Appendix D

Community and Social Audit

In respect of the proposed development at

Proposed Residential Development - Donore Project, at Site of Former St. Teresa's Gardens Donore Avenue, Dublin 8

Prepared by

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On behalf of

The Land Development Agency

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1.0 INTRODUCTION

1.1 The purpose of this report is to provide an audit of the existing social, cultural and community facilities serving Dublin's South-West Inner City. It provides information on the key population changes occurring in the area and the potential demographic changes arising from the redevelopment opportunities within this area. The report contains an audit of the existing social infrastructure in the area relating to:

- Community and social infrastructure;
- Open space, sport and recreation;
- Educational facilities;
- Healthcare facilities;
- Religious facilities;
- Arts and cultural facilities; and
- Retail provision.

1.2 These facilities are assessed in the context of proposed development of the subject site for residential use. In particular this assessment assesses if there is sufficient community facilities provision within the catchment to cater for the future needs of the population.

1.3 This report has been prepared on behalf of the Land Development Agency who propose to develop lands in partnership with Dublin City Council, the landowners, for a residential development, including 543 no. residential units, a childcare (creche) facility, artistic workspaces and cultural space, together with communal open spaces, play area, car parking and bicycle parking, on lands at the former St. Teresa's Garden's complex, Donore Avenue, Dublin 8.

1.4 This report provides an overview of the planning policy context as it relates to social and community infrastructure in the context of the proposed development the former St. Teresa's Gardens, Donore Avenue. This report provides a contextual overview of the area surrounding the site, an assessment of the social, cultural and community infrastructure within its catchment, identifies possible future needs in the area and demonstrates how this analysis has informed the community facilities proposed within the subject application.

1.5 The purpose of this Community and Social Audit is to determine if the South Dublin City area is well served by community related facilities to support the future residents of the proposed development. The study also forms an important information tool that can be used in the consideration of the redevelopment of other lands in the area.

1.6 The subject application site currently provides no community facility or open space for public use. In addition to the residential uses, the proposed development will comprise public open space of 3,408 sqm, communal amenity space of 4,417 sqm and a creche and other community, arts and cultural space Vehicular, pedestrian and cyclist access routes are provided from a new entrance to the north-west from Margaret Kennedy Road. Provision for further vehicular, pedestrian and cyclist access points have been made to facilitate connections to the planned residential schemes on the Bailey Gibson & Player Wills sites for which there are extant permissions (Ref. No.'s ABP-307221-20 and ABP-308917-20).

1.7 The proposed development will also provide for a 952 sq.m. of community, artist workspace, arts and cultural space, including a creche. These facilities will benefit the local area, and the existing and future residents and make a contribution to arts and cultural spaces available in the area. In addition, other communal support facilities,

including a mobility hub, open space, refuse facilities, cycling parking and storage facilities are proposed as part of the residential scheme, together with the inclusion of a retail/café unit. These new commercial units will increase the variety of uses and mix in the area. Therefore, the proposed development will result in a significant contribution to community facilities in the area.

1.8 A mobility hub is a place that brings together public, shared and active travel modes to facilitate ease of access and movement between transport options.

Dublin City Development Plan 2022-2028

1.9 The Dublin City Development Plan 2022-2028 was adopted in November 2022, and will come into effect on the 14th December 2022. As the text and maps of the adopted Plan have not been published as of the date of lodgement of this application, the below text is assumed to be the final plan, based on the proposed material amendments as agreed by the Council on 12 November 2022. An Bord Pleanála with of course assess the scheme against the published plan.

1.10 Using the same formatting as set out in the Material Alterations to the Draft Plan, Amendments to the Draft Plan are shown by way of bold green and underlined text {**Amendment**}, while deletions are shown in bold red text with strike through. (~~**deletion**~~).

1.11 Section 15.8.2 of the Development Plan states that "*All residential applications comprising of 50 or more units shall include a community and social audit to assess the provision of community facilities and infrastructure within the vicinity of the site and identify whether there is a need to provide additional facilities to cater for the proposed development*."

1.12 We note the following the relevant objectives as follows:

- ***"Policy QHSN45 – High Quality Neighbourhood and Community Facilities*** *It is the Policy of Dublin City Council to encourage and facilitate the timely and planned provision of a range of high-quality neighbourhood and community facilities which are multifunctional in terms of their use, adaptable in terms of their design and located to ensure that they are accessible and inclusive to all.* ***{To also protect existing community uses and retain them where there is potential for the use to continue.}"***
- ***"Policy QHSN46 – Community and Social Audit*** *To ensure that all residential applications comprising of 50 or more units shall include a community and social audit to assess the provision of community facilities and infrastructure within the vicinity of the site and identify whether there is a need to provide additional facilities to cater for the proposed development. Refer to Section 15.8.2 of Chapter 15: Development Standards"*
- **"Objective CUO22 – SDRAs and Large-Scale Developments**
  All new regeneration areas (SDRAs) and large scale developments above 10,000 sq. m. in total area ***{*}*** *must provide* ***{at a minimum}*** *5% community, arts and culture* ***{spaces including exhibition, performance,}*** *and artist workspaces* ***{predominantly}*** *internal floorspace as part of their development at the design stage. The option of relocating a portion (no more than half of this figure) of this to a site immediately adjacent to the area can be accommodated where it is demonstrated to be the better outcome and that it can be a contribution to an existing project in the immediate vicinity. The balance of space between cultural*

*and community use can be decided at application stage, from an evidence base/audit of the area. Such spaces must be designed to meet the identified need. {*Such developments shall incorporate both cultural/arts and community uses individually or in combination unless there is an evidence base to justify the 5% going to one sector.}"*

- ***"Community and Social Audit** All residential applications comprising of 50 or more units shall include a community and social audit to assess the provision of community facilities and infrastructure within the vicinity of the site and identify whether there is a need to provide additional facilities to cater for the proposed development.*
    - *A community and social audit should address the following:*
    - *Identify the existing community and social provision in the surrounding area covering a 750m radius.*
    - *Assess the overall need in terms of necessity, deficiency, and opportunities to share/ enhance existing facilities based on current and proposed population projections.*
    - *Justify the inclusion or exclusion of a community facility as part of the proposed development having regard to the findings of the audit."*

1.13 Green font illustrated proposed changes as part of Material Alterations to the Plan. The proposed development and this Social Infrastructure Audit are in accordance with the policies of the adopted Development Plan.

Strategic Development Regeneration Area (SDRA) 11

1.14 The proposed development is located within the Strategic Development Regeneration Area (SDRA) 11 (Formerly SDRA 12): (St Teresa's Gardens & Environs)', zoned Z14. We note, Section 15.1.15 of the Dublin City Development Plan 2022-2028 sets out the regeneration strategy for the area and provides further detail and objectives as to how this should take place. This application aligns itself with these objectives.

1.15 The following relevant guiding principles for development in SDRA 11 are set out in the Development Plan (please see Planning Report for full response to guiding principles) as follows:

Urban Structure

"The proposed urban structure provides a strategic blueprint for the future development of the SDRA, identifying key connections, public open spaces, locations for increased height and building frontages that will inform an urban design-led approach to the regeneration of this strategic area. The development of a network of streets and public spaces will be promoted to ensure the physical, social and economic integration of St. Teresa's Gardens with the former Player Wills and Bailey Gibson sites. The potential for further integration with the Coombe Hospital is indicated on the Guiding Principles Map but is indicative only. Regard will need to be had to any flooding constraints in the redevelopment of the Coombe Hospital lands in terms of land use and block layout. Integration of the White Heather Industrial Estate lands should be investigated in the future.

The movement framework and street structure, as illustrated in the Guiding Principles Map, introduces permeability through the site, based on proposed key east-west and north-south links and several proposed local access streets. Ensuring north/south (Cork St. and Donore Avenue connection to South Circular Road) permeability and east/west (Dolphin's Barn Street and Cork Street) is achieved. Generous well

designed, attractive multifunctional public open spaces with good orientation, connectivity, passive and active supervision/ overlooking etc. will be provided and will deliver high quality residential and public amenity.

A new public park is proposed as a landmark feature with passive supervision by residential and other uses; it will have a comprehensive landscaping strategy to provide significant greenery within the site and will make provision for a diverse range of recreational and sporting facilities for use by the wider neighbourhood and will provide for an area sufficient in size to accommodate a minimum 80 m by 130 m playing pitch."

1.16 The proposed development accords with the guiding principles of the SDRA through the provision of new pedestrian and cyclist access, public open space, and integration with the wider regeneration area. The proposed development will provide for a significant quantum of much needed housing including social housing, along with ancillary facilities including a creche community facilities and artist space.

1.17 The proposed development seeks to integrate with the wider regeneration of the area, in particular with separate proposals for the Player Wills and Bailey Gibson sites providing key linkage piece between Donore Avenue, South Circular Road and The Coombe Women & Infants University Hospital.

1.18 Other Source of Information that have informed this Audit include:

- Dublin City Cultural Strategy (2016-2021)
- Dublin City Cultural Audit and Map
- Dublin City Parks Strategy 2019-2022

Methodology

1.19 As part of this development proposal, we have carried out an assessment of the existing facilities in the area in order to assess the need for social and community infrastructure. A desktop study was used to collect the baseline information, this was then supplemented with a site visit and land use survey of the area to confirm this was up to date. The facilities in each category were recorded in an excel table then mapped.

1.20 In order to develop a suitable study area, it was considered that a 1.5 km radius from the site was a reasonable distance to walk or cycle. In accordance with the Development Plan, we have also noted the 750 m radius from the site. Using Openserviceroute.org we have prepared a series of Isochrones to illustrate the site's accessibility. Figure 1.1 to 1.3 represent a various travel distance accessible by a range of means.

1.21 Figures 1.1 and 1.2 illustrate walking distances from Donore avenue and Margaret Kennedy Road which are the proposed primary entrances to the scheme.

1.22 Figure 1.3 below illustrates cycling distance from Donore Avenue, this incorporates a large portion of the south inner City.

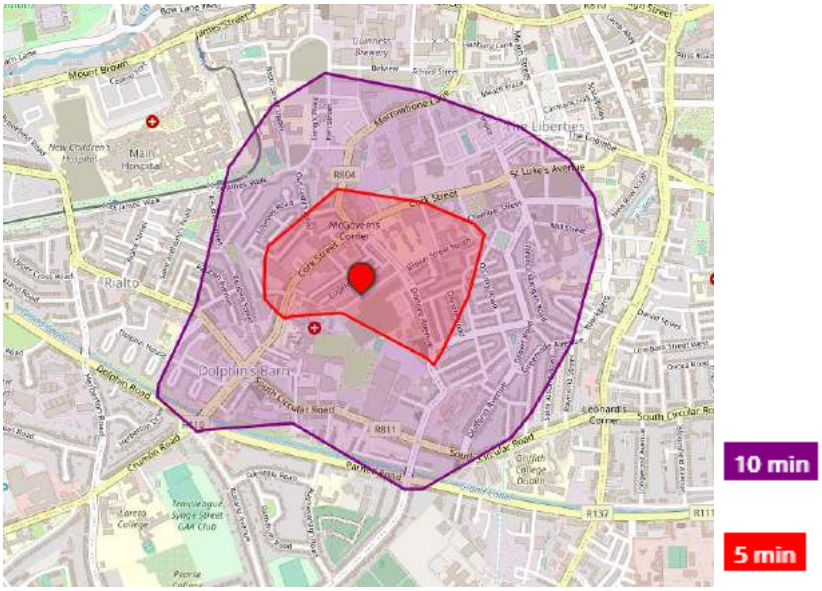

Figure 1.1: Walking distance at 5 and 10 minute intervals from Margaret Kennedy Road.

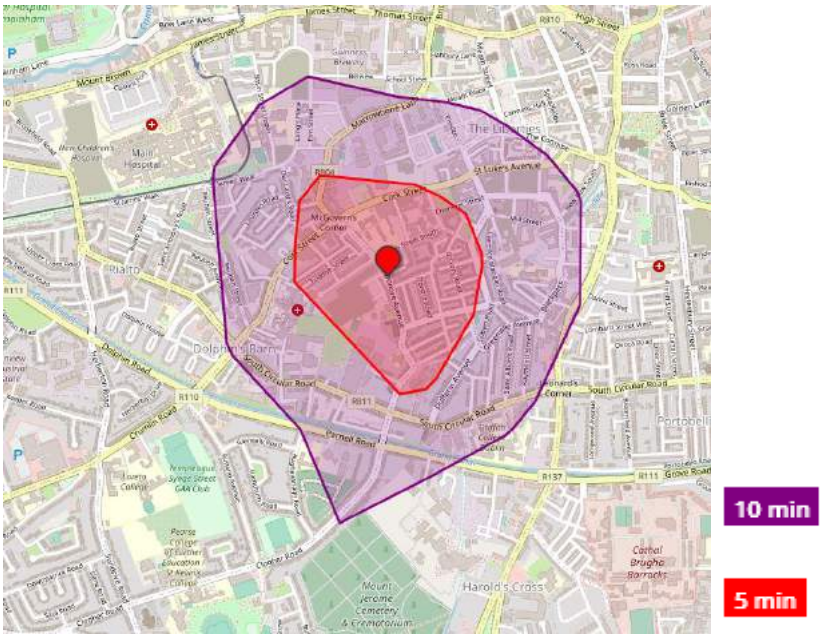

Figure 1.2: Walking distance at 5 and 10 minute intervals from Donore Avenue.

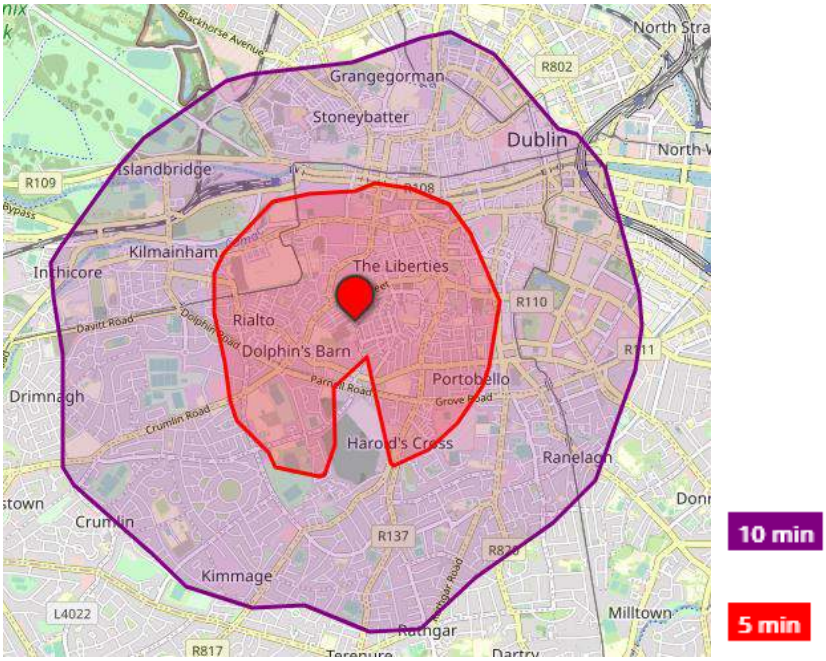

Figure 1.3: Cycling distance at 5 and 10 minute intervals from Donore Avenue

2.0 SOUTH INNER CITY AREA CONTEXT

2.1 The subject site is located on Donore Avenue which is situated in south Dublin City inside the canal ring, south-west of Dublin City Centre (1.6 km from Grafton Street and 2km from O'Connell Street). The wider area is predominately developed and comprising a broad mix of residential and commercial uses.

2.2 The site is highly accessible via a number of means. A range of Dublin Bus routes connects Cork Street town centre to the wider Dublin area including the No.'s 27, 56A, 77A and 151.

2.3 The Luas Redline provides a high frequency direct connection with wider Dublin City and Tallaght, the nearest station is the Fatima Luas stop located 750m or a 10-12 minute walk to the north-west.

2.4 It is planned by the NTA that Cork Street will be served by Bus Connects Core Route Corridor No. 9 'Greenhills to City Centre' in the near future. A planning application for this route is due to be submitted by the NTA to the Board in 2022.

2.5 The site is also close to a number of Dublin Bike Stations, enabling easy access to a network of bike share stations (Market Street South or St. James's Hospital).

2.6 Figure 3.1 shows the subject site in the context of South Dublin inner City.

Figure 2.1: Dublin City wider context (Source: Google Maps, 2022).

3.0 DEMOGRAPHIC PROFILE

3.1 In order to determine a profile of the immediate area for this Audit, it was decided to use to South-West Inner City Local Electoral Area (LEA)-5 as per the CSO SAPMAP[1], as seen in Figure 3.1 below as this encompasses a significant portion of the nearby City and considered the main area in which current and future residents are likely to avail of everyday services.

3.2 Dublin City covers an area of 115 km2 and has a population of 554,554 people (Census 2016). The population of the city is projected to increase to between 613,000 to 625,000 people up to 2026. Preliminary result from the 2022 Census state that County Dublin County has grown by 103,342 (7.7%) to 1,450,701 people from 1,347,359 No. people in 2016 however more detailed information relating to Dublin City and the LEA is not yet available as such the 2016 Census is the main point of reference.

3.3 The demographic date for the study area is obtained from the 2016 Census and relate to the Southwest Inner City Local Electoral Area (LEA 2019). The following areas are discussed:

- Population;
- Household Size;
- Age Profile;
- Social Class and Employment; and
- Educational Attainment.

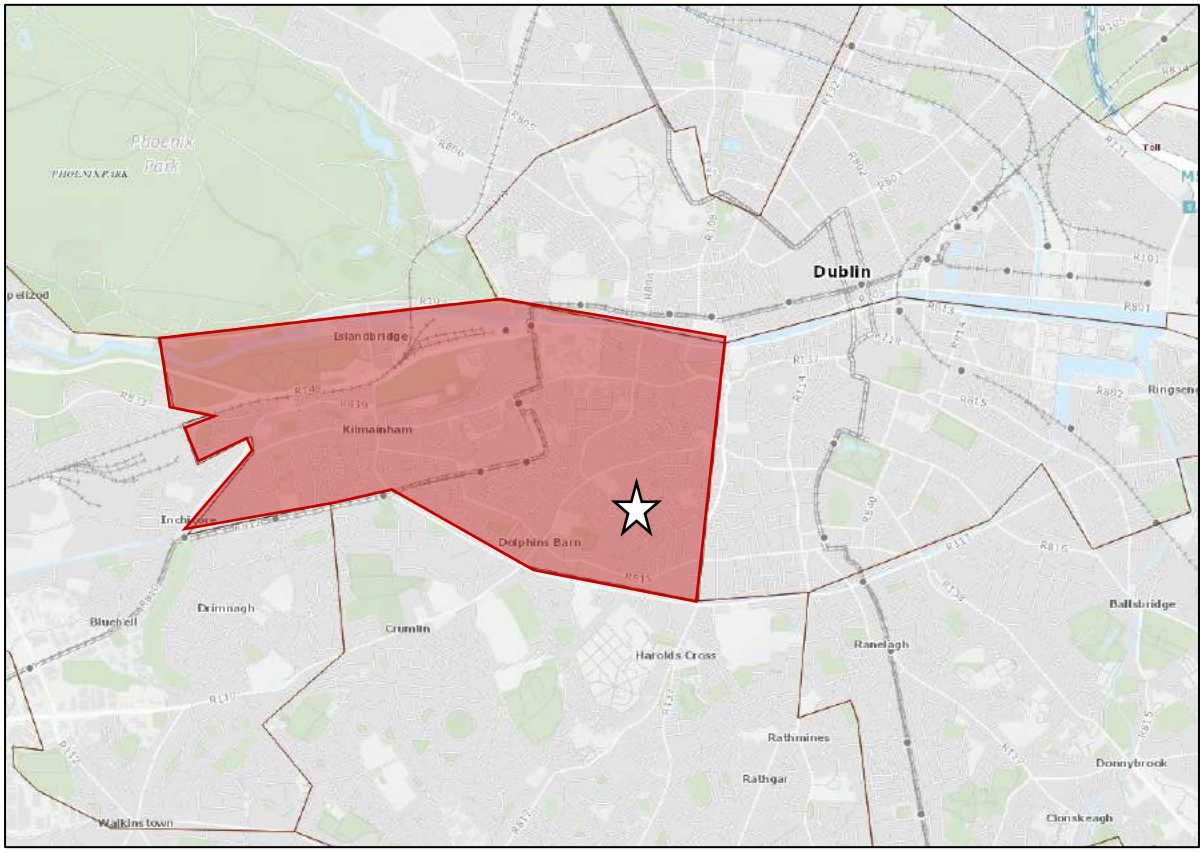

Figure 3.1: Study Area Boundary outlined in red with subject site indicated by white star; (Source: CSO, 2016).

[1]https://cso.maps.arcgis.com/apps/webappviewer/index.html?id=4d19cf7b1251408c99ccde18859ff739

Population

	LEA		Dublin City		State	
Year			**Population**	**% Change**	**Population**	**% Change**
2011	39,416		527,612		4,588,252	
2016	42,344	7.4%	554,284	4.6%	4,757,976	3.7%
2022 (preliminary)	Not available		Not available		5,123,536	7.6%

Table 3.1: Population Trends in Dublin City and the State, 2011-2016.

3.4 As can be seen from Table 3.1, LEA has experienced significant population growth above the growth rate in the State. The Dublin City Development Plan 2022-2028 projects population growth of 613,000 (low) to 625,000 (high) by 2026. A population of c. 554,500 was recorded in the 2016 census. This represents a c. 10.5% population increase at the lower end, and a c. 12.7% increase at the higher end over this period.

Age Profile

	LEA		Dublin City		State	
Age Group	**2016 Pop.**	**% Of Pop.**	**2016 Pop.**	**% Of Pop.**	**2016 Pop.**	**% Of Pop.**
0-19	6997	16.5%	111,994	20.2%	1,309,368	27.4%
20-39	21,439	50.6%	213,801	38.6%	1,322,467	27.7%
40-59	8,957	21.2%	132,649	23.9%	1,253,607	26.3%
60-79	3,940	9.3%	75,927	13.7%	727,831	15.2%
80+	1011	2.4%	20,183	3.6%	148,592	3.1%
Total	**42344**	**100.0%**	**554,554**	**100.0%**	**4,761,865**	**100%**

Table 3.2: Age Profile in LEA, Dublin City and the State, 2016; Source: CSO.

3.5 The table above shows the age profile of the LEA in comparison to Dublin City and the State. The above figure shows that Dublin City and the LEA has a generally younger population profile than seen more widely in the State with individuals ages 20-39 comprising the largest age group.

	LEA	
Household Size	**Private households (Number)**	**Persons in private households (Number)**
1 person households	5478	5478
2 person households	6503	13006
3 person households	3027	9081
4 person households	1753	7012
5 person households	680	3400
6 person households	204	1224
7 person households	57	399
8 or more persons households	29	258
Total households	**17731**	**39858**

Table 3.3: Household size in LEA, 2016; Source: CSO.

3.6 The table above shows the average household size for the south-west inner City LEA is 2.24. Based on this and the proposed unit numbers proposed, for the purposes of

this report we estimate the proposed development to result in 1,216 No. people (543 No. units x 2.24).

Social Class and Employment

	LEA		Dublin City		State	
Principal Economic Status	**Pop.**	**%**	**Pop.**	**%**	**Pop.**	**%**
At work	22,258	60.5%	265,670	56.4%	2,006,641	53.4%
Looking for first regular job	515	1.4%	4,686	1.0%	31,434	0.8%
Unemployed having lost or given up previous job	3,023	8.2%	34,514	7.3%	265,962	7.0%
Student	4,498	12.2%	53,067	11.3%	427,128	11.3%
Looking after home/family	1,602	4.4%	28,734	6.1%	305,556	8.1%
Retired	3,290	8.9%	63,637	13.5%	545,407	14.5%
Unable to work due to permanent sickness or disability	1,498	4.1%	18,665	4.0%	158,348	4.2%
Other	114	0.3%	2,368	0.5%	14,837	0.3%
Total	**36,798**	**100.0%**	**471,341**	**100.0%**	**3,755,313**	100%

Table 3.3: Employment Statistics of LEA, Dublin City and the State, 2016; Source: CSO.

3.7 The table above shows that the LEA area has an above average amount of the population at work, at 60.5% compared to the Dublin City of 56.4% or State average of 53.4% however it also has a higher-than-average percentage of unemployed at 8.2%.

3.8 The Labour Force Survey (LFS) is a continuous household survey carried out by the CSO and is the official source of employment and unemployment estimates for Ireland. The more recent statistical release indicated that the employment rate for those aged 15-64 was 72.8% in Q1 2022 compared to 65.6% in Q1 2021 and 69.6% in Q1 2020.

3.9 In Q1 2022, the employment rate for males aged 15-64 years was 77.2% compared to 68.6% for females. Looking at the rates by age group, the employment rate was lowest among those aged 15-19 years (27.1%) and highest among those aged 35-44 years (83.4%).

3.10 Unemployment decreased by 24,800 (-26.5%) for males to 68,800 in the year to Q1 2022 compared with a fall of 19,000 (-24.7%) to 58,000 for females over the same period.

	LEA		Dublin City		State	
Social Class	**LEA**	**%**	**Total**	**%**	**Pop.**	**%**
Professional workers	3,802	9.0%	53,492	9.6%	386,648	8.1%
Managerial and technical	10,788	25.5%	147,267	26.6%	1,336,896	28%
Non-manual	5,682	13.4%	89,661	16.2%	837,145	17.5%
Skilled manual	4,013	9.5%	62,892	11.3%	671,890	14.1%
Semi-skilled	3,938	9.3%	50,188	9.1%	501,103	10.5%
Unskilled	1,763	4.2%	20,871	3.8%	170,391	3.5%
All others gainfully occupied and unknown	12,358	29.2%	130,183	23.5%	857,792	18%
Total	**42,344**	**100.0%**	**554,554**	**100.0%**	**4,761,865**	**100%**

Table 3.4: Socio Economic group of LEA, Dublin City and the State, 2016; Source: CSO

3.11 The figures presented in Table 5.4 above suggest that the Dublin City area has a close employment trend when compared to the State average. In terms of socio-economic group. Within the LEA less workers are non-manual, skilled manual and semi-skilled compared to the State averages.

3.12 The social class of an area is directly related to educational attainment. This will be further discussed below.

Educational Attainment

	LEA		DCC		State	
Educational Attainment	**Pop**	**%**	**Pop**	**%**	**Pop.**	**%**
No Formal Education	356	1.3%	5,807	1.5%	52,214	1.6%
Primary Education	2,755	9.7%	43,102	11.3%	334,284	10.7%
Lower Secondary	2,354	8.3%	44,219	11.6%	449,766	14.5%
Upper Secondary	3,378	11.9%	56,059	14.7%	573,643	18.5%
Technical or Vocational qualification	1,651	5.8%	25,005	6.6%	271,532	8.7%
Advanced Certificate/Completed Apprenticeship	885	3.1%	14,191	3.7%	182,318	5.8%
Higher Certificate	1,108	3.9%	14,340	3.8%	153,351	4.9%
Ordinary Bachelor Degree or National Diploma	2,395	8.5%	27,047	7.1%	237,117	7.6%
Honours Bachelor Degree, Professional qualification or both	4,504	15.9%	50,756	13.3%	331,293	10.6%
Postgraduate Diploma or Degree	4,804	17.0%	53,063	13.9%	284,107	9.1%
Doctorate(Ph.D) or higher	478	1.7%	5,897	1.5%	28,759	0.9%
Not stated	3,630	12.8%	41,268	10.8%	198,668	6.4%
Total	**28,298**	**100.0%**	**380,754**	**100.0%**	**3,097,052**	**100%**

Table 3.4: Education Level in LEA, Dublin City and the State, 2016; Source: CSO.

3.13 As can be seen from Table 5.4 above, the LEA area has a high level of educational attainment in third level relative to the State.

3.14 The percentage of the population with no formal education in the LEA (1.3%) is lower than the State average (1.6%). Education attainment at secondary level is also lower than the State averages, as is the percentage of the population in LEA a Technical or Vocational qualification relative to the State average, with figures of 6.7% and 8.7%, respectively.

3.15 The following graphics illustrate the level of car ownership to be found in the area, together with the modal split used by existing residents to travel to work, school & college, based on the 2016 Census of Population. From these pie-charts it is evident that while 50% of the population do have access to a car, over 75% of the population use public transport, or cycling or walking to commute to education or work. The Donore Project seeks to build on and promote sustainable travel as the predominant mode of transport for residents within the proposed apartment scheme.

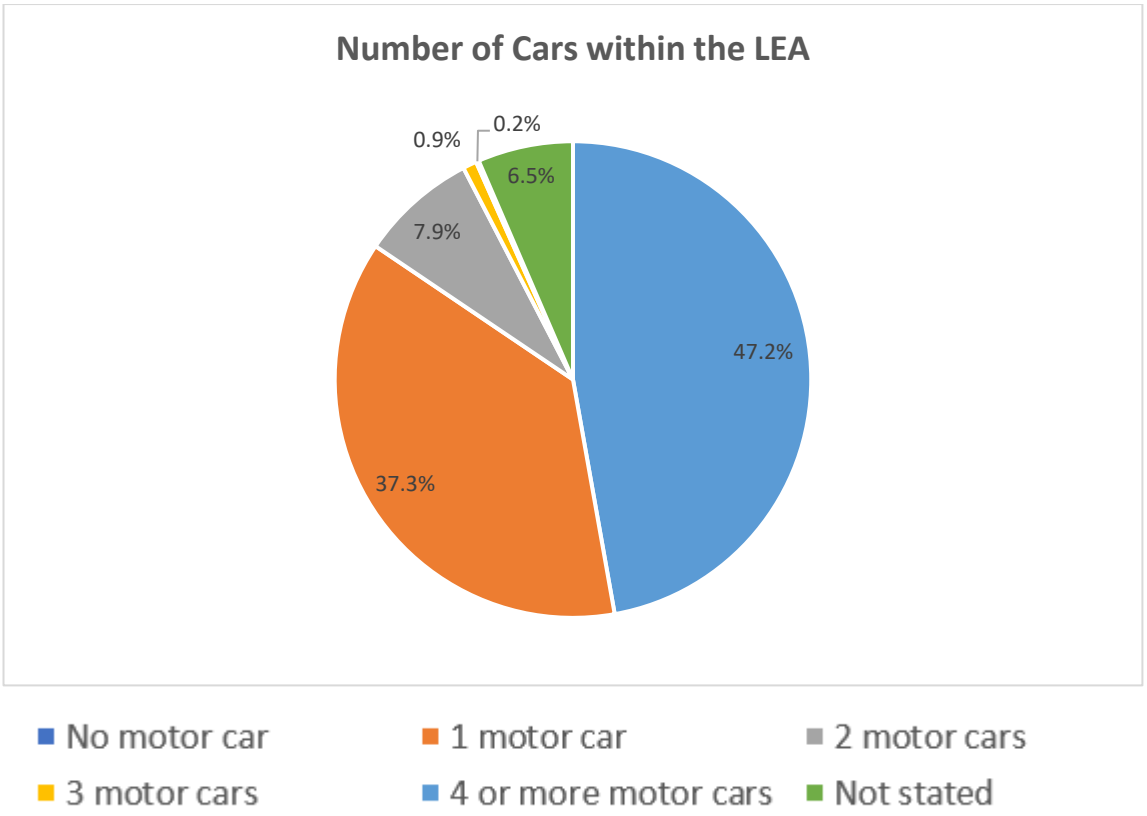

Figure 3.2: Households with cars in the LEA (Source: CSO, 2016)

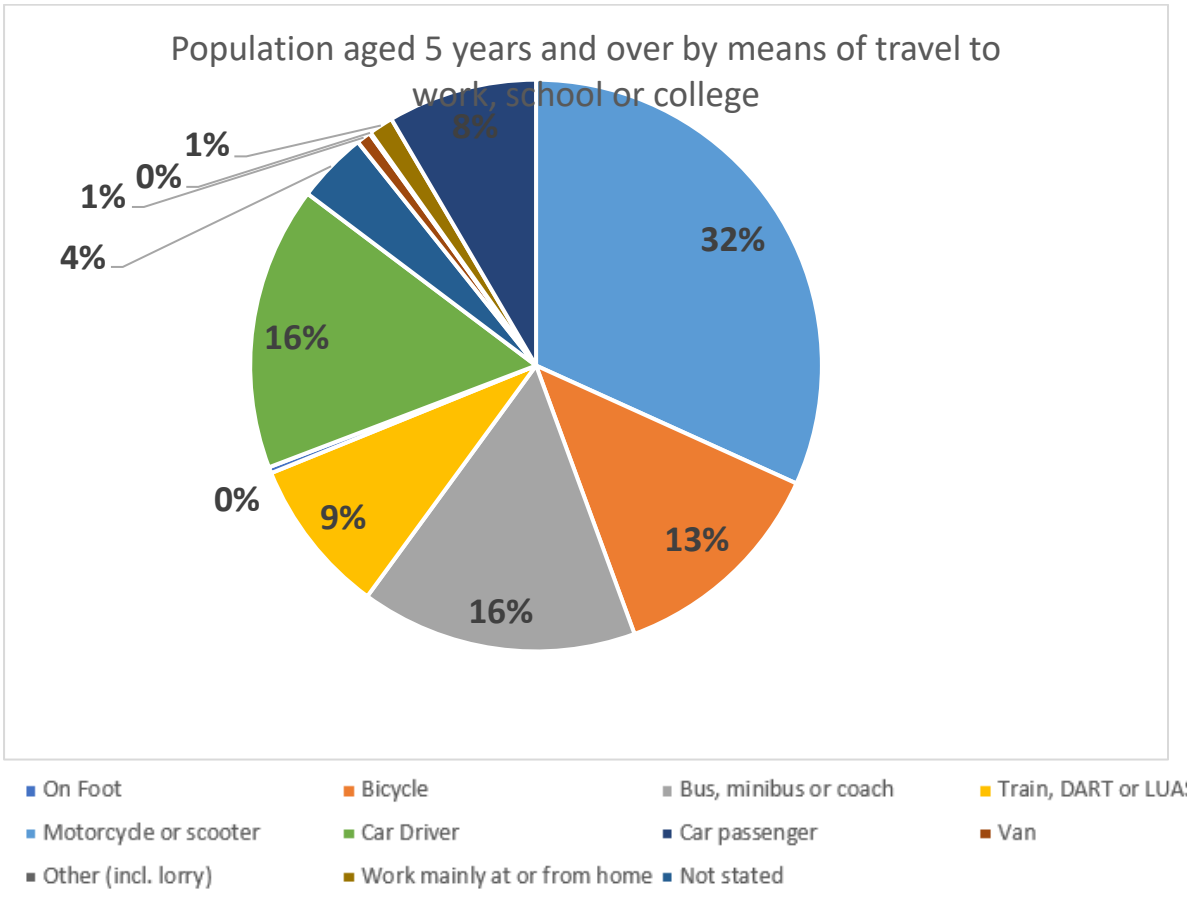

Figure 3.3: Mode of travel to school / work in the LEA (Source: CSO, 2016).

4.0 PLANNING POLICY REVIEW

4.1 The key provisions of national, regional and local planning policy as it relates to the proposed development and this assessment are set out in the following sections. The key policy and guidance documents of relevance to the proposed development are as follows:

- Project Ireland 2040 - National Planning Framework;
- Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas (2009);
- Sustainable Urban Housing: Design Standards for New Apartments - Guidelines for Planning Authorities (2020);
- Guidelines for Planning Authorities on Childcare Facilities (2001);
- Regional Spatial and Economic Strategy for the Eastern and Midland Region (RSES) 2019;
- Dublin City Development Plan 2022-2028.

National Planning Framework

4.2 The National Planning Framework (hereby abbreviated to NPF) is the core high-level strategic plan for shaping the future growth and development of Ireland until 2040. The NPF sets out that 50% of future population is to be accommodated within the existing footprint of Dublin and the other 4 cities.

4.3 The NPF approach includes National Strategic Outcome 10 which seeks to provide *'access to quality Childcare, Education and Health services'*. While the NPF provides no guidance on what infrastructure is required to service new developments of different sizes, a hierarchy of settlements and related infrastructure notes that cities, i.e. central and/or urban locations, may provide all infrastructure within accessible walking area or accessible on transport networks. Figure 3.1 illustrates the hierarchy of settlements and related infrastructure.

4.4 With the lack of alternative guidance and in order to provide a policy and evidence-based approach this Assessment, we will use the NPF hierarchy of settlements to assess the infrastructure within close proximity of the subject area. As set out in Section 3, it is considered a catchment area of infrastructure within 15 minutes walking distance is appropriate.

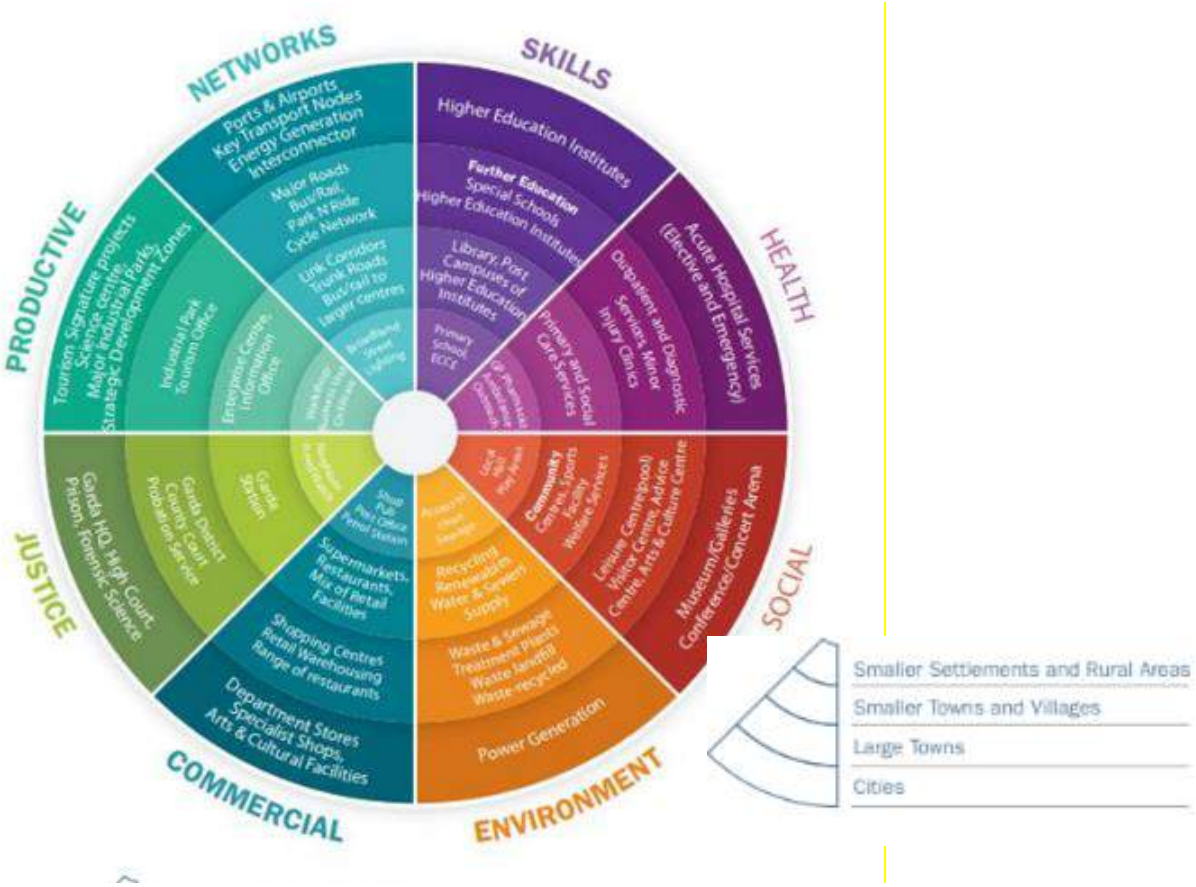

Figure 4.1: NPF Hierarchy of Settlements and Related Infrastructure (Source: National Planning Framework).

4.5 The NPF also includes the following objectives in relation to social infrastructure needs:

"NPC 30- *Local planning, housing, transport/ accessibility and leisure policies will be developed with a focus on meeting the needs and opportunities of an ageing population along with the inclusion of specific projections, supported by clear proposals in respect of ageing communities as part of the core strategy of city and county development plans.*

"NPC 31- *Prioritise the alignment of targeted and planned population and employment growth with investment in:*

• A childcare/ECCE planning function, for monitoring, analysis and forecasting of investment needs, including identification of regional priorities;
• The provision of childcare facilities and new and refurbished schools on well located sites within or close to existing built-up areas, that meet the diverse needs of local populations;
• The expansion and consolidation of Higher Education facilities, particularly where this will contribute to wider regional development, and
• Programmes for life-long learning, especially in areas of higher education and further education and training where skills gaps are identified."

4.6 These objectives highlight the need to safeguard and construct policy for key areas of the population, such as children and ageing communities and therefore to ensure that facilities which cater for all aspects of the population are in place in urban areas and areas of increasing development.

Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas (2009)

4.7 These guidelines were published by the Department of the Environment, Heritage and Local Government in order to set out the key principles that should be adopted within developments and used by the Planning Authorities both in writing their Development Plans and in assessing new developments. The sections under this document that are relevant to this social and community infrastructure audit / assessment are outlined below.

4.8 The Guidelines state that one of the fundamental questions to be addressed during the planning process is "*the relationship and linkages between the area to be (re)developed and established neighbourhoods, including the availability of existing community facilities, and the provision of pedestrian and cycle networks*."

4.9 The Guidelines state that Planning Authorities should ensure efficient and integrated provision of schools, childcare, community centres, healthcare facilities and district/neighbourhood centres are made available for the wider community. We note the following requirements set out in the Guidelines that relate to social infrastructure:

- **Schools:** "*No substantial residential development should proceed without an assessment of existing schools' capacity or the provision of new school facilities in tandem with the development*." This is further clarified as requiring applications for 200+ units to be accompanied by a report detailing the school capacity of the area and the impact of the development.
- **Childcare**: In accordance with the Childcare Guidelines 2001, the Guidelines recommend the provision of one childcare facility (equivalent to a minimum of 20 child places) for every 75 dwelling units. However, the Guidelines state "*the threshold for such provision should be established having regard to the existing geographical distribution of childcare facilities and the emerging demographic profile of areas, in consultation with city / county childcare committees. The location of childcare facilities should be easily accessible by parents, and the facility may be combined with other appropriate uses, such as places of employment*."
- **Community Centres**: The Guidelines state that provision of community centres is to be assessed by the local authority but should be in a central area and near public transport facilities.
- **Healthcare facilities:** The Guidelines state that the provision of healthcare facilities should be determined in conjunction with the Health Services Executive and the needs of the elderly and disabled should be taken into consideration in health care facilities, accessibility, caretaking facilities and residential development.
- **District/Neighbourhood Centres:** The provision of new retail in new district or neighbourhood centres will be influenced by the Development Plan Retail Strategy.

Sustainable Urban Housing: Design Standards for New Apartments (2020)

4.10 The following outlines the relevant social and community infrastructure requirements of the Apartment Guidelines 2020 of relevance to this assessment. Section 4.7 of the Apartment Guidelines 2020 states the following in relation to childcare facilities:

"Notwithstanding the Planning Guidelines for Childcare Facilities (2001), in respect of which a review is to be progressed, and which recommend the provision of one childcare facility (equivalent to a minimum of 20 child places) for every 75 dwelling units, the threshold for provision of any such facilities in apartment schemes should be established having regard to the scale and unit mix of the proposed development and

the existing geographical distribution of childcare facilities and the emerging demographic profile of the area. One-bedroom or studio type units should not generally be considered to contribute to a requirement for any childcare provision and subject to location, this may also apply in part or whole, to units with two or more bedrooms." (Emphasis added)

Childcare Facilities: Guidelines for Planning Authorities (2001)

4.11 As summarised above, the *"Guidelines for Planning Authorities on Childcare Facilities"* (2001) indicate that Development Plans should facilitate the provision of childcare facilities in appropriate locations.

4.12 The Guidelines recommend that in larger new housing estates, Planning Authorities should require the provision of a minimum of one childcare facility with 20 places for each 75 dwellings. The threshold for provision should be established having regard to existing location of facilities and the emerging demography of the area where new housing is proposed. The Guidelines advise that sites should be identified for such facilities as an integral part of the pre-planning discussions.

4.13 The following definition of Childcare is included in the Guidelines:

"In these Guidelines, "childcare" is taken to mean full day-care and sessional facilities and services for pre-school children and school-going children out of school hours. It includes services involving care, education, and socialisation opportunities for children. Thus, services such as pre-schools, naíonraí (Irish language playgroups), day-care services, crèches, playgroups, and after-school groups are encompassed by these Guidelines. Conversely childminding, schools, (primary, secondary and special) and residential centres for children are not covered by these Guidelines."

The Guidelines state that "*planning authorities should require the provision of at least one childcare facility for new housing areas unless there are significant reasons to the contrary for example, development consisting of single bed apartments or where there are adequate childcare facilities in adjoining developments. For new housing areas, an average of one childcare facility for each 75 dwellings would be appropriate. (See also paragraph 3.3.1 and Appendix 2 below). The threshold for provision should be established having regard to the existing geographical distribution of childcare facilities and the emerging demographic profile of areas. Authorities could consider requiring the provision of larger units catering for up to 30/40 children in areas of major residential development on the basis that such a large facility might be able to offer a variety of services – sessional/drop in/after-school, etc'. Regional Spatial and Economic Strategy for the Eastern and Midland Region (RSES) 2019*

4.14 The Regional Spatial and Economic Strategy for the Eastern and Midland Region (RSES) 2019 sets out a 12-year strategic development framework for the Eastern and Midland Region. Supportive of the implementation of the NPF, the RSES reflects its focus on the provision of accessible services and facilities for communities within the Eastern and Midland Region.

4.15 Section 9.1 of the RSES details that the availability of, and access to, services and facilities, inclusive of healthcare services, education facilities and community/recreational facilities is key to creating healthier places. This is supported by Regional Policy Objective 9.14 which calls for Local Authorities to *"support the planned provision of easily accessible social, community, cultural and recreational*

facilities and ensure that all communities have access to a range of facilities that meet the needs of the communities they serve".

4.16 In addition, the Metropolitan Area Strategic Plan (MASP) set out in the RSES emphasises the need to provide accessible services and facilities and supports "ongoing collaboration between regional stakeholders to ensure that social infrastructure such as education, health and community facilities are provided in tandem with the development of strategic development areas".

Dublin City Development Plan 2022-2028

4.17 The Dublin City Development Plan was adopted by the City Council on the 12th November and will become operational on the 14th December 2022. A number of policies and objectives relating to the social and community infrastructure requirements of new developments are predominantly contained within Chapter 5 of the Development Plan, titled *'Quality Housing and Sustainable Neighbourhoods'*, and Chapter 12 / 15, the most relevant of which are included below.

- **Community and Social Audit (policy QHSN46):** *"To ensure that all residential applications comprising of 50 or more units shall include a community and social audit to assess the provision of community facilities and infrastructure within the vicinity of the site and identify whether there is a need to provide additional facilities to cater for the proposed development. Refer to Section 15.8.2 of Chapter 15: Development Standards.'*
- **15-Minute City (policy QHSN10):** *'It is the Policy of Dublin City Council to promote the* ***(~~concept~~)*** ***{realisation}*** *of the 15-minute city which provides for liveable, sustainable urban neighbourhoods and villages throughout the city that deliver healthy placemaking, high quality housing and well designed,* ***{intergenerational and accessible,}*** *safe and inclusive public spaces served by local services, amenities****(, sports facilities)*** *and sustainable modes of* ***{public and accessible}*** *transport* ***{where feasible}****."*
- **High Quality Apartment Development (Policy QHSN34):** *'To promote the provision of high-quality apartments within sustainable neighbourhoods by achieving suitable levels of amenity within individual apartments, and within each apartment development, and ensuring that suitable social infrastructure and other support facilities are available in the neighbourhood.'*
- ***"Policy QHSN45 – High Quality Neighbourhood and Community Facilities*** *It is the Policy of Dublin City Council to encourage and facilitate the timely and planned provision of a range of high-quality neighbourhood and community facilities which are multifunctional in terms of their use, adaptable in terms of their design and located to ensure that they are accessible and inclusive to all.* ***{To also protect existing community uses and retain them where there is potential for the use to continue.}"***
- **Phasing (Policy QHSN47):** *'To require that larger schemes which will be developed over a considerable period of time are developed in accordance with an agreed phasing programme to ensure that suitable physical, social and community infrastructure is provided in tandem with the residential development and that substantial infrastructure is available to initial occupiers.'*
- **Inclusive Social and Community Infrastructure (Policy QHSN48):** *'To support the development of social and community infrastructure that is inclusive and accessible in its design and provides for needs of persons with disabilities, older people, migrant communities and children and adults with additional needs including the sensory needs of the neurodiverse.'*

- **Amenities and Retail (Policy QHSN49)** *'To ensure all areas of the city, including those that have Local Area Plans, deliver social infrastructure, sports and recreational facilities, retail outlets, schools and infrastructure in accordance to an agreed phasing programme to ensure large neighbourhoods are not left isolated without essential services."*
- **Sláintecare Plan (Policy QHSN50):** *'To support the Health Service Executive and other statutory, voluntary and private agencies in the provision of appropriate healthcare facilities - including the system of hospital care and the provision of community-based primary care facilities, mental health and wellbeing facilities including Men's Sheds - and to encourage the integration of healthcare facilities in accessible locations within new and existing communities in accordance with the government Sláintecare Plan.'*
- **Childcare Facilities (Policy QHSN 53):** *'To facilitate the provision of appropriately designed and sized fit-for-purpose affordable childcare facilities as an integral part of proposals for new residential and mixed-use developments, subject to an analysis of demographic and geographic need undertaken by the applicant in consultation with the Dublin City Council Childcare Committee, in order to ensure that their provision and location is in keeping with areas of population and employment growth.'*
- **Objective CUO22 – "SDRAs and Large-Scale Developments** *All new regeneration areas (SDRAs) and large scale developments above 10,000 sq. m. in total area **{*}** must provide **{at a minimum}** 5% community, arts and culture **{spaces including exhibition, performance,}** and artist workspaces **{predominantly}** internal floorspace as part of their development at the design stage. The option of relocating a portion (no more than half of this figure) of this to a site immediately adjacent to the area can be accommodated where it is demonstrated to be the better outcome and that it can be a contribution to an existing project in the immediate vicinity. The balance of space between cultural and community use can be decided at application stage, from an evidence base/audit of the area. Such spaces must be designed to meet the identified need. {*Such developments shall incorporate both cultural/arts and community uses individually or in combination unless there is an evidence base to justify the 5% going to one sector.}*
- **Objective CUO26 'Co-Design and Audits –** *"Large development applications (over 10,000 sq. m., either in phases or as one application) will, in the absence of a DCC local area culture audit (COU38 refers), be required to undertake a cultural audit for the local area to identify shortcomings within the area; and to work with DCC Arts Office to identify and agree appropriate arts or cultural uses, preferably as part of a co-design process in advance of lodging an application, for inclusion in the development. Such audits shall be informed by the existing cultural mapping resources in the Dublin City Cultural Infrastructure Study and by Culture Near You maps."*
- **Objective CUO40 Cultural and Artistic Space Audit** – "*To aim to undertake during the life of the development plan, an audit and implementation plan for each Electoral Area of the Council to assess the current and future needs with regard to cultural and artistic spaces and to set a series of actions, policy tools and initiatives to address identified shortfalls"*

4.18 Section 12.5.3 of the Plan relates to 'Supporting Cultural Vibrancy in the City'. As part of the preparatory work for the Development Plan, a Cultural Infrastructure Study was undertaken of the city, and is published as a background document for the Plan. The study provides a detailed analysis of the extent of cultural infrastructure within the city; where challenges lie; and makes a number of recommendations. It is noted that there are no significant deficits of cultural space in the immediate vicinity of the application

site referenced in the audit. The report indicates DCC should aspire to provide 5% increase in the provision of cultural assets per annum over the life of the Development Plan.

4.19 The report also states that "*It is essential that new neighbourhoods include appropriate cultural infrastructure in order to create a place establish a sense of community and foster social cohesion*". As outlined in MW Architectural Design Statement, in addition to the public open space, a publicly accessible cultural and exhibition space is proposed including a childcare facility. There is also a retail unit proposed for the benefit of proposed residents and the wider community.

5.0 EXISTING COMMUNITY FACILITIES

5.1 A survey was carried out of the existing social infrastructure in the within 1.5 km radius of the subject site under the following headings:

- Community and Social Infrastructure
- Open Space, Sport and Recreation
- Education Facilities
- Healthcare Facilities
- Religious Facilities
- Arts & Cultural Facilities
- Retail.

5.2 In addition, we have mapped the key resources within 1.5 km of the subject site in the above categories. 1.5 km is considered a reasonable maximum distance to travel via range of transport including walking, cycling and public transport. The area is well provided for in many regards, as such the list is not exhaustive due to the number of such facilities nearby, instead the survey focuses on the most convenient and relevant such facilities. As can be seen in Figure 5.1 below, the site is regarded as being extremely well connected to existing community facilities.

Community and Social Infrastructure

5.3 Quality neighbourhoods should be responsive to the needs of local communities, play an important role in quality-of-life factors and foster a wider sense of community and active citizenship.

5.4 Community Facilities are considered to include youth services, local authority offices, welfare services, libraries, Garda and fire stations, and community services.

5.5 Dublin City has a strong network of community groups and clubs, many of which are voluntary groups. Our survey identified a large range of community facilities within the study area

5.6 Key providers in the area include Donore Youth and Community Centre, Fatima Groups United Family Resource Centre, Rialto Youth Project, Ashgrove Community Centre, Dublin's Men's Shed, Fr Lar Redmond Community Centre and Dolphin House Community Centre, *inter alia*. These facilities provide an essential role in responding to local community needs.

5.7 Dublin City Council is currently preparing plans for an extensive refurbishment and expansion of the fire damaged Donore Community Centre which will provide over 1,400m2 of community space to serve the area.

5.8 Dublin City also has a large-scale library network. Libraries provide useful facilities to local residents including free broadband and wireless internet service, self-service printing/scanning, photocopying, study space, children's learning zone, garden space, citizen's information centre, large print book collection, daily newspapers as well as application forms for motor tax, passport etc. and a community noticeboard / information.

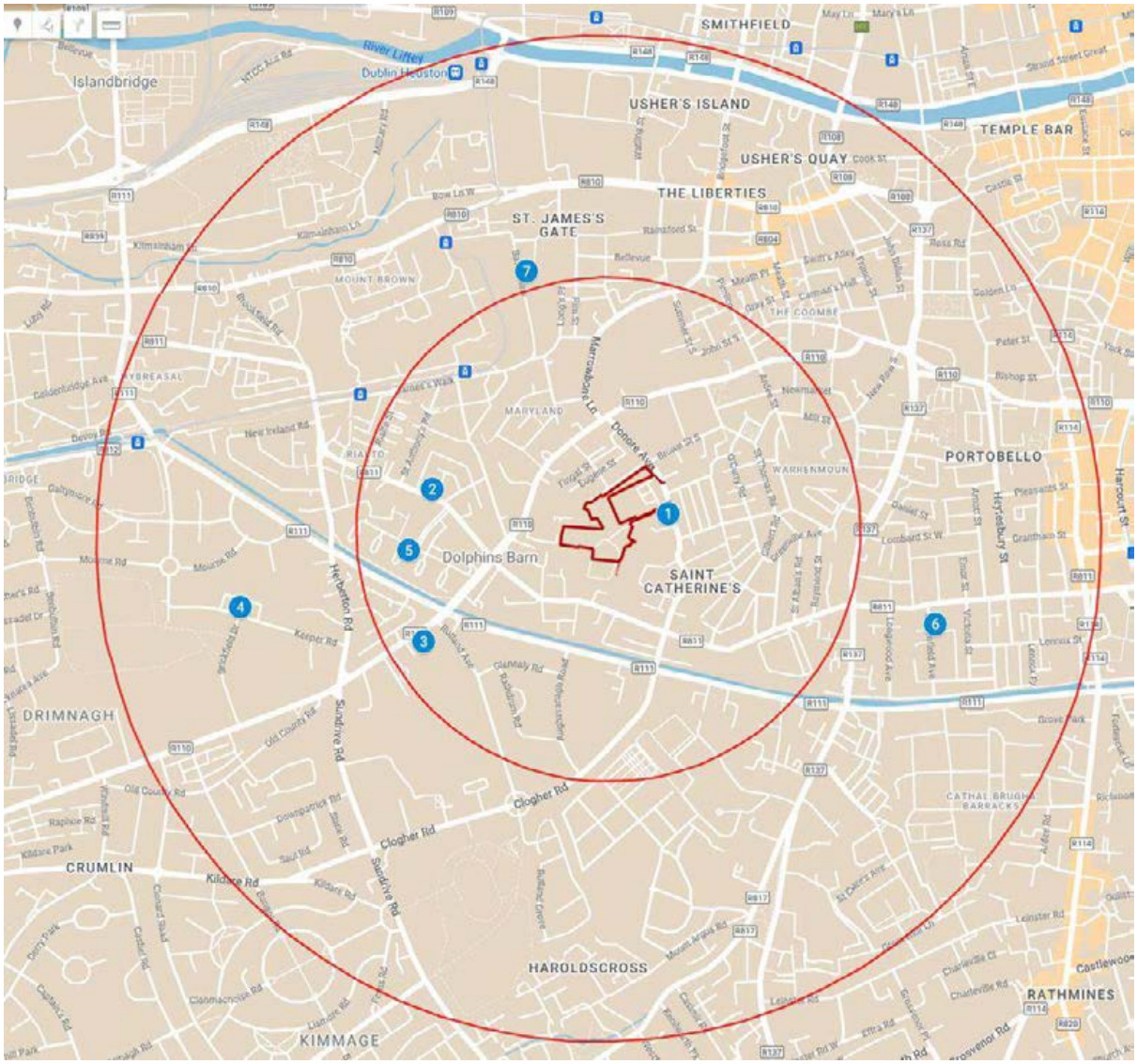

Figure 5.1: Overview of Community facilities within 750m and 1.5 km of the subject site.

	Name	Type	Address
1	Donore Youth and Community Centre (currently closed)	Community Resource	Dan Project GYDP Foroige, Donore Ave, Saint Catherine's, Dublin 8
2	Rialto Youth Project	Community Resource	468 S Circular Rd, Saint James' (part of Phoenix Park), Dublin 8, D08 H51F
3	Clay Youth Project	Community Resource	31A Crumlin Rd, Crumlin, Dublin 12
4	Fr Lar Redmond Community Centre	Community Resource	53A Keeper Rd, Crumlin, Dublin 12
5	Dolphin House Community Centre	Community Resource	Dolphin House, Rialto, Dublin, D08 H9DX
6	St Kevin's Community Centre	Community Resource	45 Bloomfield Ave, Portobello, Dublin 8, D08 X2E7
7	Fountain Youth Project	Community Resource	2A Basin View, Ushers, Dublin 8, D08 N2E9
8	South Inner City Community Development Association (SICCDA)	Community Resource	90 Meath Street, Dublin 8, D08 TPH9

9	Fatima Groups United Family Resource Centre	Community Resource	3 Reuben Plaza, Rialto, Dublin
10	Dublin's Men's Shed	Community Resource	10-11 Earl Street South, Dublin 8, Ireland
11	Southwest Inner-City Network (SWICN)	Community Resource	Digital Court, Rainsford St, The Liberties, Dublin 8

Table 6.1: Overview of key community facilities within 750m and 1.5 km of the subject site.

5.9 We also note the following ancillary community facilities in the area:

Name	Type	Address
1. Dolphin's Barn Fire Station - Dublin Fire Brigade	Fire Brigade	Parnell Rd, Drimnagh, Dolphins Barn, Co. Dublin, D12 C520
2. Kevin Street Garda Station	Garda Station	41 Kevin Street Upper, Dublin
3. Kilmainham Garda Station	Garda Station	High Road, Kilmainham Ln, Kilmainham, Dublin 8
4. Sundrive Road Garda Station	Garda Station	110 Crumlin Rd, Crumlin, Dublin
5. An Post	Post office	2 Reuben St, Saint James' (part of Phoenix Park), Dublin 8, D08 FR80
6. An Post Cork St	Post office	McGoverns Corner, Cork St, The Liberties, Dublin
7. An Post Dolphin's Barn	Post office	41A Dolphin's Barn, Saint James' (part of Phoenix Park), Dublin
8. An Post Leonard's Corner	Post office	Clanbrassil Street Upper Clanbrassil Street Upper, Portobello, Dublin 8, D08 KA07
9. DCC Bring Centre	Recycling Centre	Rutland Ave, Crumlin, Dublin 12, D12 ED72
10. Citizens Information Centre (Liberties)	Social Welfare	90 Meath St, The Liberties, Dublin 8, D08 TPH9
11. Intreo Centre Cork Street, Dublin 8	Social Welfare	Guild Building, Cork St, Dublin 8, D08 XH90
12. Dolphin's Barn Library	library	Parnell Rd, Crumlin, Dublin, D12 ET22
13. Donore Community Centre (currently closed following fire)	Community Centre	Donore Avenue, Dublin 8

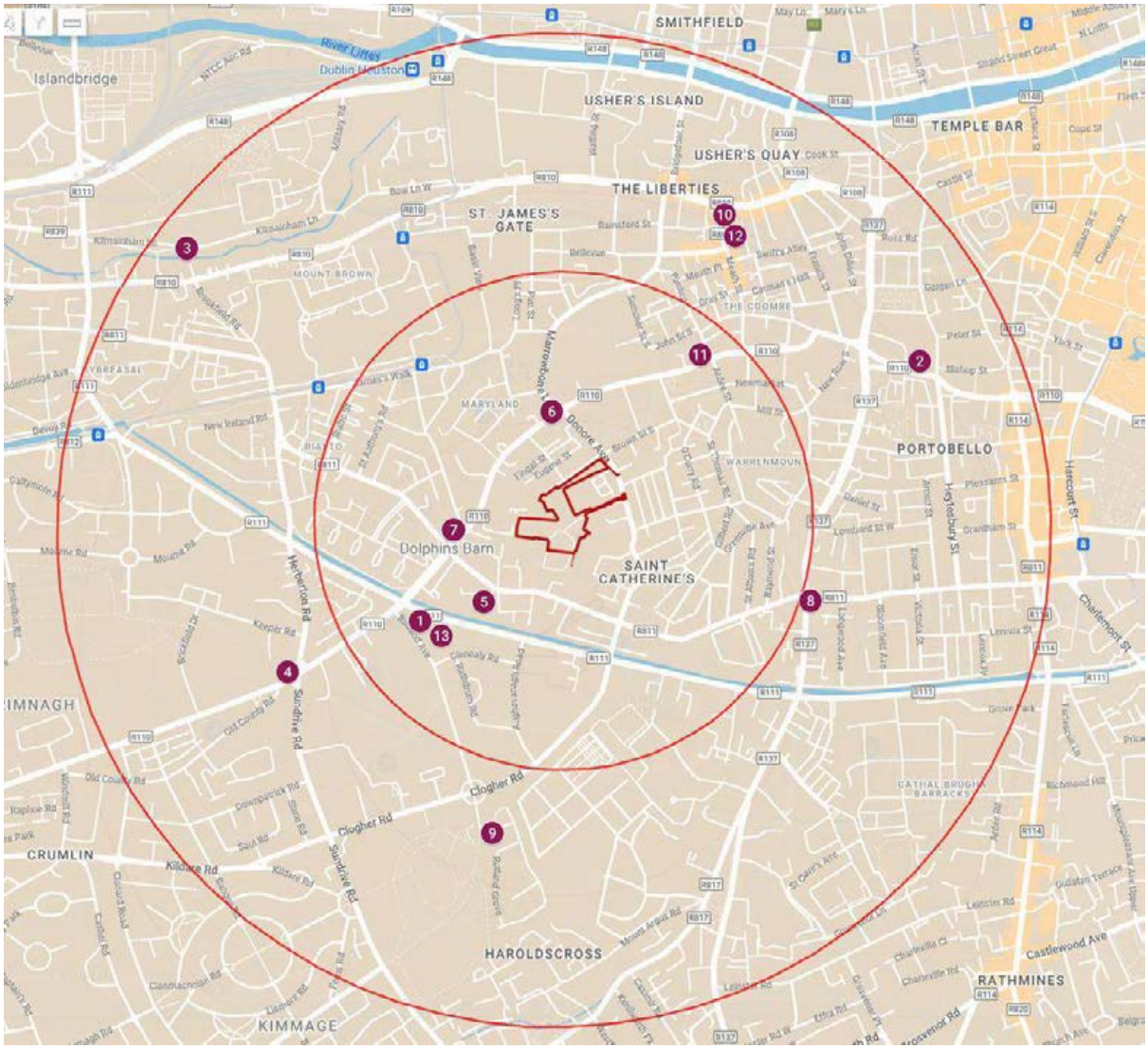

Figure 5.2: Overview of ancillary community facilities within 750m and 1.5 km of the subject site.

5.10 As set out above, it is considered the existing and proposed uses within the catchment area offer excellent service provision for the community. The surrounding area also benefits from other community, social, and ancillary infrastructure, including community centres, and essential public services.

Open Space, Sport & Recreation

5.11 Recreation and open space are an important part of every community's life. They require pro-active encouragement and enhancement to ensure participation by all within the local community. This section of the audit seeks to identify the type, functions, location and maintenance requirements of open spaces within the wider area and includes:

- An assessment of the quality and condition of facilities and fitness for purpose;
- The levels of use, needs and differing aspirations for open space by the community; and
- An evaluation of the existing provision against the identified needs, such as to identify areas of deficiency or surplus and other issues and opportunities.

5.12 The immediate area has a large range of open space areas suitable for cycling, running and walking. Despite its predominately developed and urban character, there are a range of open space and recreation areas nearby. For the purposes of this study open space and recreation facilities are considered to include parks, playgrounds, multi-use games areas, leisure facilities and sports pitches used by GAA, soccer and other clubs.

5.13 Quality recreation, leisure and amenity facilities have a fundamental impact on quality of life. It can improve social integration and cohesiveness. Sporting, recreation and leisure activities are of primary importance to the quality of life enjoyed by the local community.

5.14 We also note a number of Scout groups in the area including the 35th Dublin Donore Scout Group, 87th Polish Scout Group and 42nd Dublin Scout Group which provide an important recreational service for younger people.

5.15 There are a number of larger key parks discussed in detail below in addition to other open spaces and sport facilities in the vicinity (see accompanying map Figure 5.7).

(1) Weaver Park

5.16 Weaver Park is in the heart of the Liberties in Dublin's city centre. The park has a playground, a skatepark, benches and a pergola.

Figure 5.3: Weaver Park (Source: Google Images, 2022).

(2) Brickfield Park

5.17 Brickfield Park is in Drimnagh on the city's Southside. The park has a playground, soccer and all-weather pitches.

Figure 5.4: Brickfield Park (Source: Google Images, 2022).

(3) Eamonn Ceannt Park

5.18 Eamonn Ceannt Park in Crumlin is named after one of the executed leaders of the 1916 Rising. The park has soccer pitches, a 9-a-side all weather pitch, changing facilities, tennis courts, a basketball court, running track and an outdoor gym. It is also home to Dublin City's velodrome.

Figure 5.5: the Eamonn Ceannt Park (Source: Google Images, 2022).

(4) Flanagan's Field Community Garden

5.19 Flanagan's Fields community garden is an inner-city community garden located on Reuban Street and named after Dublin-born Michael Flanagan. The garden was established in 2010 and is still very much popular in the community. The garden

combines 21st-century growing methods and cutting-edge technology to grow a range of nutritious food.

Figure 5.6: Flanagan's Fields community garden (Source: Google Images, 2022).

5.20 This assessment demonstrates that there are a number of open space, sports and recreational uses within the study area. The proposed open spaces will make an important contribution to the existing open space in the area. As such it is considered that there is plenty of open space and sports activities located in the vicinity of the subject site which can accommodate the additional population that will be generated by the proposed development.

5.21 The facilities indicated above are deemed to be within a reasonable distance of the subject site. This is in addition to open spaces in close proximity to the site. Thus, the scheme includes good provision of sports and recreational facilities which will enhance the provision in the area.

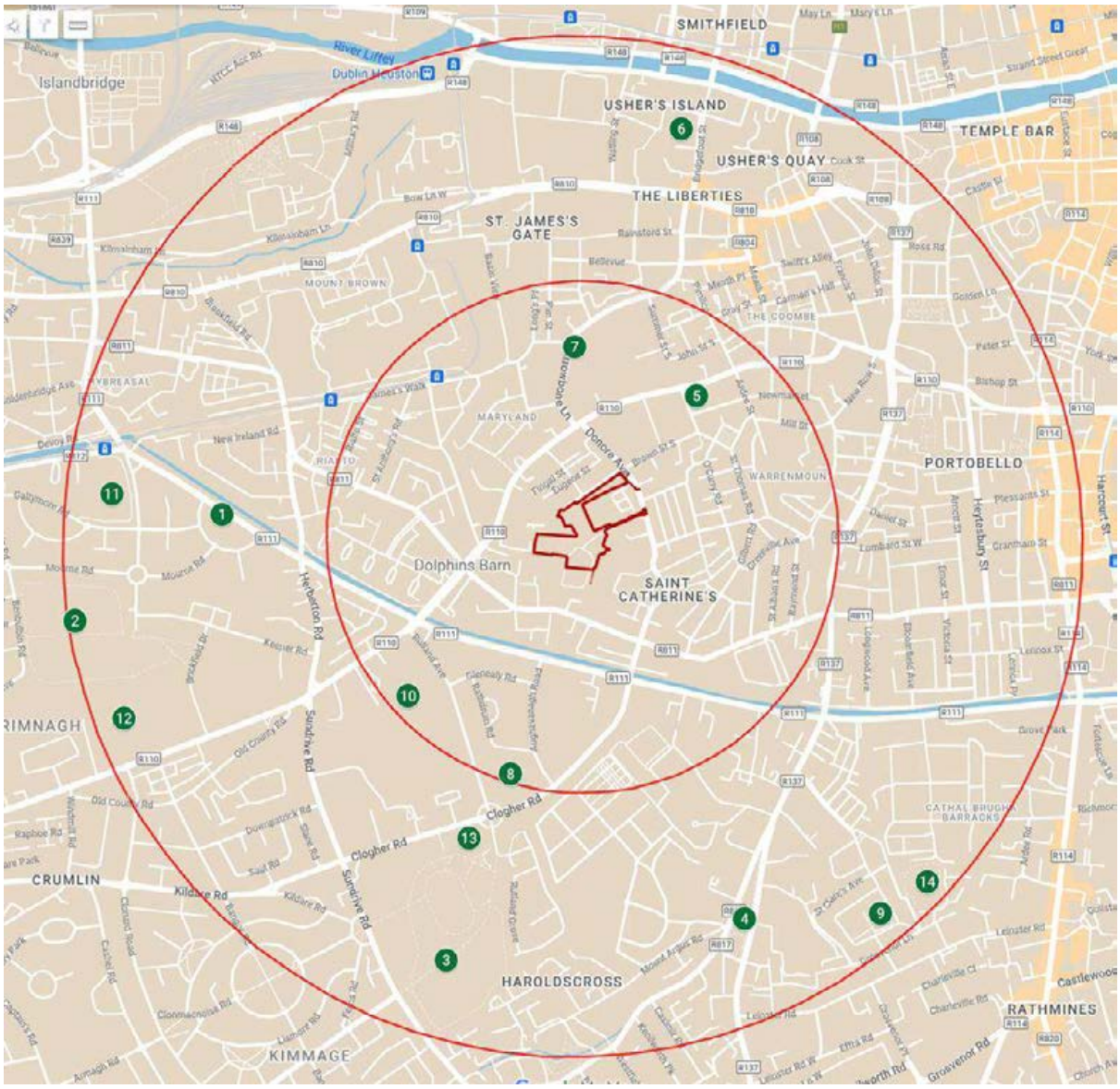

Figure 5.7: Overview of Open Space and Recreation Facilities within 750m and 1.5 km.

Name	Type	Address
1. Dolphin Rd Park and Outdoor Public Gym	Park	137 New Ireland Rd, Rialto, Drimnagh, Dublin, D08 FE0R
2. Brickfield Park	Park	Brickfield Park, Drimnagh, Dublin
3. Eamonn Ceannt Park	Park	Eamonn Ceannt Park, Harold's Cross, Dublin
4. Harold's Cross Park	Park	Harold's Cross Rd, Harold's Cross, Dublin
5. Weaver Park	Park	128 Cork St, Merchants Quay, Dublin, D08 K5RH
6. Bridgefoot Park	Park	Bridgefoot Street, Dublin 8.
7. Flanagan's Fields community garden	Garden	8 Reuben St, Ushers, Dublin 8, D08 W6F3
8. St Catherine's Community Sports Centre, The Liberties	Sports Centre	Marrowbone Ln, The Liberties, Dublin 8

9. Transport Club	Sports grounds	129A Rutland Ave, Crumlin, Dublin 12, D12 YH50
10. Stratford Lawn Tennis Club	Sports grounds	Grosvenor Square, Rathmines, Dublin, D06 HP90
11. Templeogue Synge Street GAA grounds	Sports grounds	65B, 65B Crumlin Rd, Crumlin, Dublin 12, D12 CPR2
12. Good Counsel GAA Club	Sports grounds	Davitt Rd, Goldenbridge, Drimnagh, Dublin 12
13. Iveagh Sports grounds	Sports grounds	Guinness Athletic Union Iveagh Grounds, Crumlin Rd, Crumlin, Dublin, D12 TY0R
14. Lourdes Celtic Football Club	Sports grounds	Sundrive Pavilion Eamonn Ceannt Park, Crumlin, Dublin 12
15. Portobello GAA Club	Sports grounds	Grosvenor Lane, Leinster Rd, Dublin 6, D06 PP29
16. Flanagan's Field Community Garden	Community Garden	8 Reuben St, Ushers, Dublin 8, D08 W6F3
17. Drimnagh Boxing Club	Recreation	Keeper Rd, Drimnagh, Dublin
18. 35th Dublin Donore Scout Group	Recreation	Arbutus Ave, Parnell Rd, Harold's Cross, Dublin 12
19. 87th Polish Scout Group	Recreation	100 Parnell Rd, Crumlin, Dublin
20. 55th Dublin Scout Group	Recreation	9, Village House, Dolphin's Barn St, Dolphin Barn, Dublin 8, D08 WF58

Educational Facilities

5.22 The following range of education facilities including: pre / after school, primary, secondary, third level colleges and further education facilities were identified within close proximity of the subject site.

5.23 The map below illustrates the high concentration of schools within a 1.5 km radius of the subject site. Appendix 1-2 lists details of individuals facilities.

5.24 The proposed development includes a childcare facility; the rationale and justification for this facility is set out in Appendix 3.

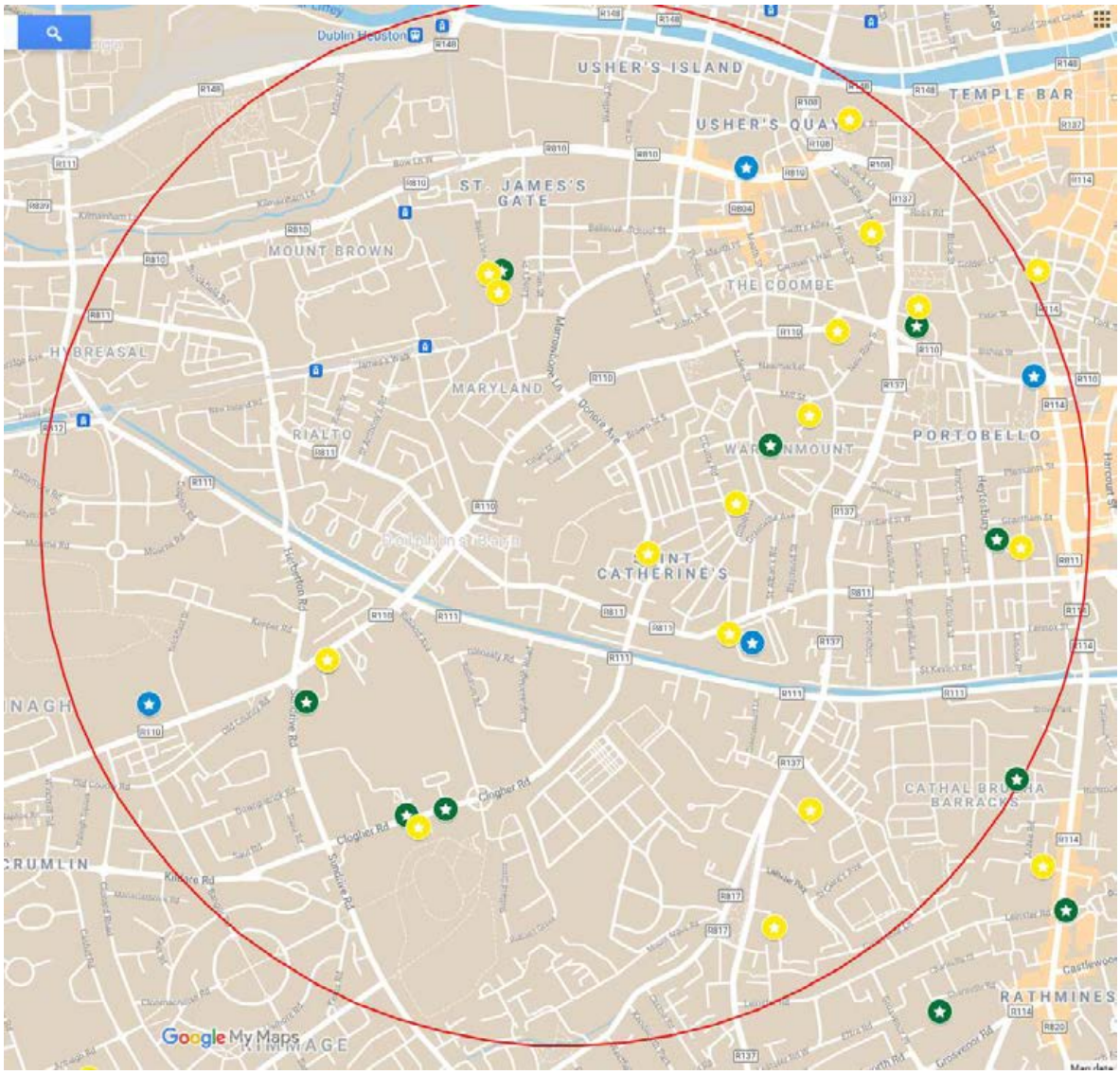

Figure 5.8: Overview of Education Facilities within 1.5 km with approximate locations.

	Primary Schools
	Secondary Schools
	Third level institutes

Primary Schools

5.25 The primary education sector includes a range of school types, including state-funded schools, special schools and private primary schools. The state-funded schools include religious schools, non-denominational schools, multi-denominational schools and Gaelscoileanna (Irish-medium schools).

5.26 The State pays the bulk of the building and running costs of state-funded primary schools. Although children are not obliged to attend school until the age of six, almost all children begin school in the September following their fourth birthday. Nearly 40% of four-year-olds and almost all five-year-olds are enrolled in infant classes in primary schools (sometimes called national schools). Primary education consists of an eight-year cycle: junior infants, senior infants, and first to sixth classes. Pupils normally transfer to post-primary education at the age of twelve.

5.27 We note 18 No. primary schools within 1.5 km of the subject site, catering for 3,577 No. pupils. Please see Appendix 2 for full list of these primary schools.

5.28 Based on an average primary school-going age cohort of 12% of the population (as per the Department of Education methodology for calculating school demand), the additional post-primary school-going population which would be required to be planned for within the South-West Inner City area equates to c. 201 no. children (5.8% of 3,577 at maximum occupancy).

Secondary Schools

5.29 The post-primary education sector comprises secondary, vocational, community and comprehensive schools. Secondary schools are privately owned and managed. Vocational schools are state-established and administered by Education and Training Boards (ETBs), while community and comprehensive schools are managed by Boards of Management.

5.30 Post-primary education consists of a three-year Junior Cycle (lower secondary), followed by a two- or three-year Senior Cycle (upper secondary), depending on whether the optional Transition Year (TY) is taken.

5.31 Students usually begin the Junior Cycle at age 12. The Junior Certificate examination is taken after three years. The main objective of the Junior Cycle is for students to complete a broad and balanced curriculum, and to develop the knowledge and skills that will enable them to proceed to Senior Cycle education The Senior Cycle caters for students in the 15-to-18-year age group. It includes an optional Transition Year, which follows immediately after the Junior Cycle. We have surveyed the number of schools in the wider 1.5 km area, as these schools are likely to serve the future residents of the proposed development.

5.32 We note 8 No. post-primary schools within 1.5 km of the subject site, catering for 1,968 No. pupils. Please see Appendix 3 for full list of these primary schools.

5.33 Based on an average secondary primary school-going age cohort of 8.5 % of the population (as per the Department of Education methodology for calculating school demand), the additional post-primary school-going population which would be required to be planned for within the South-West Inner City area equates to c. 143 no. children (7.2 % of 1,968 at maximum occupancy).

5.34 Following a nationwide demographic exercise carried out by the Department of Education and Science into the current and future need for primary and post-primary school places across the country, the Minister announced plans in April 2018, for the establishment of 42 new schools over the following 4 years (2019 to 2022). 26 of these schools are intended for primary level and 16 at post-primary level. However, the requirement for new schools is kept under on-going review and in particular would have regard to the impact of the increased rollout of housing provision to meet balanced regional development as outlined in Project Ireland 2040.

5.35 Considering the relatively small projected increase of students to the nearby school going population we consider there to be sufficient capacity within the existing schools for the future population.

Enrolment Trends

5.36 The Department of Education and Skills (DoES) reported in November 2021 that enrolment figures for primary schools in Ireland were likely to have reached peak levels in 2018 and are now projected to gradually decline in all population scenarios, with the preferred M1F2 scenario] suggesting a low point of c. 440,000 pupils by 2033. This is 120,860 lower than current figures. The DoES projection then anticipates an increase, expected to rise to 474,888 by 2040, an increase of 34,300 primary pupils over a 7-year period (2033-2040), in line with revised migration and fertility assumptions for the country. The latest statistical release by the DES in this respect state states: "Enrolments in primary schools in Ireland in 2020 stood at 561,411 down by almost 6,000 on 2019 (567,716)."

"…the sharpest fall is anticipated in the early period and will average 12,000 pupils per year between 2022 and 2028. Following the low point, in 2033 enrolments will rise more slowly in 2034-2036 before accelerating in 2040 (+6,967)"

5.37 Post-primary enrolments, however, is expected to continue to rise in the short-term and to reach record levels in 2024, with peak of c. 408,000 pupils, before falling gradually to c. 317,000 pupils by 2039. The DES report states:

"Enrolments in post-primary schools have risen by 26,923 (8%) over the past five years and are projected to continue rising over the short term. Under M1F2 they are projected to peak in 2024 with 408,794 pupils, some 29,610 higher than in 2020."

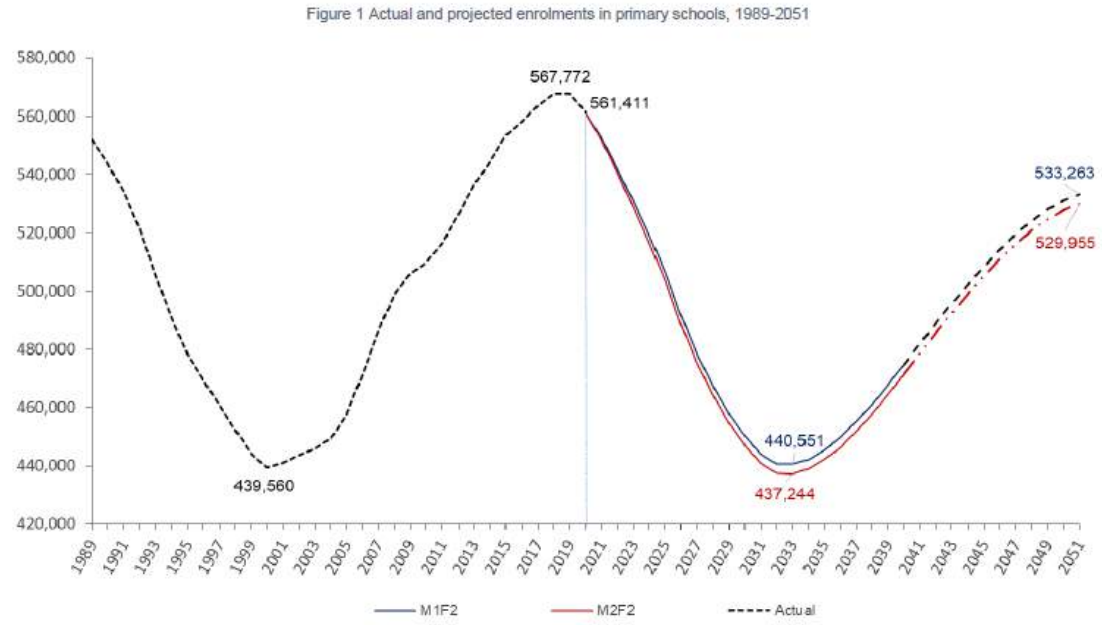

Figure 5.9: Projections of Enrolment at Primary Level, 1989–2051, organized by growth projection scenarios created by the CSO. (Source: DoE, November 2021).

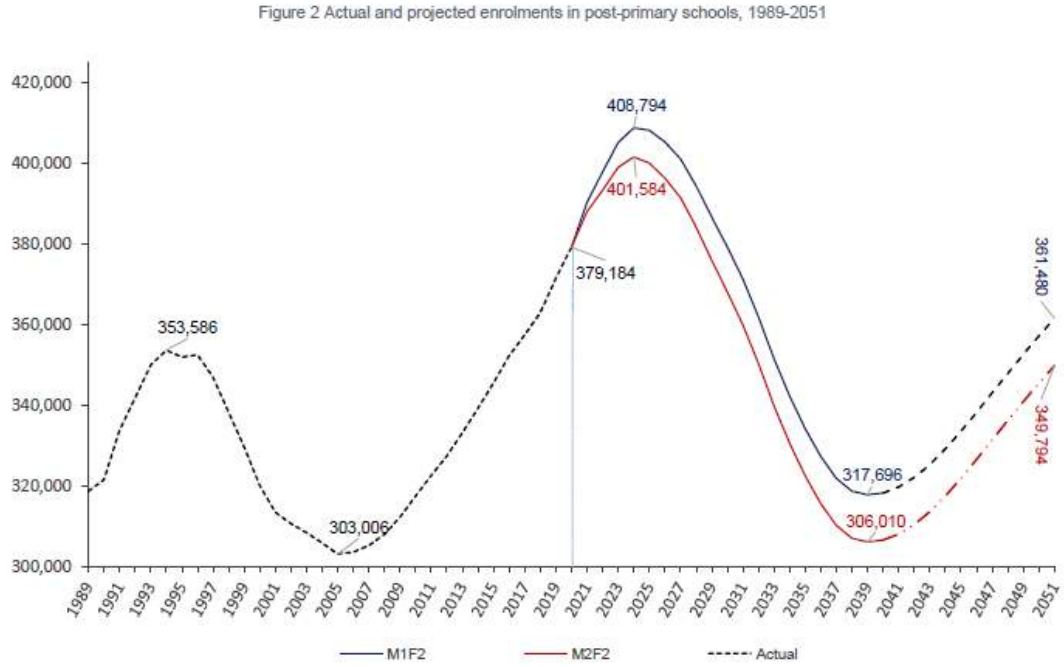

Figure 5.10: Projections of Enrolment at Post-Primary Level, 1989–2051, organized by growth projection scenarios created by the CSO. (Source: DoE, November 2021).

Schools' Admissions Notices

5.38 As per Section 63 of the Education (Admissions to School) Act, in 2018, the schools are required to publish an Annual Admissions Notice each year with key information about the annual admissions process. This Act further states that, although the schools can decide when to run their admissions process, they cannot accept applications for admissions for the school year concerned before 1 October in the previous year. This review helped determine the trend in schools for admitting students into the classes

each year. The admissions notices for almost all the schools (Primary and Post-Primary) indicated the spaces made available are for Junior Infants (722 spaces) in Primary Schools and first year (384 spaces) in Post Primary Schools. It should be noted that these are spaces made available for the academic 2022/2023, not existing capacity. Where schools have not provided sufficient information on their intake for the next academic year these have been assumed to be zero.

5.39 The schools have a combined total of 1,106 spaces available for 2022-2023 academic year of which 722 no. space catered to primary schools, 384 no. spaces to post primary schools.

Potential Impact on the Study Area

5.40 Using the projected enrolment figures for Dublin Region, produced within the Department of Education's publication Projections for full-time enrolment: Primary and Second Level, 2021-2040, we were able to extrapolate the future enrolment for the 2025-26 academic year for the study area.

5.41 The report projects the enrolment figures in primary schools within Dublin region to drop by 9.81% between academic years 2020/21 and 2025/26. Applying this future projection figure to the current enrolment figures within the study area it is estimated that the enrolments in 18 primary schools identified in the assessment are set to reduce by 350 spaces by the 2025/26 academic year.

5.42 At the post primary level, the report projects the enrolment figures to increase by 7.65% between the academic years 2020/21 and 2025/26. This would result in an increase of 150 children in the 8 post primary schools identified within the study area by 2025/26 academic year. We note that the indicative change figures provided are an estimate of potential enrolments at each school level based on the regional population projections included in the DoE report and do not represent localized values.

Third Level and Further Education

5.43 Third-level education in the Republic of Ireland includes all education after second level, encompassing higher education in universities and colleges and further education on Post Leaving Certificate (PLC) and other courses.

5.44 There are a number of third level institutes in the surrounding area which include:

- Trinity College, Dublin (TCD) is located at the heart of Dublin City Centre c.2.1 km from the subject site. Trinity College is widely considered one of Europe's elite universities, in part due to its historical significance. Academically, it is divided into three faculties comprising 23 schools, offering degree and diploma courses at both undergraduate and postgraduate levels. It now has over 15,000 undergraduate and postgraduate students.
- The National College of Art and Design (NCAD) is Ireland's oldest art institution, offering the largest range of art and design degrees at undergraduate and postgraduate level in the country. Originating as a drawing school in 1746, many of the most important Irish artists, designers and art educators have studied or taught in the college. The College has around 950 full-time students and a further 600 pursuing part-time courses.
- Technological University Dublin's Aungier Street Campus is located c.1.3 km m east of the subject site. The university was formed by the amalgamation of three existing institutes of technology in the Dublin area – Dublin Institute of

Technology, Institute of Technology, Blanchardstown, and Institute of Technology, Tallaght. TU Dublin now has over 3,000 staff and a student population of 28,500. The College of Business, the School of Media and the Department of Legal Studies are based in Aungier Street. Student facilities include the library; students' union area; computer rooms and cafeteria.

- Given the highly accessible nature of the site other large-scale universities such as Technological University Dublin's Tallaght Campus and University College Dublin are conveniently accessible via public transport (Luas and Bus respectively).
- There are a number of other further education facilities such as Griffith College, Pearse College, and Crumlin College of Further Education within close distance of the subject site.

5.45 It is clear that this part of Dublin City is well served by all types of education facilities.

Childcare Facilities

5.46 Within just c.1.5 km alone we noted 28 No. childcare facilities providing a range of services from full day to sessional for a range of age profiles with a cumulative capacity for 1,337 No. children. We have prepared a childcare facility assessment as part of this application, and this is contained within Appendix 3 which sets out full details of existing childcare facilities, and an assessment of future needs.

5.47 Considering the proposed development's characteristics, namely unit mix; the demographic profile of the area and the permitted provision of childcare facilities, the scale of development existing, under construction and permitted for the area, we submit that the proposed childcare facility as proposed as part of the overall apartment scheme is sufficient to meet the demand of the future population created by the proposed development.

5.48 The provision of a Creche/Childcare Facility of c.664 sqm (equating to c. 130 no. child spaces), in combination with recently permitted and existing childcare facilities in the area, meets the requirements of delivering this proposed scheme of development.

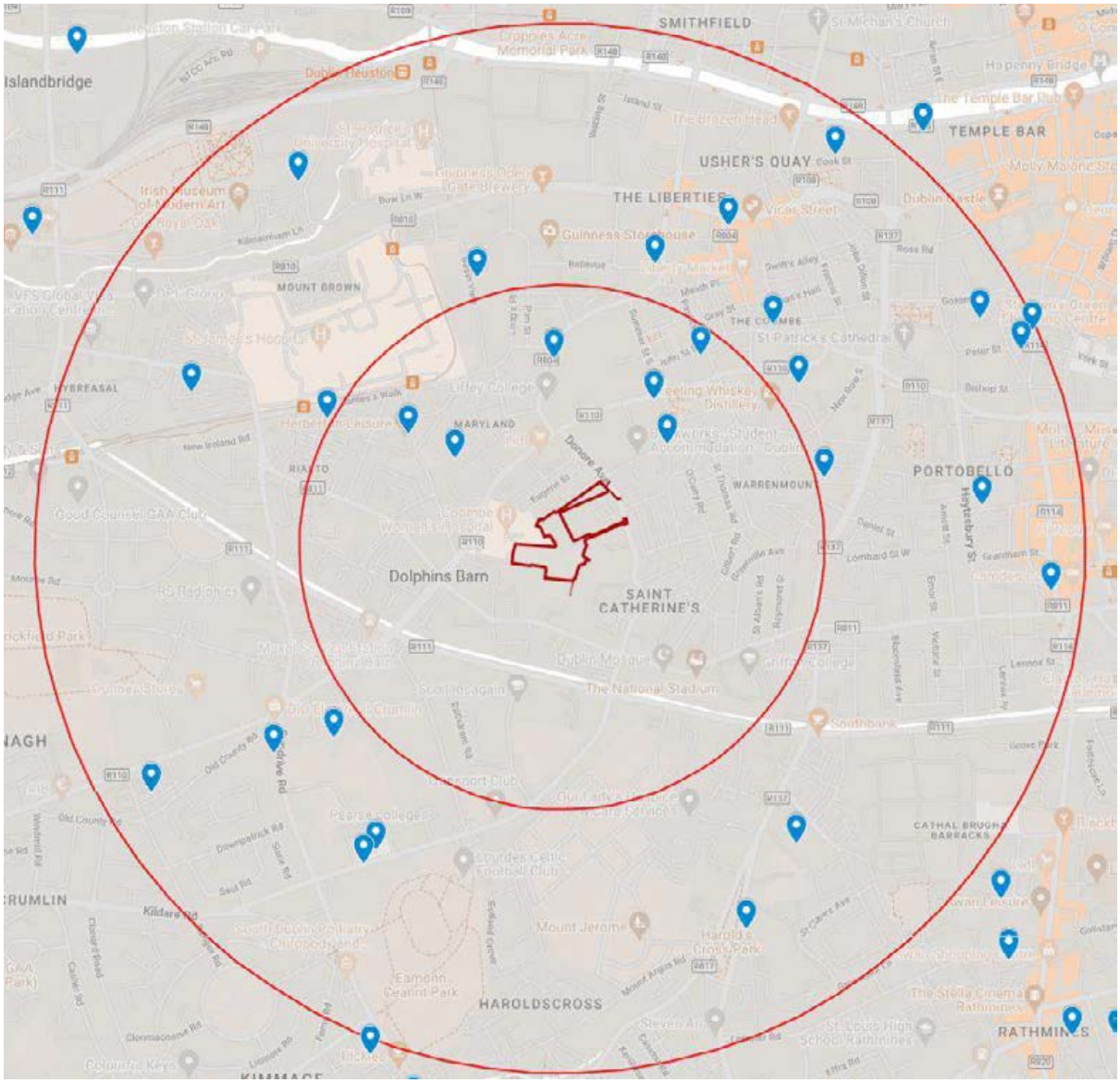

Figure 5.11 Overview of Childcare Facilities in within 1.5km (Source: Google Maps / Tulsa's Register of Early Year Services, dated: May 2022).

Healthcare Facilities

5.49 Healthcare within the study area is provided by a range of different organisations including public, voluntary and private agencies. The Health Services Executive is the primary agency responsible for delivering health and personal social services in Ireland. In recent years, primary care has been identified as the most effective and cost-efficient way to treat patients. This offsets dependence on the hospital system allowing most patient care to take place at local, community locations which feature multi-disciplinary teams of healthcare professionals working together.

5.50 For specialist services individuals may be willing to travel further, as the proposed development is located within the Great Dublin Area it has access to national public hospitals, private hospitals, high-tech hospitals, accident and emergency services, psychiatric hospitals, rehabilitation centres, orthopaedic hospital and hospices.

5.51 Many of the healthcare facilities are clustered around the City Centre. However, St. James' Hospital and The Coombe Women & Infants Hospital are located in close

proximity to the subject site providing a significant range of healthcare needs. The National Children's Hospital is currently under construction within the James's Hospital Campus and will provide a world class facility in the future. In addition, there are 2 other primary care centres in the area including Inchicore Primary Care Centre and Rialto Primary Care Centre, for more everyday healthcare needs.

5.52 We also note the Donore Community Drug & Alcohol Team whom are working with the community of Donore Avenue and the surrounding areas to assist all those affected by addiction problems, to promote healthy well-being and to improve the quality of life for those who use the service. This service is based in the Donore Youth and Community Centre.

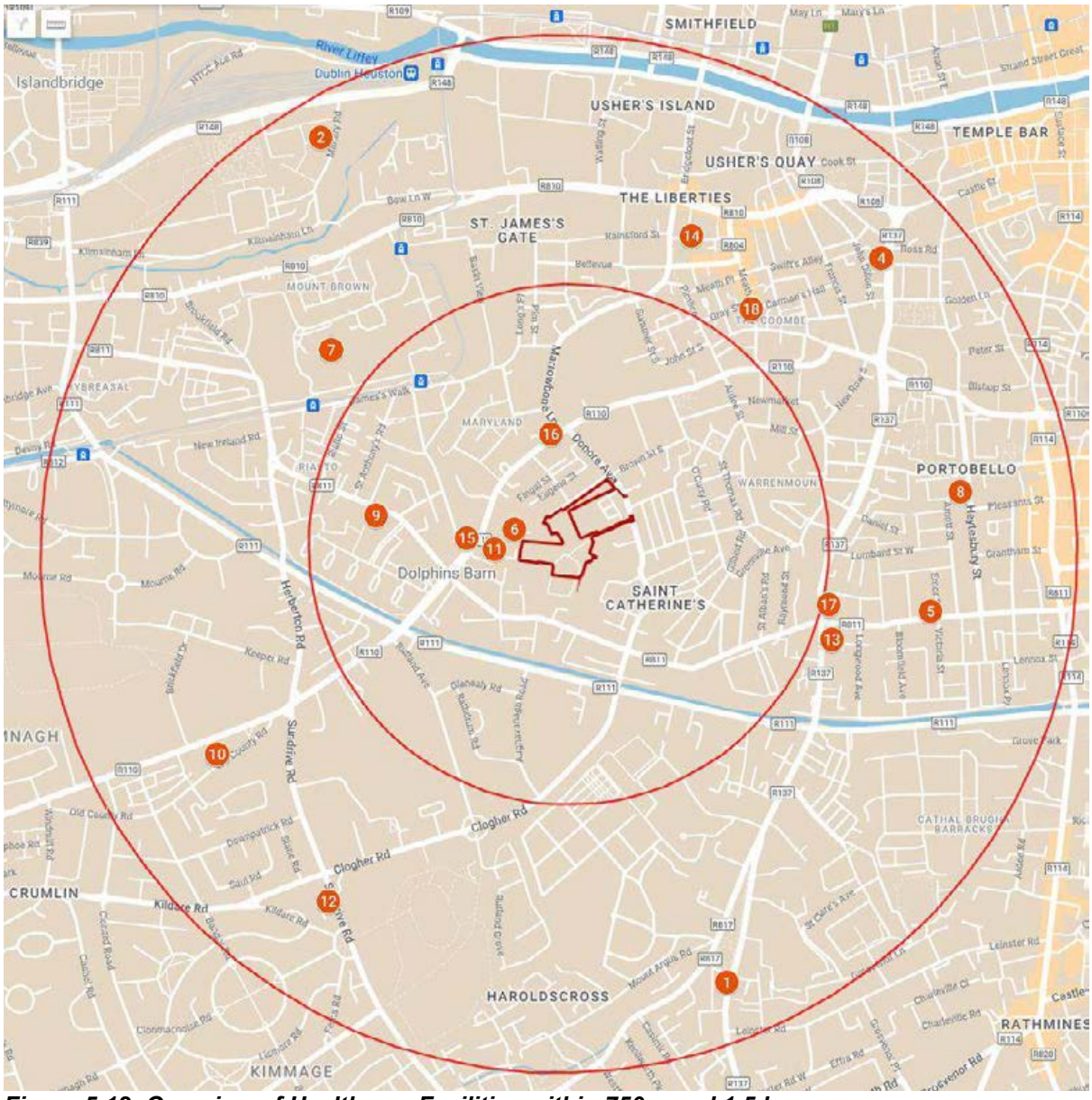

Figure 5.12: Overview of Healthcare Facilities within 750m and 1.5 km.

Name	Type	Address
1. Crown Dental Clinic	Dentist	196 Harold's Cross Rd, Terenure, Dublin, D6W VN24
2. Dublin Dental Specialist Clinic	Dentist	Heuston South Quarter, Unit 8A Dargan Building, Military Rd, Dublin
3. HSE Dental Clinic	Dentist	Old County Rd, Crumlin, Dublin
4. Patrick Street Dental	Dentist	Ardilaun Court, Nicholas House, Patrick St, The Liberties, Dublin 8
5. Portobello Dental Clinic	Dentist	34 S Circular Rd, Portobello, Dublin, D08 PHK2
6. Coombe Women's Hospital	Hospital	Cork St, Saint James' (part of Phoenix Park), Dublin, D08 XW7X
7. St. James's Hospital	Hospital	James St, Saint James' (part of Phoenix Park), Dublin 8, D08 NHY1
8. Old Meath Hospital	Primary Care Centre	Old meath hospital, Heytesbury St, Dublin
9. Rialto Primary	Primary Care Centre	383 S Circular Rd, Saint James' (part of Phoenix Park), Dublin 8, D08 RY99
10. Old County Road Health Centre	Primary Care Centre	57 Old County Rd, Crumlin, Dublin 12, D12 KT66
11. Coombe Family Practice	Private practice	8 Dolphin's Barn St, Saint James' (part of Phoenix Park), Dublin
12. Dr Catherine King	Private practice	172 Sundrive Rd, Kimmage, Dublin, D12 V2CY
13. South Circular Road GP Clinic	Private practice	106a S Circular Rd, Wood Quay, Dublin, D08 K2V6
14. Thomas Court Medical Centre	Private practice	1 St Catherine's Ln W, The Liberties, Dublin 8
15. Coombe Community Pharmacy	Pharmacy	Unit 2 Earls Court Building, Dolphin's Barn St, Dublin, D08 RDC9
16. Your Local Pharmacy	Pharmacy	McGoverns Corner, 2 Cork St, The Liberties, Dublin 8, D08 NP22
17. Leonards Corner Pharmacy	Pharmacy	106 S Circular Rd, Portobello, Dublin 8, D08 AHR8
18. Foley's Pharmacy	Pharmacy	39 Meath St, The Liberties, Dublin 8, D08 T0X4

Table 6.2: Overview of Healthcare Facilities within 750m and 1.5 km.

5.53 It is evident that there is a wide-ranging number and variety of health care facilities in the area. This level of provision within proximity to the subject site constitutes excellent service provision for the community and is considered sufficient to cater for the additional needs arising from the proposed development.

Religious Facilities

5.54 Religious and community facilities are a very important part in the provision of neighbourhood facilities. Due to its primacy and historic nature Dublin City has a range of religious facilities. In many cases, as described below community facilities are associated with these religious facilities.

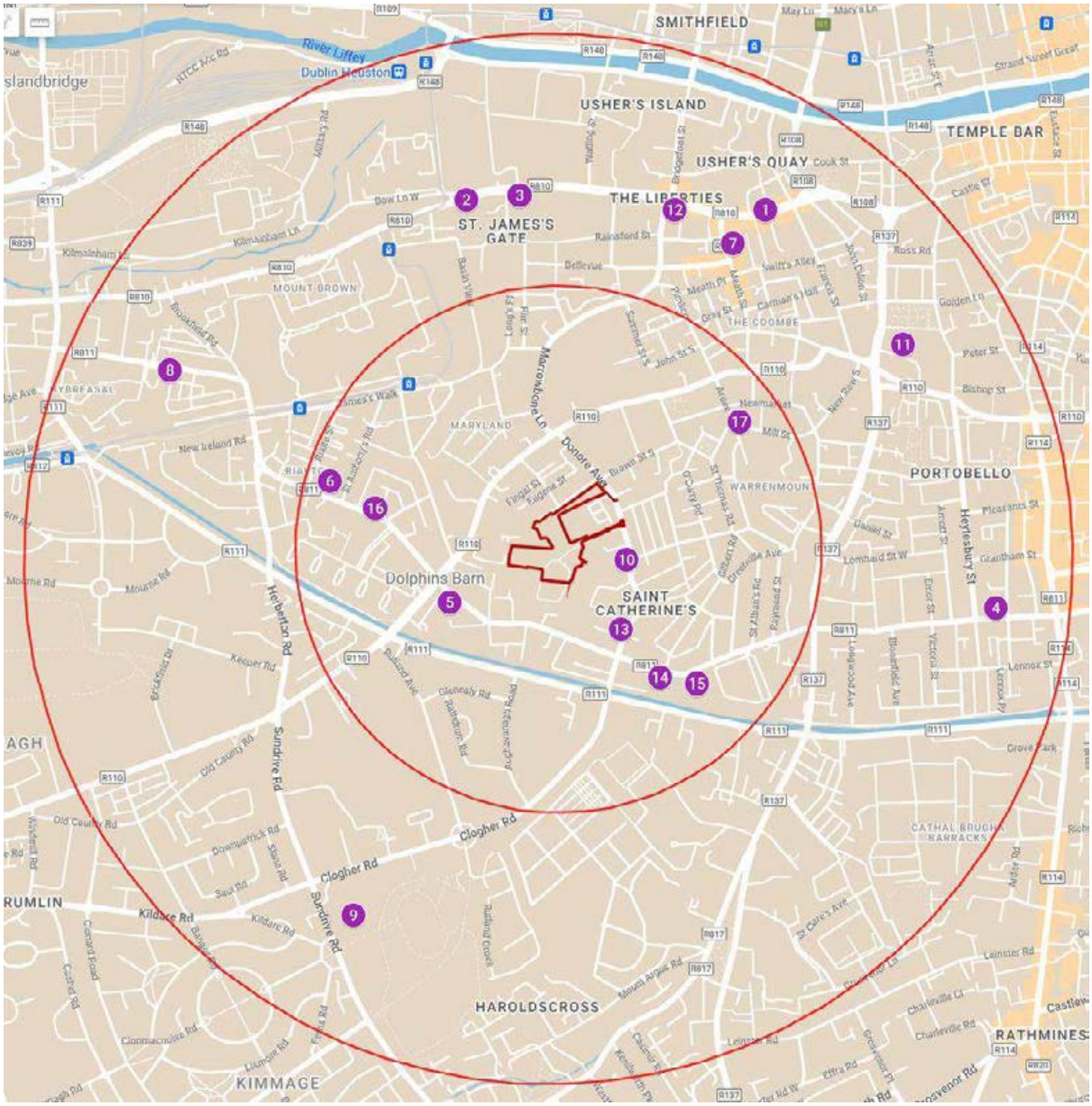

Figure 5.13: Overview of Religious Facilities within 750m and 1.5 km.

Name	Description
1. John's Lane Church	Catholic
2. Parish of St James	Catholic
3. Saint James's Roman Catholic Church	Catholic
4. St. Kevin's Church, Harrington Street, Dublin	Catholic
5. Our Lady of Dolours Church	Catholic

6. Rialto Parish Roman Catholic Church	Catholic
7. St Catherine's Church, Dublin	Catholic
8. St Peter's Church	Catholic
9. St. Bernadette's Church	Catholic
10. St. Teresa's Church	Catholic
11. St Patrick's Cathedral	Church of Ireland
12. Saint Catherine's Church of Ireland	Church of Ireland
13. St. Catherine & St. James' Church of Ireland	Church of Ireland
14. Dublin Mosque	Islam
15. All Nations Church	Not specified
16. House of the Rock	Not specified
17. Liberty Church	Not specified

Table 6.4: Overview of Religious Facilities within 750m and 1.5 km.

Arts & Cultural Facilities

5.55 It is widely recognised that arts and culture are key cornerstones in the sustainable development of new communities, helping to define and preserve identity, promote social activity, and offer valuable educational and economic returns. Dublin City has a strong network of artists, performers and musicians promoting cultural activities. Many of these organisations are difficult to pinpoint on a map, however this section attempts to identify some of the active organisations in the area.

5.56 Dublin City Council Arts Office provides a service that supports the development of creative people and communities through the Arts. Provision and support of high-quality arts experiences are central to the service. This is realised through research, programmes, events, grants and awards and the development of on-line and off-line resources.

5.57 Community, arts, cultural and exhibition space together with artist and photography studios, are proposed to be located within the Player Wills Factory as part of the adjacent Hines's development (ABP-308917-20). Provision for the expansion of St Catherine's National School has been accommodated within the Player Wills site within the application by Hines (ABP Reg. Ref. (ABP-308917-20).

Dublin City Cultural Audit and Map

5.58 DCC commissioned Turley to prepare a Cultural Audit and Map with recommendations in order to deliver Priority 2(4) and 3(1) of the Dublin City Cultural Strategy (2016-2021). This has in turn informed the preparation of the Dublin City Development Plan 2022 – 2028, The Dublin City Cultural Audit and Map is an audit, map and a dynamic database with cultural information about the city. Information on the map includes arts and heritage, parks and nature, sport and fitness, food, hobbies, community involvement and education, as well as artists and makers who call Dublin home.

5.59 We have cross referenced the findings of this audit which references many types of cultural and community facilities in Dublin. Figure 5.

5.60 In addition to the above, the following arts and cultural facilities have been identified in the study and provided a variety of uses to the community:

Name	Type	Address
1. The Royal Hospital Kilmainham in Kilmainham	Art Gallery	Military Road, Saint James' (part of Phoenix Park), Dublin 8
2. St. James's Gate Brewery	Museum	53 James's Street St James's Gate, Dublin 8
3. College of Dance	Venue	St. Catherine's Sports Centre, Marrowbone Lane, Dublin, D08 W5WC
4. The Village	Venue	Wexford St, Portobello, Dublin
5. Vicar Street	Venue	58-59 Thomas St, The Liberties, Dublin 8
6. Whelan's	Venue	25 Wexford St, Portobello, Dublin 2, D02 H527
7. Fumbally Exchange	Creative collective	Argus House, Blackpitts, The Liberties, Dublin 8
8. Islamic Foundation of Ireland	Cultural Centre	163 S Circular Rd, Saint Catherine's, Dublin 8, D08 F642
9. Afro-Eire	Music school	Church Park Ave, Harold's Cross, Dublin
10. Gallery Zozimus	Gallery and antiques	57 Francis St, The Liberties, Dublin 8, D08 HY72
11. Sarah Walsh, Artist. (formerly SCWalsh Painter & Printmaker)	Artist	Studio HX2 Mart Harolds Cross Village Studios, 18A Greenmount Ln, Harold's Cross, Dublin 12, D12 C953
12. Peter Young - Stained Glass Artist / Ireland	Artist	107 Cork St, Saint Catherine's, Dublin 8, D08 FX4C
13. Mia McVey Designs	Artist	Bow Ln W, Saint James' (part of Phoenix Park), Dublin, D08 NW89
14. ayelet lalor	Artist	Maryland, Dublin
15. Pallas Projects/Studios	Artist	115–117 The Coombe, Dublin 8 Ireland D08 A970
16. Teeling Whiskey Distillery	Tourist attraction	13-17 Newmarket, The Liberties, Dublin 8, D08 KD91
17. The Dublin Liberties Distillery	Tourist attraction	33 Mill St, The Liberties, Dublin, D08 V221
18. Irish Jewish Museum	Museum	3 Walworth Rd, Portobello, Dublin 8, D08 TD29

Table 6.5: Key cultural Facilities in South Dublin Inner City within 750m and 1.5 km.

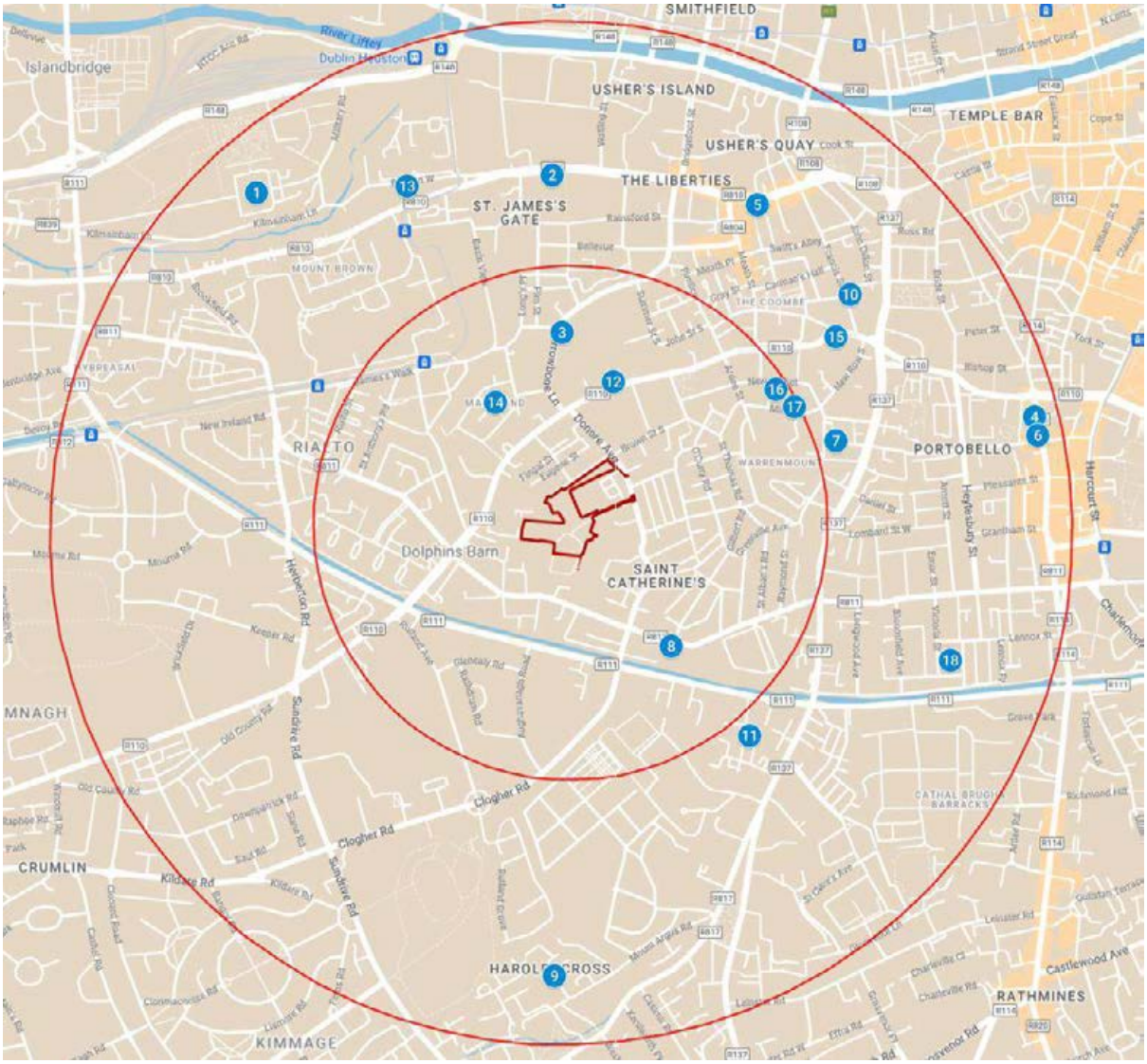

Figure 5.14: Overview of cultural resources (Source: Google Maps, 2022).

5.61 We note the following large-scale museum and locations in close proximity to the site from the map which have multiple functions in the area:

The Irish Museum of Modern Art

5.62 The Royal Hospital Kilmainham in Kilmainham, Dublin, is a former 17th-century hospital at Kilmainham in Ireland. The structure now houses the Irish Museum of Modern Art. The Royal Hospital in Kilmainham was finally restored by the Irish Government in 1984 and opened as the Irish Museum of Modern Art (IMMA). In recent years, Royal Kilmainham Hospital has become a popular location for concerts during the summer months.

St. James's Gate Brewery

5.63 St. James's Gate Brewery was founded in 1759, by Arthur Guinness and has historic significance in the area and internationally, now being a major tourist attraction. Originally leased in 1759 to Arthur Guinness at £45 per year for 9,000 years, the St. James's Gate area has been the home of Guinness ever since. The company has

since bought out the originally leased property, and during the 19th and early 20th centuries, the brewery owned most of the buildings in the surrounding area, including many streets of housing for brewery employees, and offices associated with the brewery. The attached exhibition on the 250-year-old history of Guinness is called the Guinness Storehouse.

Vicar Street

5.64 Vicar Street is a concert, performing arts centre and events venue in Dublin, Ireland. Located on Thomas Street, Dublin 8, Vicar and is known for music and comedy. Vicar St has a seated capacity of 1050 and a standing capacity of 1500. Opened in 1998 and Extended in 2002. Vicar Street is owned by Harry Crosbie and operated by Peter Aiken.

College of Dance, St. Catherine's Sports Centre

5.65 Founded in 1990, The College of Dance is now recognised as Ireland's premier dance college providing full-time, foundation level, professional dance and performing arts training. Its' graduates have gone on to study, and win scholarships to, some of the most prestigious international conservatoires for dance and theatre studies. Graduates can be found working in these fields worldwide.

Assessment

5.66 In response to Objective CUO22 which requires 5% of floorspace for developments above 10,000 sq.m, and as set out in the Statement of Consistency and the Architectural Design Statement, the proposal provides for significant planning benefits including the provision public open space, improved permeability in this area of the city, café, mobility hub, arts and cultural space, artist workspace, mobility hub, childcare facility, and a significant quantum of social and affordable housing.

5.67 The proposed development consists of a residential scheme containing 543 No. apartments with a Net Internal Area of 36,218m2. 5% of this area equates to 1,811m2. A minimum of 50% of this area must be provided on site in the form of community/arts/cultural space, which equates to 905.5m2.

5.68 Within the proposed development the applicant proposes to provide 952m2 of internal floor space devoted to a mixture of community, arts and cultural space, broken down as follows:

- Community: Creche 664m2
- Arts: Artist Workspaces 160m2
- Culture: Cultural space 128m2

5.69 For further detail on this space please see MW's Architectural Design Statement and associated drawings.

5.70 In order to meet the 5% requirement, this leaves a shortfall of 857m2 of floorspace to be provided within the vicinity of the site. It is proposed that that this shortfall of 857m2 would be accommodated within the proposed refurbished and extended nearby Donore Community Centre (which has been closed in recent years), which when complete, will have over 1,400m2 of community space. We attach a letter from Dublin City Council confirming acceptance of this proposal to satisfy compliance with Objective CU022.

The proposed development is considered to be acceptable in this regard. Accordingly, the needs of the future residents within the proposed development regarding cultural uses are adequately met. The proposed development will also support existing facilities in the area.

Retail

5.71 Dublin City has a wide range of choice and type of retail uses in the immediate area. Key retail facilities are concentrated in the St. Stephen's Green (located just outside 1.5km distance of the centre point of the site), George's Street and Grafton Street areas. In addition, there are a number of neighbourhood and local centres catering for more everyday needs, including a range of convenience and local shops along Cork Street.

5.72 Crumlin Shopping Centre (currently undergoing redevelopment), Clanbrassil Street is also located nearby which provides for a range of everyday needs and services.

5.73 The following mix of retail uses were noted in these neighbourhood and local centres:

- Clothes and retail
- Book shops
- Restaurants and cafes
- Hairdressers and barbers
- Pharmacies
- Electronics
- Discount food stores
- Post office
- Banks and credit unions
- Mechanics and Car repairs
- Social welfare and other civic services (Intreo Centre Cork Street)

5.74 When considering the range of retail and other services available nearby and within in Dublin City Centre, it is considered that the proposed development is well provided for. The proposed development will provide a small scale retail unit for everyday needs.

5.75 There are a range of existing shops and services along Cork Street including supermarkets, pharmacies, pubs and cafes much of which are located within a 5 minute walking distance of the site.

5.76 The scheme will support existing businesses and help vacant units on Cork Street find occupiers through the influx of additional people in the area.

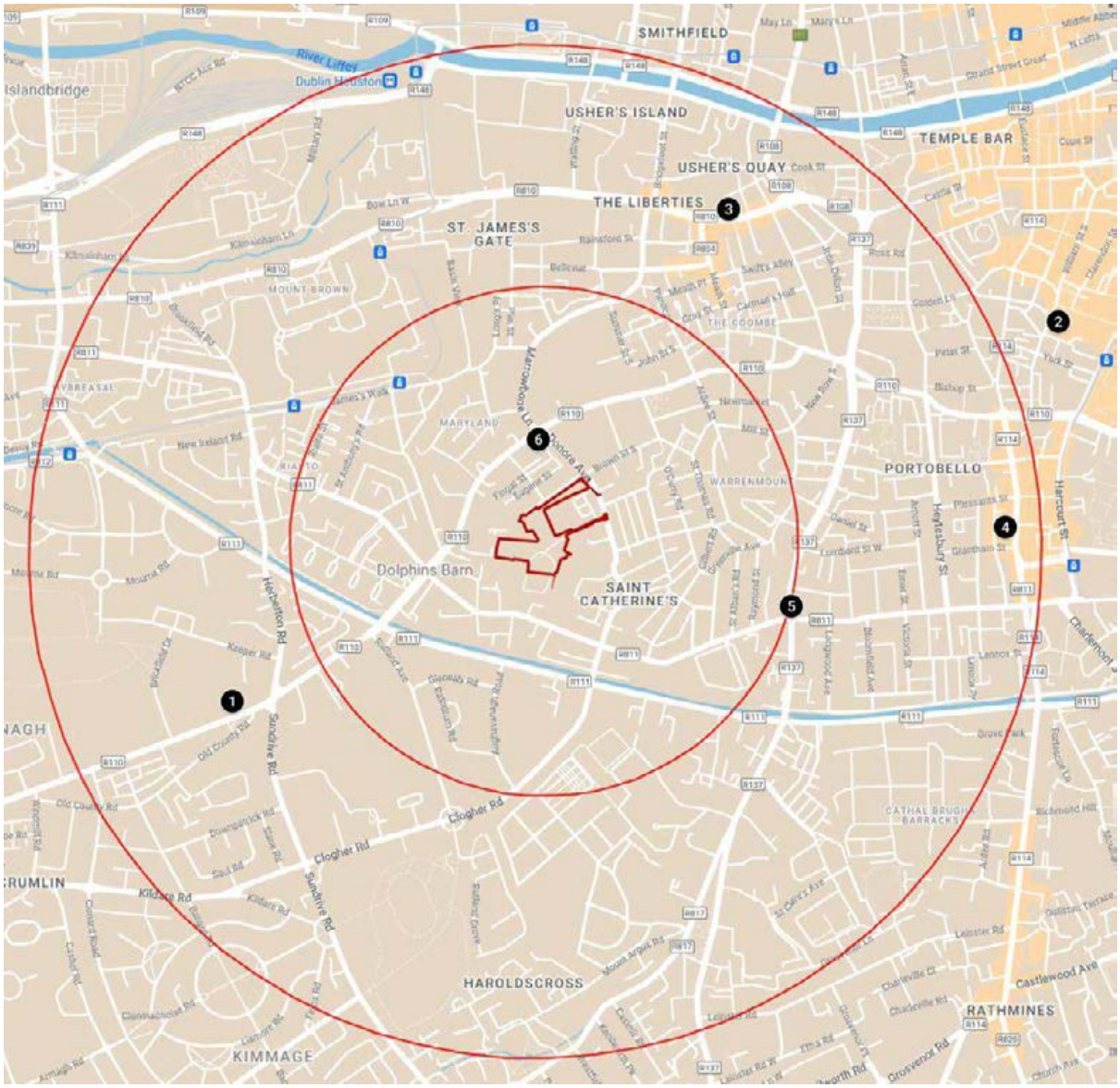

Figure 5.15: Key Retail Facilities in Dublin City within 750m and 1.5 km.

Name	Type	Address
1. Dunnes Stores	Shopping Centre	Crumlin Shopping Centre, Crumlin Rd, Crumlin, Dublin 12, D12 DRP4
2. Stephen's Green Shopping Centre	Shopping Centre	St Stephen's Green, Dublin, D02 HX65
3. Thomas Street	Local Retail	51 - 52 Thomas St, The Liberties, Dublin
4. Camden Street	Local Retail	The Lennox Building, 47-51 Richmond St S, Saint Kevin's, Dublin 2, D02 FK02
5. Clanbrassil Street	Local Retail	106 S Circular Rd, Portobello, Dublin 8, D08 AHR8
6. Cork Street	Local Retail	Cork Street.

Table 6.6: Key Retail Facilities in Dublin City within 750m and 1.5 km.

6.0 DEVELOPMENT PROPOSAL

6.1 It is considered that the proposed development will make a significant contribution to the built environment in Dublin City.

6.2 The development proposal has considered all of the requirements of SDRA12 and the Dublin City Development Plan, in particular the provision of the following:

- Public open space
- Retail / café unit
- Artist workspace, arts and cultural space including a childcare facility

6.3 The development will consist of the construction of a residential scheme of 543 no. apartments on an overall site of 3.26 ha.

6.4 The development (GFA of c. 53,227 sqm) contains the following mix of apartments: 225 No. 1 bedroom apartments (36 no. 1-person & 189 no. 2-person), 274 No. 2 bedroom apartments (including 52 No. 2 bed 3 person apartments and 222 No. 2 bed 4 person apartments), 44 No. 3 bedroom 5-person apartments, together with retail/café unit (168 sq.m.), mobility hub (52 sq.m.) and 952 sq.m. of community, artist workspace, arts and cultural space, including a creche, set out in 4 No. blocks.

6.5 The breakdown of each block will contain the following apartments:

- Block DCC1 comprises 111 No. apartments in a block of 6-7 storeys;
- Block DCC 3 comprises 247 No. apartments in a block of 6-15 storeys;
- Block DCC5 comprises 132 No. apartments in a block of 2-7 storeys;
- Block DCC6 comprises 53 No. apartments in a block of 7 storeys;

6.6 The proposed development will also provide for public open space of 3,408 sqm, communal amenity space of 4,417 sqm and an outdoor play space associated with the creche. Provision of private open space in the form of balconies or terraces is provided to all individual apartments.

6.7 The proposed development will provide 906 no. residential bicycle parking spaces which are located within secure bicycle stores. 5% of these are over-sized spaces which are for large bicycles, cargo bicycles and other non-standard bicycles. In addition, 138 spaces for visitors are distributed throughout the site.

6.8 A total of 79 no. car parking spaces are provided at undercroft level. Six of these are mobility impaired spaces (2 in each of DCC1, DCC3 & DCC5). 50% of standard spaces will be EV fitted. Up to 30 of the spaces will be reserved for car sharing (resident use only). A further 15 no. on-street spaces are proposed consisting of:

- 1 no. accessible bay (between DCC5 & DCC6)
- 1 no. short stay bay (between DCC5 & DCC6)
- 1 no. crèche set-down / loading bay (between DCC5 & DCC6)
- 1 no. set-down / loading bay (northern side of DCC5)
- 1 no. set-down/loading bay (northern side of DCC 3)
- 10 no. short stay spaces (north-east of DCC1)

6.9 In addition, 4 no. motorcycle spaces are also to be provided.

6.10 Vehicular, pedestrian and cyclist access routes are provided from a new entrance to the north-west from Margaret Kennedy Road. Provision for further vehicular, pedestrian and cyclist access points have been made to facilitate connections to the planned residential schemes on the Bailey Gibson & Player Wills sites for which there are extant permissions (Ref. No.'s ABP-307221-20 & ABP-308917-20).

6.11 The development will also provide for all associated ancillary site development infrastructure including site clearance & demolition of boundary wall along Margaret Kennedy Road and playing pitch on eastern side of site and associated fencing/lighting, the construction of foundations, ESB substations, switch room, water tank rooms, storage room, meter room, sprinkler tank room, comms room, bin storage, bicycle stores, green roofs, hard and soft landscaping, play equipment, boundary walls, attenuation area and all associated works and infrastructure to facilitate the development including connection to foul and surface water drainage and water supply.

6.12 The proposed development will also support the refurbishment and extended nearby Donore Community Centre (which has been closed in recent years), which when complete, will have over 1,400m2 of community space.

7.0 CONCLUSION

7.1 The purpose of this Assessment is to determine if the South Dublin Inner City area is well served by community related facilities to support the future residents of the proposed development.

7.2 In summary, it is considered that South Dublin inner city has a range open space and recreational facilities including a large number of education facilities, higher level college, and a good provision of community and local retail facilities located throughout the area. As such the facilities that South Dublin City currently offers are considered to be of a high standard and capable of meeting the needs of further residents of the Proposed scheme. They will be supplemented by the community and recreational facilities that will be development within the proposed scheme and adjoining sites as part of the regeneration of the St. Teresa's Gardens and adjoining land and will be able to support the future residents of the proposed development.

7.3 The site as it currently stands, provides no contribution to the built environment through public realm or retail for public use. The proposed development will include public open space, childcare, community, arts and cultural space, retail and high-quality pedestrian & cycling routes which will benefit the existing and the future residents in the area. Taken together with the additional community and recreational facilities planned by the City Council in the immediate vicinity of the subject site, the area will be well served by community, arts and cultural facilities to serve existing and future residents.

APPENDIX 1: LIST OF PRIMARY SCHOOLS WITHIN 1.5 km

Roll Number	Official Name	Address (Line 1)	Address (Line 2)	Ethos Description	Female	Male	Enrolment per Return	Admissions Notice
1. 13611D	Presentation Primary School	Warrenmount	Blackpitts	Catholic	130	74	204	50
2. 15625B	St Catherines West N S	Donore Avenue	South Circular Road	Church Of Ireland	101	101	202	27
3. 16786H	St Brigids Primary School	The Coombe	Dublin 8	Catholic	185	64	249	108
4.	SCOIL MHUIRE OGH 1	Crumlin Road	Dublin 12	Catholic	132	84	216	54
5. 17683C	Muire Og 2 Loreto Con	Crumlin Road	Dublin 12	Catholic	105	88	193	60
6. 17893N	Sancta Maria C B S	Synge Street	Dublin 8	Catholic	27	77	104	28
7. 18386B	Marist National School	Clogher Road	Crumlin	Catholic	189	50	239	60
8. 18477E	Scoil Na Mbrathar	John Dillon Street	Dublin 8	Catholic	14	154	168	22
9. 19480V	St Patricks	St Patrick's Close	Dublin 8	Church Of Ireland	15	15	30	48
10. 19933J	Scoil Treasa Naofa	Petrie Road	Donore Avenue	Catholic	70	110	180	26
11. 20012S	Griffith Barracks Multi D School	The Old Guardhouse	South Circular Road	Multi Denominational	167	194	361	56
12. 20104A	St Audoens Ns	Cook Street	Merchant's Quay	Catholic	79	102	181	22
13. 20429F	St. James's Primary School	Basin Lane	James' Street	Catholic	131	129	260	40
14. 20430N	Canal Way Educate Together National School	Basin Street Upper	Dublin 8	Multi Denominational	170	210	380	54
15. 16651H	St Clares Convent N S	Harold's Cross Road	Dublin 6W	Catholic	93	121	214	24
16. 14556D	St Endas	Whitefriar Street	Dublin 8	Catholic	61	62	123	21
17. 17603B	Scoil Iosagain Boys Senior	Aughavannagh Road	Dublin 12	Catholic		85	85	22

18. 00743W	Mater Dei National School	Basin Lane, James Street,	Dublin 8	Catholic	137	51	188	0
						Total	**3,577**	**722**

Source: last updated July 2022 https://www.gov.ie/en/collection/primary-schools/

APPENDIX 2: LIST OF POST-PRIMARY SCHOOLS WITHIN 1.5 km

Roll Number	Official School Name	Address 1	Address 2	Eircode	School Gender - Post Primary	Ethos/Religion	Female	Male	Total	Admissions Notice
1. 60560E	St Marys College	73-79 Lower Rathmines Road	Dublin 6	D06CH79	Boys	Catholic		467	467	96
2. 60660I	St Patricks Cathedral Grammar School	St Patricks Close	Dublin 8	D08WK19	Mixed	Church of Ireland	122	134	256	48
3. 60470D	Christian Brothers, Synge St.	Synge Street CBS Secondary School	Synge Street	D08R283	Boys	Catholic		279	279	48
4. 60800V	Loreto College	Crumlin Road	Dublin 12	D12E196	Girls	Catholic	381		381	72
5. 60792C	Presentation College	Warrenmount	Clarence Mangan Road	D08W0X7	Mixed	Catholic	131		131	48
6. 60410I	C.B.S. James Street	James's Street	Dublin 8	D08K338	Mixed	Catholic	53	108	161	
7. 70160R	Clogher Road Community College	Clogher Road	Crumlin	D12YP11	Mixed	Multi Denominational	50	134	184	
8. 68365A	Harolds Cross Educate Together Secondary School	151 -153 Harold's Cross Road	Dublin 6W	D6WHP44	Mixed	Multi Denominational	54	55	109	72
Total	**1,968**									**384**

Source: Statistics last updated July 2022 https://www.gov.ie/en/collection/post-primary-schools/#20212022

APPENDIX 3: CHILDCARE FACILITIES ASSESSMENT

Policy Context

Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas (2009)

The Guidelines state in Chapter 4 – Planning for Sustainable Neighbourhoods, that Planning Authorities should ensure efficient and integrated provision of schools, childcare, community centres, healthcare facilities and district/neighbourhood centres are made available for the wider community.

Section 4.5 of the Guidelines includes recommendations in response to childcare provision and specifically states the following:

"The Department's guidelines on childcare facilities (DoEHLG 2001) emphasise the importance of local assessment of the need to provide such facilities at the development plan or local area plan stage, having regard to the provision of existing facilities in the area. When considering planning applications, in the case of larger housing schemes, the guidelines recommend the provision of one childcare facility (equivalent to a minimum of 20 child places) for every 75 dwelling units. However, ***the threshold for such provision should be established having regard to the existing geographical distribution of childcare facilities and the emerging demographic profile of areas****, in consultation with city / county childcare committees. The location of childcare facilities should be easily accessible by parents, and the facility may be combined with other appropriate uses, such as places of employment."* (Emphasis added)

This report seeks to demonstrate that having regard to the existing and planned geographical distribution of childcare facilities in the area and having regard to the demand for childcare facilities from future residents of the development.

Guidelines for Planning Authorities on Childcare Facilities (2001)

The "Guidelines for Planning Authorities on Childcare Facilities" (2001) indicate that Development Plans should facilitate the provision of childcare facilities in appropriate locations. The Guidelines recommend that in larger new housing estates, Planning Authorities should require the provision of a minimum of one childcare facility with 20 places for each 75 dwellings. The threshold for provision should be established having regard to existing location of facilities and the emerging demography of the area where new housing is proposed. The Guidelines advise that sites should be identified for such facilities as an integral part of the pre-planning discussions.

The Guidelines state that '*planning authorities should require the provision of at least one childcare facility for new housing areas unless there are significant reasons to the contrary for example, development consisting of single bed apartments or where there are adequate childcare facilities in adjoining developments. For new housing areas, an average of one childcare facility for each 75 dwellings would be appropriate. (See also paragraph 3.3.1 and Appendix 2 below).* ***The threshold for provision should be established having regard to the existing geographical distribution of childcare facilities and the emerging demographic profile of areas.*** *Authorities could consider requiring the provision of larger units catering for up to 30/40 children in areas of major residential development on the basis that such a large facility might be able to offer a variety of services – sessional/drop in/after-school, etc'*. (Emphasis added)

We understand that a review of the Childcare Guidelines is scheduled by the Department, predicated on the accepted view that the current guidelines are too onerous / prescriptive.

Sustainable Urban Housing: Design Standards for New Apartments - Guidelines for Planning Authorities (2020)

The recommendations of the 2001 Childcare Facility Guidelines, outlined above, must be considered in the context of the Sustainable Urban Housing: Design Standards for New Apartments 2020, i.e., more recent Section 28 Ministerial Guidelines.

Section 4.7 of the Apartment Guidelines 2020 states the following in relation to childcare facilities:

"Notwithstanding the Planning Guidelines for Childcare Facilities (2001), in respect of which a review is to be progressed, and which recommend the provision of one child-care facility (equivalent to a minimum of 20 child places) for every 75 dwelling units, the threshold for provision of any such facilities in apartment schemes should be established having regard to ***the scale and unit mix of the proposed development and the existing geographical distribution of childcare facilities and the emerging demographic profile of the area****.* ***One-bedroom or studio type units should not generally be considered*** *to contribute to a requirement for any childcare provision and subject to location, this may also apply in part or whole, to units with two or more bedrooms*." (Emphasis added)

Demographic Profile

In order to gather a complete understanding of the immediate area we have prepared the following age profile of the local area focusing on education requirements (i.e., 0-19 years of age). The subject site is located in the Dublin City Council (DCC) local authority area and the South-West Inner City Local Electoral Area. The selected study area comprises the electoral divisions within a 1km radius as illustrated in Figure 1 below. For the purposes of comparison, we have also included figures for the state. Full figures are included as Appendix A.

Electoral divisions (ED's) were excluded were only marginally within the 1km radius. In total the following 13 No. ED's were included.

- Crumlin B
- Crumlin C
- Kimmage C
- Merchant's Quay B
- Merchant's Quay C
- Merchant's Quay F
- Merchant's Quay D
- Merchant's Quay E
- Ushers Quay F
- Ushers Quay C
- Ushers Quay D
- Ushers Quay E
- Wood Quay B

Figure 1: electoral divisions within 1km with site located. (Source: CSO 2016; Google Earth).

	State	%	LEA	%	DCC	%	EDs 1km	%
0-4	331,515	7.0%	2421	5.7%	30683	5.5%	2119	4.5%
05-12_	548,693	11.5%	2627	6.2%	42603	7.7%	2432	5.2%
13-19_	429,160	9.0%	1949	4.6%	38708	7.0%	1908	4.0%
Total population		**4,761,865**	**42,344**		**554,554**		**37,565**	

Table 1: Population for State, Dublin City & Local Electoral Areas broken down by age cohorts (source CSO Census 2016)

As clearly illustrated from the above, the numbers of children ages 0-4 requiring childcare are significantly lower than the state average. The LEA is similar to that of the wider DCC area but the selected ED's have a lower average at 4.5%.

Household Size

As evident from the below CSO (2016) figures, the household size in both DCC and the LEA are smaller than the state average.

Area	Households	Persons	Average Household Size
LEA 2019 South West Inner City	17,731	39,858	2.3
Dublin City Council	211,747	525,229	2.5
State	1,697,665	4,666,376	2.8

Table 2: Comparison of household size between the state, DCC and the LEA (CSO, 2016).

Applying the average household size to the proposed development resulting in an estimated population of 1,216 no. people.

Existing Childcare Providers

Within a radius of c.1.5 km from the subject site we noted 28 No. childcare facilities providing a range of services from full day to sessional for a range of age profile with a cumulative capacity for 1,337 No. children. Appendix B sets out full details of these 28 No. childcare facilities. Their geographic distribution is shown on Figure 2 below.

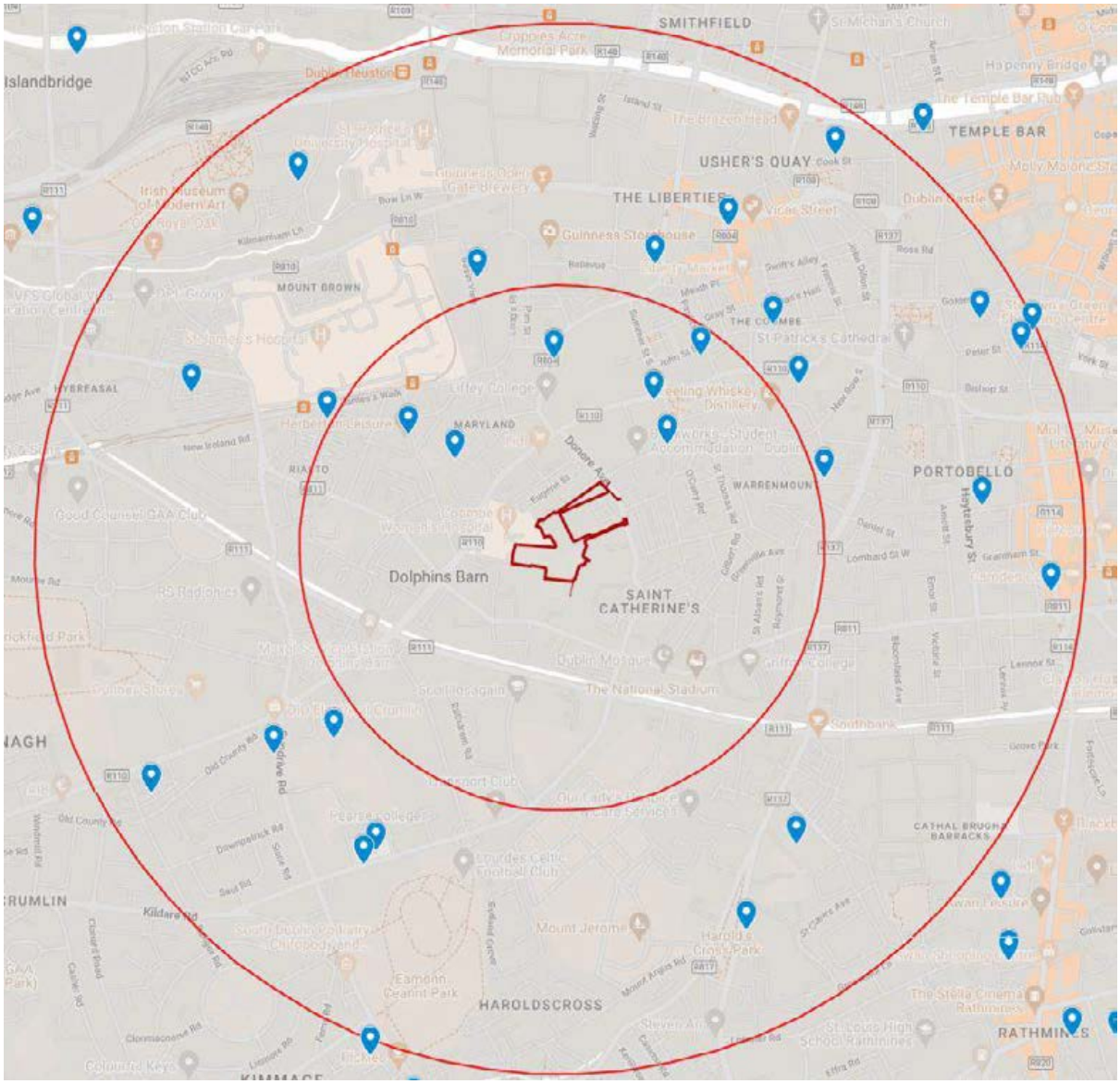

Figure 2: Overview of Childcare Facilities in within 750m and 1.5km (Source: Google Maps / Tulsa's Register of Early Year Services, August 2022).

Permitted Childcare Facilities

We note 2 No. permitted childcare facilities (subject to JR) in the immediate area at the following locations:

- Bailey Gibson (ABP-307221-20): a childcare facility/creche at ground floor level in BG1 with a gross floor area of 233 square metres.

- Player Wills (ABP-308917-20): a childcare facility with GFA of 275 sqm with dedicate play area.

Existing Childcare Demand

The CSOs Quarterly National Household Survey (QNHS), Childcare, Quarter 3 2016 is the most current available published national data on childcare statistics. It provides the following information of relevance to this assessment. This survey found that 19% of pre-school children in the State are cared for in a crèche / Montessori / playgroup / after school facility, with the highest rate of use to be found in Dublin at 25%.

According to Census 2016, there are 2,119 no. children aged between 0-4 years within the subject area (study area indicated in Figure 1). Based on data presented in QNHS, which demonstrates that 25% of school children in the Dublin area are cared for in a crèche/Montessori/playgroup/after school facility, this would indicate that there is an existing requirement for circa. 530 no. pre-school places in this catchment (2,119 / .25).

The analysis of existing facilities provided above demonstrates that there is a good level of facilities in the area catering for the demand for childcare provision. Therefore, it can reasonably be assumed that the existing population are being accommodated in the local area (by the 28 No. providers within 1.5 km with capacity for 1,337 spaces) and do not need to travel out of local area to avail of childcare facilities.

Assessment of Childcare Need

There are a number of ways to estimate the number of childcare places which would be required the needs of the residentials of the proposed apartment scheme. The first is to estimate the total population which the design of the scheme could accommodate. Based on the unit numbers and unit mix, it is estimated that if each unit was fully occupied to its design capacity, the proposed development could accommodate a population of 1,685 people.

Data extrapolated from Census 2016 identified that 5.7% of the local area population were children 0-4 years of age in the LEA. Applying this percentage to the projected population which could be housed in the proposed development would give an estimate of 96 No. children under 5 of the projected resident population.

Then as noted above only around one quarter of such pre-school age children in Dublin avail of childcare facilities, this would suggest that as few as 24 No. children may require the use of such a creche facility on site.

A second approach is to apply the methodology as set out in the Childcare Guidelines, as updated by the Apartment Guidelines, which states:

"Notwithstanding the Planning Guidelines for Childcare Facilities (2001), in respect of which a review is to be progressed, and which recommend the provision of one child-care facility (equivalent to a minimum of 20 child places) for every 75 dwelling units, the threshold for provision of any such facilities in apartment schemes should be established having regard to the scale and unit mix of the proposed development and the existing geographical distribution of childcare facilities and the emerging demographic profile of the area. One-bedroom or studio type units should not generally be considered to contribute to a requirement for any childcare provision and subject to location, this may also apply in part or whole, to units with two or more bedrooms."

The proposed development entails the following unit mix:

Types	Unit Numbers

1 bed	225
2 bed, 3 person	52
2 bed, 4 person	222
3 bed	44
Total	543
Total excluding 1 bed & 2 bed-3 person	318

Considering the above unit mix, the childcare requirement on the basis of 1 facility catering for 20 places per 75 No. units (excluding 1 bed units & 2 bed – 3 persons units) would be 85 No. places. (318 / 75 X 20 = 85).

Given that this figure is higher than the theoretical children projected population, it is proposed that a creche facility capable of accommodating 85 No. children will be provided on site as part of the overall development, in accordance with the Childcare Guidelines.

Appendix A: Age Profile Data

Age Group	LEA	DCC	State	ED's
0	598	6,602	62,257	509
1	476	6,123	64,029	405
2	483	6,050	66,318	440
3	419	5,949	68,076	375
4	445	5,959	70,835	390
5	411	5,930	72,404	368
6	394	5,836	72,517	363
7	352	5,713	72,166	320
8	331	5,454	71,524	296
9	300	5,004	66,950	274
10	277	4,901	64,793	262
11	262	4,868	64,014	264
12	300	4,897	64,325	285
13	252	4,861	63,531	227
14	246	5,066	62,813	240
15	221	4,938	61,643	218
16	216	5,090	60,989	222
17	246	5,430	61,318	256
18	371	6,499	61,294	365
19	397	6,824	57,572	380
20-24	4,109	44,484	273,636	3643
25-29	6,443	60,867	297,435	5043
30-34	6,120	58,889	361,975	4728
35-39	4,767	49,561	389,421	3823
40-44	3,084	38,021	357,460	2697
45-49	2,343	34,093	326,110	2192
50-54	1,866	31,743	299,935	1814
55-59	1,664	28,792	270,102	1649
60-64	1,338	23,755	238,856	1400
65-69	1,127	20,984	211,236	1268
70-74	835	17,027	162,272	913
75-79	640	14,161	115,467	757
80-84	517	10,857	81,037	612
85+	494	9,326	67,555	567
Total	42,344	554,554	4,761,865	37565

(Source: CSO, 2016)

Age	Merchants Quay C	Usher F	Merchant Quay D	Wood Quay B	Merchants Quay E	Ushers E	Ushers C	Ushers D	Merchants Quay F	Crumlin B	Kimmage C	Crumlin C	Merch Quay B
0	30	32	22	40	25	23	74	37	107	29	38	24	28
1	38	22	28	31	29	20	56	28	24	31	30	27	41
2	42	32	30	27	14	22	87	28	23	34	36	32	33
3	31	29	20	29	21	25	58	27	18	31	20	41	25
4	35	32	30	24	12	26	49	35	36	40	26	19	26
5	36	24	26	16	24	21	54	29	21	37	25	30	25
6	29	27	18	24	13	29	49	25	24	38	28	37	22
7	26	24	23	25	12	27	43	21	20	30	25	22	22
8	18	16	24	28	13	27	39	29	7	22	35	22	16
9	20	15	16	18	21	17	42	12	18	34	22	29	10
10	19	18	15	22	7	24	43	18	12	31	16	20	17
11	19	20	9	21	11	15	37	11	20	34	22	28	17
12	27	20	24	19	7	21	41	19	16	32	20	19	20
13	20	14	11	17	4	18	37	16	10	24	10	27	19
14	19	17	9	14	5	23	34	14	12	28	18	28	19
15	24	25	6	13	8	14	29	11	9	27	15	23	14
16	19	13	9	9	12	12	30	16	8	42	22	16	14
17	21	20	13	19	19	21	28	7	7	43	12	30	16
18	32	19	11	22	50	20	48	35	19	38	11	25	35
19	30	24	12	23	98	18	32	23	13	32	15	24	36
20-24	371	222	180	327	590	139	304	184	214	196	243	168	505
25-29	631	352	246	528	325	184	524	262	302	204	473	188	824
30-34	552	346	276	421	315	179	541	284	302	214	386	216	696
35-39	378	354	207	340	249	163	438	224	262	187	317	199	505
40-44	250	276	171	276	133	119	305	175	187	209	196	175	225
45-49	172	220	156	228	119	100	245	147	115	207	139	147	197
50-54	144	197	104	200	87	93	203	115	87	202	126	132	124

55-59	130	176	104	153	72	115	151	109	77	177	133	133	119
60-64	116	167	90	112	62	96	119	83	59	165	123	115	93
65-69	107	160	89	131	40	65	88	64	52	174	123	88	87
70-74	64	137	53	84	35	43	57	47	20	136	92	98	47
75-79	47	147	59	60	25	22	42	21	30	110	83	72	39
80-84	40	137	53	57	15	25	29	16	17	73	74	49	27
85+	29	150	41	56	17	24	27	16	10	57	89	28	23
Total	3,566	3,484	2,185	3,414	2,489	1,790	3,983	2,188	2,158	2,968	3,043	2,331	3,966

(Source: CSO, 2016)

Appendix B
Existing Childcare Facilities in Local Area [August 2022]

Tusla Number	Service Name	Address	Town	Age Profile	Service Type	No. Of Children Service Can Accommodate
TU2015DY269	Kiddies Korner	292 Sundrive Road, Crumlin	Dublin 12	0 - 6 Years	Full Day Part Time Sessional	40
TU2015DY237	Loreto Preschool	Loreto Primary School, Crumlin Road, Crumlin	Dublin 12	2 - 6 Years	Sessional	33
TU2015DY341	Pearse College Nursery	Pearse College, Clogher Road, Crumlin	Dublin 12	0 - 6 Years	Full Day Part Time Sessional	93
TU2015DY286	Stepping Stones Montessori	23 Ardagh Road, Crumlin	Dublin 12	2 - 6 Years	Sessional	11
TU2015DY241	The Marist Creche	Marist Primary School, Clogher Road, Crumlin	Dublin 12	2 - 6 Years	Sessional	40
TU2015DY381	D2 Montessori	6 Camden Street Upper	Dublin 2	1 - 5 Years	Full Day Part Time Sessional	52
TU2015DY332	YMCA Childcare	YMCA Childcare, 53 Aungier Street	Dublin 2	0 - 6 Years	Full Day Part Time	129
TU2015DY297	Leinster Park Montessori	139 Harolds Cross Road, Harolds Cross	Dublin 6W	2 - 6 Years	Sessional	31
TU2015DY295	St. Clare's Pre-School Limited	St. Clare's Pre School, Harolds Cross Road, Ha	Dublin 6W	2 - 6 Years	Sessional	22
TU2015DY305	Bowers Childcare Ltd	Block C, Brabazon Hall, Ardee Street	Dublin 8	0 - 6 Years	Full Day Part Time Sessional	50
TU2015DY244	Connolly Children's Centre	Ashgrove Community Centre, The Coombe, I	Dublin 8	1 - 6 Years	Full Day Part Time Sessional	40
TU2015DY357	Dolphin Creche	310 - 311 Dolphins House, Rialto	Dublin 8	1 - 6 Years	Part Time	21
TU2015DY246	Fatima Groups United Children's Day	78 Reuben Street, Rialto	Dublin 8	1 - 5 Years	Full Day Part time	58
TU2015DY285	Lighthouse Montessori School	6a Pleasants Street	Dublin 8	2 - 5 Years	Full Day Part Time	21
TU2016DY022	Mayfield Montessori	8 Mayfield Road, Kilmainham	Dublin 8	2 - 6 Years	Sessional	22
TU2015DY312	Mercy Family Centre	South Brown Street, Weaver Square	Dublin 8	0 - 5 Years	Part Time	170
TU2015DY291	Safari Childcare	The Hibernia Building, Heuston Sth Quater,	Dublin 8	1 - 6 Years	Full Day Part Time Sessional	120

TU2015DY342	School St & Thomas Court Bawn FRC	School Street, Pimlico	Dublin 8	0 - 5 Years	Full Day Part Time Sessional	52
TU2015DY334	Sophia Nurturing Centre	Sophia Housing, 25 Cork Street	Dublin 8	0 - 6 Years	Full Day Sessional	21
TU2015DY403	St John of God Menni Early Services	25 Cork St.	Dublin 8	0 - 6 Years	Sessional	6
TU2015DY337	St. Audoen's Pre-school	Cook St, Merchants Quay	Dublin 8	3 - 6 Years	Sessional	11
TU2015DY346	Wee Tots Creche and Pre School	Fountain Resource Group, 2A Basin Street	Dublin 8	0 - 6 Years	Full Day Part Time Sessional	44
TU2015DY261	Whitefriars Childcare Ltd	Alexandra Walk, Whitefriar Street	Dublin 8	0 - 5 Years	Full Day Part Time	40
TU2015DY401	Whitefriars Childcare Ltd	Newmarket Hall, St Lukes Avenue, Cork St.	Dublin 8	2 - 6 Years	Sessional	29
TU2019DY008	Footprints Early Years	St Catherines Sport Centre, Merchants Quay,	Dublin 8	2 - 6 Years	Part Time Sessional	22
TU2015DY248	St Joseph's ECDS	St Josephs Early Childhood Care Education Centre, Morningstar Road,	Dublin 8	2 - 6 Years	Full Day, Sessional	32
TU2015DY290	Child's Play	Blackpitts House, 1A St. Kevin's Avenue, Blackpitts	Dublin 8	0 - 6 Years	Full Day, Part Time, Sessional	70
TU2015DY369	Saoirse Waldorf School T/A Dublin Steiner School	92 Meath St	Dublin 8	3 - 5 Years	Full Day	32
TU2015DY358	Scallywags Creche	Carmelite Community Centre, 56 Angier Street	Dublin 2	1 - 6 Years	Part Time	25
					Total	**1,337**

(Source: Tusla Register of Early Years services Link: https://www.tusla.ie/uploads/content/Dublin_Aug22_1.pdf)

Appendix E

Donore Project

Traffic and Transport Assessment

The Land Development Agency

Project number: 60648061

November 2022

Delivering a better world

Quality information

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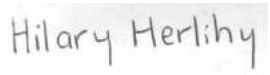			
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Revision History

Revision	Revision date	Details	Authorized	Name	Position
01	15/07/2022	Internal Draft	JS	Jennifer Searle	Principal Consultant
02	09/09/2022	Updated from Applicant comments	JS	Jennifer Searle	Principal Consultant
03	14/11/2022	Updated from Legal review	HH	Hilary Herlihy	Associate Director
04	17/11/2022	Final	IH	Iain Hamilton	Principal Consultant

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	BIOGRAPHY
Name: Hilary Herlihy Title: Consultant, AECOM Qualifications: BSc (Hons)	Hilary is a graduate consultant collaborating with members of the traffic team in various projects throughout the Republic of Ireland TTA's, scoping reports, MMP's, and EIAR inputs are part of the work that Hilary completes daily alongside members of her team. A diverse range of development applications are worked on with a focus on housing development. Recent projects include Energia solar farms and the associated traffic scoping for EIAR and abnormal loads assessment's contribution. Hilary's experience includes, detailed report writing, understanding of development plan standards and ability to work with development traffic growth assessments.

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Figures

Tables

1. Introduction

1.1 Background

AECOM has been commissioned by The Land Development Agency (LDA) to provide a Traffic and Transport Assessment (TTA) in on behalf of Dublin City Council, in line with giving notice of its intention to make an application for a seven year permission to An Bord Pleanála in relation to a proposed residential development at this site located on the former St. Teresa's Gardens, Donore Avenue, Dublin 8.

The site is bound by Donore Avenue to the north-east, Margaret Kennedy Road to the north-west, The Coombe Women and Infants University Hospital to the west, the former Bailey Gibson factory buildings to the south-west, and the former Player Wills factory to the south-east as shown in Figure 1.1.

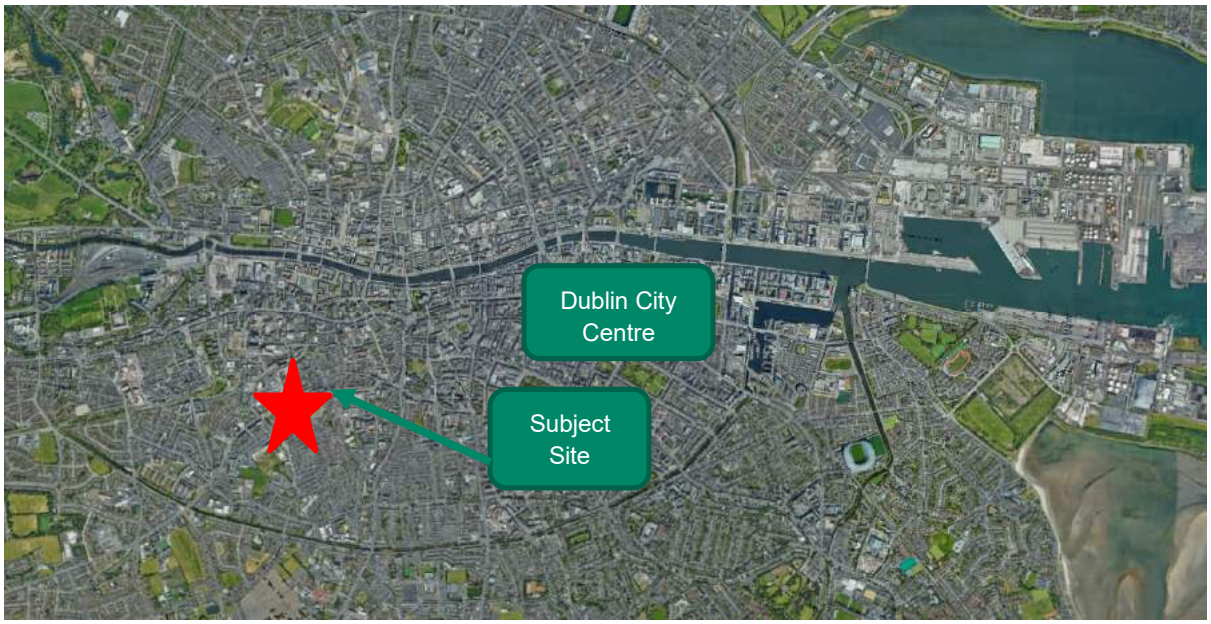


Figure 1.1 Subject Site in Relation to Dublin City Centre (Source: Google Earth)

The above Figure 1.1 illustrates an approximation of the site location in relation to Dublin City Centre. The proposed development site is illustrated in greater detail in Figure 2.1

1.2 The Development

The development will consist of the construction of a residential scheme of 543 no. apartments on an overall site of 3.26 ha.

The development (GFA of c. 53,227sqm) contains the following mix of apartments: 225 No. 1 bedroom apartments (36 no. 1-person & 189 no. 2-person), 274 No. 2 bedroom apartments (including 52 No. 2 bed 3 person apartments and 222 No. 2 bed 4 person apartments), 44 No. 3 bedroom 5-person apartments, together with retail/café unit (168 sq.m.), mobility hub (52 sq.m.) and 952 sq.m. of community, artist workspace, arts and cultural space, including a creche, set out in 4 No. blocks.

The breakdown of each block will contain the following apartments:

- Block DCC 1 comprises 111 No. apartments in a block of 6-7 storeys;
- Block DCC 3 comprises 247 No. apartments in a block of 6-15 storeys;
- Block DCC 5 comprises 132 No. apartments in a block of 2-7 storeys;
- Block DCC 6 comprises 53 No. apartments in a block of 7 storeys;

The proposed development will also provide for public open space of 3,408 sqm, communal amenity space of 4,417 sqm and an outdoor play space associated with the creche. Provision of private open space in the form of balconies or terraces is provided to all individual apartments.

The LDA / DCC lands are part of the overall lands which make up the St. Teresa's Gardens & Environs, Strategic Development Regeneration Area (SDRA) 12 of the Dublin City Development Plan 2016-2022. Figure 1.2 illustrates the boundaries of the various sites, as set out in the development framework, as there is pedestrian and vehicular access to the Donore Project via other development sites namely the Bailey Gibson (BG) & Player Wills (PW) sites.

1.3 History

The proposed development site is within the SDRA 11 which relates to a mixed-use development with the capacity for 800 - 1,000 residential homes with the following guiding principles being provided in the Dublin City Development Plan 2022– 2028. SDRA 11 has 3 components and as part of this TTA are known as the following:

- Player Wills (PW);
- Bailey Gibson (BG); and
- DCC

The three component site is shown in Figure 1.2.

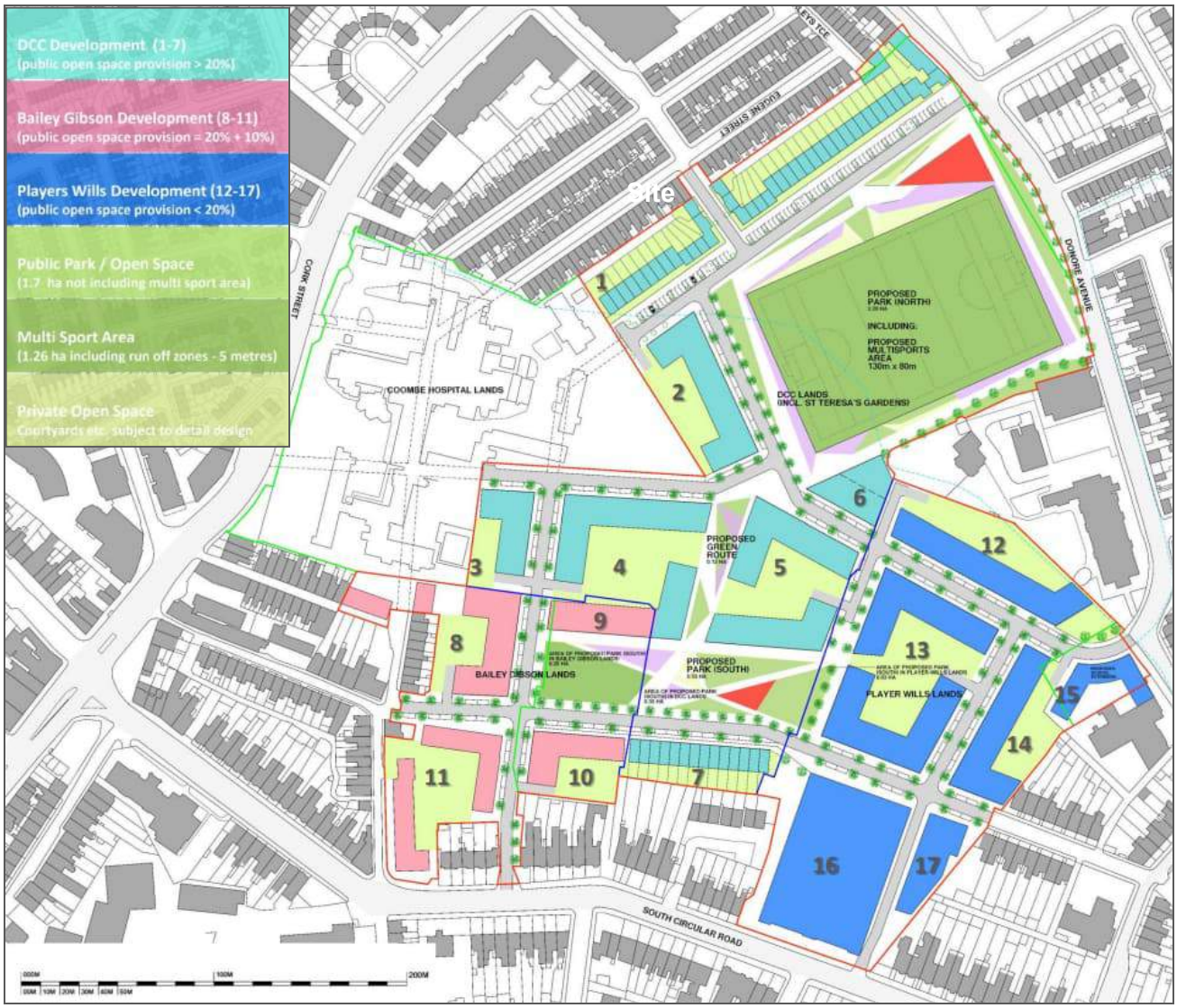


Figure 1.2 SDRA 11 Development Framework Blocks (Source: DCC Development Plan)

SDRA 11 is a Strategic Development Regeneration area in Dublin 8, The SDRA 11 lands form a large urban block of approx. 11.65 hectares comprising Dublin City Council Lands, lands currently controlled by the receivers acting for NAMA (known as Players Square / Players Wills and Bailey Gibson lands) and the Coombe Hospital Lands. The purpose of the Development Framework is to translate the requirements and principles of the current City Development Plan on the Planning and Development of the SDRA 11 lands.

This TTA report is in support of the DCC lands only application. Figure 1.2 illustrates the 3 different sites within the development plan.

1.3.1 Proposed Neighbouring Development

AECOM has undertaken a review of proposed housing developments in the immediate vicinity as part of the STG SDRA 11 framework, the results are illustrated in Table 1.1. This is in order to illustrate the committed developments in area and to highlight what is proposed within the neighbouring developments. This in turn emphasises that although this TTA analyses the traffic generation for the DCC development there will be an external adjoining factor of the neighbouring development detailed in Table 1.1.

The set Study Area or Zone of Influence (ZOI) in relation to the surrounding road network. The study area for the chapter was established through discussion and agreement with the Council based on the anticipated routing to the Site for construction and operational vehicles at points in which traffic could be most intensive. The size of the area is defined by the total trips generated from the proposals and their likely distribution on to the local road network."

Table 1.1 SDRA 11 Proposed Housing Developments in the immediate vicinity

	Player Wills	Bailey Gibson
Number of residential apartments	732 residential apartments comprising of: • 240 Shared Accommodation apartments • 492 Apartments consisting of: – 40 Studio – 292 one bedroom – 108 two bedroom – 52 three bedroom	416 apartments comprising of: • 19 Studio • 251 one bedroom • 136 two bedroom • 6 three bedroom • 4 four bedroom
Non-residential land uses	**PW1** • 852 sq.m for community, arts, and cultural and exhibition space; • 503 sq.m for retail • 994 sq.m for café/bar/restaurant • 217 sq.m of co-working office space • Other communal uses; entertainment area, lounge areas, laundry, welfare, gym, and waste storage **PW2** • 142 sq.m café/restaurant • 673 sq.m for tenant facilities **PW4** • 421 sq.m childcare facility (275 sq.m GFA and 146 sq.m external play area)	**BG1, BG2** • 812 sq.m for tenant facilities • 283 sq.m childcare facility (233 sq.m GFA and 50 sq.m play area) **BG1** • 164 sq.m for restaurant/café/bar **BG2** • 224 sq.m of commercial floorspaces

In addition to neighbouring proposed housing applications The Combe Women's and Infant University Hospital have applied for planning permission for the following;

- Planning application reference: 3494/21 consisting of a planning application for the development of a new dedicated Colposcopy/Women's Health Unit building of 3 no. storeys plus rooftop plant room which will be attached to the existing Colposcopy building to the west by way of glazed link
- Planning application reference: 4049/19 consisting of a new four storey laboratory building (1340m2) within the existing Coombe Women and Infant University Hospital site with the provision of rooftop plant and 2 no. rear extensions to the existing adjacent laboratory building to include a new link, office, and store (68m2) with all associated site works. Permission has been granted on February 11th 2020

1.3.2 Committed Development

AECOM understands that committed developments are those that have been granted planning permission and that are either under construction but not completed or construction has yet to start. Therefore this would include Bailey Gibson 1 and Player Wills 1 as detailed in Table 1.1

1.4 Pre Application Consultations

In pre-application discussions with DCC a number of matters were raised. There were concerns about the low parking ratio proposed (0.1 spaces per unit). Subsequent development of the proposals have increased the off street parking on the site to 79 spaces giving a ratio of 0.15 spaces per unit. Car club/ car share spaces have been provided in addition to existing nearby locations with up to 30 car club/ car share spaces within the development. It is considered that the location of the site in relation to Dublin City Centre and key transport networks with capacity detailed in Appendix E, located close by assists in the proposed development being considered a 'low car development'

Parking ratios were discussed with DCC which are lower than the CDP standards on account of the sustainable location and opportunity for the proposed development to integrate with infrastructure such a Bus Connects and LUAS red line. Thus, justification for any amendment to these ratios is based on other sustainable measures, in this case the provision of GoCar spaces and a robust Management Strategy

A meeting was held with DCC Transportation Planning on 29 September 2021 Key 'take away' points from the meeting detailed in Table 1.1, with respect to this report were the following points;

- There were concerns about the low parking ratio proposed (0.1 spaces per unit);
- Given the low parking ratio - proportionally more car share spaces are required – compared to nearby sites;
- Cycle parking should be in line with the Sustainable Urban Housing: Design Standards for New Apartments guidelines (December 2020) but visitor parking can be lower; and
- Include provision for large bikes/cargo bikes and EV charging.

A further meeting was held with DCC Transportation Planning on 5th January 2022 Version 4 of this report was presented. Key 'take away' points from the meeting, with respect to the report were:

- Generally happy with changes re. mobility management including the inclusion of the mobility management hub and location of management office;
- Welcomed increase in cycle parking, provision of larger bike parking spaces, and more spaces for car share facilities;
- There were still concerns regarding. car parking numbers being too low and further justification/ supporting information required;
- Access strategy and connection through to Bailey Gibson site; and
- Cargo bike spaces should also be provided for visitor and the location of these should be carefully considered e.g. located near the creche.

The traffic impact of the proposals is likely to be minimal or similar to the BG development. However due to the recently granted application for the BG site and the PW site, it will be necessary to understand when these developments would be delivered as this has a knock-on impact in regard to permeability from the proposed development to the south and east. This TTA will explore the potential traffic impact on the local highway network.

AECOM's response to these concerns outlined by DCC are met within Table 1.1 and within the following sections of this TTA.

Table 1.1 DCC Comments on Pre-App and AECOM Response

Topic	DCC Comment	AECOM Response
Low parking Ratio	DCC raised concerns about the low parking ratio proposed (0.1 spaces per unit);	Within this TTA AECOM has provided the planning authority with parking precedents which detail a number of developments within Dublin City Council that have been granted permission with parking ratios of 0.15 or below. These develops of are of a similar land use and location. As part of this TTA analysis the census data received has been analysed and it can be derived from this that 57%of the public in the census grouped area walk or use public transport. Therefore demonstrating that a high car dependency is not present in the area. Chapter 2 of this TTA provides details of the existing conditions of the transport network in the area of the proposed development site. This includes the site's urban context and good transport networks.
Car share spaces	DCC stated that given the low parking ratio - proportionally more car share spaces are required – compared to nearby sites;	AECOM have noted within this TTA the local existing car sharing facilities by both car sharing firms GoCar and Yuko. In addition to the existing car sharing facilities within the locality of the Proposed Development Site, it is proposed to provide an additional 30 car sharing spaces assumed exclusive for residents of the proposed development site as part of this scheme. Further information in relation to this DCC comment is detailed in chapter 2.3.7
Cycle Parking	DCC suggested that cycle parking should be in line with the Sustainable Urban Housing: Design of New Apartments guidelines (December 2020) but visitor parking is stated that if can been lower;	It is proposed to provide 906 cycle parking spaces within the proposed development site. as per the new apartment guidelines quoted by the DCC in Pre-app meetings the resident cycle parking meets the requirements. As noted in the pre-app meeting DCC stated that the visitor parking may be lower which is the case for this proposed development. Further information in relation to this DCC comment is detailed in chapter 3.7
Large Bikes i.e. Cargo Bike provision	It was suggested by DCC to include provision for large bikes/cargo bikes Cargo bike spaces should also be provided for visitor and the location of these should be carefully considered e.g., located near the creche.	It is proposed that 5% of residential bike parking will be designated for Cargo bikes. it is proposed to provide 2 no. cargo bike stands at the entrance to the creche. Further information in relation to this DCC comment is detailed in chapter 3.7
EV Charging	DCC noted to ensure the provision for EV charging	Within the Proposed Development 50% of all standard car spaces will be EV compliant. Further information in relation to this DCC comment is detailed in chapter 3.6.1

1.5 Objectives

The main objective of this report is to examine the traffic impact of the proposed development and its access arrangements on the local area road network. The net change in traffic on the network due to additional traffic has been calculated and its effects on the local road network has been investigated. In order to complete this report, AECOM has made reference to and complied with the following documents:

- Sustainable Urban Housing: Design Standards for New Apartments – Guidelines for Planning Authorities (2020);
- DMURS (Design Manual for Urban Roads and Streets), May 2019 (Dept of Transport, Tourism and Sport/Dept. of Environment, Community & Local Govt);
- Dublin City Development Plan 2022-2028
- Greater Dublin Area Transport Strategy 2016-2035 + published draft new Strategy
- The Traffic Management Guidelines 2019 (jointly published by the DOELG, DTO, DOT);
- TII Traffic and Transport Assessment Guidelines May 2014;
- The NTA Greater Dublin Area Cycle Plan (December 2013); and
- Design Recommendations for Multi-storey and underground car parks (4th Edition) March 2011.

1.6 Policy Guidance

While undertaking this TTA, AECOM have taken guidance and standards that are set in numerous different policy guideline documents. The following include a number of the policy documents that were used as guidance and this application is compliant with;

- Dublin City Council Development Plan 2022-2028
- Design Standards for New Apartments – 2018
- Greater Dublin Area Transport Strategy 2022-2042
- National Sustainable Mobility Policy 2022

1.7 Study Methodology

The methodology adopted for this report in accordance with TTA guidance can be summarised as follows:

- **Existing Transport Infrastructure** – AECOM have collated information on the public transport, walking and cycling facilities in the surrounding area of the site.
- **Development Proposals** – Description of the proposed development
- **Traffic Flow Assessment** – Traffic surveys were used to assess the traffic flows at the surrounding junction to the proposed development. These surveys have formed the baseline scenario for this analysis.
- **Development Trip Generation** – Based on the quantum of the proposed development, AECOM have reviewed trip rate data for similar uses and developed anticipated traffic flows, by using the industry standard Trip Rate Information Computer System (TRICS) database. These flows were then assigned to the existing network having regard for the observed traffic patterns on the surrounding road network.
- **Percentage Impact Assessment –** The traffic impact on the key junctions, with and without the proposed development was undertaken to determine the future operation and any key requirements for further analysis or required mitigation measures.

1.8 Structure of Report

The remainder of the report is divided into the following sections:

- Section 2 considers the location of the site and existing traffic flows;
- Section 3 discusses the proposed development, and gives a brief outline of the proposed internal road network and site layout;

- Section 4 outlines a statement of compliance for the proposed development in response to An Bord Pleanala;
- Section 5 considers the traffic generation and potential impacts of the development;
- Section 6 contains an analysis of the capacity of key junctions, including proposed mitigation measures;
- Section 7 presents the mobility management plan;
- Section 8 provides a summary and conclusion

2. Existing Conditions

2.1 General

This section of the report gives an outline of the existing conditions surrounding the proposed development including the local road network, the characteristics of the site, any committed future road infrastructure schemes, and any committed developments in the vicinity. The subject site is situated approximately 3.5km south of Dublin City Centre, and 300m north of the Royal Canal.

The site is situated to benefit from both sustainable and active forms of transport due to its proximity to Dublin City Centre, (approx. 3km walk to O'Connell Bridge). AECOM has undertaken a desktop review via Google Maps of the surrounding road network. The following sub-headings will outline the existing facilities available to the prospective residents with respect to active travel (walking, cycling) and sustainable transport (bus, rail, car share) along with a review of the existing commuting habits for the surrounding electoral districts based on the 2016 Census data.

Following pre-application consultations with the council DCC did not request a walking and cycling audit. It is stated in the DCC Development plan 2022-2028 that a walkability and/or cyclability audit may be required depending on the location of the development and existing provisions within the local road network. The TTA contains a thorough review of the existing pedestrian and cycling facilities in the proposed development study area. DCC have welcomed the proposed cycle facilities on site.

2.2 Existing Road Network

The proposed development is located within a network of roads that provide both pedestrian and vehicular access, the existing quality of the road network and pedestrian infrastructure is considered to be in good quality and functioning well. The local road network is illustrated in in Figure 2.1.

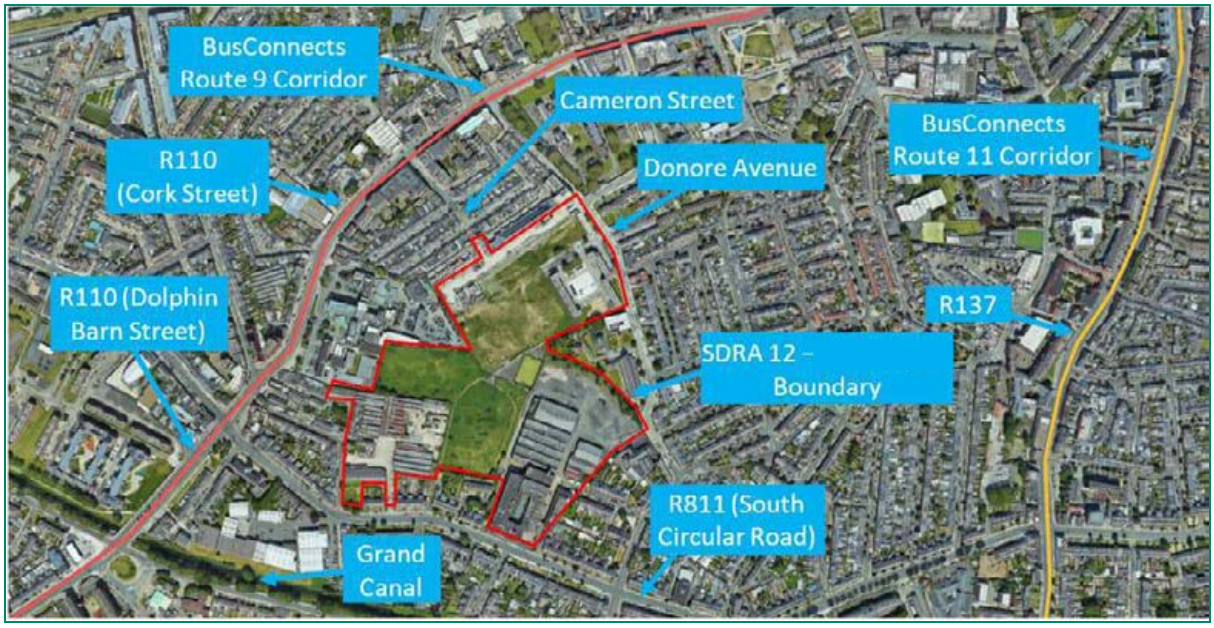


Figure 2.1 Site Location

Figure 2.2 Proposed Site development Area within the SDRA 11

The following details the different roads and footways that show the proposed development is easily accessible.

2.2.1 Donore Avenue

Donore Avenue is designated as a local street which features footways along both sides of the carriageway with uncontrolled crossings provided by means of blister strip paving and raised tables. The raised tables are provided at junctions to create safer crossing facilities with speed ramps provided between the junctions to help keep vehicle speeds low. Street lighting is provided along both sides of the carriageway.

2.2.2 South Circular Road (R811)

The South Circular Road is designated as a Regional Road (R811) which features footways along both sides of the carriageway. A bus lane is provided along a section of the carriageway for buses travelling east along the South Circular Road from the R110. Bus stops are provided along both sides of the carriageway. A signal-controlled junction is provided at the Donore Avenue / South Circular Road which features designated crossing facilities on the northern and western arm (dropped kerbs and tactile paving). A signal-controlled junction is provided at the R110 / South Circular Road which features designated crossing facilities on all arms of the junction, the north and south arm are staggered crossings. Public lighting is provided along both sides of the carriageway.

2.2.3 Cork Street (R110)

The Cork Street (R110) is designated as a Regional Road and is to the west of the SDRA 11. It features footways along both sides of the carriageway with a dedicated bus and cycle lane also being provided along both sides of the carriageway. Signalised junctions with designated crossing facilities are provided at the R110 / South Circular Road and R110 / Donore Avenue / R804 junctions. A pelican crossing is provided at the Coombe Women and Infants University Hospital. Public lighting is provided along both sides of the carriageway.

2.2.4 Cameron Street

Cameron Street is a local street which features footways along both sides of the carriageway and serves as an access street to residential homes along Eugene Street, Fingal Street, Maxwell Street. A raised table with tactile paving is provided at the intersection of Cameron Street / Fingal Street / Maxwell Street. Public Lighting is provided on approach to the R110 from Cameron Street.

Figure 2.3 below illustrates the local access routes throughout the proposed scheme that creates access points to the afore mentioned roads and amenities known as the non-statutory plan.

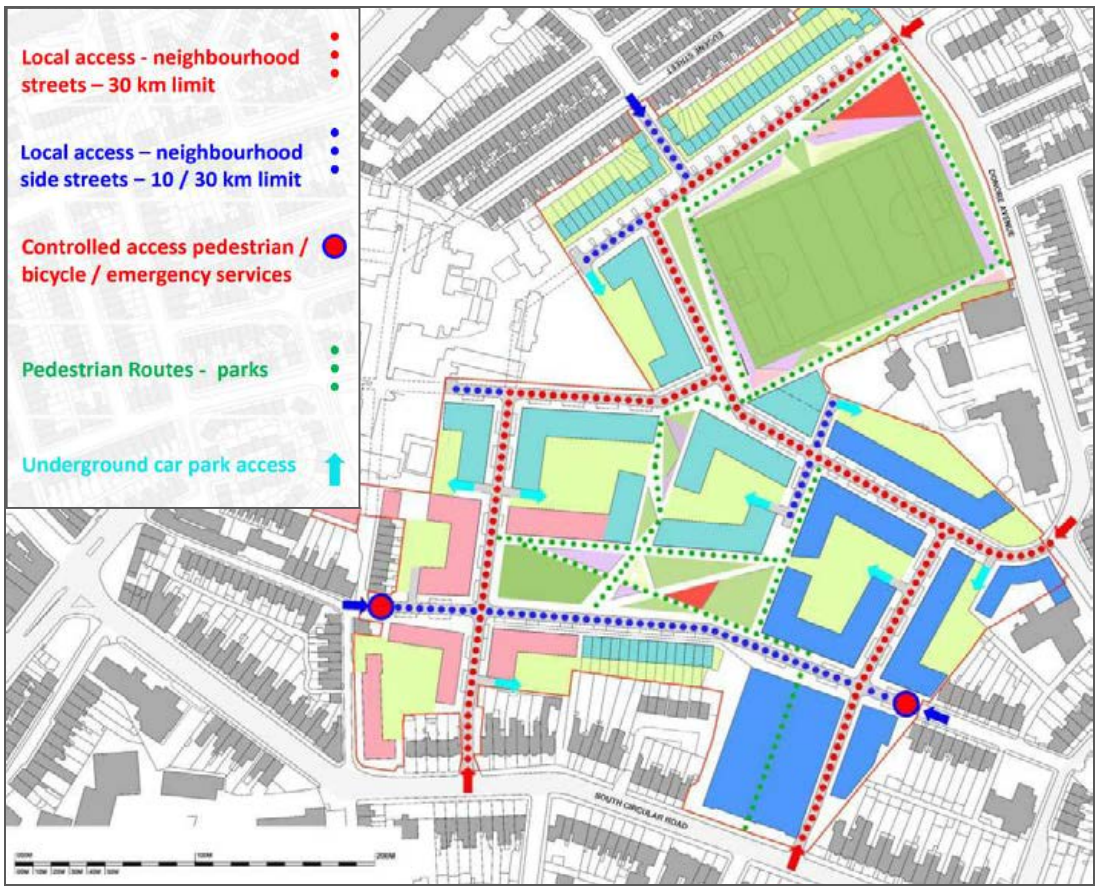


Figure 2.3 SDRA 11 Development Framework Access Strategy

The above shows that following the access strategy guidance in the above development framework there will be vehicular access to the site from the south circular road via the Player Wills site and Bailey Gibson developments and will be a local access neighbourhood street with a 30kph speed limit

2.3 Road Collision Statistics

As part of the road network analysis a review of the Road Safety Authority (RSA) traffic collision database was to be undertaken for the road network in the vicinity of the proposed site to identify any collision trends. This review is aimed to assist to identify any potential safety concerns in relation to the existing road network. However, the RSA website has been offline due to GDPR issues, and it is unclear when the site will be updated and back up and running for use.

The set Study Area or Zone of Influence (ZOI) in relation to the surrounding road network. The study area for the chapter was established through discussion and agreement with the Council based on the anticipated routing to the Site for construction and operational vehicles at points in which traffic could be most intensive. The size of the area is defined by the total trips generated from the proposals and their likely distribution on to the local road network."

AECOM have reviewed the collision data presented in the SYSTRA Transport Assessment, June 2022, for the Bailey Gibson site application and this is presented in Figure 2.9. Data is only provided from 2005 - 2016 and incidents are categorised into class of severity, which includes minor, serious or fatal collisions. SYSTRA reported that there was only one minor accident on South Circular Road which was relevant to the site. No fatal accidents occurred within proximity to the site and only one minor accident

Figure 2.4 SYSTRA Road Collisions DATA (figure 3.22 Road Collisions Map)

2.4 Existing Sustainable Transport Provision

2.4.1 Sustainable Transport

Sustainable transport is considered a vital part of the city with cycling, bus, LUAS and rail providing essential services for residents to get around. Fortunately, due to the location of the proposed development numerous amenities and facilities are located nearby either within walking distance, cycle distance or other public transport modes. The following sub-sections demonstrate the availability and locality of various sustainable modes of transport in relation to the subject site. A pedestrian and cycle assessment was undertaken during AECOM's site visit on February 3rd 2022. In addition a separate public transport capacity assessment was undertaken and is further detailed in Appendix E

2.4.2 Public Transport Capacity Assessment

On 13.10.22 and 18.10.22,AECOM surveyors assessed public transport capacities at various public transport stops surrounding St. Teresa's Gardens development site. These stops were monitored between peak hours of 07:00-10:00 and 16:00-19:00 and included the Fatima Luas stop and the following bus stops:

- Stops 1365, 1381and 1382 on the South Circular Road;
- Stops 2315 and 2379 on Cork Street; and
- Stop 4857 on Rutledge Terrace.

Surveyors were able to calculate the departing capacities of each of these services as well as analyse timetables and the overall frequency of services in the area.

The results of this survey as well as a brief analysis of each stop are outlined in Appendix E

From the results of the public transport capacity assessment report it is evident that here is adequate capacity on the public transport system stops within walking distance of the proposed development site.

2.4.3 Sustainable Transport – Bus

As graphically illustrated in Figure 2.4 the site is situated to benefit from bus transport connections allowing all site users to travel by this sustainable mode. There are 8 no. bus services located within a 400m walking catchment of the site. These bus stops are operated by Dublin Bus.

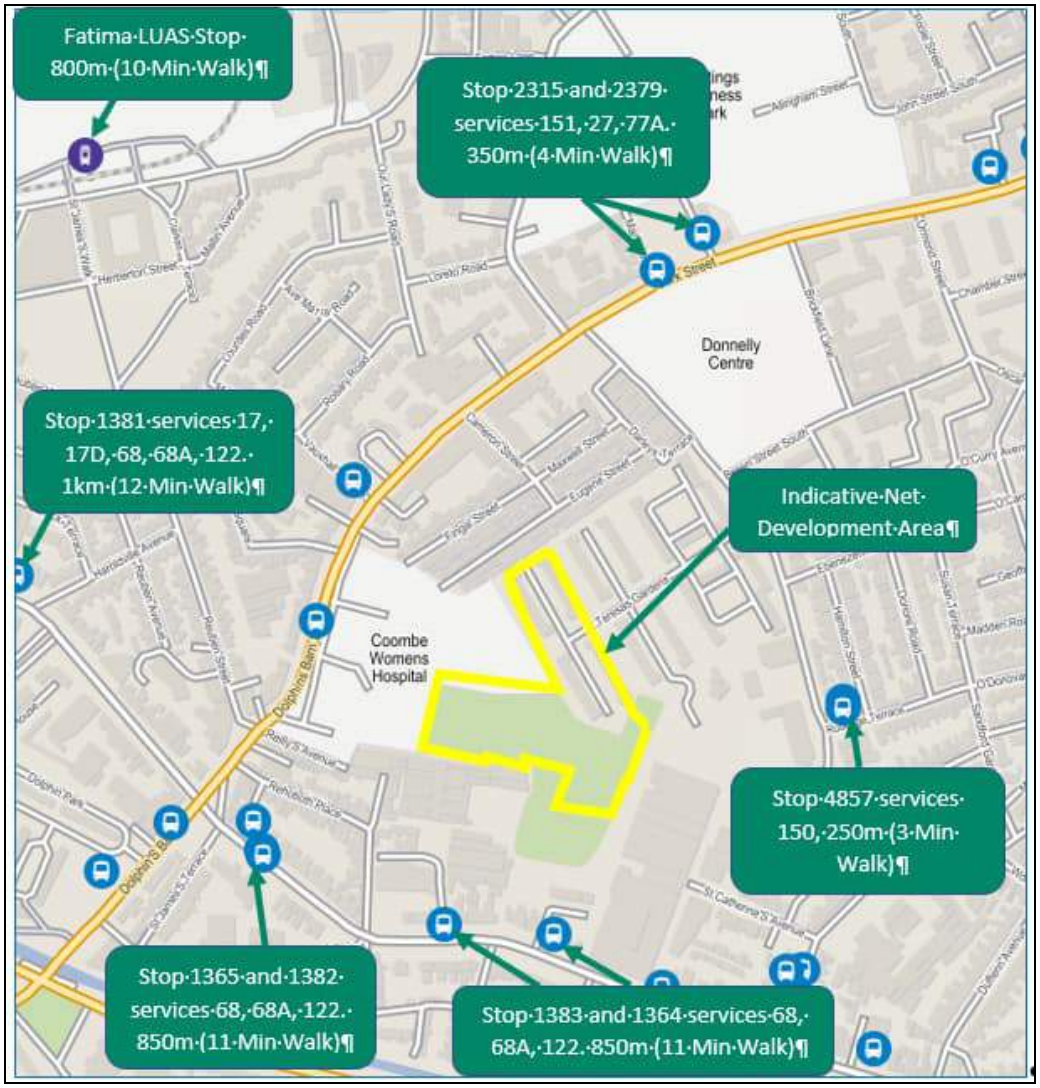


Figure 2.5 Existing Bus Stops

Services available at stops surrounding the site are shown in Table 2.1.

Table 2.1 Bus Services and Routing

Route	Operator	Distance to Proposed Development Site	Route	Services Am and PM Peak Hours		
				Monday to Friday	Saturday	Sunday
17	Dublin Bus	1km (12 min walk)	Rialto -Crumlin -Nutgrove - UCD- Blackrock	1 service every 20 mins	1 service every 20 mins	1 service every 20 mins
27	Dublin Bus	350m (4 min walk)	Jobstown – Blessington Road – Cork Street- Malahide Road	1 service every 10 mins	1 service every 10 mins	1 service every 15 mins
56A	Dublin Bus	350m (4 min walk)	Tallaght – Ballymount Road – St. Luke's Avenue- Ringsend road.	1 service every 1 hours and 15 mins	1 service every 1 hours and 15 mins	1 service every 1 hours and 15 mins
68	Dublin Bus	850m (11 min walk)	Hawkins Street – Dolphins Barn -Rialto – Bluebell- Clondalkin - Greenogue	1 service every 1 hour	1 service every 1 hour	1 service every 1 hours and 15 mins
77A	Dublin Bus	350m (4 min walk)	Citywest Road – Old Blessington Road – Cork Street – Ringsend Road	1 service every 20 mins	1 service every 20 mins	1 service every 30 mins
150	Dublin Bus	250m (3 min walk)	Hawkins Street – Patrick Street – Donore Avenue - Rossmore	1 service every 20 mins	1 service every 20 mins	1 service every 30 mins
151	Dublin Bus	350m (4 min walk)	Docklands (East Road)- Dolphins Barn – Parkwest - Foxborough	1 service every 20 mins	1 service every 20 mins	1 service every 30 mins
122	Dublin Bus	850m (11 min walk)	Drimnagh Road – Herberton Road – South Circular Road – Dorset Street – Ashington Park	1 service every 15 mins	1 service every 20 mins	1 service every 20 mins

2.4.4 Sustainable Transport – Light Rail

The site is situated in proximity to the Fatima LUAS stop which is part of the LUAS redline which offers services east towards Connolly Station and west towards Tallaght and Saggart. Due to the frequency of the LUAS service this is understood to adequately cater for the varying demand at peak commuter times. Red line LUAS trams operate at a frequency of 3-5 mins at peak hours and a frequency of 12 -15 mins at off peak hours. The Fatima Luas stop is situated 900m north of the subject site. Figure 2.6 details the walking route. Figure 2.77illustrates the site location in relation to the Fatima LUAS stop.

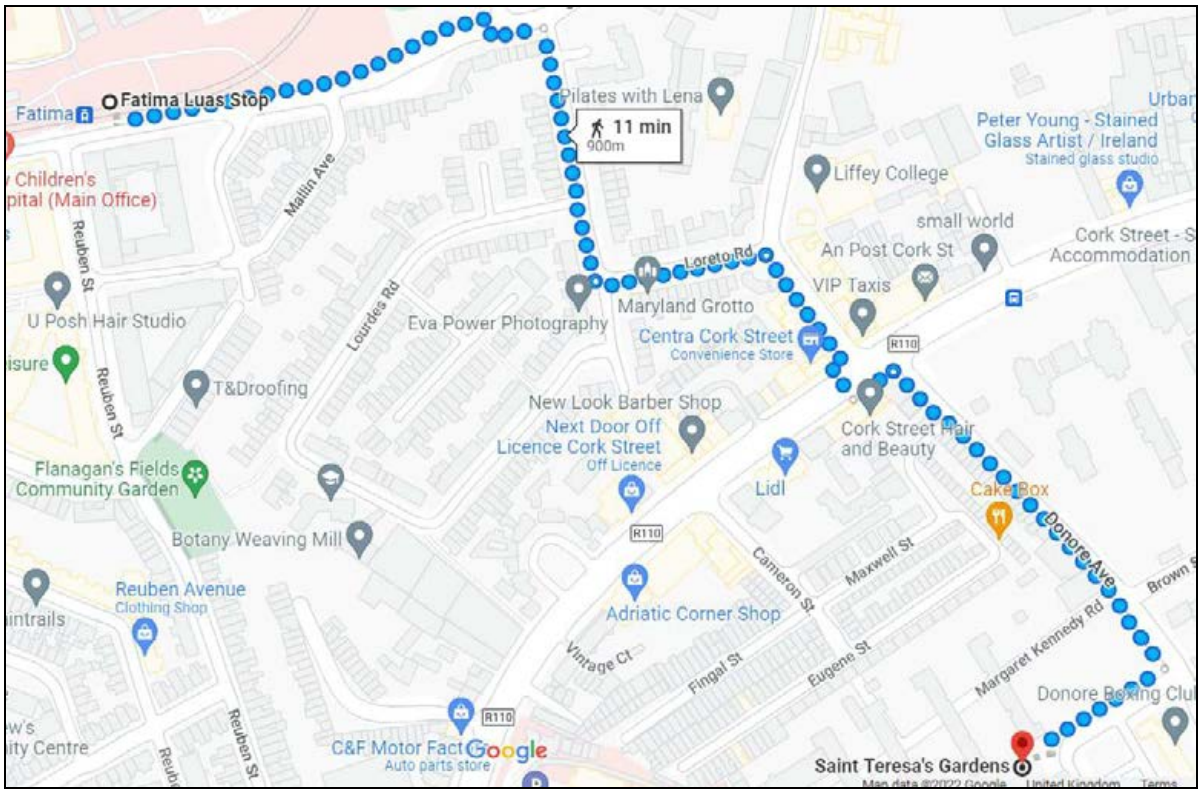


Figure 2.6 Fatima walking distance

Figure 2.7 Existing LUAS Locations

2.4.5 Sustainable Transport – Heavy Rail

The closest railway station to the site is the Heuston Train Station located 2.0 km (23 min walk) north of the SDRA 11 site. Heuston Station is the terminal stop for the part of the South Western Commuter service which provides rail services west to Galway, Limerick, Waterford and Cork. Figure 2.8 illustrates the site location in relation to Heuston Train Station.

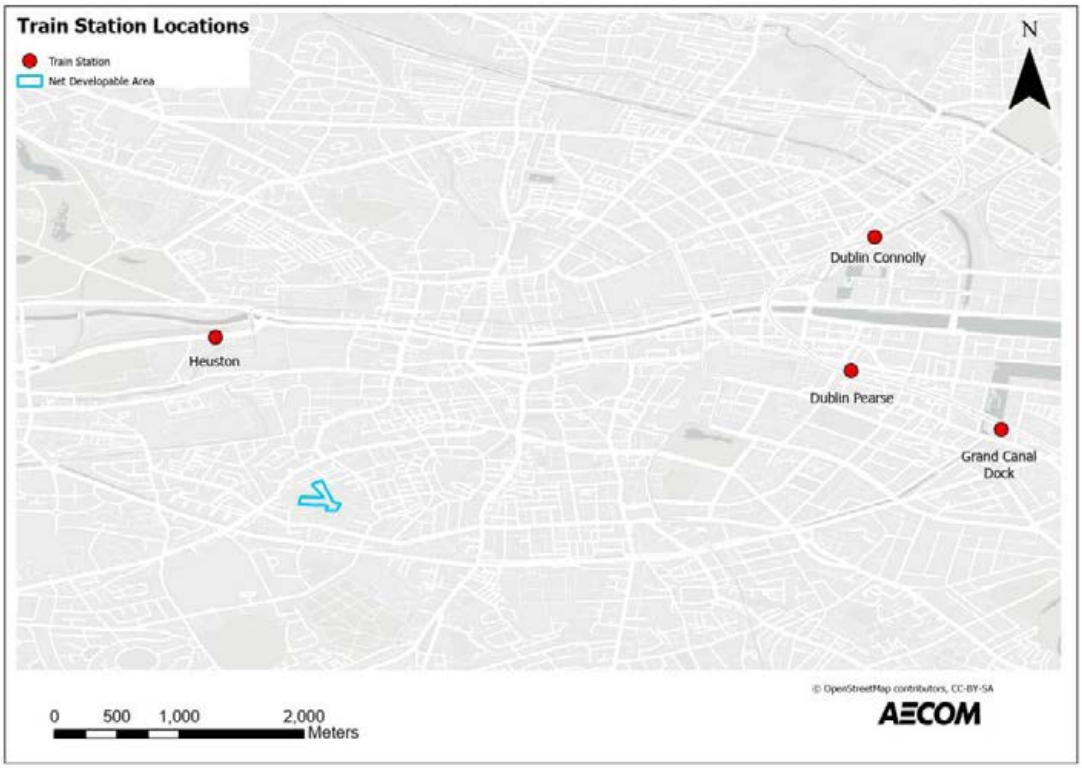


Figure 2.8 Train Station Proximity

2.4.6 Sustainable Travel – Cycling

In the vicinity of the subject site, dedicated cycle lanes are provided on the R110 ensuring cycle access towards Dublin City Centre, no dedicated cycle lanes are provided on the South Circular Road or Donore Avenue currently. It is planned to upgrade the cycle lanes along the R110, Donore Avenue and the South Circular Road. It is understood that the cycle facilities to be provided along the R110 will be part of the BusConnects redesign. While the planned future active modes of travel are relevant to the application as an observation to the aid the proposed development site in future years the current active travel facilities is what the applications impact on the available capacity will be determined from. There are no Dublin bike stations within the vicinity of the proposed development site. The existing cycling facilities are illustrated in **Figure 2.9**.

Figure 2.9 Existing Cycle Facilities Source (National Transport Authority 2013)

Figure 2.10 illustrates the current cycling facilities that exist as of 2022 based on desktop study and site visit undertaken by AECOM locating the active cycle facilities around the proposed development site.

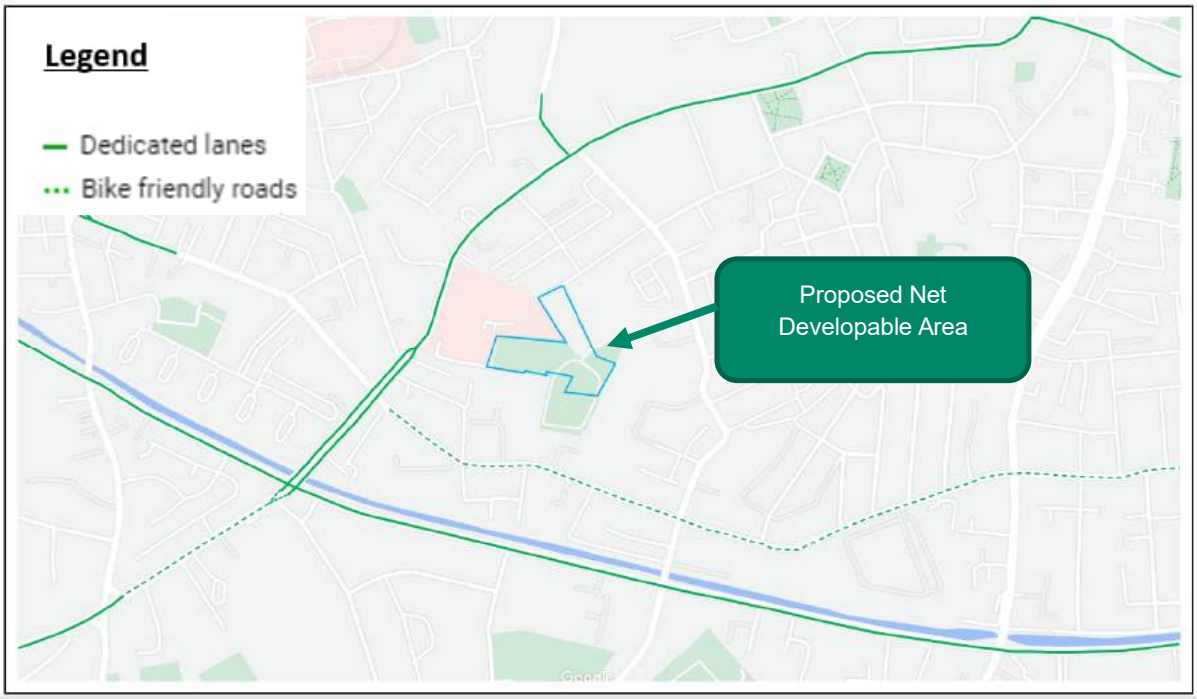


Figure 2.10 Current Cycling Facilities (AECOM)

In addition,
Figure 2.11 illustrates the walking and cycling distance from the proposed development site. These distances are considered approximate due to the shapefile data AECOM had access to limiting the complete accuracy of the Isochrone.

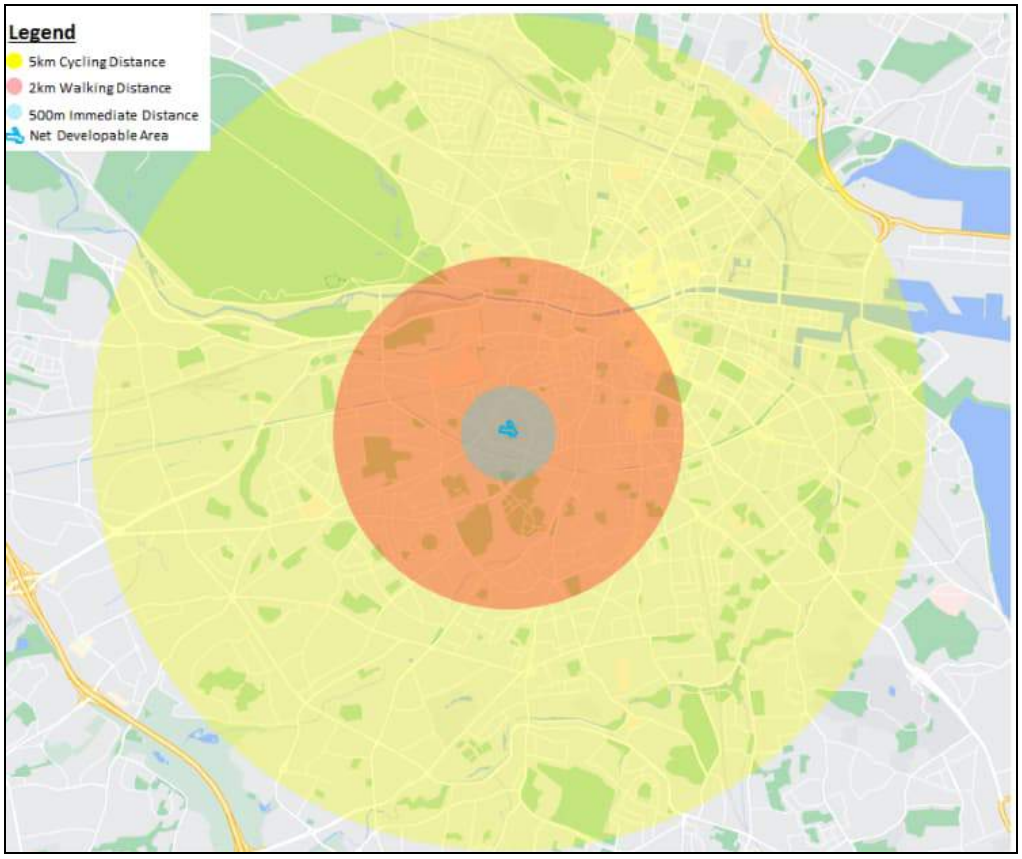


Figure 2.11 Walking and Cycling Radius in Relation to the Proposed Development.

2.4.7 Sustainable Transport – Car Club/Car Share

Whilst it is anticipated that commuting will generally be undertaken on foot, bicycle or public transport, existing car club/car share facilities are available in proximity to the proposed development.

Car club/car share members can book cars online or via the app for durations of as little as an hour. They then unlock the car with their phone or a membership Card; the keys are in the car, with fuel, insurance and city parking all included. The benefits of such car sharing services include:

- Aids the reduction of cars on the road and therefore traffic congestion, noise and air pollution;
- Has the potential to free up land traditionally used for private parking spaces;
- Encourages and potentially increases use of public transport, walking and cycling as the need for car ownership is reduced;
- Car sharing allows those who cannot afford a car the opportunity to drive, encouraging social inclusivity;
- Car share replaces approximately 20-25 private car parking spaces.

There are four existing GoCar hire stations located within a 400m walking catchment of the subject site. AECOM have met with car sharing provider Go Car, who indicated that 25-30 vehicles would seem a maximum appropriate amount of car sharing car parking spaces to supply for the proposed development. It is not proposed to increase the GoCar capacity with the proposed development site if permission is granted. It is anticipated that each vehicle can serve up to 20 properties. The locations of the nearest GoCar spaces are detailed in Table 2.2

Table 2.2 GoCar Bases and Distances

Site Number	GoCar Location	Distance from Subject site
1	Cork Street (Opposite Lidl)	300m
2	Donore Avenue – Rutlidge Terrace	180m
3	Dolphin Avenue	900m
4	Merton Avenue	500m

There are 3 existing YUKO hire stations located within a 500m walking catchment of the subject site. YUKO provide a similar service to GoCar. Booking a car can be completed through the website or their app. All rented cars must return to the location that the user set off from.

The locations of the YUKO bases are illustrated in in Table 2.3

Table 2.3 YUKO Bases and Distances

Site Number	YUKO Location	Distance from Subject site
1	1 Harmon Street, St. Catherine's, Dublin 8	400m
2	29 Donore Avenue , St. Catherine's, Dublin 8	150m
3	Salisbury Apartments, 214 South Circular Road, Dublin 8	450m

2.5 Potential Transport Infrastructure

2.5.1 Cycle Network

In the vicinity of the subject site, it is planned to upgrade the cycle facilities along the R110, Donore Avenue and the South Circular Road. It is understood that the cycle facilities to be provided along the R110 will be part of the BusConnects redesign. The implementation of the new network will take place on a phased basis over a number of years having started in 2021.

2.5.2 BusConnects

The NTA have published BusConnects Dublin, a €2 billion scheme that comprises a strategy to develop out continuous bus lanes along a series of bus corridors across Greater Dublin. The NTA envisages that the benefits will include improved bus service frequency and reliability, whilst also providing cycling priority along key corridors

in Dublin. If the Bus Connects scheme goes ahead this can be facilitated without impacting the principles of the development.

The scheme includes a series of corridors into Dublin City Centre. Of relevance to this scheme is 'Spine D' inclusive of routes D1, D2, D3, D4 and D5.

The National Transport Authority (NTA) has put forward proposals to upgrade a number of core bus corridors from the Dublin environs to the City Centre under the title 'BusConnects'. The aim of the project is to:

- 'Make bus journeys faster, predictable and reliable;
- New bus stops and better facilities;
- More efficient network, connecting more places and carrying more passengers;
- Updated ticketing systems and implementing a cashless payment system with a simpler fare structure; and
- Improving the cycling network and making it safer.'

As part of the BusConnects scheme the current bus network is to be revised and more frequent and efficient services are to be provided across the Dublin environs. The subject site is within 300m of Corridor 9 (Greenhills to City Centre) and 1.1km of corridor 11 (Kimmage to City Centre) of the bus connects proposals corridor 9 route length is approximately 12kms. The current bus journey time is up to 80 mins and the proposed bus connects bus journey time is 30-40 mins. In addition a new orbital route is planned along South Circular Road which will pass directly in front of the proposed development. This route will operate at a frequency of 5-10 minutes. Figure 2.12 illustrates the proposed BusConnects routes in the vicinity of the proposed development site.

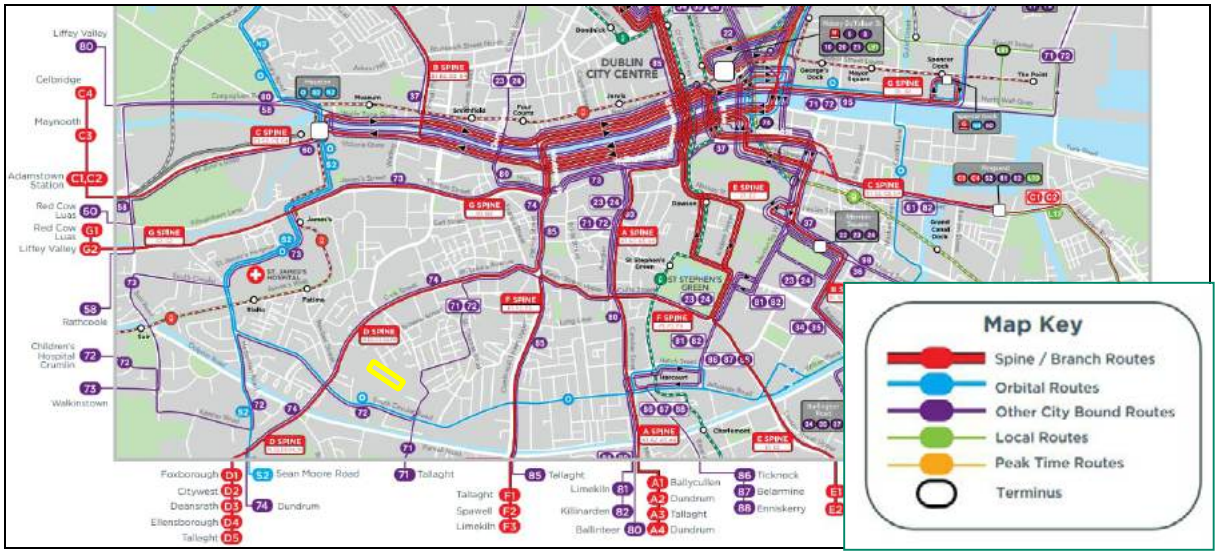


Figure 2.12 Bus Connects Local Area Map

2.6 Social Infrastructure Assessment

John Spain Associates have undertaken a social and community audit, and their report accompanies this application. The purpose of a Social Infrastructure Assessment is to provide an audit of the existing community facilities serving the Dublin's South Inner City. It provides information on the key population changes occurring in the area and the potential demographic changes arising from the redevelopment opportunities within this area. It also contains an audit of the existing social infrastructure in the area relating to:

- Community and social infrastructure;
- Open space, sport and recreation;
- Educational facilities;
- Healthcare facilities;
- Religious facilities;
- Arts and cultural facilities; and

- Retail provision.

The assessment demonstrates that there is sufficient community facilities provision within the catchment to cater for the future needs of the population. This is related to transportation matters as the assessment shows numerous community facilities within walking and cycling catchments of the development negating the need for travel by car.

In summary, it is considered that the South Dublin Inner City, and the site, is accessible to a range of open space and recreational facilities including a large number of education facilities including a third level university; and a large quantum of community and retail facilities located throughout the area. As such the facilities are all easily accessed by a range of sustainable transport modes, especially walking and cycling, reducing the requirements to service the needs of cars in the development.

2.7 Existing Conditions Summary

The existing area and the nature of the land use proposed has opportunities to support and encourage sustainable journeys in favour of the private car, which can be achieved by providing a low car parking ratio for the proposed development.

3. The Proposed Development

This TTA is submitted to support the planning application by The Land Development Agency (LDA). on behalf of Dublin City Council. The Land Development Agency, intend to apply to An Bord Pleanála for a seven year permission to An Bord Pleanála in relation to a proposed residential development at this site located on the former St. Teresa's Gardens, Donore Avenue, Dublin 8. The site is bound by Donore Avenue to the north-east, Margaret Kennedy Road to the north-west, The Coombe Women & Infants University Hospital to the west, the former Bailey Gibson factory buildings to the south-west, and the former Player Wills factory to the south-east. The development will consist of the construction of a residential scheme of 543 no. apartments on an overall site of 3.26 ha.

3.1 Development Proposal

The development will consist of the construction of a residential scheme of 543 no. apartments on an overall site of 3.26 ha.

The development (GFA of c. 53,227sqm) will be set out in 4 blocks and contains the following:

- 225 No. 1 bedroom apartments (36 no. 1-person & 189 no. 2-person);
- 274 No. 2 bedroom apartments (including 52 No. 2 bed 3 person apartments;
- 222 No. 2 bed (4 person apartments);
- 44 No. 3 bedroom 5-person apartments;
- A community, artist workspace, arts and cultural space, including a creche set out in 4 no. blocks. creche (952 sqm);
- A retail/café unit (168 sqm);
- A mobility hub (52 sqm); and

Figure 3.1 illustrates the proposed general arrangement.

Figure 3.1 Proposed General Arrangement (AECOM drawing no. STG-AEC-S1b-00-00-DR-C-0000001)

The breakdown of each block will contain the following apartments:

- Block DCC1 comprises 111 No. apartments in a block of 6-7 storeys;
- Block DCC 3 comprises 247 No. apartments in a block of 6-15 storeys;
- Block DCC5 comprises 132 No. apartments in a block of 2-7 storeys; and
- Block DCC6 comprises 53 No. apartments in a block of 7 storeys;

The development (GFA of c. 53,227sqm) contains the following mix of apartments: 225 No. 1 bedroom apartments (36 no. 1-person & 189 no. 2-person), 274 No. 2 bedroom apartments (including 52 No. 2 bed 3 person apartments and 222 No. 2 bed 4 person apartments), 44 No. 3 bedroom 5-person apartments, together with retail/café unit (168 sq.m.), mobility hub (52 sq.m.) and 952 sq.m. of community, artist workspace, arts and cultural space, including a creche, set out in 4 No. blocks.

The proposed development will also provide for public open space of 3,408 sqm, communal amenity space of 4,417 sqm and an outdoor play space associated with the creche. Provision of private open space in the form of balconies or terraces is provided to all individual apartments.

The proposed development will provide 906 no. residential bicycle parking spaces which are located within secure bicycle stores. 5% of these are over-sized spaces which are for large bicycles, cargo bicycles and other non-standard bicycles. In addition, 138 spaces for visitors are distributed throughout the site.This is inclusive of dedicated cycle parking for creche use and café use within the proposed site. .

A total of 79 no. car parking spaces are provided at podium level. Six of these are mobility impaired spaces (2 in each of DCC1, DCC3 & DCC5). 50% of standard spaces will be EV fitted. Up to 30 of the

spaces will be reserved for car sharing (resident use only). A further 15 no. on-street spaces are proposed consisting of:

- 1 no. accessible bay (between DCC5 & DCC6)
- 1 no. short stay bay (between DCC5 & DCC6)
- 1 no. crèche set-down/ loading bay (between DCC5 & DCC6)
- 1 no. set-down / loading bay (northern side of DCC5)
- 1 no. set-down/loading bay (northern side of DCC 3)
- 10 no. short stay spaces (north-west of DCC1)

In addition, 4 motorcycle spaces are also to be provided.

Vehicular, pedestrian and cyclist access routes are provided from a new entrance to the north-west from Margaret Kennedy Road. Provision for further vehicular, pedestrian and cyclist access points have been made to facilitate connections to the planned residential schemes on the Bailey Gibson & Player Wills sites for which there are extant permissions (Ref. No.'s ABP-307221-20 & ABP-308917-20).

The development will also provide for all associated ancillary site development infrastructure including site clearance & demolition of boundary wall along Margaret Kennedy Road and playing pitch on eastern side of site and associated fencing/lighting, the construction of foundations, ESB substations, switch room, water tank rooms, storage room, meter room, sprinkler tank room, comms room, bin storage, bicycle stores, green roofs, hard and soft landscaping, play equipment, boundary walls, attenuation area and all associated works and infrastructure to facilitate the development including connection to foul and surface water drainage and water supply.

3.2 Vehicular Access

Access into the site will be via Donore Avenue from Margaret Kennedy Road in the form of a 3-arm priority T Junction and has been design to DMRUS guidance and is shown in Figure 3.2.

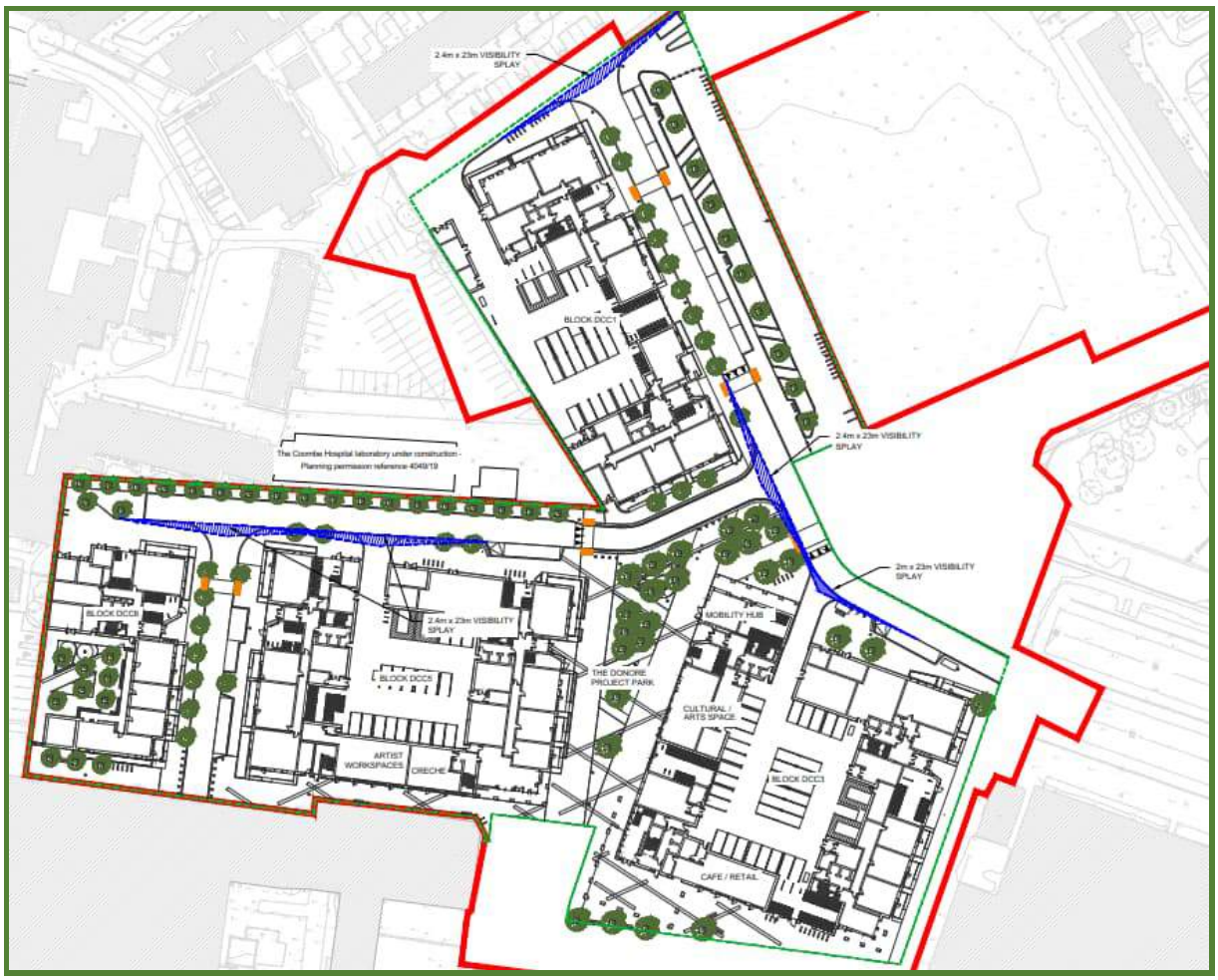


Figure 3.2 Proposed Access junction with Visibility Splay (AECOM Drawing no.STG-AEC-S1b-00-00DR-C-0000101)

A visibility assessment has been undertaken on the proposed site access following DMRB guidelines. Visibility splays are provided to illustrate sight lines toward and down intersecting streets to ensure that drivers have sufficient reaction time to stop should a vehicle enter their path. The visibility splay of the site access junction slightly encroaches the on-street parking bay, due to the low speeds, residential area and location of the bay it is considered acceptable and will not be a road safety issue.

AECOM have submitted AECOM Drawing STG-AEC-S1b-00-00DR-C-0000101 demonstrating that the proposed main access, achieve a recommended visibility splay of 2.4m x 23m on Margaret Kennedy Road as per the DMURS guidelines for a 30km/h speed limit in addition to internally within the site road network. Drawing Number STG-AEC-S1b-00-00DR-C-0000101 in Appendix A illustrates the full assessment.

3.3 Taking in Charge

Illustrated in Figure 3.3 below is the assigned taking in charge programme for the proposed site along with existing information regarding adjacent lands within the DCC ownership. Taking in charge describes the lands that will be under different agency ownership and management once the site is developed.

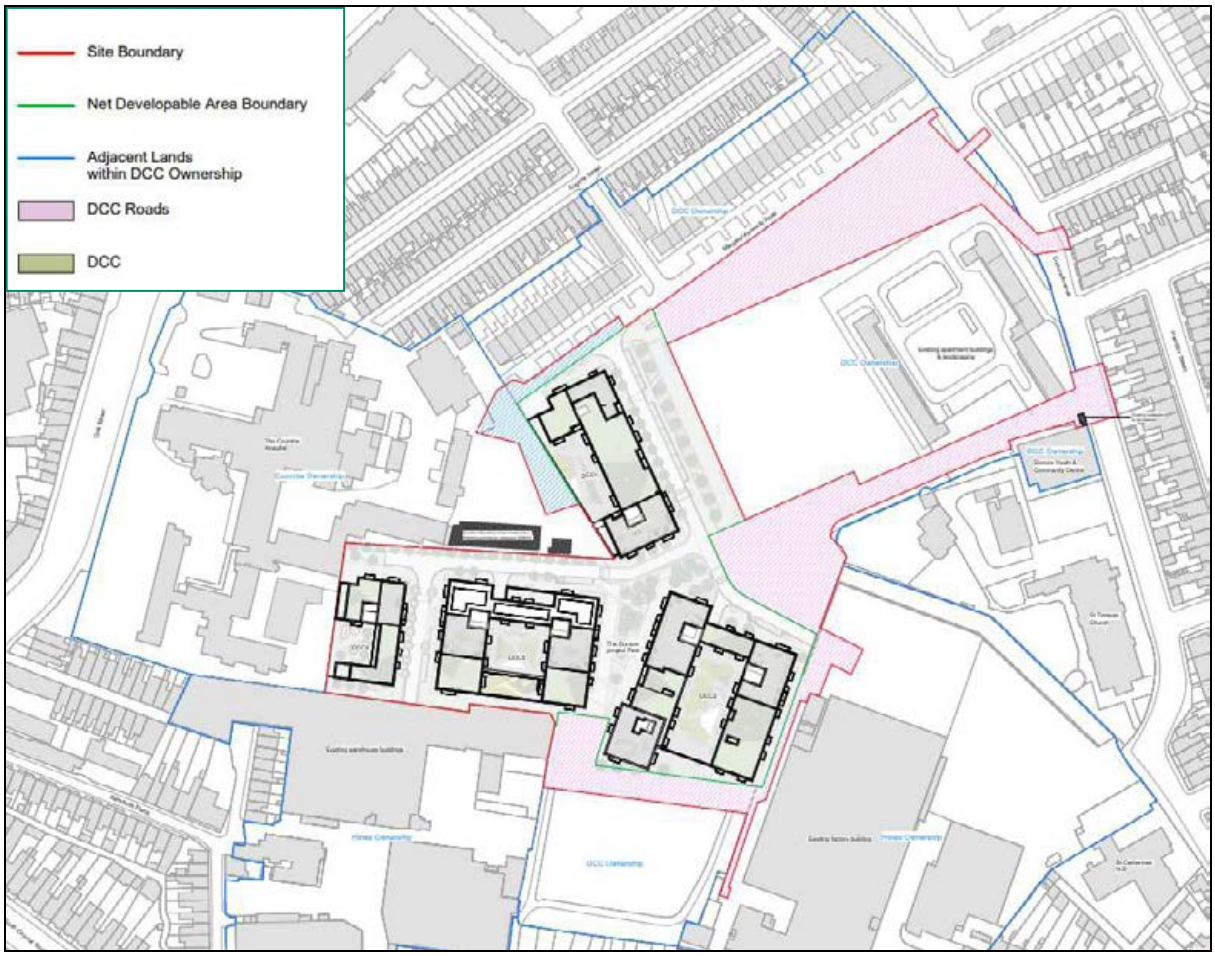


Figure 3.3 Taking in Charge Drawing (Source: Metropolitan Workshop Drawing no. STG- MW- S1b- 00- XX- DR- A- 1100002- S4- P1

3.4 Internal Roads

Internal roads within the proposed development have been designed to comply with DMURS guidance. AECOM has undertaken a review of the proposed carriageway widths and can confirm they are compliant with the DMURS guidelines for internal estate roads. The main access carriageway width has been designed to provide ample width for refuse vehicles to safely manoeuvre within the site. The entrance road is 11m wide, the main internal spine road is 5.5m wide, whilst towards the eastern end of the site between DCC 1 and DCC 3 the carriageway width is 4.8m wide.

A raised pedestrian priority ramp is proposed across the vehicular access to reduce vehicular speeds upon entering the development and to create a sense of pedestrian priority as per the DMURS guidelines. A 1.8m (min) wide footway will be situated on either side of the new internal estate road, to provide a dedicated route for pedestrians.

An auto tracking exercise has been carried out to ensure both Fire Tender and Refuse vehicles can access and manoeuvre within the site. A fire tender with an aerial platform is required for the buildings within this development. Dublin Fire Brigade advised a new vehicle type has been added to their fleet and will be used to access this development and it was confirmed by the fire consultant that the vehicle used for autotracking is sufficiently similar for analysis.

Furthermore, the swept path analysis for refuse vehicles was developed and assessed against the Operational Waste Management Plan.

Refer to drawing STG-AEC-S1b-00-00-DR-C-0000102 & 0000103 for swept path analysis and STG-AEC-S1b-00-00-DR-C-0000101 for visibility splays at junctions and entrances.

Figure 3.4 Proposed Swept Path Analysis with Refuse Vehicle of 2 (AECOM Drawing :STG-AEC-S1b-00-00-DR-C-0000103)

The results of the analysis show that the site access junction can accommodate servicing vehicles, a standard 10.2m long refuse lorry will be able to safely access the site and manoeuvre within the development site and exit back onto Donore Avenue accessing and exiting the site. AECOM have submitted drawing STG-AEC-S1b-00-00-DR-C-0000103 in Appendix A. Figure 3.4 demonstrates that the proposed development will facilitate on site refuse collections.

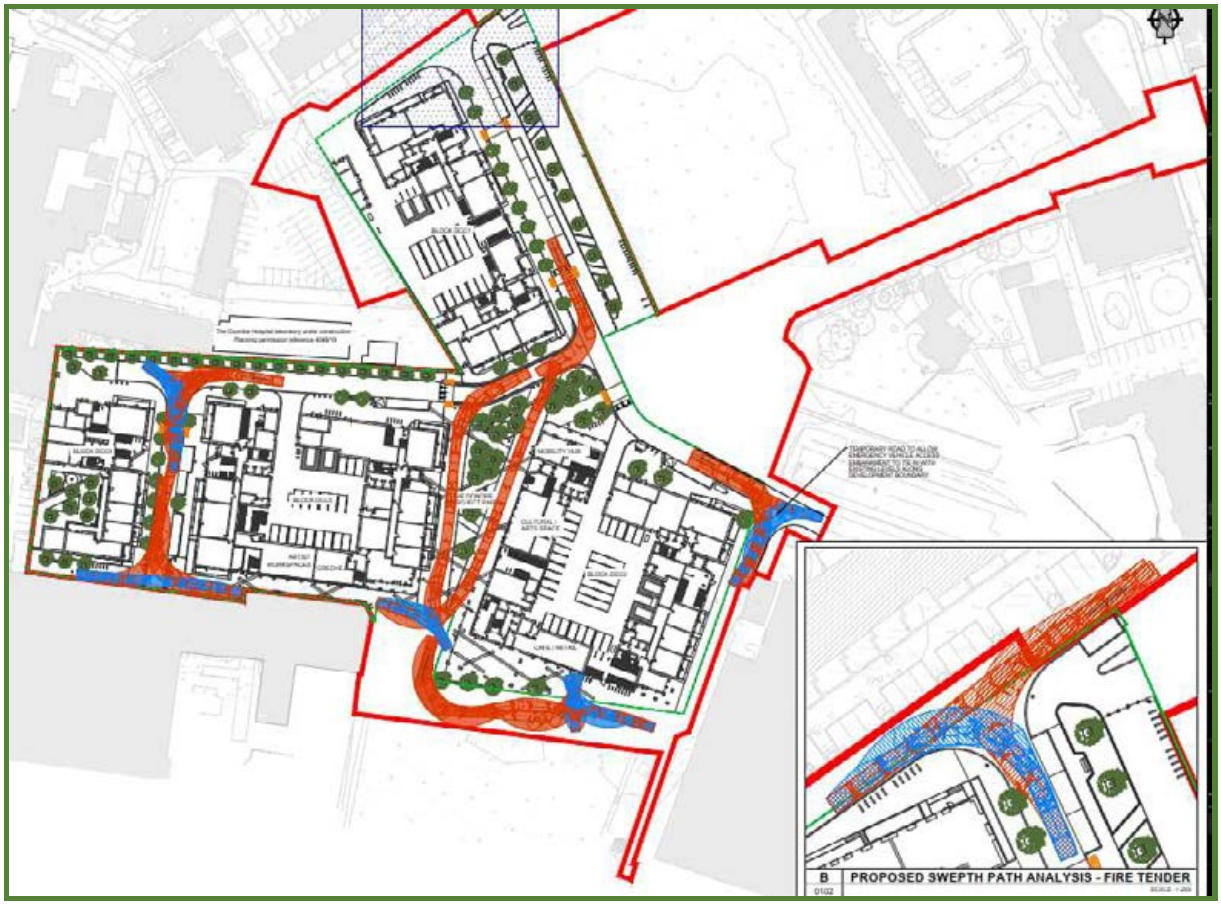


Figure 3.5 Proposed Swept Path Analysis Fire Tender (AECOM Drawing no. STG-AEC-S1b-00-00-DR-C-0000102)

3.5 Pedestrian Infrastructure

It is proposed to provide high quality pedestrian accesses from Donore Avenue into the site. Pedestrian crossing facilities will be provided across both vehicular entrance / egress locations off Margaret Kennedy Road. This will ultimately enhance the existing crossing facilities at the site access.

Figure 3.6 illustrates the local access routes throughout the proposed scheme that creates access points to the afore mentioned roads and amenities.

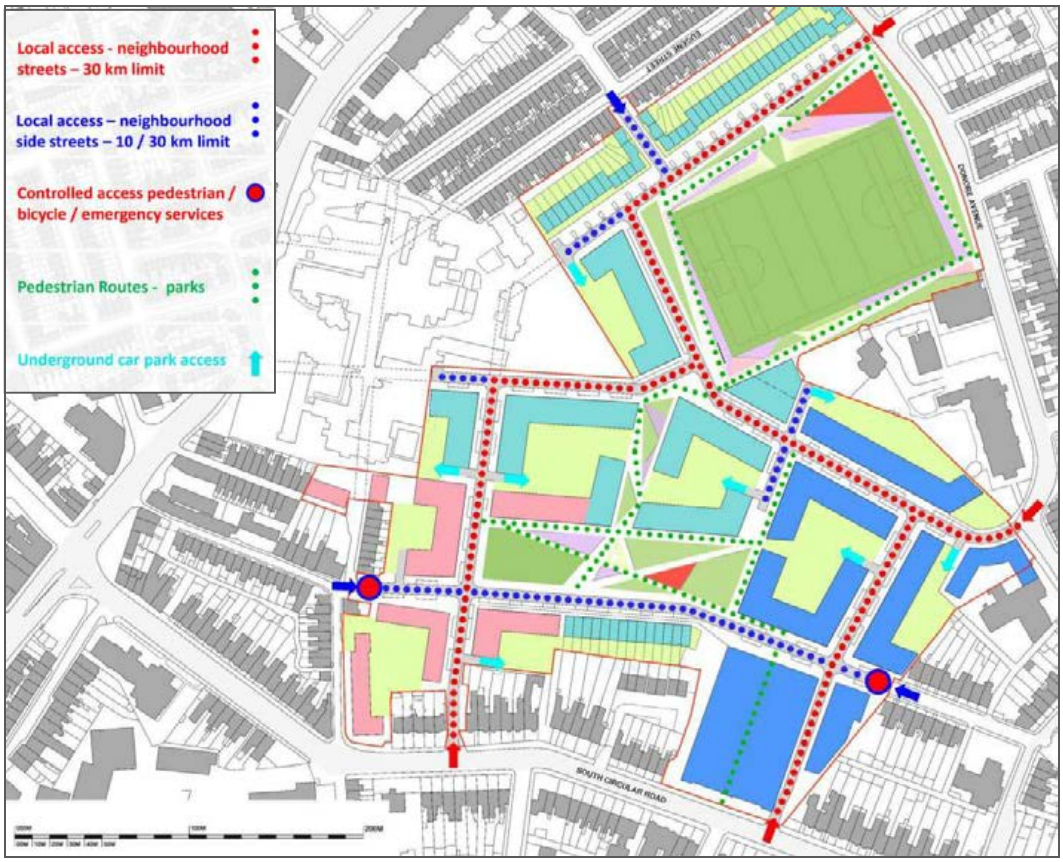


Figure 3.6 SDRA 11 Development Framework Access Strategy

Figure 3.6 shows that following the access strategy guidance in the above development framework there will be vehicular access to the site from the South Circular Road via the Player Wills site and Bailey Gibson developments and will be a local access- neighbourhood street with a 30kph speed limit.

3.6 Proposed Car Parking

The subject site is proposed to be a low car development. The Public transport network nearby is considered to be well established and operating within capacity as detailed in Appendix E This would enable a low car development to thrive on the proposed development site. The purpose of the low car development is to encourage through traffic management the use of public transport and active modes of travel to the proposed residents and users of the proposed development site. the reliance on private car use is discouraged through the reduced level of car parking spaces provided within the proposed development. The proposed development provides secure bike parking which will encourage residents to use this mode of transport more frequently. The suggested mobility hub will provide residents with live times of local public transport so that they can plan their journey accordingly. Due to the location of the site a low car development will be viable, and it is well situated between various public transport routes.

3.7 Existing Commuting Habits

To further understand the proposed low car development within the context of the local area, AECOM has undertaken a review of the Central Statistics Office (CSO) Small Area Populations Map (SAPMAP) tool to analyse the findings of the 2016 Census. Residential settlements that are located within close proximity to the proposed development have been analysed to determine existing commuter trends for the area based on their electoral divisions This analysis has been used to identify initial baseline travel characteristics for proposed development and is presented in Table 3.1 This demonstrates the majority of residents using sustainable travel modes for travel to work / place of study.

Table 3.1 Existing Mode Share3 CSO SAP MAP

Means of Travel	Work	School or College	Total	Mode Share (%)
On foot	1117	711	1828	34.9%
Bicycle	661	136	797	15.2%
Bus, minibus or coach	508	229	737	14.1%
Train, DART or LUAS	341	82	423	8.1%
Motorcycle or scooter	14	2	16	0.3%
Car driver	978	37	1015	19.4%
Car passenger	72	188	260	5.0%
Van	54	0	54	1.0%
Work mainly at or from home	105	3	108	2.1%
Total	**3850**	**1388**	**5238**	**100%**

3.7.1 DCC Parking Standards

In line with the 2022-2028 DCC Development Plan, for Zone 1 the car parking ratio of 0.5 parking spaces per dwelling is stipulated and for zones 2 and 3 the car parking ratio is 1 car parking space per dwelling. The subject site is situated within Zone 1. These standards are illustrated in Table 3.1. It should be noted that these are maximum values.

Table 3.2 Car parking Requirements

National Standards	Car Parking Requirements	Maximum Car parking standard	Number of Car Parking Spaces Required	Total Number of Car Parking Spaces Required
DCC Development Plan Standards (2016-2022)	Apartments (543)	0.5 car space per dwelling	272	272

The current DCC Development Plan states that *"Parking Zone 1 occurs along generally within the Canal Cordon and within North Circular Road in recognition of active travel infrastructure and opportunities and where major public transport corridors intersect"*

It is anticipated that the traffic impacts generated from the social and cost rental accommodation element of the proposed development will be smaller in volume than the mainstream housing due to the socio economic standing of the proposed demographic within the site. Proof is provided through the Census 2016 data analysis, indicating high levels of walking and active travel transport choices. Therefore the proposed lower car parking facilities in the proposed site will be adequate to the proposed development resident demographic and location.

The Sustainable Urban Housing: Design Standards for New Apartments Guidelines (December 2020) states that *'the quantum of car parking or the requirement for any such provision for apartment developments will vary, having regard to the types of location in cities and towns that may be suitable for apartment development, broadly based on proximity and accessibility criteria.*

In Central and/or Accessible Urban Locations, larger scale and higher density developments, comprising wholly of apartments in more central locations that are well served by public transport, the default policy is for car parking provision to be minimised, substantially reduced or wholly eliminated in certain circumstances. The policies above would be particularly applicable in highly accessible areas such as in or adjoining city cores or at a confluence of public transport systems such rail and bus stations located in close proximity'

Such locations are generally suitable for small- to large-scale (will vary subject to location) and higher density development (will also vary), that may wholly comprise apartments, including:

- Sites within within walking distance (i.e. up to 15 minutes or 1,000-1,500m), of principal city centres, or significant employment locations, that may include hospitals and third-level institutions;
- Sites within reasonable walking distance (i.e. up to 10 minutes or 800-1,000m) to/from high capacity urban public transport stops (such as DART or Luas); and

- Sites within easy walking distance (i.e. up to 5 minutes or 400-500m) to/from high frequency (i.e. min 10 minute peak hour frequency) urban bus services.

These locations are most likely to be in cities, especially in or adjacent to (i.e. within 15 minutes walking distance of) city centres or centrally located employment locations. This includes 10 minutes walking distance of DART, commuter rail or Luas stops or within 5 minutes walking distance of high frequency (min 10 minute peak hour frequency) bus services.

It is also noted that in the Dublin City Development Plan 2022-2028, has included the site in Zone 1 and the following text is taken from the Appendix 5

"A relaxation of maximum car parking standards will be considered in Zone 1 and Zone 2 for any site located within a highly accessible location. Applicants must set out a clear case satisfactorily demonstrating a reduction of parking need for the development based on the following criteria:

- *Locational suitability and advantages of the site.*
- *Proximity to High Frequency Public Transport services (10 minutes' walk).*
- *Walking and cycling accessibility/permeability and any improvement to same.*
- *The range of services and sources of employment available within walking distance of the development.*
- *Availability of shared mobility*
- *Impact on the amenities of surrounding properties or areas including overspill parking. (see Appendix F Social Audit)*
- *Impact on traffic safety including obstruction of other road users.*
- *Robustness of Mobility Management Plan to support the development*."

The Criteria stated above is addressed in detail throughout the TTA. Various elements of this criteria are assessed and analysed in relation the proposed site throughout the TTA. Table 3.3 details how the TTA has addressed the DCC development plan criteria.

Table 3.3 Donore Project Car Parking Consistency with National Policy Outline

Topic	Information within TTA
Locational suitability and advantages of the site.	Chapter 2 of this TTA provides details of the existing conditions f the transport network in the area of the proposed development site. This includes the site's urban context and good transport networks.
Proximity to High Frequency Public Transport services (10 minutes' walk).	A Public transport capacity assessment has been included as part of this application. This assessment details the existing public transport located in close proximity to the site and in addition details the capacity levels on the various services.
Walking and cycling accessibility/permeability and any improvement to same.	Section 2.5 of this TTA provides details on the potential and planned infrastructure that will benefit the proposed development site. This is inclusive of BusConnects improving both the public bus network and the dedicated cycle network.
Availability of shared mobility	AECOM have noted within this TTA the local existing car sharing facilities by both car sharing firms GoCar and Yuko. In addition to the existing car sharing facilities within the locality of the Proposed Development Site, it is proposed to provide an additional 30 car sharing spaces assumed exclusive for residents of the proposed development site as part of this scheme.
Impact on the amenities of surrounding properties or areas including overspill parking and the range of services and sources of employment available within walking distance of the development	Appendix F of this TTA details the full report on the social and Community audit for the proposed development site. The purpose of this report is to provide an audit of the existing community facilities serving Dublin's South-West Inner City. It provides information on the key population changes occurring in the area and the potential demographic changes arising from the redevelopment opportunities within this area
Impact on traffic safety	The RSA submitted as part of this application confirms the undertaking of an

including obstruction of other road users.	audit of the road safety associated with the proposed development site and indicates any issues that may be of a safety concern within the design. The design has responded to any potential issues that the auditors have identified.
Robustness of Mobility Management Plan to support the development."	A separate mobility management plan has been submitted as part of this application to highlight the objectives and measures that will be undertaken as part of the proposed development to encourage active modes of travel.

In regard to Electric Vehicle (EV) parking 50% of the car parking spaces that are provided should be EV compliant in accordance with Dublin City Development Plan 2022-2028. 50% of standard spaces within the proposed development will be EV fitted and therefore the development is compliant to the Dublin City Development Plan 2022-2028 in relation to Electrical vehicle charging points

Motorbike parking for a development are to be provided at a rate of 6.5% of the total number of car parking spaces. Car Club spaces are also to be provided and managed by the car club company and will be fully fitted for with electrical vehicle charging facilities as per Appendix 5 of the DCC development plan. There is no standard or guidance regarding the number of spaces and should be justified against the requirements of the development.

GoCar members can book cars online or via the app for durations of as little as an hour. They then unlock the car with their phone or a GoCard; the keys are in the car, with fuel, insurance and city parking all included. The benefits of such car sharing services include:

- The reduction of cars on the road and therefore traffic congestion, noise and air pollution;
- Frees up land traditionally used for private parking spaces;
- Encourages and potentially increases use of public transport, walking and cycling as the need for car ownership is reduced;
- Car sharing allows those who cannot afford a car the opportunity to drive, encouraging social inclusivity; and
- Car share replaces approximately 20 private car parking spaces.

It is proposed to provide up to 30 no. car parking spaces for car sharing (resident use only)

For retail developments in Zone 1 the car parking requirement is 1 space per 350 sq.m GFA. For creches in Zone 1 it is 1 space per 100sqm GFA.

3.7.2 Car Parking Allocation

A total of 79 no. car parking spaces are proposed to be provided. This will comprise of 79 no. podium car parking spaces at grade inclusive of 6 no mobility impaired spaces. 50% of standard spaces will be EV fitted. With up to 30 no. spaces being reserved for resident only car sharing. Podium refers to the car parking being enclosed within the building footprint. Parking numbers are detailed in Table 3.4.

A further 15 no. on-street spaces are proposed consisting of:

- 1 no. short stay bay (between DCC5 & DCC6)
- 1 no. accessible bay (between DCC5 & DCC6)
- 1 no. crèche set-down/ loading bay (between DCC5 & DCC6)
- 1 no. set-down / loading bay (northern side of DCC5)
- 1 no. set-down/loading bay (northern side of DCC 3
- 10 no. short stay spaces (north west of DCC 1)

Table 3.4 – Proposed Car Parking Allocation

Allocation	Proposed Parking (Podium)	Proposed Parking (At Surface)	Proposed Parking (overall)
Apartments	73	0	73
Visitor	0	11*	1
Accessible	6	1	7
Crèche Set down	0	1	1
Set down/ loading bay	0	2	2
Total	**79**	**15**	**94**

**Short Stay Surface Parking*

Inclusive of the total number of car parking spaces allocated to the apartments (79 no. spaces), comprises of the following:

Mobility Impaired Spaces: 6 no. mobility impaired parking spaces (6 no. resident spaces in basement and 1 no. visitor space at ground level) are proposed in compliance with the Dublin City Council (DCC) Development Plan requirements, which recommends at least 5% of the total number.

4 motorcycle spaces are proposed in compliance with the Dublin City Council Development Plan requirements, which recommends at least 6.5% of the total spaces should be designated for motorcycles.

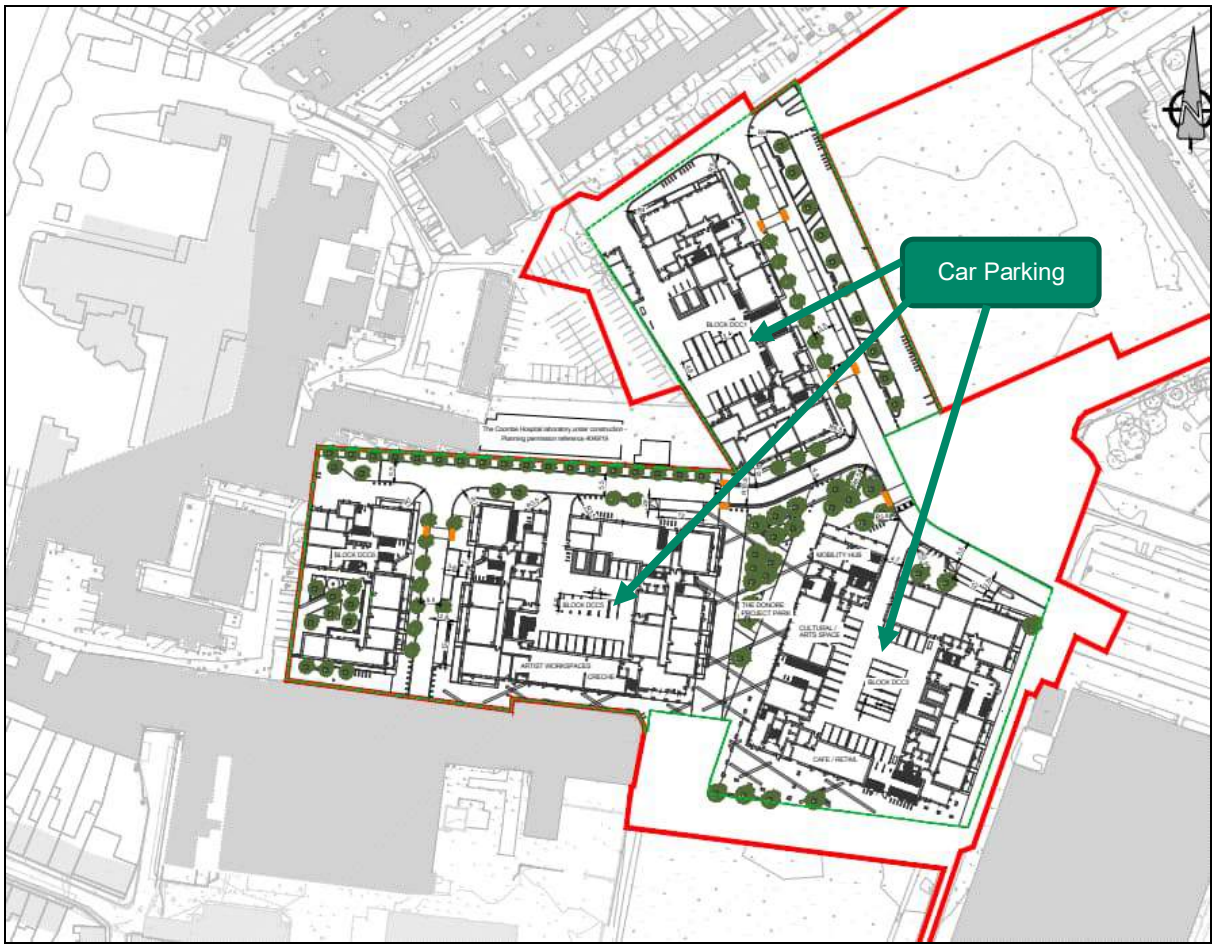


Figure 3.7 Proposed General Arrangement Indicating Car Parking (AECOM drawing no. STG-AEC-S1b-00-00-DR-C-0000001)

3.7.3 Parking Precedents

It is also worth noting the various planning applications for schemes in similar locations that have been granted permission through An Bord Pleanala. Table 3.5 illustrates a summary of these developments and their parking ratios. These show that parking ratios below our ratio (0.15) have been permitted in a number of residential developments in Dublin as examples of similar developments that have proposed low parking ratios within the vicinity of the proposed development site.

Table 3.5 Parking Ratio Application Comparisons (Source: An Bord Pleanala

Ref -No	Address	Apartments	Decision	Bicycle Parking Provision	Car parking Ratio
ABP-310567-21	42A Parkgate Street, Dublin 8	198	Grant	551	0.13
ABP-309098-21	Lands at St. Michael's Hospital Car Park, Crofton Road, Dún Laoghaire, Dublin	102	Grant	184	0.02
ABP-308871-20	Former Steelworks Site at 32A, 32B, 33, 34 & 35 James Street, Dublin 8	189	Grant	257	0.02
ABP-307067-20	Site formerly known as the IDA Ireland Small Business Centre/Newmarket Industrial Estate bounded by Newmarket, Brabazon Place, St.Luke's Avenue and Newmarket Street, Dublin 8	413	Grant	550	0.12
ABP-305676-19 (JR)	Lands to the rear of Connolly Station Car Park, Sheriff Street Lower, Dublin 1	741	Granted (Judicial Review)	-	0.07

3.8 Cycle Parking Standards

Cycle parking for the various design options has been detailed in accordance with Section 16.39 of the DCC Development Plan 2022 – 2028' and section 4.18 of the 'Sustainable Urban Housing, Design Guidelines for New Apartments'.

DCC standards for cycle parking consist of a ratio of 1.67 per unit, plus visitor parking as shown in Table 3.6.

Table 3.6 DCC Cycle Parking Standards

Land Use	DCC Parking Requirement (Zone 1)		Design Standards for New Apartments	
	Short Stay	Long Stay	Short Stay	Long Stay
Apartments	1 cycle space per 2 apartments	1 cycle space per bedroom	1 space per 2 apartments	1 space per bedroom
Creche	1 per 5 Students	1 per 5 staff	N/A	N/A

The proposed development proposes to provide 906 no. cycle spaces. There are also an additional 138 no. bicycle spaces at surface level for visitors to the scheme.

The design standards for new apartments stipulates that '*a general minimum standard of 1 cycle storage space per bedroom shall be applied. For studio units, at least 1 cycle storage space shall be provided. Visitor cycle parking shall also be provided at a standard of 1 space per 2 residential units. Any deviation from these standards shall be at the discretion of the planning authority and shall be justified with respect to factors such as location, quality of facilities proposed, flexibility for future enhancement/enlargement, etc.*' Table 3.7 illustrates this detail further.

The proposed 'creche' space as part of the community/ art space within the proposed development, is planned to accommodate 80 no. children and accommodate 34 no. staff. This figure is based on the number of children divided by the national guidance on children adult ratios for creche facilities.

Table 3.7 Cycle Parking Requirements

National Standards	Cycle Parking Requirements	Minimum Cycle parking standard	Number of Cycle Parking Spaces Required	Total Number of Cycle Parking Spaces Provided
DCC Development Plan Standards (2022-2028)	Apartments (543)	1 cycle space per bedroom	905	906
	Visitor Spaces	1 cycle space per 2 apartments	272	138 minus the creche (16 cycle spaces) and the café (3 cycle spaces)
Sustainable Urban Housing : Design Standards for New Apartments guidelines (December 2020)	Bedrooms (905)	1 Cycle Space Per Bedroom	905	906
	Visitor Spaces	1 Cycle Space per 2 apartments	272	138 minus the creche (21 cycle spaces) and the café (3 cycle spaces)
DCC Development Plan (2022-2028) – . Creche	Staff	1 Cycle Space per 5 staff	7	8
	Students	1 Cycle Space per 5 Students	14	8
DCC Development Plan (2022-2028) – Community Space (i.e. Cafe)	Staff	1 per 5 staff	2	2
	Customers	1 per 10 seats	1	1

The proposed development proposes to provide 906 no. cycle spaces. There are also an additional 138 no. bicycle spaces at surface level for visitors to the scheme.

While the proposed development does provide for the quantum of cycle spaces to serve the residents of the scheme as per the minimum requirement provided for in the Guidelines for 1 cycle storage space per bedroom for the 1-bed and 2-bed units, 1 space per studio unit, which equates to 905 no. spaces, it is slightly below the standard for visitor parking which is 1 visitor space per 2 units, which equates to a visitor requirement of 272 no. spaces.

However, as provided for in the guidelines, "*any deviation from these standards shall be at the discretion of the planning authority and shall be justified with respect to factors such as location, quality of facilities proposed, flexibility for future enhancement/enlargement, etc.".* As noted above, and as set out in this TTA, given the sites highly accessible location which is proximate to a range of high quality public transport services, a large number of the visitors to the site are likely to arrive by public transport or on foot.

Bicycle stores will be clearly visible and located in convenient locations to encourage sustainable modes of transport: beside residential entrances; along active street frontages; from the communal courtyard in DCC6; or from podium car parking in DCC5. All residential bicycle parking is located within the building footprint.

The proposed 'creche' space as part of the community/ art space within the proposed development, is planned to accommodate 80 no. children and accommodate 34 no. staff. This figure is based on the number of children divided by the national guidance on children adult ratios for creche facilities.

The cycle parking areas are located in convenient locations, around the different blocks, that are easily accessible from street level being located adjacent to building entrances. In addition, 5% of the total number of

cycle parking spaces are for the larger bikes, such as cargo bicycles, or other non-standard bicycles .Included in this 5% it is proposed to provide 2 no. cargo bike stands at the entrance to the creche. Excluded from the 119 no. visitor cycle parking spaces located around the proposed development site is a proposed 16 no. bike parking spaces consisting of 14 bike spaces via two tier (Josta-type) stands as well as a Sheffield stand for non-standard bikes totalling 16 no. spaces. These are dedicated entirely for use of staff and students of the creche.

Similarly, regarding the café it is proposed to provide 3 number of bicycle parking spaces dedicated to the use of staff and customers of the café. At the time of writing this TTA AECOM do not know the number of covers or the style of business that the proposed café on the proposed development site is to contain or present as. The cycle parking guidance is recommended as per the DCC development plan in terms seat covers and number of staff. Through having knowledge of the proposed café GFA of 168 sqm AECOM have assumed that a number of 10 seats would be applicable to this space with 2 members of staff. It is considered very unlikely that the proposed café will be generating trips outside the development itself.

These dedicated bike parking spaces will be included in the final number of 138 no. visitor bike parking spaces proposed within the development site. The total number of visitor spaces for the site will total 119 number of spaces
The bicycle parking is distributed pro rata amongst the various blocks as set out below and summarised in Table 3.5.

- DCC1 - Total spaces = 200
- DCC3 - Total spaces = 376
- DCC5 - Total spaces = 238
- DCC6 - Total spaces = 92

Table 3.8 Cycle Parking Provision

Bike Parking Provision		
Residential	906	Spaces in secure bicycle stores
Visitor	119	Spaces distributed through the site
Creche	16	Spaces distributed near to the Creche
Cafe	3	Spaces distributed near the Cafe
Cargo	5%	Of the residential Bike parking
Total	1,044	Cycle parking spaces

Visitor spaces, in the form of Sheffield Stands, are distributed around the site for each of the block and these total space for 138 bicycles, or 0.2 spaces per dwelling. Within the 138 cycle parking spaces they will be identified separately as residential visitor cycle parking spaces, creche drop off / staff cycle parking spaces and café cycle spaces as standards and guidelines require.

It can be seen that the cycle parking provision is in excess of that required by DCC Development Plan Standards and goes someway to providing for The Sustainable Urban Housing Design Standards for New Apartments Guidelines (December 2020), by providing broadly in line with 1 Cycle Space Per Bedroom (906 spaces) and visitor cycle parking at a ratio of 0.2 spaces per unit.

AECOM have assessed the relevant land uses regarding cycle parking provisions required. In the instance of the 952 sqm of community, artist workspace, arts and cultural space, including a creche the cycle parking provision has been calculated with the worst case scenario in mind to ensure that the proposed development would meet the cycle parking requirement. Therefore, for the purposes of robust analysis and ensuring adequate cycle parking provision the entirety of the 952sqm stated in the development description and above is for the purposes of assessment being titled as the land use of a creche.

With consideration of the above, the proposed cycle parking provision is sufficient to accommodate predicted demand.

The proposed cycle parking provision has been designed to encourage cycling as a key mode of travel to and from the site. The cycle parking spaces for residents will comprise of predominantly 2 tier (Josta) stands with some non-standard stands.

Visitor cycle parking spaces are incorporated as part of the external landscaping across the site in the form of 'Sheffield style' cycle parking stands. Resident's cycle parking is located at grade within building footprints and secured with fob access for residents only. The cycle parking is located adjusted to communal lift/stair cores.

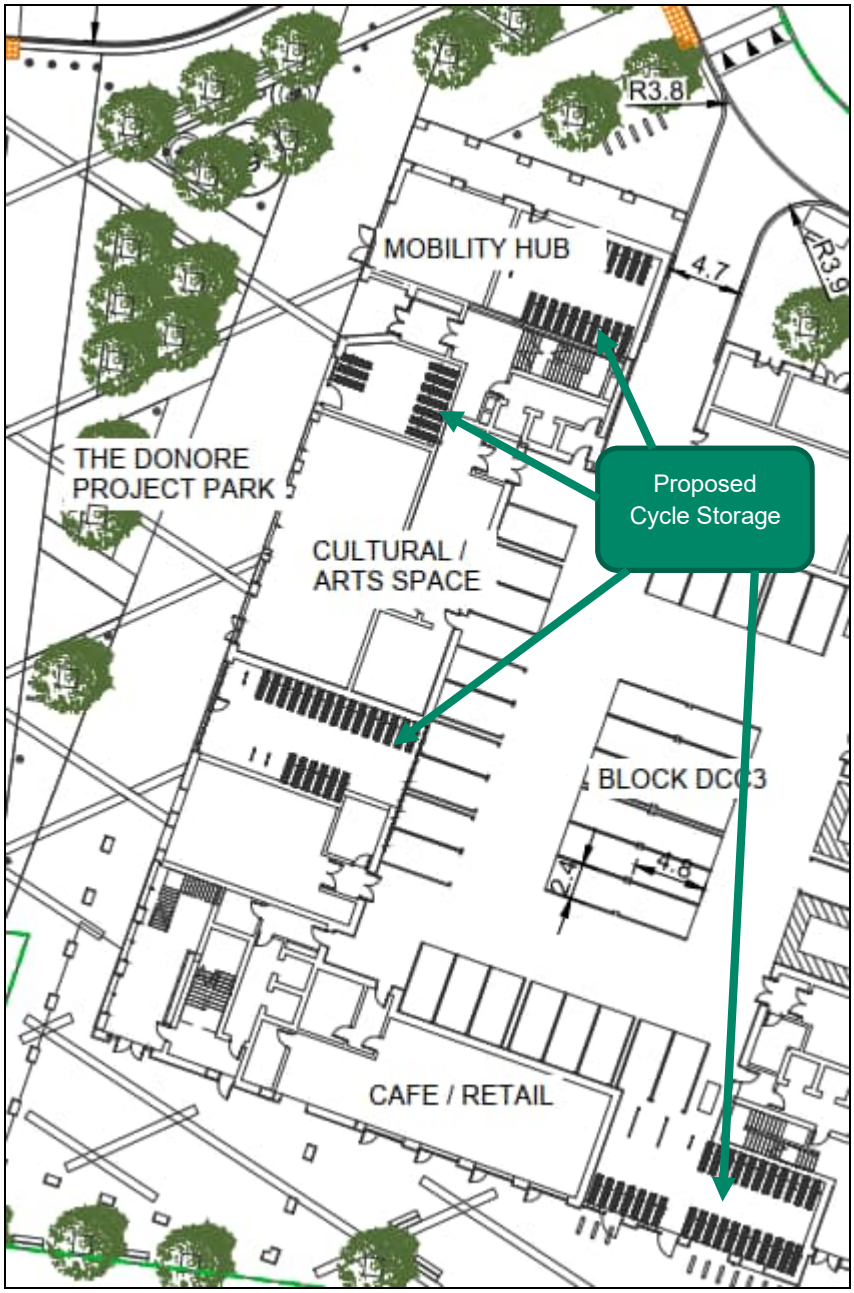


Figure 3.8 Proposed Cycle Storage within General Arrangement (AECOM Drawing No. AECOM drawing no. STG-AEC-S1b-00-00-DR-C-0000001)

3.9 Podium Parking Management

It should be noted that a Management Company will be appointed by the applicant who will be responsible for management of the proposed car parking. Perspective residents will be made aware of the car parking arrangements with the management company being responsible for enforcing the above arrangement. This will include measures such as the following:

- Regular car registration checks against assigned car parking spaces and clamping enforcements;
- Internal warning signs to be erected to warn visitors of parking restrictions in place;

- Letters to be sent to all residents informing them of the agreed car parking strategy;

- Parking will only be permitted within designated parking bays, wheel clamping will be in force for any offending motorists.

The proposed parking provision for cars, cyclists and motorcycles have been prepared to take into consideration a balanced approach in terms of the parking requirements within both the '*Dublin City Council Development Plan 2016-2022*', the draft Dublin City Development Plan 2022-2028 and the '*Sustainable Urban Housing: Design Standards for New Apartments, Guidelines for Planning Authorities*'.

3.10 Construction Phasing

The development of the proposed site will be constructed in phases as is detailed in Table 3.9. A Construction Traffic Management Plan (CTMP) will be submitted separately as part of this application.

Table 3.9 Construction Phasing

	Stage	Start Date	Finish Date
Phase 1	Enabling Works	2024	2024
	Piling	2024	2025
	DCC3	2024	2027
	DCC6	2024	2026
	DCC5	2025	2026
Phase 2	Enabling Works	2025	2025
	Piling	2025	2025
	DCC1	2025	2027

4. DMURS Statement of Compliance

4.1 General

This chapter comprises of a Statement of Compliance, prepared for the Part X (section 175) of the Planning and Development Act 2000-2021. It is recommended to include the following sections with appropriate commentary relevant to the proposed development.

4.2 Compliance with DMURS

AECOM has set out in the following sections how the proposed development is compliant with the DMURS guidelines.

It is AECOM's opinion that the proposed development is consistent with both the principles and guidance outlined within DMURS. The scheme proposals are the outcome of an integrated approach that seeks to implement a sustainable community connected by well-designed streets which deliver safe, convenient and attractive networks in addition to promoting a real and viable alternative to car based journeys.

The adopted design approach successfully achieves the appropriate balance between the functional requirements of different network users whilst enhancing the sense of place. The implementation of self-regulating streets actively manages movement by offering real modal and route choices in a low speed, high quality residential environment.

The main objective of this report is to examine the design principles of the proposed development with reference to the two core principles presented within DMURS, as outlined below:

1. Street Networks: To support the creation of integrated street networks which promote either levels of permeability and legibility for all users and in particular more sustainable forms of transport.
2. Street Design: The promotion of multi-functional, place-based streets that balance the needs of all users within a self-regulating environment.

4.3 Street Networks

Specific attributes of the street network which contribute to achieving the DMURS objective include:

- The proposed development achieves filtered permeability, primarily for walking and cycling along the eastern, northern and southern boundary of the site.
- Well designed and frequently provided pedestrian crossing facilities are provided along key desire lines throughout the site. All courtesy crossings are provided with dropped kerbs thereby allowing pedestrians to informally assert a degree of priority.
- A variety of materials and finishes will be specified in the shared areas to indicate that the carriageway is an extension of the pedestrian domain.

4.4 Street Design

The internal layout design has been informed by Chapter 4 of the DMURS guidelines and is in accordance with these guidelines.. The following measures are examples of where compliance with the recommended street design guidelines has been demonstrated:

4.4.1 Streetscape

- Pedestrian crossings are proposed which comprise of tactile paving and dropped kerbs to facilitate pedestrian movements throughout the site.
- Car parking provision is proposed both on and off street.
- DMURS also gives guidance on the types of materials and finishes to be used in order to provide a sense of calm for traffic and improve legibility for vulnerable road users. All carriageways, footpaths and tactile paving are proposed to be of visually contrasting colour.

- As per Section 4.2.4 of DMURS, signing and lining has been provided appropriately at the required locations throughout the development. However, the proposed development has been designed to have a self-regulating approach to increase the road safety as opposed to relying on mandatory warning signs.

4.4.2 Pedestrian and Cyclist Environment

The following measures are examples of where compliance with the DMURS pedestrian focus has been demonstrated:

- As per Figure 4.34 of DMURS, the internal footpaths have been proposed at a minimum width of 1.8m, which is the space required to allow two buggies or wheelchairs to pass each other or travel side by side.
- There are a number of pedestrian crossings proposed throughout the site, which comprise of tactile paving and flushed kerbs to facilitate pedestrian movements crossing the carriageways at the junctions.
- The proposed corner radii at the junctions comply with DMURS (Section 4.3.3) to 4.0 – 6.0m in order to reduce vehicular speeds and reduce pedestrian crossing distances.

4.4.3 Carriageway Conditions

- The proposed residential development's internal hierarchy of local streets incorporates 5.5m wide carriageways along the proposed site internal road network
- Both horizontal and vertical deflection are used to increase driver caution and calm traffic.
- Internal footpaths have been provided at a minimum width of 1.8m, which is the space required to allow two wheelchairs to pass each other; proposed internal footpaths are no less than 1.8m throughout the development.
- Car parking is of the required minimum dimensions i.e. 2.4m x 4.8m for a standard parking space.
- Internally within the development carriageway kerb heights will be specified as 75-80mm in accordance with the objectives of DMURS.
- SPA has been undertaken, see Civils' drawings, to demonstrate that the proposed development can cater for delivery and servicing vehicles.

4.4.4 Conclusion

As detailed above the proposed development has been examined and complies with the design principles and objectives set out in DMURS (2019) for Street Networks and Street Design.

5. Trip Generation and Distribution

5.1 General

The purpose of this section is to determine the overall number of trips that will be generated by the proposed development in terms of vehicular traffic.

To understand the potential vehicular trip generation associated with the site, AECOM has undertaken a review of the base traffic upon the adjoining road network against the proposed trip generation, outlined in the subsequent sections.

Table 5.1 Proposed Schedule of Accommodation

Land Use	Type	Quantum	
Apartment	1 Bed	225	units
	2 bed	274	units
	3 Bed	44	units
Café	N/A	168	Sq. m
Community/ Artist Space/Creche	N/A	952	Sq. m
Mobility Hub	N/A	52	Sq. m

5.2 Base Traffic Flows

Irish Traffic Surveys (ITS) undertook Junction Turning Counts at various junctions within the designated study area on October 19th 2022l. these locations in the context of the development site are illustrated in Figure 5.1. The surveys were undertaken for 12 hrs on a neutral weekday within the school term. This was to understand existing traffic conditions in the study area of the site. Figure 5.1 illustrates the count locations in the context of the development site.

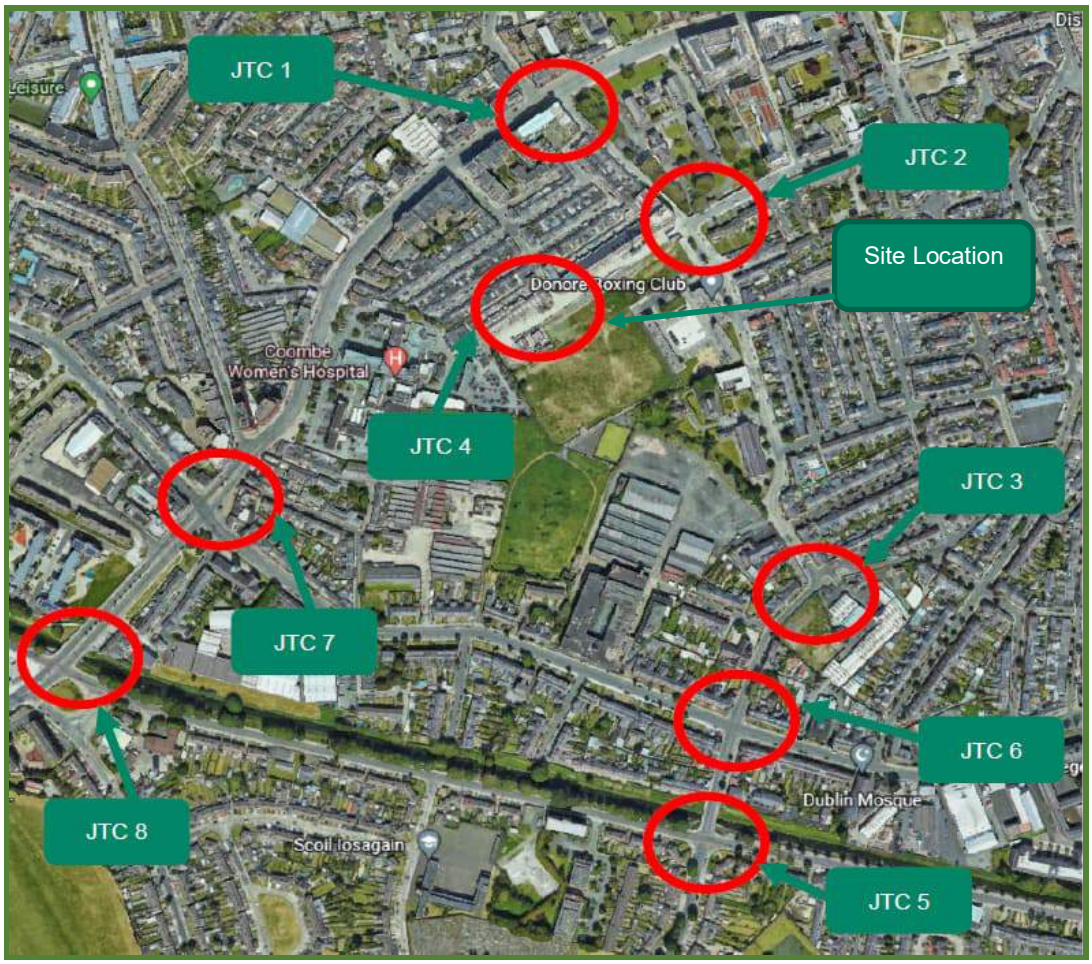


Figure 5.1 Location of ITS Traffic Surveys

For the base traffic flows, the typical weekday morning (08:15 – 09:15) and evening (16:00 – 17:00) peak hour periods were identified in terms of traffic volumes on the road network. These are the periods when traffic flows are greatest based on the ITS data, and therefore will be used for the purpose of the modelling analysis. Figure 5.2 illustrates the existing baseline traffic observed in the vicinity of the site address with the full network flow diagram located in Appendix B and Figure 5.3 illustrates the trip distribution observed at the time the traffic surveys were undertaken in the locality of the Site access, a full distribution diagram is located in Appendix B.

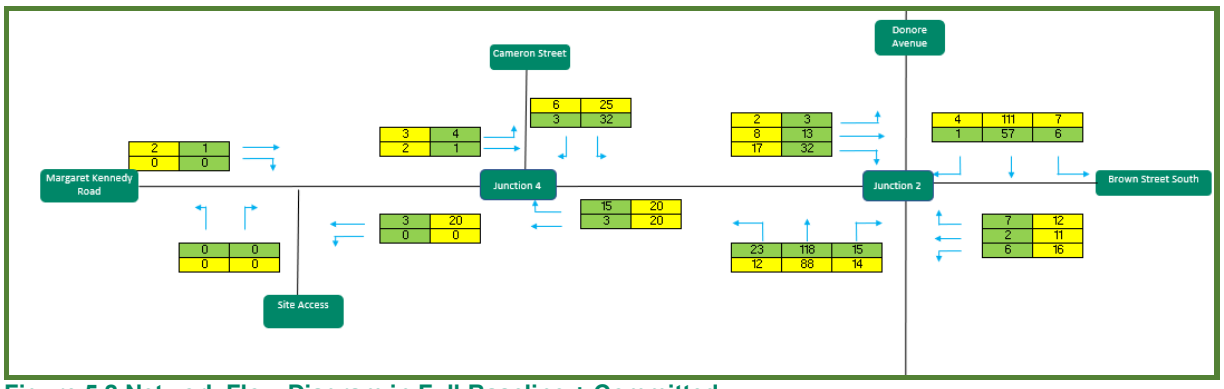


Figure 5.2 Network Flow Diagram in Full Baseline + Committed

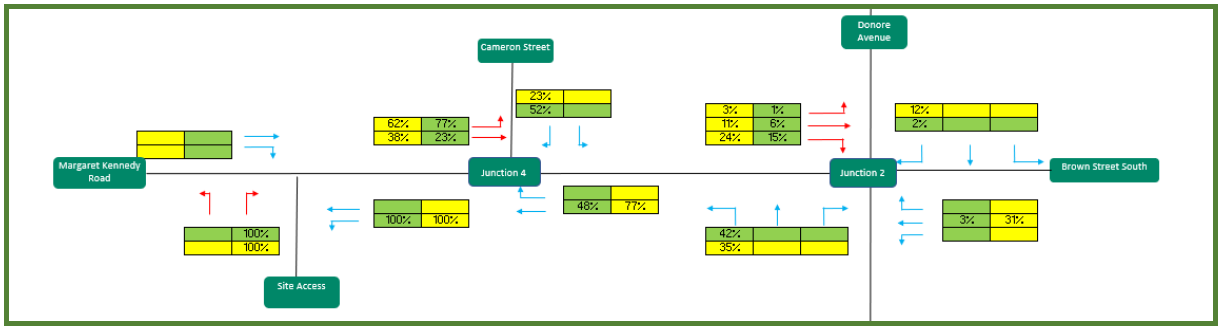


Figure 5.3 Trip Distribution In detail at Site

5.3 Proposed Development Trip Generation

The Trip Rate Information Computer System (TRICS) has been interrogated to calculate the quantum of vehicle trips likely to be generated by a development of the scale and type proposed. Trip generation data was calculated for the morning and evening peak hours (08:15 – 09:15 and 16:00 – 17:00 respectively), so as to determine the maximum impact of the proposed development on the surrounding road network.

The TRICS (version 7.9.1) outputs are shown in Appendix D, whilst the proposed trip rates for the AM and PM peaks can be found on Table 5.2.

Table 5.2 Proposed People Trip Rate TRICS (version 7.9.1)

Mode of Travel	Morning (08:15 - 09:15)		Evening (16:00 - 17:00)	
	AM Arrivals	AM Departures	PM Arrivals	PM Departures
Total People Rate Council Flats	0.122	0.388	0.402	0.178
Total People Rate Creche	4.981	1.729	0.714	1.955

The proposed people trip generation according to TRICS is presented in Table 5.3. The community arts centre / creche trip generation is low as it is understood that the patrons of the amenities will be residents of the proposed development.

Table 5.3 Proposed People Trip Generation TRICS (version 7.9.1)

Mode of Travel	Morning (08:15 - 09:15)		Evening (16:00 - 17:00)	
	AM Arrivals	AM Departures	PM Arrivals	PM Departures
Total People Council Flats	66	211	218	97
Total People Creche	47	16	7	19
Total	113	227	225	115

5.4 Census 2016 Data and Trip Generation

AECOM have undertaken an analysis of the Census 2016 data available from the Central Statistics Office (CSO) to determine the existing commuting patterns and car ownership within the surrounding area of the development site. The areas that have been included within this analysis are illustrated in Figure 5.4 The most recent census took place in April 2022. However, the relevant traffic data is not available to the public at the time of this application.

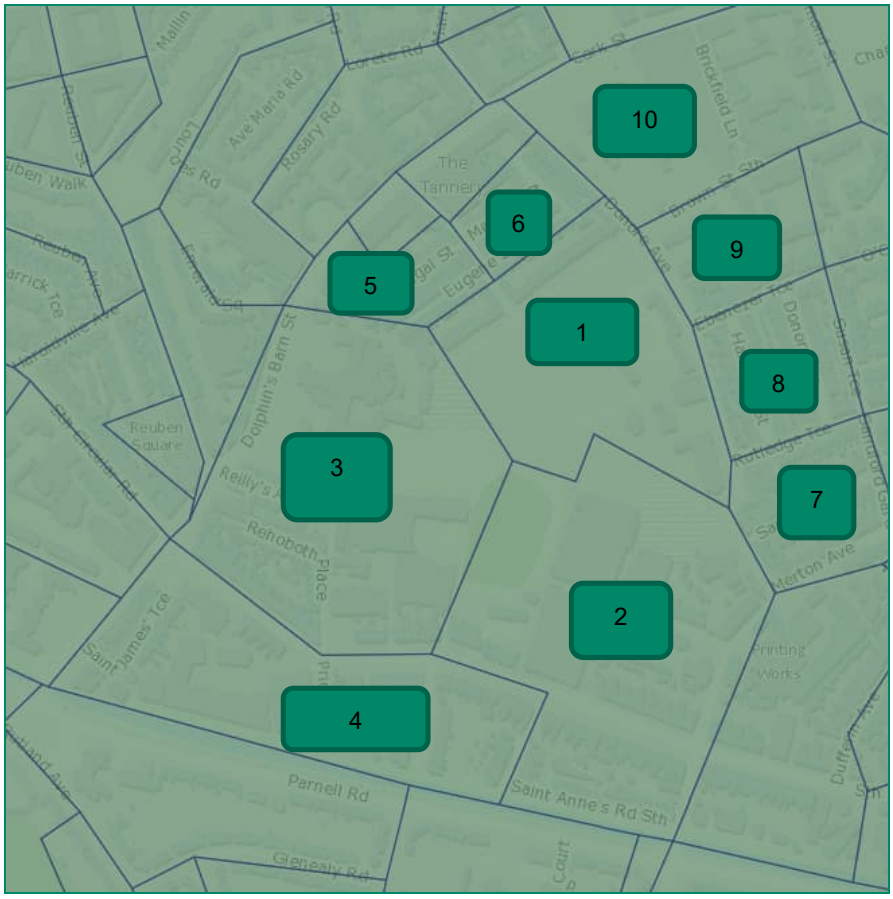


Figure 5.4 Extent of Small Areas within the vicinity of the Subject Site (Source: Central Statistics Office – 2016 SAP Maps)

5.4.1 Existing Commuter Patterns

Census 2016 figures obtained from the Central Statistics Office (CSO) detail the means of travel to work, school or college (i.e. on foot, bicycle, car driver etc.) for people aged 5 years and over for the electoral division of Rehoboth Place and Eugene Street in which the development site falls. These figures are shown in Table 5.4 together with mode shares of each of the means of travel.

Table 5.5. – Existing Journey Patterns

Means of Travel	Work	School or College	Total	Mode Share (%)
On foot	1117	711	1828	34.9%
Bicycle	661	136	797	15.2%
Bus, minibus or coach	508	229	737	14.1%
Train, DART or LUAS	341	82	423	8.1%
Motorcycle or scooter	14	2	16	0.3%
Car driver	978	37	1015	19.4%
Car passenger	72	188	260	5.0%
Van	54	0	54	1.0%
Other (incl. lorry)	2	0	2	0.0%
Work mainly at or from home	105	3	108	2.1%
Total	3852	1388	5240	100.0%

Table 5.5 demonstrates that while 19% of individuals surveyed drive to their place of work / education, approximately 14% take the bus. 35% of commuters walk to their place of work or education while 15% cycle. This would further indicate that the proposed development is well situated to take advantage of the existing sustainable travel infrastructure in the area. Post covid the uptake in work from home has been taken into account. However, in order to complete a robust assessment with the worst case scenario AECOM have used the census 2016 figures in full in order to future proof the proposed development in terms of projected traffic impact.

In 2016 working from home accounted for a small proportion of existing journey behaviours, however post Covid-19 pandemic there is potential for a higher proportion of working from home which may reduce car ownership in urban location and thus the traffic impact of developments such as the proposed scheme.

5.4.2 Existing Car Ownership

Census 2016 figures obtained from the Central Statistics Office (CSO) detail the car ownership per household and car ownership rate for the electoral division of Rehoboth Place and Eugene Street in which the development site falls. Figure 5.5 illustrates the number of cars per household and the overall car ownership rate for the electoral division. It indicates that 40% of houses in the electoral division own one car followed by 8% with two cars, 50% with no car, 1% with three cars and 0% with four or more cars. The overall car ownership for the electoral division is 50% of houses own a car with 50% having no car.

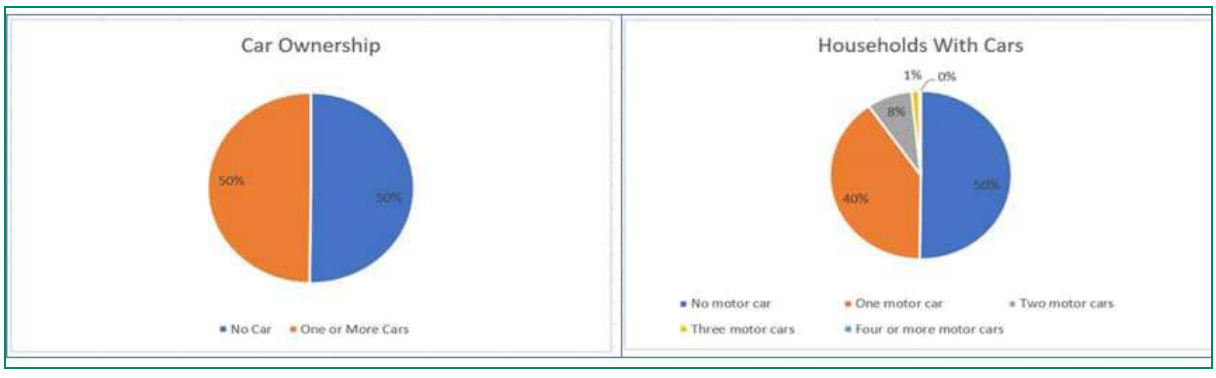


Figure 5.5 Households With Cars (L) and Car Ownership % (R) from CSO Census 2016 Figures

Based on the 2016 census data as detailed in Table 5.4 which details the number of trips estimated to be generated from the proposed development. This estimation is gathered from the TRICS software Total People trip rate in conjunction with the 2016 census data detailed earlier in the TTA.

Table 5.4 Trip generation based on 2016 Census Data from Small Area Population data

Mode of Travel	Morning (08:15 - 09:15)		Evening (16:00 - 17:00)	
	AM Arrivals	AM Departures	PM Arrivals	PM Departures
Vehicle Trip	25	47	46	25
Total One Way Flows	25	47	46	25
Total Two Way Flows	72		72	

The estimated total movements by the permitted development during the morning and evening peak hours were 72 and 72 two way flows respectively. As the development proposals are for a low car development with only 79 car parking spaces for residents, AECOM feel the trip generation presented in Table 5.5 is a realistic view of how the development will operate once built.

5.4.3 Trip Distribution

To understand the potential distribution of trips arriving and departing the site, the base traffic survey data have been interrogated. The traffic volumes along Donore Avenue are associated with predominately 'tidal' commuter trips, with a greater proportion of trips travelling eastbound along Cork Street during the morning peak travelling towards Dublin City Centre. In the evening peak, the trend is reversed, with trips predominately travelling westbound exiting the city centre. The proposed development distribution is illustrated in Figure 5.6.

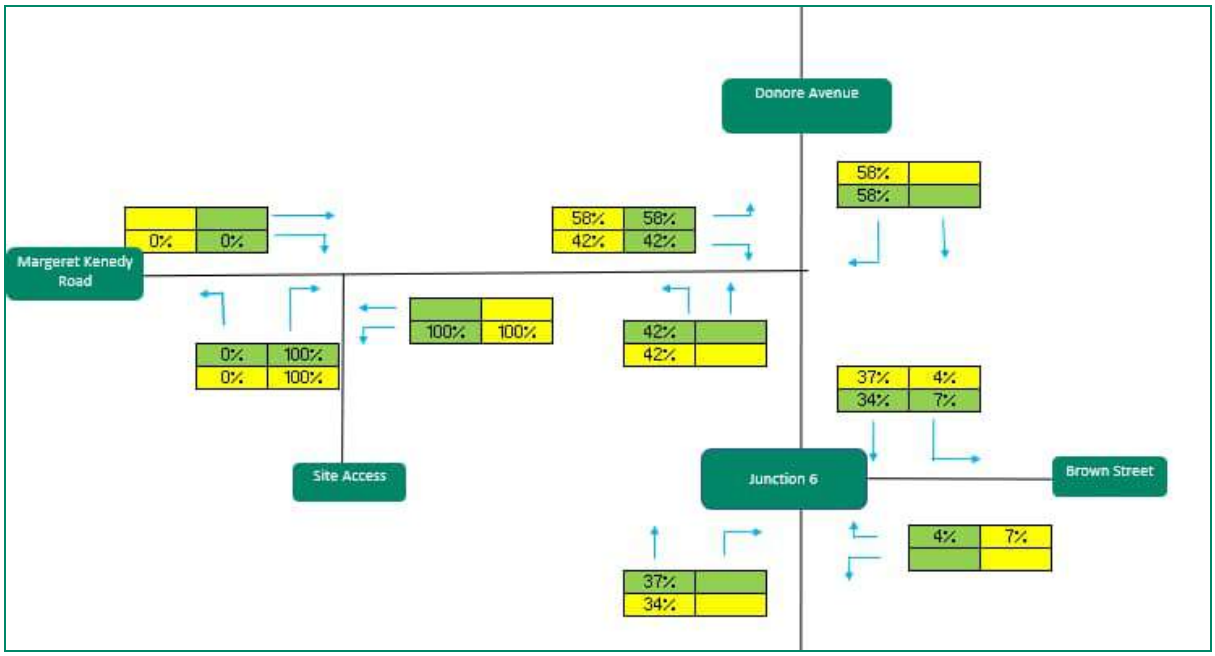


Figure 5.6 Trip Distribution At Proposed Site

5.5 Growth Rates

The Transport Infrastructure Ireland (TII) '*Project Appraisal Guidelines for National Roads Unit 5.3 – Travel Demand Projections (October 2021)*' provides guidance on the preparation of future travel demand projects for use in scheme modelling and appraisal. The guidelines presents in Table 6.1 Growth Rates based on an annual factor per region.

The guidelines have been interrogated by AECOM to determine a suitable growth factor for the proposed opening year (assumed 2026) and the horizon assessment years, which are the Opening Year + 5 Years (2031) and + 15 Years (2041) as per the TII Traffic Assessment Guidelines.

It is proposed to apply the 'LV' (light vehicles) growth factor given the characteristics of the surrounding road network which typically serves car and light vehicular traffic associated with residential and commuting journeys.

The High Growth Rate for the 'Dublin Metropolitan Area' is projected as 1.0191 (1.91%) growth per annum from 2016 – 2030, and 1.0087 (0.87%) per annum from 2030 – 2040. The applied growth rates to the base traffic surveys are summarised as follows:

- 2026 opening Year: 1.1012 (10.12%)
- 2031 Horizon Year, Growth Rate: 1.1934 (19.34%)
- 2041 Horizon Year, Growth Rate: 1.2265 (22.65%)

5.6 Percentage Impact of the Proposed Development

The TII Guidelines for Transport Assessments state that the thresholds for junction analysis in Transport Assessments are as follows:

- *"Traffic to and from the development exceeds 10% of the existing two-way traffic flow on the adjoining highway."*

- *"Traffic to and from the development exceeds 5% of the existing two-way traffic flow on the adjoining highway, where traffic congestion exists or will exist within the assessment period or in other sensitive locations".*

Table 5.5 details all junctions and illustrates the junctions with the highest percentage impact and over the TII threshold stated above are the site access junction and the Donore Avenue/Margaret Kennedy Road/ Brown Street South junction.

A comparison was made between the pre-development and post-development scenarios, to identify the percentage impact of the development.

The projected percentage impact of the operational traffic on the surrounding road junctions in the year of opening (2026) is set out in Table 5.5

Table 5.5 Junction Percentage Impact Assessment

Location	Existing Two-Way Vehicle Trips	Development Trips	% Increase	Existing Two-Way Vehicle Trips	Development Trips	% Increase
Site Access	4	72	1719%	22	72	328%
Junction 1	2261	1	0%	2485	78	3%
Junction 2	283	65	23%	301	87	29%
Junction 3	432	19	4%	443	22	5%
Junction 4	59	72	122%	76	97	127%
Junction 5	1728	14	1%	1495	14	1%
Junction 6	1641	17	1%	1408	20	1%
Junction 7	3902	0	0%	2848	1	0%
Junction 8	3630	0	0%	2051	1	0%

It should be noted that the significant increase in traffic anticipated at Junction 1 is due to the relatively low levels of traffic on the existing network at present

The percentage impact of the operational phase will result in a percentage impact reaching the TII Threshold of: the following junctions;

- 1719% and 328% upon the Site Access/ Margaret Kennedy Road junction in the respective morning and evening peak hour periods.
- 23% and 29% upon Junction 2 Donore Avenue/ Margaret Kendy Road / Brown Street South in the respective morning and evening peak hour periods.
- 122% and 127% upon Junction 4 Margaret Kennedy Road/ Camron Street junction in the respective morning and evening peak hour periods.

It should also be acknowledged that the trip generation does not include for any potential pass by or diverted trip rate reduction. It can therefore be argued that the impacts are a worst-case scenario.

The analysis suggests that junction modelling is required on the Site Access, Junction 2 and Junction 4 as per the TII guidelines. Chapter 6 presents the findings of the junction analysis.

6. Capacity Analysis

6.1 Introduction

This chapter presents the impact analysis to identify the potential effects of the proposed development upon the surrounding road network at the junctions as identified in Chapter 5 of this report. As the junctions are unsignalized priority-controlled junctions they will be assessed using the industry standard Junctions 10 (PICADY) software developed by Transport Research Laboratory (TRL).

6.2 Junction Analysis

The operational assessment of the local road network has been undertaken using TRL Junctions 10 software to model the operations of the priority junctions, with the geometric parameters and observed traffic flows at each junction entered into the computer package. Within the modelling software, the time periods assessed are divided into a number of 15-minute time segments in order to simulate the likely arrival pattern of traffic more effectively. The results returned in the models are the Ratio of Flows to Capacity (RFC) and queue (PCU). The maximum RFC value for each movement is likely to be observed over the central 15-30-minute period of the hour under consideration.

RFC values between 0.00 and 0.85 are generally accepted as representing stable operating conditions, values between 0.85 and 1.00 represent variable operation (i.e. possible queues building up at the junction during the period under consideration and increases in vehicle delay moving through the junction). RFC values in excess of 1.00 represent overloaded conditions (i.e. congested conditions).

Queues are measured in Passenger Car Units (PCU), a Passenger Car Unit is a measure used primarily to assess highway capacity, for modelling purposes. Different vehicles are assigned different values, according to the space they take up on a road. A car has a value of 1; smaller vehicles such as motorcycle will have lower values, and larger vehicles such as HGVs will have higher values. 1 PCU equates to a 5.75m long car.

All models were developed using the traffic surveys commissioned by ITS in October 2022 to assess the traffic volumes for the morning and evening peak period and future assessment years with and without the development

6.3 Scenarios

For all junction assessments, AECOM has modelled the following scenarios:

- 2022 Base + AM and PM;
- 2022 Base + Committed AM and PM;
- 2026 (Opening Year) Base + Committed + Development AM and PM;
- 2031 (+5years) Base + Committed + Development AM and PM; and
- 2041 (+10years) Base + Committed + Development AM and PM

6.4 Site Access/ Margaret Kennedy Road

Junction geometries were derived using default software measurements for the junction size in relation to Margaret Kennedy Road. The orientation of the model is shown in Figure 6.1.

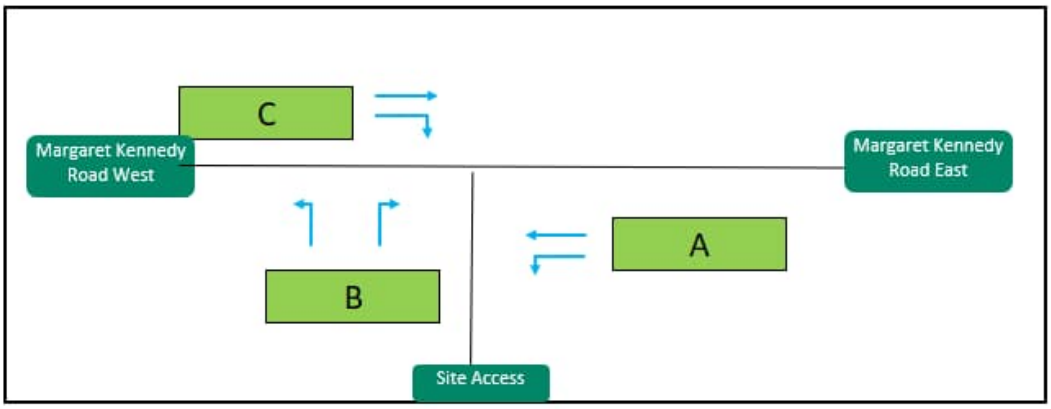


Figure 6.1 Site Access Arm Orientation

A summary of the results is shown in Figure 6.1 with the full Junctions 10 outputs contained within Appendix C.

Table 6.1 Site Access/ Margaret Kennedy Road Junction 10 Outputs

Assessment Year	Arm	AM Peak		PM Peak	
		Queue (PCU)	RFC	Queue (PCU)	RFC
2022 Baseline	Site Access	0.0	0.00	0.0	0.00
	Margaret Kennedy Road West	0.0	0.00	0.0	0.00
2022 Baseline + Committed	Site Access	0.0	0.00	0.0	0.00
	Margaret Kennedy Road West	0.0	0.00	0.0	0.00
2026 B+ C+D	Site Access	0.1	0.12	0.1	0.06
	Margaret Kennedy Road West	0.0	0.00	0.0	0.00
2031 B+ C+D	Site Access	0.1	0.12	0.1	0.06
	Margaret Kennedy Road West	0.0	0.00	0.0	0.00
2041 B+ C+D	Site Access	0.1	0.12	0.1	0.06
	Margaret Kennedy Road West	0.0	0.00	0.0	0.00

Based on the analysis of this priority-controlled junction, it is clear that the with the inclusion of the proposed development along Margaret Kennedy Road, this junction would continue to operate within capacity throughout the 2026 (opening year) to the 2041 (opening year + 15) assessment with the development in place.

As demonstrated in the 2026 assessment year, the proposed development would result in an increase of 0.12 (12%) RFC with a corresponding increase to queuing of 0.1 PCU during the morning peak period on the Site access arm of the junction. During the evening peak period it is anticipated that the RFC would be 0.06 (6%) with a 0.1 PCU on the Site access arm of the junction.

When analysing the 2041 assessment year with development, the proposed development would result in an increase of 0.12 (12%) RFC with a corresponding increase to queuing of 0.1 PCU during the morning peak period on the Site access arm of the junction. During the evening peak period it is anticipated that the RFC would remain the same at 0.06 (6%) with an anticipated increase of 0.1 PCU on the Site access arm of the junction.

6.5 Margaret Kennedy Road/ Cameron Street

Margaret Kennedy Road is currently under construction in conjunction with the Site Access and therefore junction geometries were derive using default software measurements for the junction size. The orientation of the model is shown in Figure 6.2

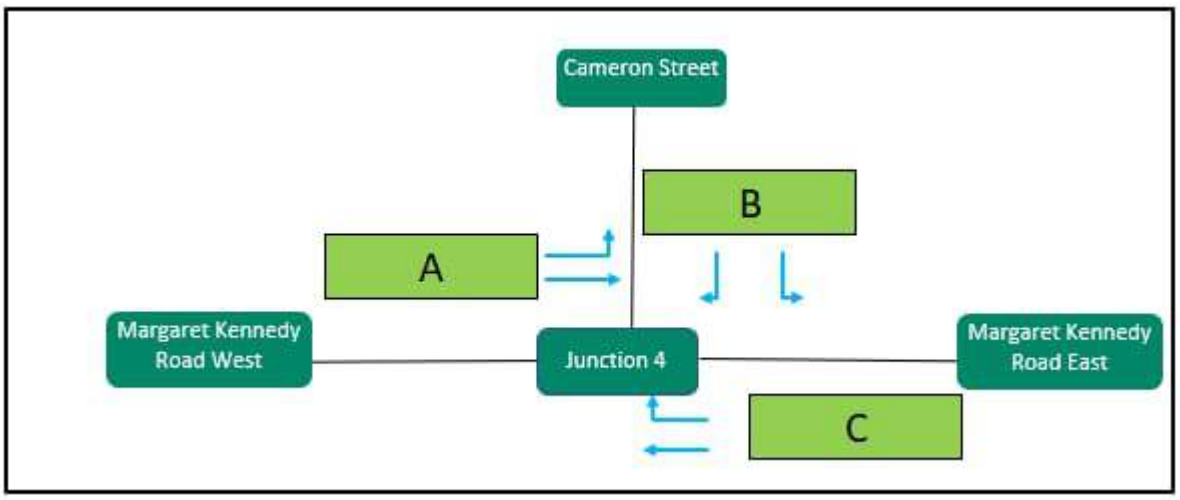


Figure 6.2 Junction 4 Arm Orientation

A summary of the results are shown in Table 6.2with the full Junctions 10 outputs contained within Appendix C.

Table 6.2 Margaret Kennedy Road / Cameron Street Junction 10 Outputs

Assessment Year	Arm	AM Peak		PM Peak	
		Queue (PCU)	RFC	Queue (PCU)	RFC
2022 Baseline	Cameron Street	0.1	0.07	0.1	0.06
	Margaret Kennedy Road East	0.0	0.03	0.0	0.04
2022 Baseline + Committed	Cameron Street	0.1	0.07	0.1	0.06
	Margaret Kennedy Road East	0.0	0.03	0.0	0.04
2026 B+ C+D	Cameron Street	0.1	0.11	0.1	0.10
	Margaret Kennedy Road East	0.0	0.03	0.1	0.04
2031 B+ C+D	Cameron Street	0.1	0.12	0.1	0.11
	Margaret Kennedy Road East	0.0	0.04	0.1	0.05
2041 B+ C+D	Cameron Street	0.1	0.12	0.1	0.11
	Margaret Kennedy Road East	0.0	0.04	0.1	0.05

Based on the analysis of this priority-controlled junction, it is clear that with the inclusion of the proposed development traffic along Margaret Kennedy Road, this junction would operate within capacity throughout the 2026(opening year) to the 2041 (opening year + 15) assessment with the development in place.

As demonstrated in the 2026 assessment year, the analysed junction would result in an RFC value of between 0.03 (3%) to 0.11 (11%) with a corresponding queue factor ranging of 0.1 PCU during the morning peak period whilst during the evening peak period it is anticipated that the RFC would range from 0.04 (4%) to 0.10 (10%) and a PCU factor of 0.1

When analysing the 2041 assessment year with development, the proposed development would result in an increase of 0.12 (12%) RFC with a corresponding increase to queuing of 0.1 PCU during the morning peak period on the Cameron Street arm of the junction. During the evening peak period it is anticipated that the RFC would be 0.11 (11%) with an anticipated increase of 0.1 PCU on the Cameron Street arm of the junction.

6.6 Margaret Kennedy Road/ Donore Avenue / Brown Street South

Geometries were determined for Junction 2 using visual online aids from Google Earth. Figure 6.3 illustrates the junction orientation as modelled in Junction 10.

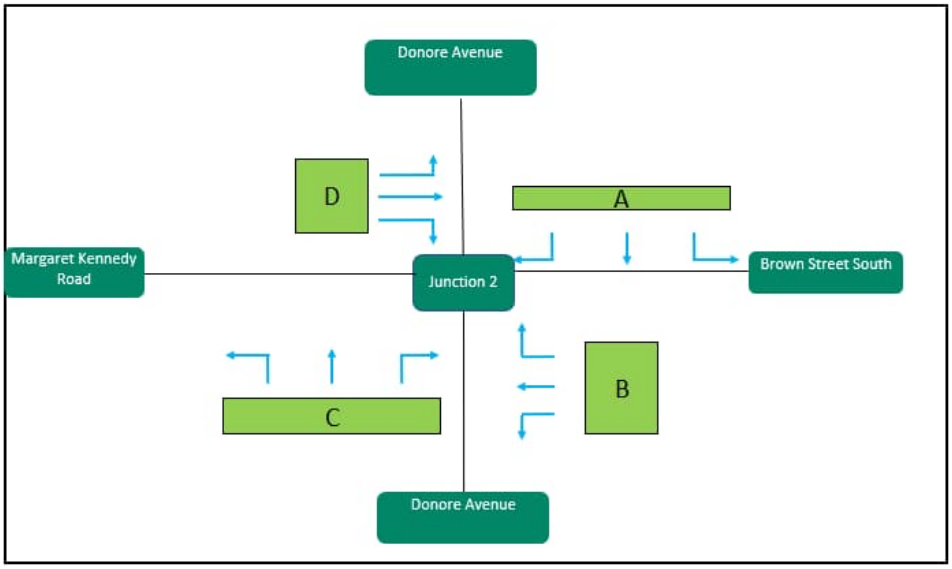


Figure 6.3 Junction 2 Arm Orientation

A summary of the results is shown in Table 6.3 with the full Junctions 10 outputs contained within Appendix C.

Table 6.3 Margaret Kennedy Road/ Donore Avenue/ Brown Street South Junction 10 Outputs

Assessment Year	Arm	AM Peak		PM Peak	
		Queue (PCU)	RFC	Queue (PCU)	RFC
2022 Baseline	Brown Street South	0.0	0.03	0.1	0.09
	Donore Avenue North	0.0	0.00	0.0	0.01
	Margaret Kennedy Road West	0.1	0.12	0.1	0.07
	Donore Avenue South	0.0	0.03	0.0	0.03
2022 Baseline + Committed	Brown Street South	0.0	0.03	0.1	0.09
	Donore Avenue North	0.0	0.00	0.0	0.01
	Margaret Kennedy Road West	0.1	0.12	0.1	0.07
	Donore Avenue South	0.0	0.03	0.0	0.03
2026 B +C+D	Brown Street South	0.0	0.04	0.2	0.14
	Donore Avenue North	0.0	0.00	0.0	0.02
	Margaret Kennedy Road West	0.2	0.16	0.1	0.11
	Donore Avenue South	0.0	0.04	0.0	0.03
2031 B +C+D	Brown Street South	0.0	0.04	0.2	0.14
	Donore Avenue North	0.0	0.00	0.0	0.02
	Margaret Kennedy Road West	0.2	0.18	0.1	0.11
	Donore Avenue South	0.1	0.04	0.1	0.04
2041 B +C+D	Brown Street South	0.0	0.04	0.2	0.15
	Donore Avenue North	0.0	0.00	0.0	0.02
	Margaret Kennedy Road West	0.2	0.18	0.1	0.12
	Donore Avenue South	0.1	0.04	0.1	0.04

Based on the analysis of this priority-controlled junction, it is clear that with the inclusion of the proposed development traffic along Margaret Kennedy Road, this junction would operate within capacity throughout the 2026(opening year) to the 2041 (opening year + 15) assessment with the development in place.

As demonstrated in the 2026 assessment year, the analysed junction would result in an RFC value of between 0.04 (4%) to 0.16 (16%) with a corresponding queue factor up to 0.2 PCU during the morning peak period whilst during the evening peak period it is anticipated that the RFC would range from 0.02 (2%) to 0.14 (14%) with no queuing anticipated.

When analysing the 2041 assessment year with development, the proposed development would result in an increase of 0.14 (14%) RFC with a corresponding increase to queuing of 0.2 PCU during the morning peak period on the Margaret Kennedy Road West arm of the junction. During the evening peak period it is anticipated that the RFC would be up to 0.15 (11%) with an anticipated increase of 0.2 PCU on the Brown Street South arm of the junction.

From the analysis undertaken at both junctions, this indicates that the proposed development is not likely to have a significant effect on the surrounding road network.

7. Summary and Conclusion

7.1 Summary

AECOM have prepared this Traffic and Transport Assessment to support the planning application by The Land Development Agency on behalf of Dublin City Council, who intend to apply to An Bord Pleanála for a seven-year permission in relation to a proposed residential development at this site located on the former St. Teresa's Gardens, Donore Avenue, Dublin 8

The proposed development (GFA of c. 53,227sqm) contains the following mix of apartments: 225 No. 1 bedroom apartments (36 no. 1-person & 189 no. 2-person), 274 No. 2 bedroom apartments (including 52 No. 2 bed 3 person apartments and 222 No. 2 bed 4 person apartments), 44 No. 3 bedroom 5-person apartments, together with retail/café unit (168 sq.m.), mobility hub (52 sq.m.) and 952 sq.m. of community, artist workspace, arts and cultural space, including a creche, set out in 4 No. blocks.

The proposed development will also provide for public open space of 3,408 sqm, communal amenity space of 4,417 sqm and an outdoor play space associated with the creche. Provision of private open space in the form of balconies or terraces is provided to all individual apartments.

A total of 79 no. car parking spaces are provided at podium level. Six of these are mobility impaired spaces (2 in each of DCC1, DCC3 & DCC5). 50% of standard spaces will be EV fitted. Up to 30 of the spaces will be reserved for car sharing (resident use only). A further 15 no. on-street spaces are proposed. Parking at the site is deemed appropriate and to standard given the accessibility of the site, its location and land use.

The proposed development will provide 906 no. residential bicycle parking spaces which are located within secure bicycle stores. 5% of these are over-sized spaces which are for large bicycles, cargo bicycles and other non-standard bicycles. In addition, 138 spaces for visitors are distributed throughout the site, included in the 138 number spaces is a dedicated number of cycle parking spaces intended for the sole use of the proposed creche facility and proposed café. This includes provision of cycle parking in accordance with the Design Standards for New Apartments (March 2018)

The proposed development is situated within an ideal location to benefit from existing sustainable travel facilities. Cork Street and South Circular Road enjoy high levels of cycling on both the west and eastbound lanes during the weekday peak hour periods, providing an attractive and viable mode of transport to Dublin City Centre, as opposed to private car. High frequency with spare capacity bus services are available from Cork Street and South Circular Road, which connect the site to numerous local destinations including Dublin City Centre. The scheme is supported by a Mobility Management Plan to support the development.

Refuse vehicles will be required to access the proposed land uses. A swept path assessment demonstrates that a refuse vehicle will be able to safely manoeuvre within the internal site road network.

The road safety record of the highway network within the study area has been examined and no significant road safety problems have been identified.

A separate Construction Traffic Management Plan, Mobility Management Plan and Road Safety Audit has been prepared by AECOM and will be submitted in support of this application

Trip generation for the proposed development has been developed using TRICS and 2016 Census data which is deemed suitable for this low car development. A percentage impact analysis has been undertaken as per TII percentage impact standards and the site access junction, Margaret Kennedy Road/ Camron Street and Donore Avenue / Margaret Kennedy Road junction required further assessment.

Modelling results demonstrate both junctions will operate below 0.85 RFC and therefore the proposed development will not have a significant impact on the surrounding local road network.

The overall development will generate a resultant trip generation of 72 and 72 two-way movements during the AM and PM peak hours respectively. The percentage impact of additional traffic generated by the proposed development exceeds the 5% threshold on 3 no. junctions assessed during the AM and PM peak hours at the differing phases and their corresponding opening years as well as the projected future years of +5 years and +15 years. This exceeds the TII percentage impact standards and warrants detailed assessment of the proposed

access junctions and adjoining Junction (over 5%, where traffic congestion exists). AECOM have undertaken a detailed junction analysis which has been presented within this report.

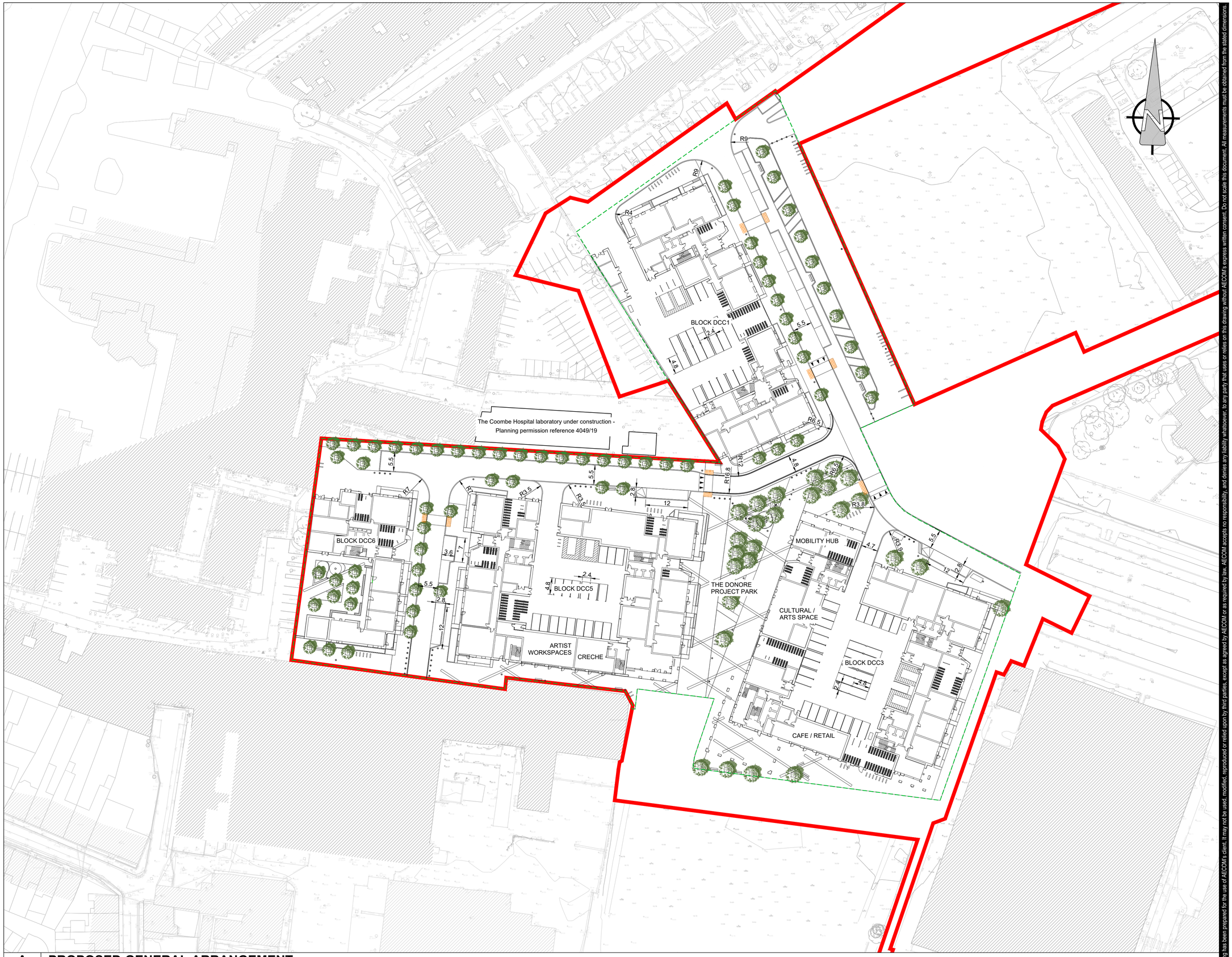
A summary is included in the TTA. The plan presents a series of measures to promote sustainable travel amongst future site users, and to reduce the reliance on private vehicular modes. Given the site is highly accessible via walking, cycling and public transport, and a series of sustainable transport measures are proposed in the Mobility Management Plan, the development is well placed to promote sustainable travel from the onset.

7.2 Conclusion

The assessment has considered the transport implications of the proposed development. It demonstrates that the development is in keeping with the local area, provide adequate parking for all residents and will have minimal impact on the local road network. Thus, under current assessment, there are no highway related grounds on which this application should not be given planning consent.

It is concluded that the proposals will not result in a material deterioration of existing road conditions and will encourage travel by more sustainable means and as a result there are no significant traffic or transportation related reasons that should prevent the granting of planning permission for the proposed development

Appendix A Site Drawings



A | **PROPOSED GENERAL ARRANGEMENT**
0001 | Scale: 1:500

AECOM

PROJECT

DONORE PROJECT, DONORE AVENUE, DUBLIN 8

CLIENT

THE LAND DEVELOPMENT AGENCY (LDA)

CONSULTANT

AECOM
4th Floor Adelphi Plaza,
George's Street Upper,
Dun Laoghaire,
Co Dublin
Tel:+353 (0)1 696-6220
www.aecom.com

NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ARCHITECTURAL AND ENGINEERING DRAWINGS, ANY DISCREPANCIES, ERRORS OR OMISSIONS TO BE BROUGHT TO THE ATTENTION OF THE DESIGNER.
2. ALL DIMENSIONS TO BE CHECKED BY THE CONTRACTOR ON SITE PRIOR TO COMMENCEMENT OF WORKS.
3. AECOM LIMITED TO BE INFORMED BY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO THE COMMENCEMENT OF WORKS ON SITE.
4. DIMENSIONS OF ALL BOUNDARIES AND ADJOINING ROADS TO BE CHECKED ON SITE PRIOR TO COMMENCEMENT OF WORKS.
5. THIS DESIGN DRAWING HAS BEEN DEVELOPED USING THE FOLLOWING TOPOGRAPHICAL SURVEYS: LDA SURVEY (MSL39995 REV1 21.05.2021) AND HINES' SURVEY (MSL35430 REV2 24.06.2020).

LEGEND:

SITE BOUNDARY.....

NET DEVELOPABLE AREA BOUNDARY.....

AECOM
PLANNING

ISSUE/REVISION

I/R	DATE	DESCRIPTION
0	18.11.2022	ISSUED FOR PLANNING

PROJECT NUMBER

60648061

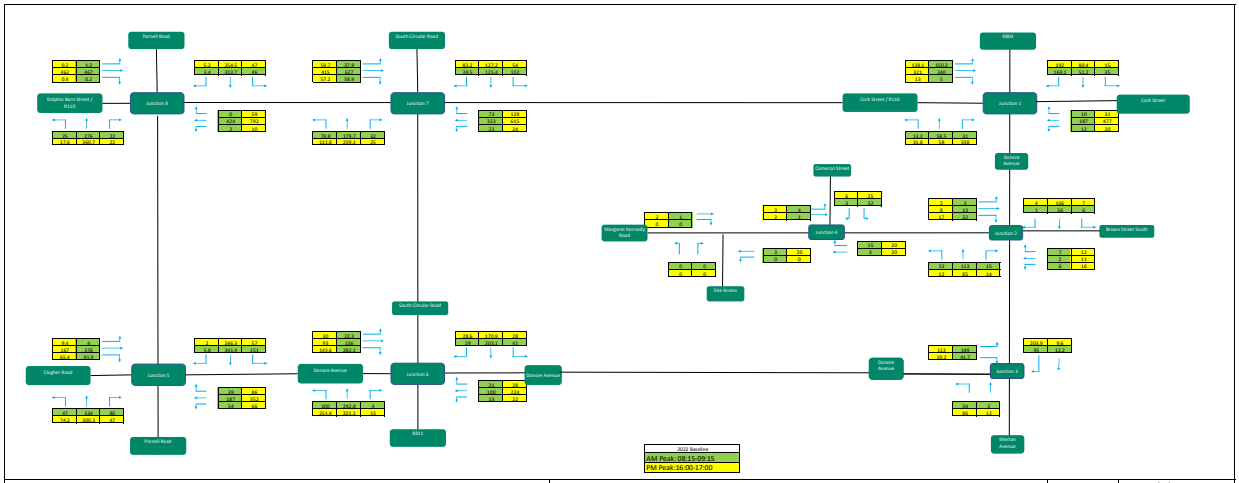
SHEET TITLE

PROPOSED GENERAL ARRANGEMENT

SHEET NUMBER

STG-AEC-S1b-00-00-DR-C-0000001

Appendix B Network Flow Diagrams



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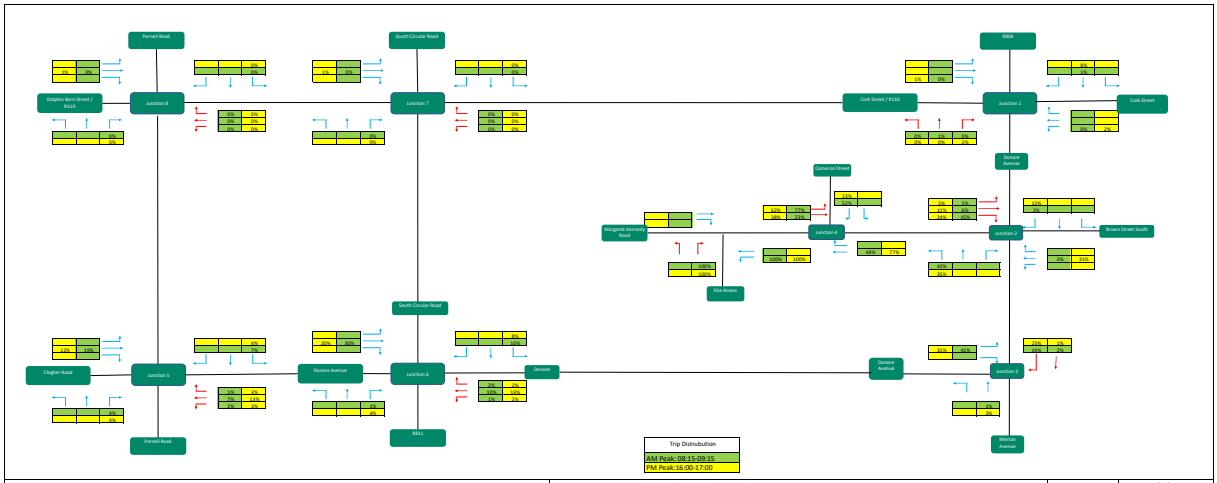
				Design:	HH
Project : Donore Project	AECOM	**Drawing Number:**	**Revision:**	Checked:	MR
				Approved:	SM



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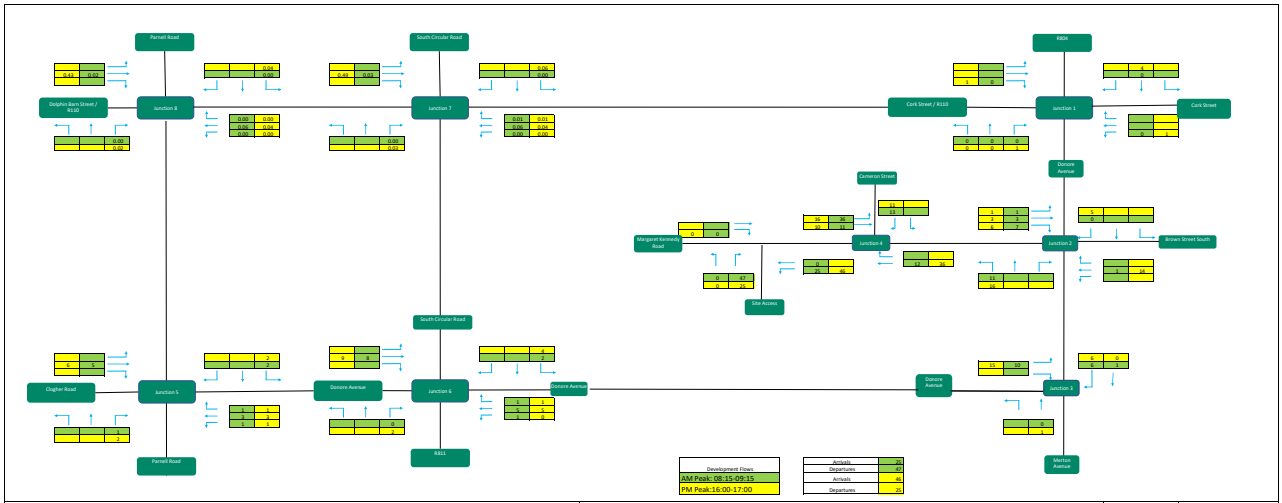
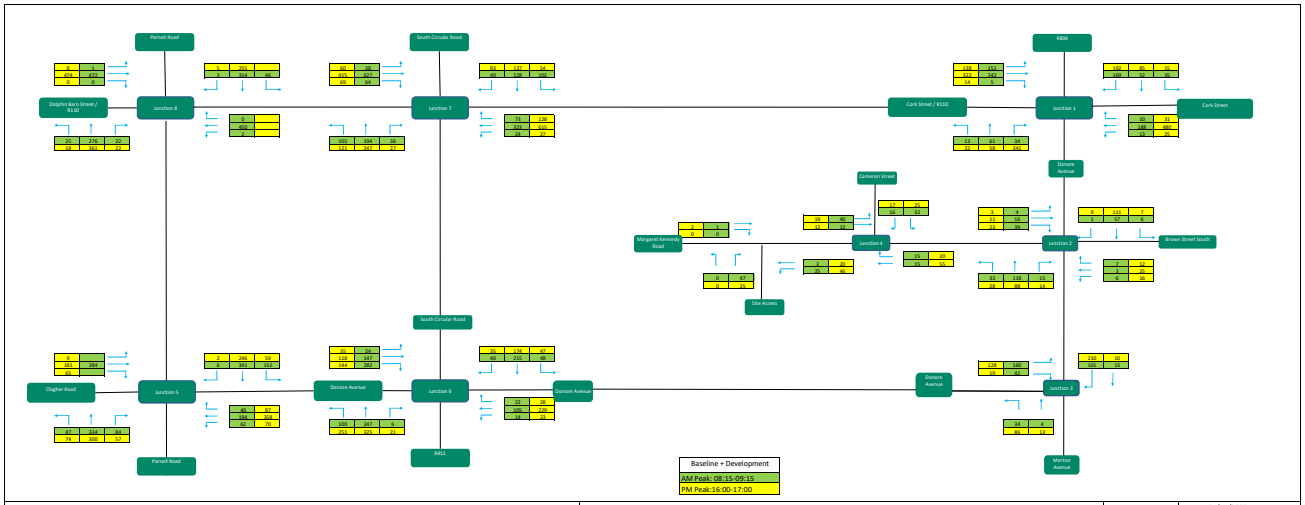
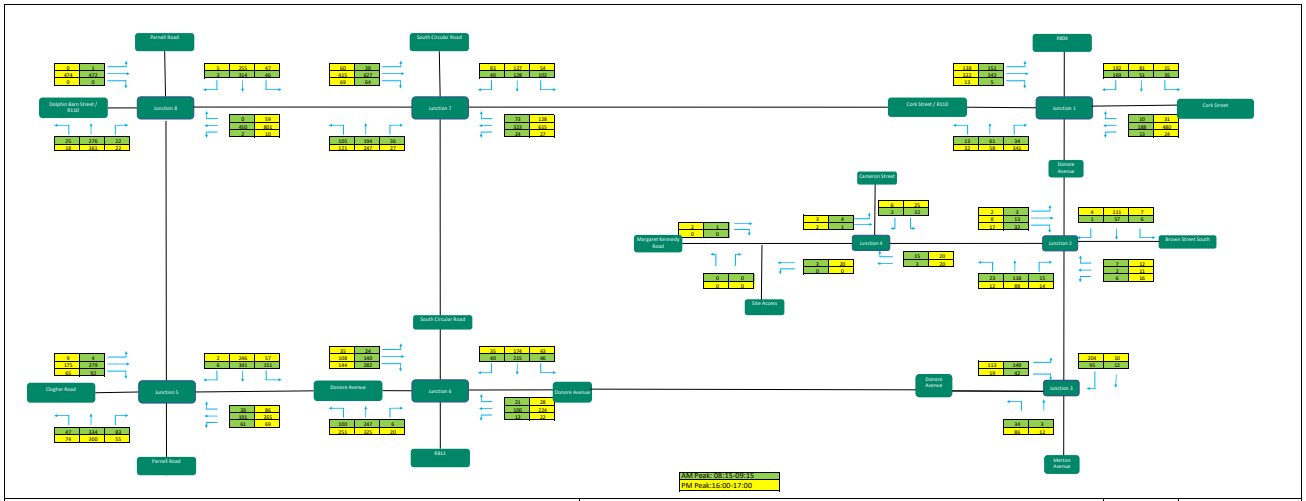
				Design:	HH
Project : Donore Project	AECOM	**Drawing Number:**	**Revision:**	Checked:	MR
				Approved:	SM



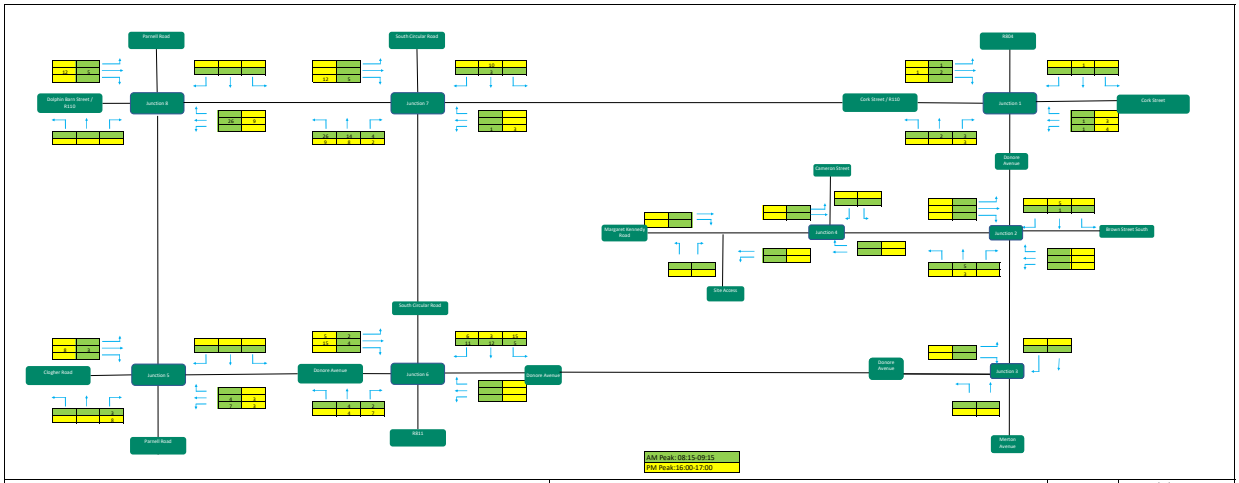
Client: Land Development Agency	**Title:** Development Flows			Date:	04/11/2022
				Design:	HH
Project : Donore Project	AECOM	**Drawing Number:**	**Revision:**	Checked:	MR
				Approved:	SM



Client: Land Development Agency	**Title:** 2022 Baseline + Development			Date:	04/11/2022
				Design:	HH
Project : Donore Project	AECOM	**Drawing Number:**	**Revision:**	Checked:	MR
				Approved:	SM



Client: Land Development Agency	**Title:** 2022 Baseline + Committed			Date:	04/11/2022
				Design:	HH
Project : Donore Project	AECOM	**Drawing Number:**	**Revision:**	Checked:	JG
				Approved:	SM



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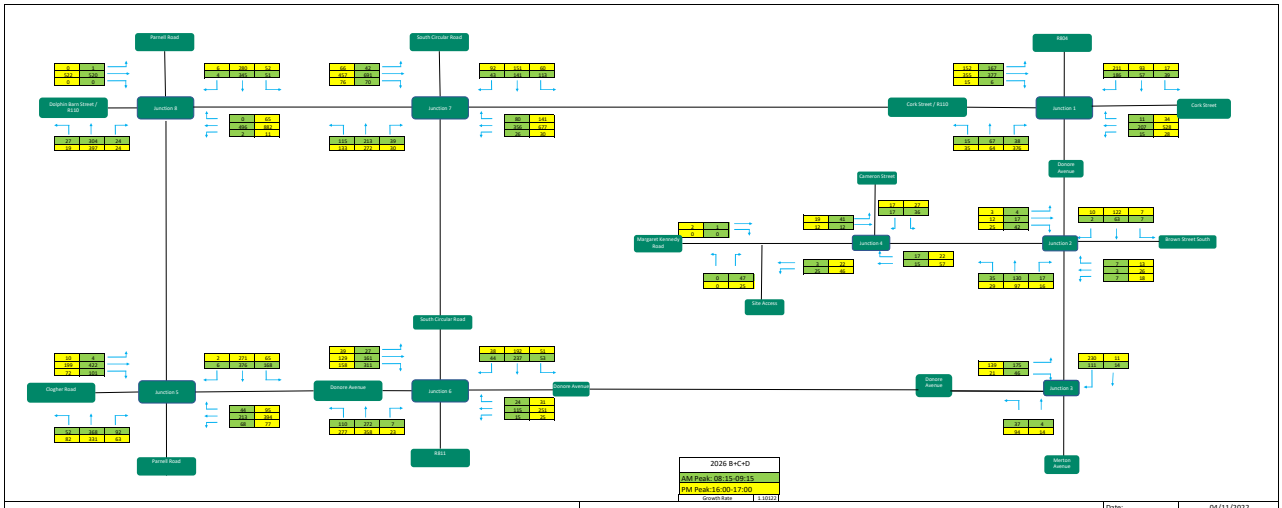
Project : Donore Project	AECOM	**Drawing Number:**	**Revision:**	Checked:	JG
				Approved:	SM



Client: Land Development Agency	**Title:** 2026 Baseline + Committed + Development			Date:	04/11/2022
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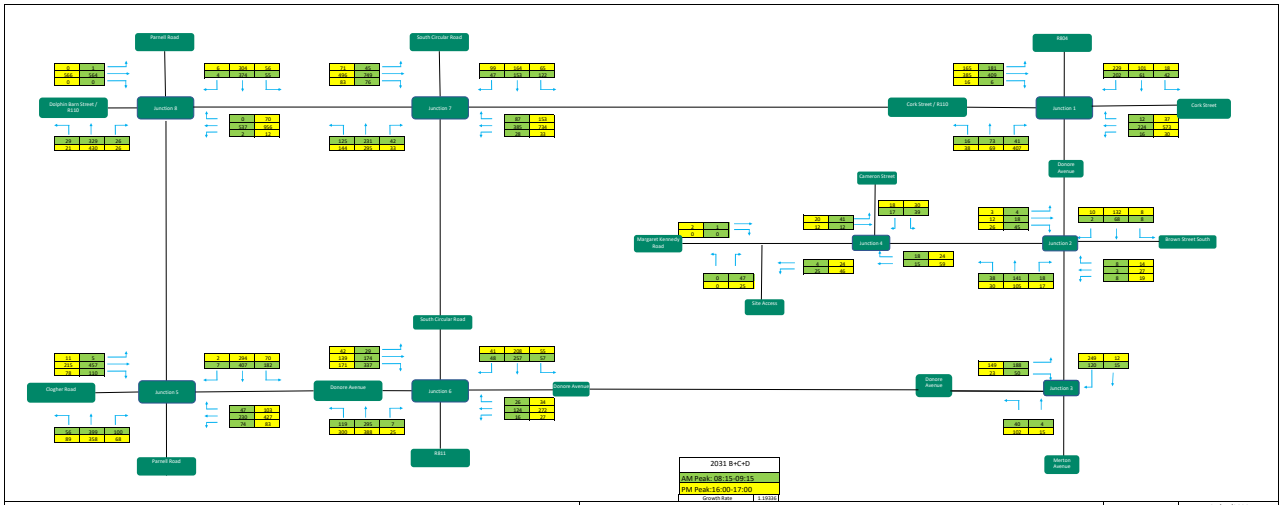
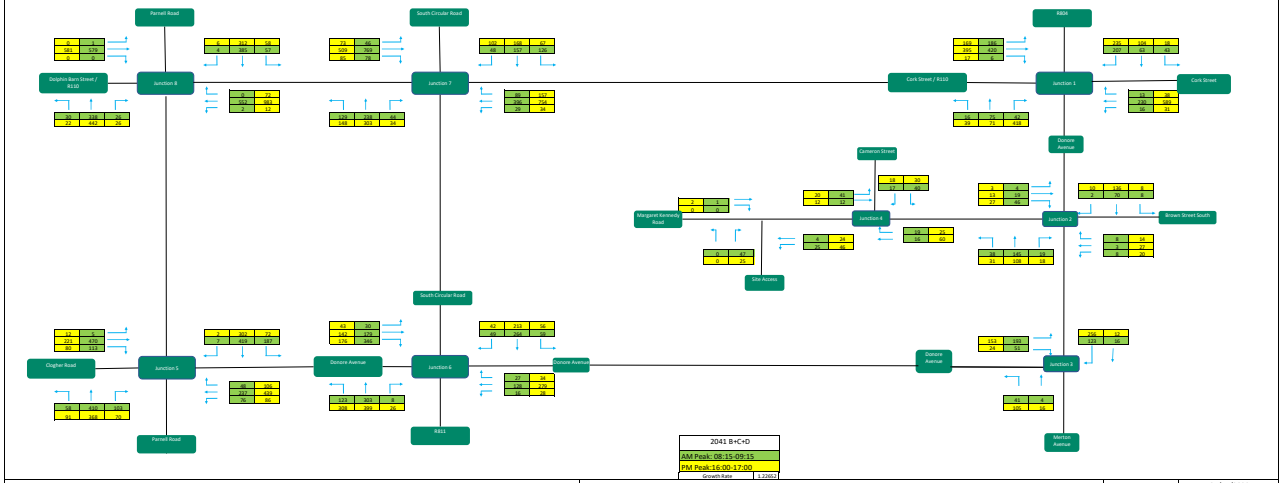
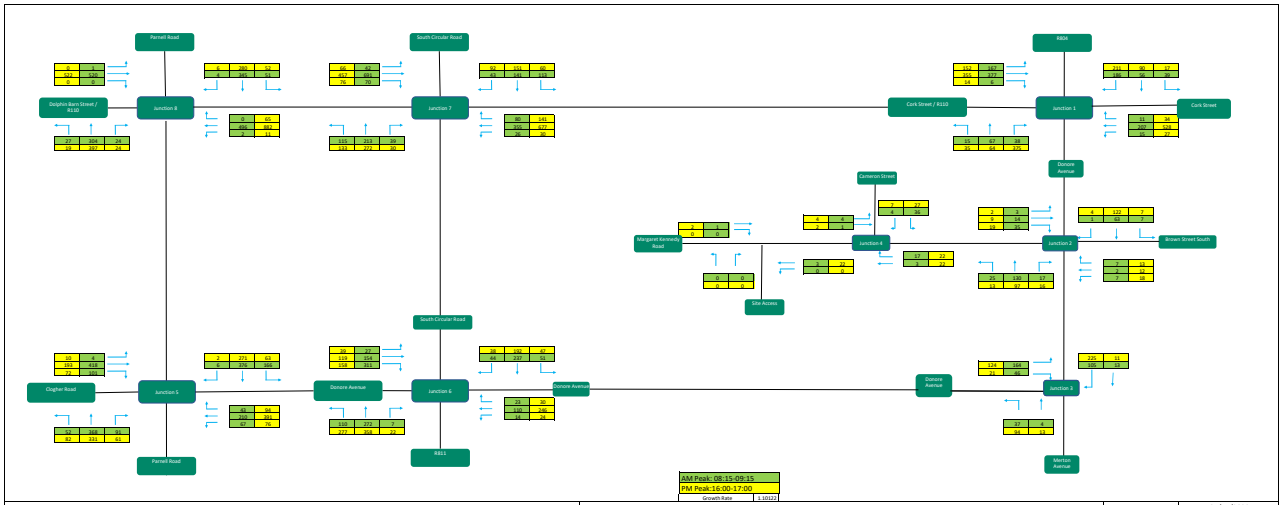
Project : Donore Project	AECOM	**Drawing Number:**	**Revision:**	Checked:	JG
				Approved:	SM



Client: Land Development Agency	**Title:** 2031 Baseline + Committed + Development			Date:	04/11/2022
				Design:	HH
Project : Donore Project	AECOM	**Drawing Number:**	**Revision:**	Checked:	JG
				Approved:	SM



Client: Land Development Agency	**Title:** 2041 Baseline + Committed + Development			Date:	04/11/2022
				Design:	HH
Project : Donore Project	AECOM	**Drawing Number:**	**Revision:**	Checked:	JG
				Approved:	SM



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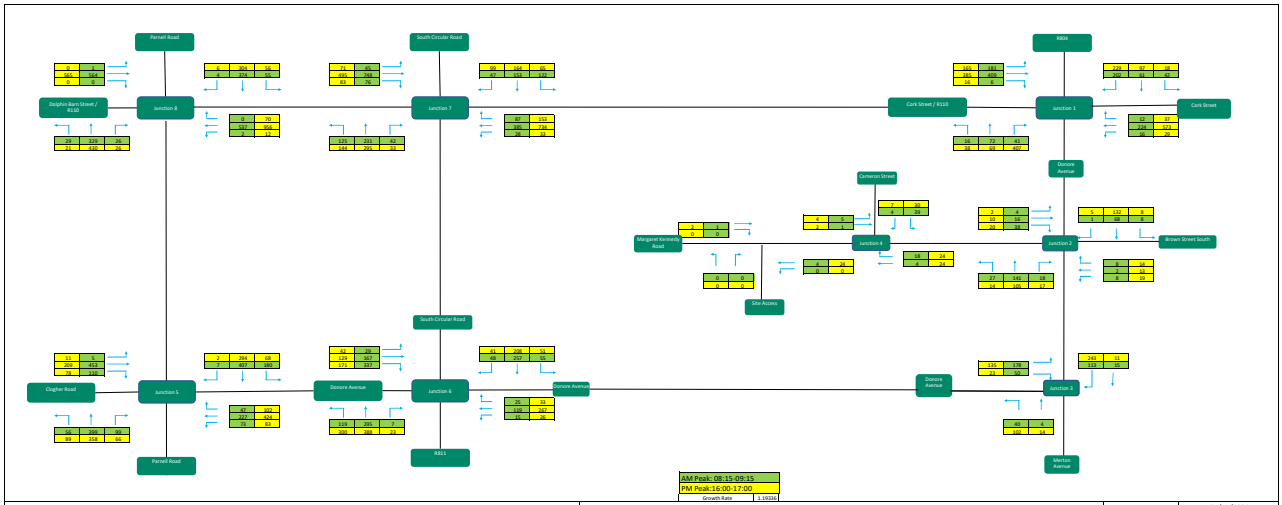
Project :	Donore Project	AECOM	**Drawing Number:**	**Revision:**	Checked: JG
					Approved: SM



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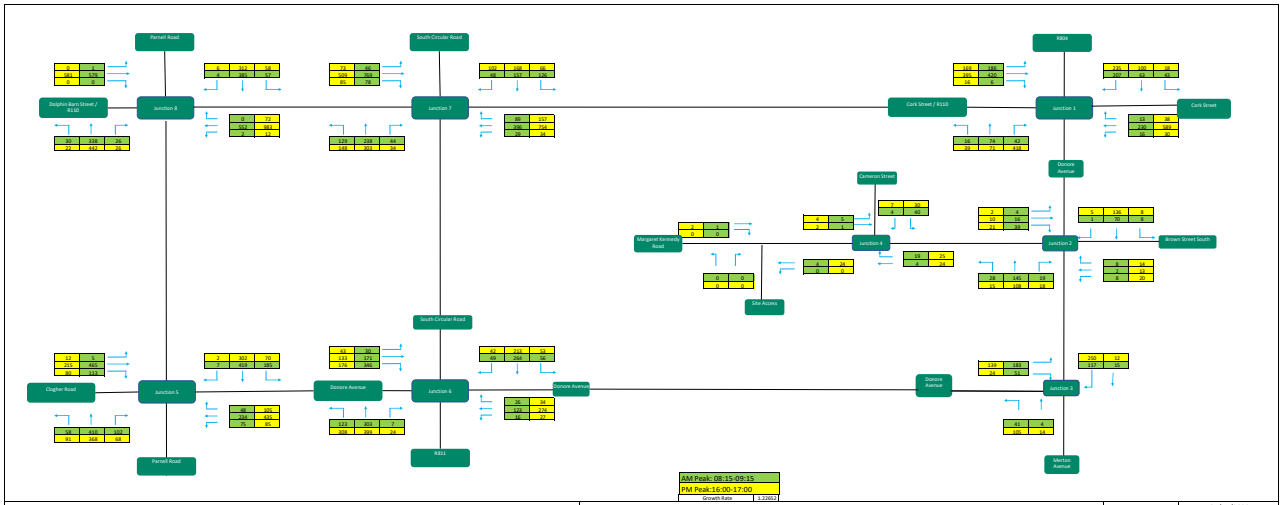
				Design:	HH
Project :	Donore Project	AECOM	**Drawing Number:**	Checked:	JG
			Revision:	Approved:	SM



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				Design:	HH
Project :	Donore Project	AECOM	**Drawing Number:**	Checked:	JG
			Revision:	Approved:	SM

Appendix C Junctions 10 Output

Junctions 10

PICADY 10 - Priority Intersection Module

Filename: STG Junction 4 Model.j10
Path: L:\Legacy\iedbl2fp001\DATA\DCS\Projects\BP\60648061_LDA_STG_Teresas\400_Technical\404_CE\01_Traffic\05_Reports\10_Traffic Deliverables\J10\J10 Models V1.1
Report generation date: 16/11/2022 17:54:26

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2022 Base									
Stream B-AC	D1	0.1	6.93	0.07	A	D2	0.1	7.14	0.06	A
Stream C-AB		0.0	6.45	0.03	A		0.0	6.37	0.04	A
	2022 Base + Committed									
Stream B-AC	D3	0.1	6.93	0.07	A	D4	0.1	7.14	0.06	A
Stream C-AB		0.0	6.45	0.03	A		0.0	6.37	0.04	A
	2026 B+C+D									
Stream B-AC	D5	0.1	7.93	0.11	A	D6	0.1	7.96	0.10	A
Stream C-AB		0.0	6.51	0.03	A		0.1	6.20	0.04	A
	2031 B+C+D									
Stream B-AC	D7	0.1	7.94	0.12	A	D8	0.1	8.02	0.11	A
Stream C-AB		0.0	6.52	0.04	A		0.1	6.21	0.05	A
	2041 B+C+D									
Stream B-AC	D9	0.1	7.95	0.12	A	D10	0.1	8.02	0.11	A
Stream C-AB		0.0	6.53	0.04	A		0.1	6.22	0.05	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	
Location	
Site number	
Date	16/11/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	EU\hilary.herlihy
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Base	AM	ONE HOUR	08:15	09:45	15
D2	2022 Base	PM	ONE HOUR	16:00	17:30	15
D3	2022 Base + Committed	AM	ONE HOUR	08:15	09:45	15
D4	2022 Base + Committed	PM	ONE HOUR	16:00	17:30	15
D5	2026 B+C+D	AM	ONE HOUR	08:15	09:45	15
D6	2026 B+C+D	PM	ONE HOUR	16:00	17:30	15
D7	2031 B+C+D	AM	ONE HOUR	08:15	09:45	15
D8	2031 B+C+D	PM	ONE HOUR	16:00	17:30	15
D9	2041 B+C+D	AM	ONE HOUR	08:15	09:45	15
D10	2041 B+C+D	PM	ONE HOUR	16:00	17:30	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		5.86	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.86	A

Arms

Arms

Arm	Name	Description	Arm type
A	Margaret Kennedy Road West		Major
B	Cameron Street		Minor
C	Margaret Kennedy Road East		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Margaret Kennedy Road East	6.00			0.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Cameron Street	One lane	2.20	0	0

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	440	0.080	0.202	0.127	0.289
B-C	574	0.088	0.222	-	-
C-B	574	0.222	0.222	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Base	AM	ONE HOUR	08:15	09:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Margaret Kennedy Road West		✓	5	100.000
B - Cameron Street		✓	35	100.000
C - Margaret Kennedy Road East		✓	18	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Margaret Kennedy Road West	B - Cameron Street	C - Margaret Kennedy Road East
From	A - Margaret Kennedy Road West	0	4	1
	B - Cameron Street	3	0	32
	C - Margaret Kennedy Road East	3	15	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Margaret Kennedy Road West	B - Cameron Street	C - Margaret Kennedy Road East
From	A - Margaret Kennedy Road West	0	0	0
	B - Cameron Street	0	0	0
	C - Margaret Kennedy Road East	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.07	6.93	0.1	A
C-AB	0.03	6.45	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	26	558	0.047	26	0.0	6.763	A
C-AB	11	575	0.020	11	0.0	6.389	A
C-A	2			2			
A-B	3			3			
A-C	0.75			0.75			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	31	558	0.056	31	0.1	6.833	A
C-AB	14	575	0.024	14	0.0	6.413	A
C-A	3			3			
A-B	4			4			
A-C	0.90			0.90			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	39	558	0.069	38	0.1	6.930	A
C-AB	17	575	0.029	17	0.0	6.446	A
C-A	3			3			
A-B	4			4			
A-C	1			1			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	39	558	0.069	39	0.1	6.930	A
C-AB	17	575	0.029	17	0.0	6.448	A
C-A	3			3			
A-B	4			4			
A-C	1			1			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	31	558	0.056	32	0.1	6.837	A
C-AB	14	575	0.024	14	0.0	6.413	A
C-A	3			3			
A-B	4			4			
A-C	0.90			0.90			

09:30 - 09:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	26	558	0.047	26	0.0	6.769	A
C-AB	11	575	0.020	11	0.0	6.392	A
C-A	2			2			
A-B	3			3			
A-C	0.75			0.75			

2022 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		4.65	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.65	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2022 Base	PM	ONE HOUR	16:00	17:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Margaret Kennedy Road West		✓	5	100.000
B - Cameron Street		✓	31	100.000
C - Margaret Kennedy Road East		✓	40	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Margaret Kennedy Road West	B - Cameron Street	C - Margaret Kennedy Road East
From	A - Margaret Kennedy Road West	0	3	2
	B - Cameron Street	6	0	25
	C - Margaret Kennedy Road East	20	20	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Margaret Kennedy Road West	B - Cameron Street	C - Margaret Kennedy Road East
From	A - Margaret Kennedy Road West	0	0	0
	B - Cameron Street	0	0	0
	C - Margaret Kennedy Road East	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.06	7.14	0.1	A
C-AB	0.04	6.37	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	23	540	0.043	23	0.0	6.970	A
C-AB	15	583	0.026	15	0.0	6.338	A
C-A	15			15			
A-B	2			2			
A-C	2			2			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	28	539	0.052	28	0.1	7.041	A
C-AB	19	585	0.032	19	0.0	6.352	A
C-A	17			17			
A-B	3			3			
A-C	2			2			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	538	0.063	34	0.1	7.138	A
C-AB	23	588	0.039	23	0.0	6.372	A
C-A	21			21			
A-B	3			3			
A-C	2			2			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	538	0.063	34	0.1	7.138	A
C-AB	23	588	0.039	23	0.0	6.375	A
C-A	21			21			
A-B	3			3			
A-C	2			2			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	28	539	0.052	28	0.1	7.043	A
C-AB	19	585	0.032	19	0.0	6.353	A
C-A	17			17			
A-B	3			3			
A-C	2			2			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	23	539	0.043	23	0.0	6.977	A
C-AB	15	583	0.027	15	0.0	6.338	A
C-A	15			15			
A-B	2			2			
A-C	2			2			

2022 Base + Committed, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		5.86	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.86	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2022 Base + Committed	AM	ONE HOUR	08:15	09:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Margaret Kennedy Road West		✓	5	100.000
B - Cameron Street		✓	35	100.000
C - Margaret Kennedy Road East		✓	18	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Margaret Kennedy Road West	B - Cameron Street	C - Margaret Kennedy Road East
From	A - Margaret Kennedy Road West	0	4	1
	B - Cameron Street	3	0	32
	C - Margaret Kennedy Road East	3	15	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Margaret Kennedy Road West	B - Cameron Street	C - Margaret Kennedy Road East
From	A - Margaret Kennedy Road West	0	0	0
	B - Cameron Street	0	0	0
	C - Margaret Kennedy Road East	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.07	6.93	0.1	A
C-AB	0.03	6.45	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	26	558	0.047	26	0.0	6.763	A
C-AB	11	575	0.020	11	0.0	6.389	A
C-A	2			2			
A-B	3			3			
A-C	0.75			0.75			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	31	558	0.056	31	0.1	6.833	A
C-AB	14	575	0.024	14	0.0	6.413	A
C-A	3			3			
A-B	4			4			
A-C	0.90			0.90			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	39	558	0.069	38	0.1	6.930	A
C-AB	17	575	0.029	17	0.0	6.446	A
C-A	3			3			
A-B	4			4			
A-C	1			1			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	39	558	0.069	39	0.1	6.930	A
C-AB	17	575	0.029	17	0.0	6.448	A
C-A	3			3			
A-B	4			4			
A-C	1			1			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	31	558	0.056	32	0.1	6.837	A
C-AB	14	575	0.024	14	0.0	6.413	A
C-A	3			3			
A-B	4			4			
A-C	0.90			0.90			

09:30 - 09:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	26	558	0.047	26	0.0	6.769	A
C-AB	11	575	0.020	11	0.0	6.392	A
C-A	2			2			
A-B	3			3			
A-C	0.75			0.75			

2022 Base + Committed, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		4.65	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.65	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2022 Base + Committed	PM	ONE HOUR	16:00	17:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Margaret Kennedy Road West		✓	5	100.000
B - Cameron Street		✓	31	100.000
C - Margaret Kennedy Road East		✓	40	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Margaret Kennedy Road West	B - Cameron Street	C - Margaret Kennedy Road East
From	A - Margaret Kennedy Road West	0	3	2
	B - Cameron Street	6	0	25
	C - Margaret Kennedy Road East	20	20	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Margaret Kennedy Road West	B - Cameron Street	C - Margaret Kennedy Road East
From	A - Margaret Kennedy Road West	0	0	0
	B - Cameron Street	0	0	0
	C - Margaret Kennedy Road East	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.06	7.14	0.1	A
C-AB	0.04	6.37	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	23	540	0.043	23	0.0	6.970	A
C-AB	15	583	0.026	15	0.0	6.338	A
C-A	15			15			
A-B	2			2			
A-C	2			2			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	28	539	0.052	28	0.1	7.041	A
C-AB	19	585	0.032	19	0.0	6.352	A
C-A	17			17			
A-B	3			3			
A-C	2			2			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	538	0.063	34	0.1	7.138	A
C-AB	23	588	0.039	23	0.0	6.372	A
C-A	21			21			
A-B	3			3			
A-C	2			2			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	538	0.063	34	0.1	7.138	A
C-AB	23	588	0.039	23	0.0	6.375	A
C-A	21			21			
A-B	3			3			
A-C	2			2			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	28	539	0.052	28	0.1	7.043	A
C-AB	19	585	0.032	19	0.0	6.353	A
C-A	17			17			
A-B	3			3			
A-C	2			2			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	23	539	0.043	23	0.0	6.977	A
C-AB	15	583	0.027	15	0.0	6.338	A
C-A	15			15			
A-B	2			2			
A-C	2			2			

2026 B+C+D, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		3.87	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.87	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2026 B+C+D	AM	ONE HOUR	08:15	09:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Margaret Kennedy Road West		✓	53	100.000
B - Cameron Street		✓	53	100.000
C - Margaret Kennedy Road East		✓	32	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Margaret Kennedy Road West	B - Cameron Street	C - Margaret Kennedy Road East
From	A - Margaret Kennedy Road West	0	41	12
	B - Cameron Street	17	0	36
	C - Margaret Kennedy Road East	15	17	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Margaret Kennedy Road West	B - Cameron Street	C - Margaret Kennedy Road East
From	A - Margaret Kennedy Road West	0	0	0
	B - Cameron Street	0	0	0
	C - Margaret Kennedy Road East	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.11	7.93	0.1	A
C-AB	0.03	6.51	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	516	0.077	40	0.1	7.555	A
C-AB	13	573	0.023	13	0.0	6.430	A
C-A	11			11			
A-B	31			31			
A-C	9			9			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	48	514	0.093	48	0.1	7.711	A
C-AB	16	573	0.027	16	0.0	6.462	A
C-A	13			13			
A-B	37			37			
A-C	11			11			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	58	512	0.114	58	0.1	7.923	A
C-AB	19	572	0.034	19	0.0	6.508	A
C-A	16			16			
A-B	45			45			
A-C	13			13			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	58	512	0.114	58	0.1	7.926	A
C-AB	19	572	0.034	19	0.0	6.510	A
C-A	16			16			
A-B	45			45			
A-C	13			13			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	48	514	0.093	48	0.1	7.717	A
C-AB	16	573	0.027	16	0.0	6.465	A
C-A	13			13			
A-B	37			37			
A-C	11			11			

09:30 - 09:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	516	0.077	40	0.1	7.570	A
C-AB	13	573	0.023	13	0.0	6.433	A
C-A	11			11			
A-B	31			31			
A-C	9			9			

2026 B+C+D, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		3.25	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.25	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2026 B+C+D	PM	ONE HOUR	16:00	17:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Margaret Kennedy Road West		✓	31	100.000
B - Cameron Street		✓	44	100.000
C - Margaret Kennedy Road East		✓	79	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Margaret Kennedy Road West	B - Cameron Street	C - Margaret Kennedy Road East
From	A - Margaret Kennedy Road West	0	19	12
	B - Cameron Street	17	0	27
	C - Margaret Kennedy Road East	57	22	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Margaret Kennedy Road West	B - Cameron Street	C - Margaret Kennedy Road East
From	A - Margaret Kennedy Road West	0	0	0
	B - Cameron Street	0	0	0
	C - Margaret Kennedy Road East	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.10	7.96	0.1	A
C-AB	0.04	6.20	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	33	505	0.066	33	0.1	7.627	A
C-AB	18	598	0.030	18	0.0	6.200	A
C-A	42			42			
A-B	14			14			
A-C	9			9			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	503	0.079	39	0.1	7.766	A
C-AB	22	603	0.036	22	0.0	6.193	A
C-A	49			49			
A-B	17			17			
A-C	11			11			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	48	501	0.097	48	0.1	7.957	A
C-AB	27	609	0.044	27	0.1	6.180	A
C-A	60			60			
A-B	21			21			
A-C	13			13			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	48	501	0.097	48	0.1	7.961	A
C-AB	27	609	0.044	27	0.1	6.183	A
C-A	60			60			
A-B	21			21			
A-C	13			13			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	503	0.079	40	0.1	7.771	A
C-AB	22	603	0.036	22	0.0	6.194	A
C-A	49			49			
A-B	17			17			
A-C	11			11			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	33	505	0.066	33	0.1	7.638	A
C-AB	18	598	0.030	18	0.0	6.204	A
C-A	42			42			
A-B	14			14			
A-C	9			9			

2031 B+C+D, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		3.98	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.98	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2031 B+C+D	AM	ONE HOUR	08:15	09:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Margaret Kennedy Road West		✓	53	100.000
B - Cameron Street		✓	56	100.000
C - Margaret Kennedy Road East		✓	33	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Margaret Kennedy Road West	B - Cameron Street	C - Margaret Kennedy Road East
From	A - Margaret Kennedy Road West	0	41	12
	B - Cameron Street	17	0	39
	C - Margaret Kennedy Road East	15	18	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Margaret Kennedy Road West	B - Cameron Street	C - Margaret Kennedy Road East
From	A - Margaret Kennedy Road West	0	0	0
	B - Cameron Street	0	0	0
	C - Margaret Kennedy Road East	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.12	7.94	0.1	A
C-AB	0.04	6.52	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	42	518	0.081	42	0.1	7.551	A
C-AB	14	573	0.024	14	0.0	6.439	A
C-A	11			11			
A-B	31			31			
A-C	9			9			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	517	0.097	50	0.1	7.714	A
C-AB	17	573	0.029	17	0.0	6.473	A
C-A	13			13			
A-B	37			37			
A-C	11			11			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	62	515	0.120	62	0.1	7.937	A
C-AB	20	572	0.036	20	0.0	6.521	A
C-A	16			16			
A-B	45			45			
A-C	13			13			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	62	515	0.120	62	0.1	7.940	A
C-AB	20	572	0.036	20	0.0	6.521	A
C-A	16			16			
A-B	45			45			
A-C	13			13			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	517	0.097	50	0.1	7.721	A
C-AB	17	573	0.029	17	0.0	6.476	A
C-A	13			13			
A-B	37			37			
A-C	11			11			

09:30 - 09:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	42	518	0.081	42	0.1	7.566	A
C-AB	14	573	0.024	14	0.0	6.442	A
C-A	11			11			
A-B	31			31			
A-C	9			9			

2031 B+C+D, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		3.37	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.37	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2031 B+C+D	PM	ONE HOUR	16:00	17:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Margaret Kennedy Road West		✓	32	100.000
B - Cameron Street		✓	48	100.000
C - Margaret Kennedy Road East		✓	83	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Margaret Kennedy Road West	B - Cameron Street	C - Margaret Kennedy Road East
From	A - Margaret Kennedy Road West	0	20	12
	B - Cameron Street	18	0	30
	C - Margaret Kennedy Road East	59	24	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Margaret Kennedy Road West	B - Cameron Street	C - Margaret Kennedy Road East
From	A - Margaret Kennedy Road West	0	0	0
	B - Cameron Street	0	0	0
	C - Margaret Kennedy Road East	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.11	8.02	0.1	A
C-AB	0.05	6.21	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	36	506	0.071	36	0.1	7.651	A
C-AB	20	599	0.033	19	0.0	6.209	A
C-A	43			43			
A-B	15			15			
A-C	9			9			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	43	504	0.086	43	0.1	7.805	A
C-AB	24	604	0.039	24	0.0	6.203	A
C-A	51			51			
A-B	18			18			
A-C	11			11			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	53	502	0.105	53	0.1	8.015	A
C-AB	30	611	0.048	30	0.1	6.194	A
C-A	62			62			
A-B	22			22			
A-C	13			13			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	53	502	0.105	53	0.1	8.018	A
C-AB	30	611	0.048	30	0.1	6.197	A
C-A	62			62			
A-B	22			22			
A-C	13			13			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	43	504	0.086	43	0.1	7.812	A
C-AB	24	604	0.039	24	0.0	6.205	A
C-A	51			51			
A-B	18			18			
A-C	11			11			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	36	506	0.071	36	0.1	7.666	A
C-AB	20	599	0.033	20	0.0	6.215	A
C-A	43			43			
A-B	15			15			
A-C	9			9			

2041 B+C+D, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		4.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.00	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D9	2041 B+C+D	AM	ONE HOUR	08:15	09:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Margaret Kennedy Road West		✓	53	100.000
B - Cameron Street		✓	57	100.000
C - Margaret Kennedy Road East		✓	35	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Margaret Kennedy Road West	B - Cameron Street	C - Margaret Kennedy Road East
From	A - Margaret Kennedy Road West	0	41	12
	B - Cameron Street	17	0	40
	C - Margaret Kennedy Road East	16	19	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Margaret Kennedy Road West	B - Cameron Street	C - Margaret Kennedy Road East
From	A - Margaret Kennedy Road West	0	0	0
	B - Cameron Street	0	0	0
	C - Margaret Kennedy Road East	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.12	7.95	0.1	A
C-AB	0.04	6.53	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	43	519	0.083	43	0.1	7.552	A
C-AB	15	573	0.025	15	0.0	6.442	A
C-A	12			12			
A-B	31			31			
A-C	9			9			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	51	518	0.099	51	0.1	7.718	A
C-AB	18	573	0.031	18	0.0	6.477	A
C-A	14			14			
A-B	37			37			
A-C	11			11			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	63	516	0.122	63	0.1	7.945	A
C-AB	22	573	0.038	22	0.0	6.526	A
C-A	17			17			
A-B	45			45			
A-C	13			13			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	63	516	0.122	63	0.1	7.948	A
C-AB	22	573	0.038	22	0.0	6.526	A
C-A	17			17			
A-B	45			45			
A-C	13			13			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	51	518	0.099	51	0.1	7.725	A
C-AB	18	573	0.031	18	0.0	6.480	A
C-A	14			14			
A-B	37			37			
A-C	11			11			

09:30 - 09:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	43	519	0.083	43	0.1	7.564	A
C-AB	15	573	0.025	15	0.0	6.445	A
C-A	12			12			
A-B	31			31			
A-C	9			9			

2041 B+C+D , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		3.37	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.37	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D10	2041 B+C+D	PM	ONE HOUR	16:00	17:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Margaret Kennedy Road West		✓	32	100.000
B - Cameron Street		✓	48	100.000
C - Margaret Kennedy Road East		✓	85	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Margaret Kennedy Road West	B - Cameron Street	C - Margaret Kennedy Road East
From	A - Margaret Kennedy Road West	0	20	12
	B - Cameron Street	18	0	30
	C - Margaret Kennedy Road East	60	25	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Margaret Kennedy Road West	B - Cameron Street	C - Margaret Kennedy Road East
From	A - Margaret Kennedy Road West	0	0	0
	B - Cameron Street	0	0	0
	C - Margaret Kennedy Road East	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.11	8.02	0.1	A
C-AB	0.05	6.22	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	36	506	0.071	36	0.1	7.654	A
C-AB	20	600	0.034	20	0.0	6.212	A
C-A	44			44			
A-B	15			15			
A-C	9			9			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	43	504	0.086	43	0.1	7.809	A
C-AB	25	605	0.041	25	0.0	6.208	A
C-A	52			52			
A-B	18			18			
A-C	11			11			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	53	502	0.105	53	0.1	8.019	A
C-AB	31	611	0.051	31	0.1	6.200	A
C-A	63			63			
A-B	22			22			
A-C	13			13			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	53	502	0.105	53	0.1	8.023	A
C-AB	31	611	0.051	31	0.1	6.201	A
C-A	63			63			
A-B	22			22			
A-C	13			13			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	43	504	0.086	43	0.1	7.814	A
C-AB	25	605	0.041	25	0.0	6.212	A
C-A	52			52			
A-B	18			18			
A-C	11			11			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	36	506	0.071	36	0.1	7.669	A
C-AB	20	600	0.034	20	0.0	6.216	A
C-A	44			44			
A-B	15			15			
A-C	9			9			

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.0.4.1693

For sales and distribution information, program advice and maintenance, contact TRL Software:
+44 (0)1344 379777 software@trl.co.uk trlsoftware.com

Filename: STG Junction 2 Model.j10
Path: L:\Legacy\iedbl2fp001\DATA\DCS\Projects\BP\60648061_LDA_STG_Teresas\400_Technical\404_CE\01_Traffic\05_Reports\10_Traffic Deliverables\J10\J10 Models V1.1
Report generation date: 16/11/2022 17:55:53

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2022 Base									
Stream B-ACD	D1	0.0	7.63	0.03	A	D2	0.1	8.18	0.09	A
Stream A-BCD		0.0	6.04	0.00	A		0.0	5.75	0.01	A
Stream D-ABC		0.1	9.54	0.12	A		0.1	9.04	0.07	A
Stream C-ABD		0.0	5.64	0.03	A		0.0	5.89	0.03	A
	2022 Base + Committed									
Stream B-ACD	D3	0.0	7.64	0.03	A	D4	0.1	8.21	0.09	A
Stream A-BCD		0.0	6.04	0.00	A		0.0	5.73	0.01	A
Stream D-ABC		0.1	9.57	0.12	A		0.1	9.07	0.07	A
Stream C-ABD		0.0	5.62	0.03	A		0.0	5.89	0.03	A
	2026 B+C+D									
Stream B-ACD	D5	0.0	7.73	0.04	A	D6	0.2	9.03	0.14	A
Stream A-BCD		0.0	6.05	0.00	A		0.0	5.77	0.02	A
Stream D-ABC		0.2	10.17	0.16	B		0.1	9.66	0.11	A
Stream C-ABD		0.0	5.55	0.04	A		0.0	5.81	0.03	A
	2031 B+C+D									
Stream B-ACD	D7	0.0	7.80	0.04	A	D8	0.2	9.19	0.14	A
Stream A-BCD		0.0	6.05	0.00	A		0.0	5.73	0.02	A
Stream D-ABC		0.2	10.43	0.18	B		0.1	9.80	0.11	A
Stream C-ABD		0.1	5.50	0.04	A		0.1	5.79	0.04	A
	2041 B+C+D									
Stream B-ACD	D9	0.0	7.82	0.04	A	D10	0.2	9.23	0.15	A
Stream A-BCD		0.0	6.05	0.00	A		0.0	5.72	0.02	A
Stream D-ABC		0.2	10.55	0.18	B		0.1	9.92	0.12	A
Stream C-ABD		0.1	5.50	0.04	A		0.1	5.79	0.04	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	
Location	
Site number	
Date	16/11/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	EU\hilary.herlihy
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Base	AM	ONE HOUR	08:15	09:45	15
D2	2022 Base	PM	ONE HOUR	16:00	17:30	15
D3	2022 Base + Committed	AM	ONE HOUR	08:15	09:45	15
D4	2022 Base + Committed	PM	ONE HOUR	16:00	17:30	15
D5	2026 B+C+D	AM	ONE HOUR	08:15	09:45	15
D6	2026 B+C+D	PM	ONE HOUR	16:00	17:30	15
D7	2031 B+C+D	AM	ONE HOUR	08:15	09:45	15
D8	2031 B+C+D	PM	ONE HOUR	16:00	17:30	15
D9	2041 B+C+D	AM	ONE HOUR	08:15	09:45	15
D10	2041 B+C+D	PM	ONE HOUR	16:00	17:30	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Base , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way	Two-way	Two-way	Two-way		2.47	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.47	A

Arms

Arms

Arm	Name	Description	Arm type
A	Donore Avenue North		Major
B	Brown Street South		Minor
C	Donore Avenue South		Major
D	Margaret Kennedy Road West		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A - Donore Avenue North	6.90			30.0	✓	0.00
C - Donore Avenue South	6.90			33.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Brown Street South	One lane	2.50	30	31
D - Margaret Kennedy Road West	One lane	2.20	31	36

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
A-D	591	-	-	-	-	-	-	0.220	0.314	0.220	-	-	-
B-A	477	0.084	0.211	0.211	-	-	-	0.133	0.302	-	0.211	0.211	0.106
B-C	611	0.090	0.228	-	-	-	-	-	-	-	-	-	-
B-D, nearside lane	477	0.084	0.211	0.211	-	-	-	0.133	0.302	0.133	-	-	-
B-D, offside lane	477	0.084	0.211	0.211	-	-	-	0.133	0.302	0.133	-	-	-
C-B	593	0.221	0.221	0.315	-	-	-	-	-	-	-	-	-
D-A	595	-	-	-	-	-	-	0.221	-	0.088	-	-	-
D-B, nearside lane	465	0.129	0.129	0.294	-	-	-	0.206	0.206	0.081	-	-	-
D-B, offside lane	465	0.129	0.129	0.294	-	-	-	0.206	0.206	0.081	-	-	-
D-C	465	-	0.129	0.294	0.103	0.206	0.206	0.206	0.206	0.081	-	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Base	AM	ONE HOUR	08:15	09:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Donore Avenue North		✓	63	100.000
B - Brown Street South		✓	15	100.000
C - Donore Avenue South		✓	151	100.000
D - Margaret Kennedy Road West		✓	48	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Donore Avenue North	B - Brown Street South	C - Donore Avenue South	D - Margaret Kennedy Road West
From	A - Donore Avenue North	0	6	56	1
	B - Brown Street South	7	0	6	2
	C - Donore Avenue South	113	15	0	23
	D - Margaret Kennedy Road West	3	13	32	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Donore Avenue North	B - Brown Street South	C - Donore Avenue South	D - Margaret Kennedy Road West
From	A - Donore Avenue North	0	0	0	0
	B - Brown Street South	0	0	0	0
	C - Donore Avenue South	0	0	0	0
	D - Margaret Kennedy Road West	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-ACD	0.03	7.63	0.0	A
A-BCD	0.00	6.04	0.0	A
A-B				
A-C				
D-ABC	0.12	9.54	0.1	A
C-ABD	0.03	5.64	0.0	A
C-D				
C-A				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	11	499	0.023	11	0.0	7.374	A
A-BCD	0.82	597	0.001	0.81	0.0	6.035	A
A-B	5			5			
A-C	42			42			
D-ABC	36	443	0.082	36	0.1	8.830	A
C-ABD	13	652	0.021	13	0.0	5.638	A
C-D	17			17			
C-A	83			83			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	13	495	0.027	13	0.0	7.479	A
A-BCD	0.99	599	0.002	0.99	0.0	6.023	A
A-B	5			5			
A-C	50			50			
D-ABC	43	438	0.099	43	0.1	9.120	A
C-ABD	17	663	0.025	17	0.0	5.565	A
C-D	20			20			
C-A	99			99			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	17	488	0.034	16	0.0	7.631	A
A-BCD	1	600	0.002	1	0.0	6.007	A
A-B	7			7			
A-C	62			62			
D-ABC	53	430	0.123	53	0.1	9.536	A
C-ABD	21	679	0.031	21	0.0	5.469	A
C-D	25			25			
C-A	121			121			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	17	488	0.034	17	0.0	7.631	A
A-BCD	1	600	0.002	1	0.0	6.007	A
A-B	7			7			
A-C	62			62			
D-ABC	53	430	0.123	53	0.1	9.542	A
C-ABD	21	679	0.031	21	0.0	5.472	A
C-D	25			25			
C-A	121			121			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	13	495	0.027	14	0.0	7.484	A
A-BCD	0.99	599	0.002	0.99	0.0	6.024	A
A-B	5			5			
A-C	50			50			
D-ABC	43	438	0.099	43	0.1	9.130	A
C-ABD	17	663	0.025	17	0.0	5.566	A
C-D	20			20			
C-A	99			99			

09:30 - 09:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	11	499	0.023	11	0.0	7.378	A
A-BCD	0.82	597	0.001	0.82	0.0	6.037	A
A-B	5			5			
A-C	42			42			
D-ABC	36	443	0.082	36	0.1	8.850	A
C-ABD	13	652	0.021	13	0.0	5.641	A
C-D	17			17			
C-A	83			83			

2022 Base , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way	Two-way	Two-way	Two-way		2.34	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.34	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2022 Base	PM	ONE HOUR	16:00	17:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Donore Avenue North		✓	117	100.000
B - Brown Street South		✓	39	100.000
C - Donore Avenue South		✓	111	100.000
D - Margaret Kennedy Road West		✓	27	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Donore Avenue North	B - Brown Street South	C - Donore Avenue South	D - Margaret Kennedy Road West
From	A - Donore Avenue North	0	7	106	4
	B - Brown Street South	12	0	16	11
	C - Donore Avenue South	85	14	0	12
	D - Margaret Kennedy Road West	2	8	17	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Donore Avenue North	B - Brown Street South	C - Donore Avenue South	D - Margaret Kennedy Road West
From	A - Donore Avenue North	0	0	0	0
	B - Brown Street South	0	0	0	0
	C - Donore Avenue South	0	0	0	0
	D - Margaret Kennedy Road West	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-ACD	0.09	8.18	0.1	A
A-BCD	0.01	5.75	0.0	A
A-B				
A-C				
D-ABC	0.07	9.04	0.1	A
C-ABD	0.03	5.89	0.0	A
C-D				
C-A				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	29	496	0.059	29	0.1	7.704	A
A-BCD	3	630	0.006	3	0.0	5.745	A
A-B	5			5			
A-C	79			79			
D-ABC	20	442	0.046	20	0.0	8.527	A
C-ABD	12	623	0.019	12	0.0	5.889	A
C-D	9			9			
C-A	63			63			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	35	491	0.071	35	0.1	7.901	A
A-BCD	4	638	0.007	4	0.0	5.683	A
A-B	6			6			
A-C	95			95			
D-ABC	24	436	0.056	24	0.1	8.738	A
C-ABD	15	629	0.023	15	0.0	5.857	A
C-D	11			11			
C-A	75			75			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	43	483	0.089	43	0.1	8.182	A
A-BCD	5	648	0.008	5	0.0	5.598	A
A-B	8			8			
A-C	116			116			
D-ABC	30	428	0.069	30	0.1	9.037	A
C-ABD	19	638	0.029	19	0.0	5.815	A
C-D	13			13			
C-A	91			91			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	43	483	0.089	43	0.1	8.183	A
A-BCD	5	648	0.008	5	0.0	5.598	A
A-B	8			8			
A-C	116			116			
D-ABC	30	428	0.069	30	0.1	9.039	A
C-ABD	19	638	0.029	19	0.0	5.815	A
C-D	13			13			
C-A	91			91			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	35	491	0.071	35	0.1	7.907	A
A-BCD	4	638	0.007	4	0.0	5.685	A
A-B	6			6			
A-C	95			95			
D-ABC	24	436	0.056	24	0.1	8.744	A
C-ABD	15	629	0.023	15	0.0	5.858	A
C-D	11			11			
C-A	75			75			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	29	496	0.059	29	0.1	7.716	A
A-BCD	3	630	0.006	3	0.0	5.745	A
A-B	5			5			
A-C	79			79			
D-ABC	20	442	0.046	20	0.0	8.537	A
C-ABD	12	623	0.019	12	0.0	5.892	A
C-D	9			9			
C-A	63			63			

2022 Base + Committed, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way	Two-way	Two-way	Two-way		2.42	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.42	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2022 Base + Committed	AM	ONE HOUR	08:15	09:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Donore Avenue North		✓	64	100.000
B - Brown Street South		✓	15	100.000
C - Donore Avenue South		✓	156	100.000
D - Margaret Kennedy Road West		✓	48	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Donore Avenue North	B - Brown Street South	C - Donore Avenue South	D - Margaret Kennedy Road West
From	A - Donore Avenue North	0	6	57	1
	B - Brown Street South	7	0	6	2
	C - Donore Avenue South	118	15	0	23
	D - Margaret Kennedy Road West	3	13	32	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Donore Avenue North	B - Brown Street South	C - Donore Avenue South	D - Margaret Kennedy Road West
From	A - Donore Avenue North	0	0	0	0
	B - Brown Street South	0	0	0	0
	C - Donore Avenue South	0	0	0	0
	D - Margaret Kennedy Road West	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-ACD	0.03	7.64	0.0	A
A-BCD	0.00	6.04	0.0	A
A-B				
A-C				
D-ABC	0.12	9.57	0.1	A
C-ABD	0.03	5.62	0.0	A
C-D				
C-A				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	11	499	0.023	11	0.0	7.382	A
A-BCD	0.82	597	0.001	0.81	0.0	6.038	A
A-B	5			5			
A-C	43			43			
D-ABC	36	442	0.082	36	0.1	8.849	A
C-ABD	13	654	0.021	13	0.0	5.618	A
C-D	17			17			
C-A	87			87			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	13	494	0.027	13	0.0	7.490	A
A-BCD	0.99	598	0.002	0.99	0.0	6.027	A
A-B	5			5			
A-C	51			51			
D-ABC	43	437	0.099	43	0.1	9.145	A
C-ABD	17	666	0.025	17	0.0	5.542	A
C-D	20			20			
C-A	103			103			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	17	487	0.034	16	0.0	7.644	A
A-BCD	1	600	0.002	1	0.0	6.011	A
A-B	7			7			
A-C	63			63			
D-ABC	53	429	0.123	53	0.1	9.568	A
C-ABD	21	683	0.031	21	0.0	5.441	A
C-D	25			25			
C-A	126			126			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	17	487	0.034	17	0.0	7.644	A
A-BCD	1	600	0.002	1	0.0	6.014	A
A-B	7			7			
A-C	63			63			
D-ABC	53	429	0.123	53	0.1	9.574	A
C-ABD	21	683	0.031	21	0.0	5.444	A
C-D	25			25			
C-A	126			126			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	13	494	0.027	14	0.0	7.491	A
A-BCD	0.99	598	0.002	1.00	0.0	6.027	A
A-B	5			5			
A-C	51			51			
D-ABC	43	437	0.099	43	0.1	9.156	A
C-ABD	17	666	0.025	17	0.0	5.545	A
C-D	20			20			
C-A	103			103			

09:30 - 09:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	11	499	0.023	11	0.0	7.383	A
A-BCD	0.82	597	0.001	0.82	0.0	6.038	A
A-B	5			5			
A-C	43			43			
D-ABC	36	442	0.082	36	0.1	8.867	A
C-ABD	14	654	0.021	14	0.0	5.621	A
C-D	17			17			
C-A	87			87			

2022 Base + Committed, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way	Two-way	Two-way	Two-way		2.28	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.28	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2022 Base + Committed	PM	ONE HOUR	16:00	17:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Donore Avenue North		✓	122	100.000
B - Brown Street South		✓	39	100.000
C - Donore Avenue South		✓	114	100.000
D - Margaret Kennedy Road West		✓	27	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Donore Avenue North	B - Brown Street South	C - Donore Avenue South	D - Margaret Kennedy Road West
From	A - Donore Avenue North	0	7	111	4
	B - Brown Street South	12	0	16	11
	C - Donore Avenue South	88	14	0	12
	D - Margaret Kennedy Road West	2	8	17	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Donore Avenue North	B - Brown Street South	C - Donore Avenue South	D - Margaret Kennedy Road West
From	A - Donore Avenue North	0	0	0	0
	B - Brown Street South	0	0	0	0
	C - Donore Avenue South	0	0	0	0
	D - Margaret Kennedy Road West	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-ACD	0.09	8.21	0.1	A
A-BCD	0.01	5.73	0.0	A
A-B				
A-C				
D-ABC	0.07	9.07	0.1	A
C-ABD	0.03	5.89	0.0	A
C-D				
C-A				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	29	495	0.059	29	0.1	7.721	A
A-BCD	4	632	0.006	3	0.0	5.726	A
A-B	5			5			
A-C	83			83			
D-ABC	20	441	0.046	20	0.0	8.546	A
C-ABD	12	624	0.019	12	0.0	5.883	A
C-D	9			9			
C-A	65			65			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	35	489	0.072	35	0.1	7.923	A
A-BCD	4	640	0.007	4	0.0	5.660	A
A-B	6			6			
A-C	99			99			
D-ABC	24	435	0.056	24	0.1	8.761	A
C-ABD	15	630	0.023	15	0.0	5.849	A
C-D	11			11			
C-A	77			77			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	43	481	0.089	43	0.1	8.210	A
A-BCD	6	652	0.008	5	0.0	5.571	A
A-B	8			8			
A-C	121			121			
D-ABC	30	427	0.070	30	0.1	9.068	A
C-ABD	19	639	0.029	19	0.0	5.805	A
C-D	13			13			
C-A	94			94			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	43	481	0.089	43	0.1	8.211	A
A-BCD	6	652	0.008	6	0.0	5.571	A
A-B	8			8			
A-C	121			121			
D-ABC	30	427	0.070	30	0.1	9.070	A
C-ABD	19	639	0.029	19	0.0	5.808	A
C-D	13			13			
C-A	94			94			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	35	489	0.072	35	0.1	7.928	A
A-BCD	4	640	0.007	4	0.0	5.663	A
A-B	6			6			
A-C	99			99			
D-ABC	24	435	0.056	24	0.1	8.768	A
C-ABD	15	630	0.023	15	0.0	5.850	A
C-D	11			11			
C-A	77			77			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	29	495	0.059	29	0.1	7.733	A
A-BCD	4	632	0.006	4	0.0	5.729	A
A-B	5			5			
A-C	83			83			
D-ABC	20	441	0.046	20	0.0	8.558	A
C-ABD	12	624	0.019	12	0.0	5.886	A
C-D	9			9			
C-A	65			65			

2026 B+C+D, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way	Two-way	Two-way	Two-way		2.72	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.72	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2026 B+C+D	AM	ONE HOUR	08:15	09:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Donore Avenue North		✓	72	100.000
B - Brown Street South		✓	17	100.000
C - Donore Avenue South		✓	182	100.000
D - Margaret Kennedy Road West		✓	63	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Donore Avenue North	B - Brown Street South	C - Donore Avenue South	D - Margaret Kennedy Road West
From	A - Donore Avenue North	0	7	63	2
	B - Brown Street South	7	0	7	3
	C - Donore Avenue South	130	17	0	35
	D - Margaret Kennedy Road West	4	17	42	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Donore Avenue North	B - Brown Street South	C - Donore Avenue South	D - Margaret Kennedy Road West
From	A - Donore Avenue North	0	0	0	0
	B - Brown Street South	0	0	0	0
	C - Donore Avenue South	0	0	0	0
	D - Margaret Kennedy Road West	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-ACD	0.04	7.73	0.0	A
A-BCD	0.00	6.05	0.0	A
A-B				
A-C				
D-ABC	0.16	10.17	0.2	B
C-ABD	0.04	5.55	0.0	A
C-D				
C-A				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	13	497	0.026	13	0.0	7.427	A
A-BCD	2	596	0.003	2	0.0	6.053	A
A-B	5			5			
A-C	47			47			
D-ABC	47	438	0.108	47	0.1	9.184	A
C-ABD	16	665	0.024	16	0.0	5.543	A
C-D	26			26			
C-A	96			96			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	15	492	0.031	15	0.0	7.554	A
A-BCD	2	597	0.003	2	0.0	6.045	A
A-B	6			6			
A-C	56			56			
D-ABC	57	432	0.131	57	0.1	9.583	A
C-ABD	20	679	0.029	20	0.0	5.456	A
C-D	31			31			
C-A	113			113			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	19	484	0.039	19	0.0	7.733	A
A-BCD	3	599	0.004	3	0.0	6.033	A
A-B	8			8			
A-C	69			69			
D-ABC	69	423	0.164	69	0.2	10.163	B
C-ABD	25	699	0.036	25	0.0	5.343	A
C-D	37			37			
C-A	138			138			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	19	484	0.039	19	0.0	7.733	A
A-BCD	3	599	0.004	3	0.0	6.035	A
A-B	8			8			
A-C	69			69			
D-ABC	69	423	0.164	69	0.2	10.174	B
C-ABD	25	699	0.036	25	0.0	5.346	A
C-D	37			37			
C-A	138			138			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	15	492	0.031	15	0.0	7.558	A
A-BCD	2	597	0.003	2	0.0	6.046	A
A-B	6			6			
A-C	56			56			
D-ABC	57	432	0.131	57	0.2	9.598	A
C-ABD	20	679	0.029	20	0.0	5.459	A
C-D	31			31			
C-A	113			113			

09:30 - 09:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	13	497	0.026	13	0.0	7.432	A
A-BCD	2	596	0.003	2	0.0	6.054	A
A-B	5			5			
A-C	47			47			
D-ABC	47	438	0.108	48	0.1	9.214	A
C-ABD	16	665	0.024	16	0.0	5.546	A
C-D	26			26			
C-A	96			96			

2026 B+C+D, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way	Two-way	Two-way	Two-way		2.87	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.87	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2026 B+C+D	PM	ONE HOUR	16:00	17:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Donore Avenue North		✓	139	100.000
B - Brown Street South		✓	57	100.000
C - Donore Avenue South		✓	142	100.000
D - Margaret Kennedy Road West		✓	40	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Donore Avenue North	B - Brown Street South	C - Donore Avenue South	D - Margaret Kennedy Road West
From	A - Donore Avenue North	0	7	122	10
	B - Brown Street South	13	0	18	26
	C - Donore Avenue South	97	16	0	29
	D - Margaret Kennedy Road West	3	12	25	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Donore Avenue North	B - Brown Street South	C - Donore Avenue South	D - Margaret Kennedy Road West
From	A - Donore Avenue North	0	0	0	0
	B - Brown Street South	0	0	0	0
	C - Donore Avenue South	0	0	0	0
	D - Margaret Kennedy Road West	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-ACD	0.14	9.03	0.2	A
A-BCD	0.02	5.77	0.0	A
A-B				
A-C				
D-ABC	0.11	9.66	0.1	A
C-ABD	0.03	5.81	0.0	A
C-D				
C-A				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	43	478	0.090	43	0.1	8.263	A
A-BCD	9	633	0.014	9	0.0	5.765	A
A-B	5			5			
A-C	91			91			
D-ABC	30	434	0.069	30	0.1	8.890	A
C-ABD	14	634	0.022	14	0.0	5.806	A
C-D	21			21			
C-A	71			71			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	51	471	0.109	51	0.1	8.575	A
A-BCD	11	642	0.017	11	0.0	5.707	A
A-B	6			6			
A-C	108			108			
D-ABC	36	427	0.084	36	0.1	9.204	A
C-ABD	17	642	0.027	17	0.0	5.760	A
C-D	25			25			
C-A	85			85			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	63	461	0.136	63	0.2	9.026	A
A-BCD	14	653	0.022	14	0.0	5.630	A
A-B	8			8			
A-C	131			131			
D-ABC	44	417	0.106	44	0.1	9.656	A
C-ABD	22	654	0.034	22	0.0	5.699	A
C-D	31			31			
C-A	103			103			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	63	461	0.136	63	0.2	9.032	A
A-BCD	14	653	0.022	14	0.0	5.630	A
A-B	8			8			
A-C	131			131			
D-ABC	44	417	0.106	44	0.1	9.661	A
C-ABD	22	654	0.034	22	0.0	5.700	A
C-D	31			31			
C-A	103			103			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	51	471	0.109	51	0.1	8.586	A
A-BCD	11	642	0.017	11	0.0	5.708	A
A-B	6			6			
A-C	108			108			
D-ABC	36	427	0.084	36	0.1	9.214	A
C-ABD	17	642	0.027	18	0.0	5.761	A
C-D	25			25			
C-A	85			85			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	43	478	0.090	43	0.1	8.283	A
A-BCD	9	633	0.014	9	0.0	5.768	A
A-B	5			5			
A-C	91			91			
D-ABC	30	434	0.069	30	0.1	8.909	A
C-ABD	14	634	0.022	14	0.0	5.809	A
C-D	21			21			
C-A	71			71			

2031 B+C+D , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way	Two-way	Two-way	Two-way		2.75	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.75	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2031 B+C+D	AM	ONE HOUR	08:15	09:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Donore Avenue North		✓	78	100.000
B - Brown Street South		✓	19	100.000
C - Donore Avenue South		✓	197	100.000
D - Margaret Kennedy Road West		✓	67	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Donore Avenue North	B - Brown Street South	C - Donore Avenue South	D - Margaret Kennedy Road West
From	A - Donore Avenue North	0	8	68	2
	B - Brown Street South	8	0	8	3
	C - Donore Avenue South	141	18	0	38
	D - Margaret Kennedy Road West	4	18	45	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Donore Avenue North	B - Brown Street South	C - Donore Avenue South	D - Margaret Kennedy Road West
From	A - Donore Avenue North	0	0	0	0
	B - Brown Street South	0	0	0	0
	C - Donore Avenue South	0	0	0	0
	D - Margaret Kennedy Road West	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-ACD	0.04	7.80	0.0	A
A-BCD	0.00	6.05	0.0	A
A-B				
A-C				
D-ABC	0.18	10.43	0.2	B
C-ABD	0.04	5.50	0.1	A
C-D				
C-A				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	14	496	0.029	14	0.0	7.463	A
A-BCD	2	597	0.003	2	0.0	6.047	A
A-B	6			6			
A-C	51			51			
D-ABC	50	435	0.116	50	0.1	9.328	A
C-ABD	17	671	0.025	17	0.0	5.501	A
C-D	28			28			
C-A	103			103			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	17	491	0.035	17	0.0	7.603	A
A-BCD	2	598	0.003	2	0.0	6.037	A
A-B	7			7			
A-C	61			61			
D-ABC	60	428	0.141	60	0.2	9.772	A
C-ABD	21	687	0.031	21	0.0	5.408	A
C-D	33			33			
C-A	123			123			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	21	482	0.043	21	0.0	7.800	A
A-BCD	3	600	0.004	3	0.0	6.023	A
A-B	9			9			
A-C	75			75			
D-ABC	74	419	0.176	74	0.2	10.419	B
C-ABD	28	708	0.039	27	0.1	5.288	A
C-D	40			40			
C-A	149			149			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	21	482	0.043	21	0.0	7.801	A
A-BCD	3	600	0.004	3	0.0	6.025	A
A-B	9			9			
A-C	75			75			
D-ABC	74	419	0.176	74	0.2	10.433	B
C-ABD	28	708	0.039	28	0.1	5.291	A
C-D	40			40			
C-A	149			149			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	17	490	0.035	17	0.0	7.604	A
A-BCD	2	598	0.003	2	0.0	6.040	A
A-B	7			7			
A-C	61			61			
D-ABC	60	428	0.141	60	0.2	9.788	A
C-ABD	21	687	0.031	21	0.0	5.409	A
C-D	33			33			
C-A	123			123			

09:30 - 09:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	14	496	0.029	14	0.0	7.471	A
A-BCD	2	597	0.003	2	0.0	6.047	A
A-B	6			6			
A-C	51			51			
D-ABC	50	435	0.116	51	0.1	9.360	A
C-ABD	17	671	0.025	17	0.0	5.504	A
C-D	28			28			
C-A	103			103			

2031 B+C+D , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way	Two-way	Two-way	Two-way		2.85	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.85	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2031 B+C+D	PM	ONE HOUR	16:00	17:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Donore Avenue North		✓	150	100.000
B - Brown Street South		✓	60	100.000
C - Donore Avenue South		✓	152	100.000
D - Margaret Kennedy Road West		✓	41	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Donore Avenue North	B - Brown Street South	C - Donore Avenue South	D - Margaret Kennedy Road West
From	A - Donore Avenue North	0	8	132	10
	B - Brown Street South	14	0	19	27
	C - Donore Avenue South	105	17	0	30
	D - Margaret Kennedy Road West	3	12	26	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Donore Avenue North	B - Brown Street South	C - Donore Avenue South	D - Margaret Kennedy Road West
From	A - Donore Avenue North	0	0	0	0
	B - Brown Street South	0	0	0	0
	C - Donore Avenue South	0	0	0	0
	D - Margaret Kennedy Road West	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-ACD	0.14	9.19	0.2	A
A-BCD	0.02	5.73	0.0	A
A-B				
A-C				
D-ABC	0.11	9.80	0.1	A
C-ABD	0.04	5.79	0.1	A
C-D				
C-A				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	45	475	0.095	45	0.1	8.355	A
A-BCD	9	637	0.014	9	0.0	5.729	A
A-B	6			6			
A-C	98			98			
D-ABC	31	432	0.072	31	0.1	8.972	A
C-ABD	15	637	0.024	15	0.0	5.789	A
C-D	22			22			
C-A	77			77			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	54	468	0.115	54	0.1	8.694	A
A-BCD	11	647	0.017	11	0.0	5.665	A
A-B	7			7			
A-C	117			117			
D-ABC	37	423	0.087	37	0.1	9.310	A
C-ABD	19	646	0.029	19	0.0	5.740	A
C-D	26			26			
C-A	92			92			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	66	458	0.144	66	0.2	9.184	A
A-BCD	14	660	0.022	14	0.0	5.579	A
A-B	9			9			
A-C	142			142			
D-ABC	45	412	0.109	45	0.1	9.795	A
C-ABD	24	658	0.037	24	0.1	5.676	A
C-D	32			32			
C-A	111			111			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	66	458	0.144	66	0.2	9.195	A
A-BCD	14	660	0.022	14	0.0	5.582	A
A-B	9			9			
A-C	142			142			
D-ABC	45	412	0.109	45	0.1	9.802	A
C-ABD	24	658	0.037	24	0.1	5.677	A
C-D	32			32			
C-A	111			111			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	54	468	0.115	54	0.1	8.704	A
A-BCD	11	646	0.017	11	0.0	5.666	A
A-B	7			7			
A-C	117			117			
D-ABC	37	423	0.087	37	0.1	9.319	A
C-ABD	19	646	0.029	19	0.0	5.742	A
C-D	26			26			
C-A	92			92			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	45	475	0.095	45	0.1	8.375	A
A-BCD	9	637	0.014	9	0.0	5.732	A
A-B	6			6			
A-C	98			98			
D-ABC	31	431	0.072	31	0.1	8.990	A
C-ABD	15	637	0.024	15	0.0	5.792	A
C-D	22			22			
C-A	77			77			

2041 B+C+D , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way	Two-way	Two-way	Two-way		2.78	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.78	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D9	2041 B+C+D	AM	ONE HOUR	08:15	09:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Donore Avenue North		✓	80	100.000
B - Brown Street South		✓	19	100.000
C - Donore Avenue South		✓	202	100.000
D - Margaret Kennedy Road West		✓	69	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Donore Avenue North	B - Brown Street South	C - Donore Avenue South	D - Margaret Kennedy Road West
From	A - Donore Avenue North	0	8	70	2
	B - Brown Street South	8	0	8	3
	C - Donore Avenue South	145	19	0	38
	D - Margaret Kennedy Road West	4	19	46	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Donore Avenue North	B - Brown Street South	C - Donore Avenue South	D - Margaret Kennedy Road West
From	A - Donore Avenue North	0	0	0	0
	B - Brown Street South	0	0	0	0
	C - Donore Avenue South	0	0	0	0
	D - Margaret Kennedy Road West	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-ACD	0.04	7.82	0.0	A
A-BCD	0.00	6.05	0.0	A
A-B				
A-C				
D-ABC	0.18	10.55	0.2	B
C-ABD	0.04	5.50	0.1	A
C-D				
C-A				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	14	495	0.029	14	0.0	7.477	A
A-BCD	2	597	0.003	2	0.0	6.045	A
A-B	6			6			
A-C	53			53			
D-ABC	52	434	0.120	51	0.1	9.391	A
C-ABD	18	673	0.027	18	0.0	5.495	A
C-D	28			28			
C-A	106			106			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	17	489	0.035	17	0.0	7.621	A
A-BCD	2	598	0.003	2	0.0	6.035	A
A-B	7			7			
A-C	63			63			
D-ABC	62	427	0.145	62	0.2	9.855	A
C-ABD	22	689	0.033	22	0.0	5.402	A
C-D	33			33			
C-A	126			126			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	21	481	0.043	21	0.0	7.824	A
A-BCD	3	600	0.004	3	0.0	6.020	A
A-B	9			9			
A-C	77			77			
D-ABC	76	417	0.182	76	0.2	10.536	B
C-ABD	29	711	0.041	29	0.1	5.282	A
C-D	40			40			
C-A	153			153			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	21	481	0.043	21	0.0	7.824	A
A-BCD	3	600	0.004	3	0.0	6.023	A
A-B	9			9			
A-C	77			77			
D-ABC	76	417	0.182	76	0.2	10.549	B
C-ABD	29	711	0.041	29	0.1	5.284	A
C-D	40			40			
C-A	153			153			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	17	489	0.035	17	0.0	7.625	A
A-BCD	2	598	0.003	2	0.0	6.036	A
A-B	7			7			
A-C	63			63			
D-ABC	62	427	0.145	62	0.2	9.873	A
C-ABD	22	689	0.033	23	0.0	5.405	A
C-D	33			33			
C-A	126			126			

09:30 - 09:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	14	495	0.029	14	0.0	7.485	A
A-BCD	2	597	0.003	2	0.0	6.048	A
A-B	6			6			
A-C	53			53			
D-ABC	52	434	0.120	52	0.1	9.427	A
C-ABD	18	673	0.027	18	0.0	5.498	A
C-D	28			28			
C-A	106			106			

2041 B+C+D , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way	Two-way	Two-way	Two-way		2.87	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.87	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D10	2041 B+C+D	PM	ONE HOUR	16:00	17:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Donore Avenue North		✓	154	100.000
B - Brown Street South		✓	61	100.000
C - Donore Avenue South		✓	157	100.000
D - Margaret Kennedy Road West		✓	43	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - Donore Avenue North	B - Brown Street South	C - Donore Avenue South	D - Margaret Kennedy Road West
From	A - Donore Avenue North	0	8	136	10
	B - Brown Street South	14	0	20	27
	C - Donore Avenue South	108	18	0	31
	D - Margaret Kennedy Road West	3	13	27	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Donore Avenue North	B - Brown Street South	C - Donore Avenue South	D - Margaret Kennedy Road West
From	A - Donore Avenue North	0	0	0	0
	B - Brown Street South	0	0	0	0
	C - Donore Avenue South	0	0	0	0
	D - Margaret Kennedy Road West	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-ACD	0.15	9.23	0.2	A
A-BCD	0.02	5.72	0.0	A
A-B				
A-C				
D-ABC	0.12	9.92	0.1	A
C-ABD	0.04	5.79	0.1	A
C-D				
C-A				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	46	476	0.097	46	0.1	8.365	A
A-BCD	9	638	0.014	9	0.0	5.719	A
A-B	6			6			
A-C	101			101			
D-ABC	32	430	0.075	32	0.1	9.038	A
C-ABD	16	638	0.025	16	0.0	5.784	A
C-D	23			23			
C-A	79			79			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	55	468	0.117	55	0.1	8.711	A
A-BCD	11	648	0.017	11	0.0	5.653	A
A-B	7			7			
A-C	120			120			
D-ABC	39	422	0.092	39	0.1	9.392	A
C-ABD	20	648	0.031	20	0.0	5.736	A
C-D	27			27			
C-A	94			94			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	67	457	0.147	67	0.2	9.218	A
A-BCD	15	661	0.022	14	0.0	5.564	A
A-B	9			9			
A-C	146			146			
D-ABC	47	410	0.115	47	0.1	9.909	A
C-ABD	26	660	0.039	26	0.1	5.671	A
C-D	33			33			
C-A	114			114			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	67	457	0.147	67	0.2	9.225	A
A-BCD	15	661	0.022	15	0.0	5.565	A
A-B	9			9			
A-C	146			146			
D-ABC	47	410	0.115	47	0.1	9.916	A
C-ABD	26	660	0.039	26	0.1	5.672	A
C-D	33			33			
C-A	114			114			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	55	468	0.117	55	0.1	8.723	A
A-BCD	11	648	0.017	11	0.0	5.654	A
A-B	7			7			
A-C	120			120			
D-ABC	39	422	0.092	39	0.1	9.403	A
C-ABD	20	648	0.031	20	0.0	5.737	A
C-D	27			27			
C-A	94			94			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	46	475	0.097	46	0.1	8.386	A
A-BCD	9	638	0.014	9	0.0	5.722	A
A-B	6			6			
A-C	101			101			
D-ABC	32	430	0.075	32	0.1	9.058	A
C-ABD	16	638	0.025	16	0.0	5.786	A
C-D	23			23			
C-A	79			79			

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.0.4.1693

For sales and distribution information, program advice and maintenance, contact TRL Software:
+44 (0)1344 379777 software@trl.co.uk trlsoftware.com

Filename: Site Access model.j10
Path: L:\Legacy\iedbl2fp001\DATA\DCS\Projects\BP\60648061_LDA_STG_Teresas\400_Technical\404_CE\01_Traffic\05_Reports\10_Traffic Deliverables\J10\J10 Models V1.1
Report generation date: 16/11/2022 17:57:09

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2022 Base									
Stream B-AC	D1	0.0	0.00	0.00	A	D2	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A		0.0	0.00	0.00	A
	2022 Base + Committed									
Stream B-AC	D3	0.0	0.00	0.00	A	D4	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A		0.0	0.00	0.00	A
	2026 B+C+D									
Stream B-AC	D5	0.1	9.35	0.12	A	D6	0.1	8.93	0.06	A
Stream C-AB		0.0	0.00	0.00	A		0.0	0.00	0.00	A
	2031 B+C+D									
Stream B-AC	D7	0.1	9.36	0.12	A	D8	0.1	8.94	0.06	A
Stream C-AB		0.0	0.00	0.00	A		0.0	0.00	0.00	A
	2041 B+C+D									
Stream B-AC	D9	0.1	9.36	0.12	A	D10	0.1	8.94	0.06	A
Stream C-AB		0.0	0.00	0.00	A		0.0	0.00	0.00	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	
Location	
Site number	
Date	16/11/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	EU\hilary.herlihy
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Base	AM	ONE HOUR	08:15	09:45	15
D2	2022 Base	PM	ONE HOUR	16:00	17:30	15
D3	2022 Base + Committed	AM	ONE HOUR	08:15	09:45	15
D4	2022 Base + Committed	PM	ONE HOUR	16:00	17:30	15
D5	2026 B+C+D	AM	ONE HOUR	08:15	09:45	15
D6	2026 B+C+D	PM	ONE HOUR	16:00	17:30	15
D7	2031 B+C+D	AM	ONE HOUR	08:15	09:45	15
D8	2031 B+C+D	PM	ONE HOUR	16:00	17:30	15
D9	2041 B+C+D	AM	ONE HOUR	08:15	09:45	15
D10	2041 B+C+D	PM	ONE HOUR	16:00	17:30	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Base , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	F

Arms

Arms

Arm	Name	Description	Arm type
A	Margaret Kennedy Road East		Major
B	Site Access		Minor
C	Margaret Kennedy Road West		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Margaret Kennedy Road West	6.00			0.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Site Access	One lane	2.20	0	0

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	440	0.080	0.202	0.127	0.289
B-C	574	0.088	0.222	-	-
C-B	574	0.222	0.222	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Base	AM	ONE HOUR	08:15	09:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Margaret Kennedy Road East		✓	3	100.000
B - Site Access		✓	0	100.000
C - Margaret Kennedy Road West		✓	1	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Margaret Kennedy Road East	B - Site Access	C - Margaret Kennedy Road West
From	A - Margaret Kennedy Road East	0	0	3
	B - Site Access	0	0	0
	C - Margaret Kennedy Road West	1	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Margaret Kennedy Road East	B - Site Access	C - Margaret Kennedy Road West
From	A - Margaret Kennedy Road East	0	0	0
	B - Site Access	0	0	0
	C - Margaret Kennedy Road West	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	498	0.000	0	0.0	0.000	A
C-AB	0	574	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	0			0			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	498	0.000	0	0.0	0.000	A
C-AB	0	574	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	0			0			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	498	0.000	0	0.0	0.000	A
C-AB	0	574	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	0			0			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	498	0.000	0	0.0	0.000	A
C-AB	0	574	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	0			0			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	498	0.000	0	0.0	0.000	A
C-AB	0	574	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	0			0			

09:30 - 09:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	498	0.000	0	0.0	0.000	A
C-AB	0	574	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	0			0			

2022 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2022 Base	PM	ONE HOUR	16:00	17:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Margaret Kennedy Road East		✓	20	100.000
B - Site Access		✓	0	100.000
C - Margaret Kennedy Road West		✓	2	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Margaret Kennedy Road East	B - Site Access	C - Margaret Kennedy Road West
From	A - Margaret Kennedy Road East	0	0	20
	B - Site Access	0	0	0
	C - Margaret Kennedy Road West	2	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Margaret Kennedy Road East	B - Site Access	C - Margaret Kennedy Road West
From	A - Margaret Kennedy Road East	0	0	0
	B - Site Access	0	0	0
	C - Margaret Kennedy Road West	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	495	0.000	0	0.0	0.000	A
C-AB	0	571	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	15			15			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	494	0.000	0	0.0	0.000	A
C-AB	0	570	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	18			18			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	493	0.000	0	0.0	0.000	A
C-AB	0	569	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	22			22			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	493	0.000	0	0.0	0.000	A
C-AB	0	569	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	22			22			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	494	0.000	0	0.0	0.000	A
C-AB	0	570	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	18			18			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	495	0.000	0	0.0	0.000	A
C-AB	0	571	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	15			15			

2022 Base + Committed, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2022 Base + Committed	AM	ONE HOUR	08:15	09:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Margaret Kennedy Road East		✓	3	100.000
B - Site Access		✓	0	100.000
C - Margaret Kennedy Road West		✓	1	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Margaret Kennedy Road East	B - Site Access	C - Margaret Kennedy Road West
From	A - Margaret Kennedy Road East	0	0	3
	B - Site Access	0	0	0
	C - Margaret Kennedy Road West	1	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Margaret Kennedy Road East	B - Site Access	C - Margaret Kennedy Road West
From	A - Margaret Kennedy Road East	0	0	0
	B - Site Access	0	0	0
	C - Margaret Kennedy Road West	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	498	0.000	0	0.0	0.000	A
C-AB	0	574	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	0			0			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	498	0.000	0	0.0	0.000	A
C-AB	0	574	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	0			0			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	498	0.000	0	0.0	0.000	A
C-AB	0	574	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	0			0			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	498	0.000	0	0.0	0.000	A
C-AB	0	574	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	0			0			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	498	0.000	0	0.0	0.000	A
C-AB	0	574	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	0			0			

09:30 - 09:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	498	0.000	0	0.0	0.000	A
C-AB	0	574	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	0			0			

2022 Base + Committed, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2022 Base + Committed	PM	ONE HOUR	16:00	17:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Margaret Kennedy Road East		✓	20	100.000
B - Site Access		✓	0	100.000
C - Margaret Kennedy Road West		✓	2	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Margaret Kennedy Road East	B - Site Access	C - Margaret Kennedy Road West
From	A - Margaret Kennedy Road East	0	0	20
	B - Site Access	0	0	0
	C - Margaret Kennedy Road West	2	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Margaret Kennedy Road East	B - Site Access	C - Margaret Kennedy Road West
From	A - Margaret Kennedy Road East	0	0	0
	B - Site Access	0	0	0
	C - Margaret Kennedy Road West	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	495	0.000	0	0.0	0.000	A
C-AB	0	571	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	15			15			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	494	0.000	0	0.0	0.000	A
C-AB	0	570	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	18			18			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	493	0.000	0	0.0	0.000	A
C-AB	0	569	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	22			22			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	493	0.000	0	0.0	0.000	A
C-AB	0	569	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	22			22			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	494	0.000	0	0.0	0.000	A
C-AB	0	570	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	18			18			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	495	0.000	0	0.0	0.000	A
C-AB	0	571	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	15			15			

2026 B+C+D , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		5.86	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.86	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2026 B+C+D	AM	ONE HOUR	08:15	09:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Margaret Kennedy Road East		✓	28	100.000
B - Site Access		✓	47	100.000
C - Margaret Kennedy Road West		✓	1	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Margaret Kennedy Road East	B - Site Access	C - Margaret Kennedy Road West
From	A - Margaret Kennedy Road East	0	25	3
	B - Site Access	47	0	0
	C - Margaret Kennedy Road West	1	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Margaret Kennedy Road East	B - Site Access	C - Margaret Kennedy Road West
From	A - Margaret Kennedy Road East	0	0	0
	B - Site Access	0	0	0
	C - Margaret Kennedy Road West	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.12	9.35	0.1	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	35	438	0.081	35	0.1	8.935	A
C-AB	0	569	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	19			19			
A-C	2			2			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	42	437	0.097	42	0.1	9.109	A
C-AB	0	568	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	22			22			
A-C	3			3			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	52	437	0.119	52	0.1	9.347	A
C-AB	0	567	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	28			28			
A-C	3			3			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	52	437	0.119	52	0.1	9.351	A
C-AB	0	567	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	28			28			
A-C	3			3			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	42	437	0.097	42	0.1	9.120	A
C-AB	0	568	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	22			22			
A-C	3			3			

09:30 - 09:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	35	438	0.081	35	0.1	8.953	A
C-AB	0	569	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	19			19			
A-C	2			2			

2026 B+C+D , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		2.40	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.40	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2026 B+C+D	PM	ONE HOUR	16:00	17:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Margaret Kennedy Road East		✓	68	100.000
B - Site Access		✓	25	100.000
C - Margaret Kennedy Road West		✓	2	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Margaret Kennedy Road East	B - Site Access	C - Margaret Kennedy Road West
From	A - Margaret Kennedy Road East	0	46	22
	B - Site Access	25	0	0
	C - Margaret Kennedy Road West	2	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Margaret Kennedy Road East	B - Site Access	C - Margaret Kennedy Road West
From	A - Margaret Kennedy Road East	0	0	0
	B - Site Access	0	0	0
	C - Margaret Kennedy Road West	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.06	8.93	0.1	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	19	433	0.043	19	0.0	8.675	A
C-AB	0	563	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	35			35			
A-C	17			17			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	22	432	0.052	22	0.1	8.784	A
C-AB	0	560	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	41			41			
A-C	20			20			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	28	431	0.064	27	0.1	8.928	A
C-AB	0	557	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	51			51			
A-C	24			24			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	28	431	0.064	28	0.1	8.930	A
C-AB	0	557	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	51			51			
A-C	24			24			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	22	432	0.052	23	0.1	8.786	A
C-AB	0	560	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	41			41			
A-C	20			20			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	19	433	0.043	19	0.0	8.685	A
C-AB	0	563	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	35			35			
A-C	17			17			

2031 B+C+D , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		5.79	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.79	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2031 B+C+D	AM	ONE HOUR	08:15	09:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Margaret Kennedy Road East		✓	29	100.000
B - Site Access		✓	47	100.000
C - Margaret Kennedy Road West		✓	1	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Margaret Kennedy Road East	B - Site Access	C - Margaret Kennedy Road West
From	A - Margaret Kennedy Road East	0	25	4
	B - Site Access	47	0	0
	C - Margaret Kennedy Road West	1	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Margaret Kennedy Road East	B - Site Access	C - Margaret Kennedy Road West
From	A - Margaret Kennedy Road East	0	0	0
	B - Site Access	0	0	0
	C - Margaret Kennedy Road West	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.12	9.36	0.1	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	35	437	0.081	35	0.1	8.939	A
C-AB	0	569	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	19			19			
A-C	3			3			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	42	437	0.097	42	0.1	9.113	A
C-AB	0	568	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	22			22			
A-C	4			4			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	52	436	0.119	52	0.1	9.353	A
C-AB	0	567	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	28			28			
A-C	4			4			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	52	436	0.119	52	0.1	9.356	A
C-AB	0	567	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	28			28			
A-C	4			4			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	42	437	0.097	42	0.1	9.124	A
C-AB	0	568	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	22			22			
A-C	4			4			

09:30 - 09:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	35	437	0.081	35	0.1	8.958	A
C-AB	0	569	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	19			19			
A-C	3			3			

2031 B+C+D , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		2.35	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.35	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2031 B+C+D	PM	ONE HOUR	16:00	17:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Margaret Kennedy Road East		✓	70	100.000
B - Site Access		✓	25	100.000
C - Margaret Kennedy Road West		✓	2	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Margaret Kennedy Road East	B - Site Access	C - Margaret Kennedy Road West
From	A - Margaret Kennedy Road East	0	46	24
	B - Site Access	25	0	0
	C - Margaret Kennedy Road West	2	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Margaret Kennedy Road East	B - Site Access	C - Margaret Kennedy Road West
From	A - Margaret Kennedy Road East	0	0	0
	B - Site Access	0	0	0
	C - Margaret Kennedy Road West	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.06	8.94	0.1	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	19	433	0.043	19	0.0	8.681	A
C-AB	0	562	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	35			35			
A-C	18			18			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	22	432	0.052	22	0.1	8.792	A
C-AB	0	560	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	41			41			
A-C	22			22			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	28	430	0.064	27	0.1	8.938	A
C-AB	0	557	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	51			51			
A-C	26			26			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	28	430	0.064	28	0.1	8.940	A
C-AB	0	557	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	51			51			
A-C	26			26			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	22	432	0.052	23	0.1	8.794	A
C-AB	0	560	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	41			41			
A-C	22			22			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	19	433	0.043	19	0.0	8.691	A
C-AB	0	562	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	35			35			
A-C	18			18			

2041 B+C+D , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		5.79	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.79	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D9	2041 B+C+D	AM	ONE HOUR	08:15	09:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Margaret Kennedy Road East		✓	29	100.000
B - Site Access		✓	47	100.000
C - Margaret Kennedy Road West		✓	1	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Margaret Kennedy Road East	B - Site Access	C - Margaret Kennedy Road West
From	A - Margaret Kennedy Road East	0	25	4
	B - Site Access	47	0	0
	C - Margaret Kennedy Road West	1	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Margaret Kennedy Road East	B - Site Access	C - Margaret Kennedy Road West
From	A - Margaret Kennedy Road East	0	0	0
	B - Site Access	0	0	0
	C - Margaret Kennedy Road West	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.12	9.36	0.1	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	35	437	0.081	35	0.1	8.939	A
C-AB	0	569	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	19			19			
A-C	3			3			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	42	437	0.097	42	0.1	9.113	A
C-AB	0	568	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	22			22			
A-C	4			4			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	52	436	0.119	52	0.1	9.353	A
C-AB	0	567	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	28			28			
A-C	4			4			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	52	436	0.119	52	0.1	9.356	A
C-AB	0	567	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	28			28			
A-C	4			4			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	42	437	0.097	42	0.1	9.124	A
C-AB	0	568	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	22			22			
A-C	4			4			

09:30 - 09:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	35	437	0.081	35	0.1	8.958	A
C-AB	0	569	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	19			19			
A-C	3			3			

2041 B+C+D , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		2.35	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.35	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D10	2041 B+C+D	PM	ONE HOUR	16:00	17:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Margaret Kennedy Road East		✓	70	100.000
B - Site Access		✓	25	100.000
C - Margaret Kennedy Road West		✓	2	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Margaret Kennedy Road East	B - Site Access	C - Margaret Kennedy Road West
From	A - Margaret Kennedy Road East	0	46	24
	B - Site Access	25	0	0
	C - Margaret Kennedy Road West	2	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Margaret Kennedy Road East	B - Site Access	C - Margaret Kennedy Road West
From	A - Margaret Kennedy Road East	0	0	0
	B - Site Access	0	0	0
	C - Margaret Kennedy Road West	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.06	8.94	0.1	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	19	433	0.043	19	0.0	8.681	A
C-AB	0	562	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	35			35			
A-C	18			18			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	22	432	0.052	22	0.1	8.792	A
C-AB	0	560	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	41			41			
A-C	22			22			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	28	430	0.064	27	0.1	8.938	A
C-AB	0	557	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	51			51			
A-C	26			26			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	28	430	0.064	28	0.1	8.940	A
C-AB	0	557	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	51			51			
A-C	26			26			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	22	432	0.052	23	0.1	8.794	A
C-AB	0	560	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	41			41			
A-C	22			22			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	19	433	0.043	19	0.0	8.691	A
C-AB	0	562	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	35			35			
A-C	18			18			

Appendix D TRICS

Calculation Reference: AUDIT-204602-220627-0600

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 04 - EDUCATION
Category : D - NURSERY
MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	ES	EAST SUSSEX	1 days
04	EAST ANGLIA		
	CA	CAMBRIDGESHIRE	1 days
	SF	SUFFOLK	1 days
05	EAST MIDLANDS		
	LN	LINCOLNSHIRE	1 days
09	NORTH		
	TW	TYNE & WEAR	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Gross floor area
Actual Range: 185 to 750 (units: sqm)
Range Selected by User: 176 to 2350 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/14 to 21/05/19

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Tuesday	3 days
Wednesday	1 days
Friday	1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	5 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Edge of Town Centre	1
Suburban Area (PPS6 Out of Centre)	3
Neighbourhood Centre (PPS6 Local Centre)	1

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	5

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

E(f)	5 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:

All Surveys Included

Population within 1 mile:

15,001 to 20,000	3 days
25,001 to 50,000	1 days
50,001 to 100,000	1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

75,001 to 100,000	1 days
125,001 to 250,000	2 days
250,001 to 500,000	2 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	1 days
1.1 to 1.5	2 days
2.1 to 2.5	1 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No	5 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	5 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	CA-04-D-02	NURSERY		CAMBRIDGESHIRE
	EASTFIELD ROAD			
	PETERBOROUGH			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Gross floor area:		400 sqm	
	Survey date: TUESDAY		*18/10/16*	*Survey Type: MANUAL*
2	ES-04-D-01	NURSERY		EAST SUSSEX
	CONNAUGHT ROAD			
	BRIGHTON			
	HOVE			
	Neighbourhood Centre (PPS6 Local Centre)			
	Residential Zone			
	Total Gross floor area:		185 sqm	
	Survey date: FRIDAY		*22/09/17*	*Survey Type: MANUAL*
3	LN-04-D-01	NURSERY		LINCOLNSHIRE
	NEWARK ROAD			
	LINCOLN			
	SWALLOW BECK			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Gross floor area:		600 sqm	
	Survey date: TUESDAY		*31/10/17*	*Survey Type: MANUAL*
4	SF-04-D-03	NURSERY		SUFFOLK
	CAMP ROAD			
	LOWESTOFT			
	Edge of Town Centre			
	Residential Zone			
	Total Gross floor area:		750 sqm	
	Survey date: WEDNESDAY		*10/12/14*	*Survey Type: MANUAL*
5	TW-04-D-03	NURSERY		TYNE & WEAR
	JUBILEE ROAD			
	NEWCASTLE UPON TYNE			
	GOSFORTH			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Gross floor area:		725 sqm	
	Survey date: TUESDAY		*21/05/19*	*Survey Type: MANUAL*

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY
MULTI-MODAL TOTAL VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period
Total People to Total Vehicles ratio (all time periods and directions): 2.51

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	400	0.000	1	400	0.000	1	400	0.000
07:00 - 08:00	5	532	0.677	5	532	0.188	5	532	0.865
08:00 - 09:00	5	532	2.068	5	532	1.579	5	532	3.647
09:00 - 10:00	5	532	0.639	5	532	0.451	5	532	1.090
10:00 - 11:00	5	532	0.000	5	532	0.000	5	532	0.000
11:00 - 12:00	5	532	0.075	5	532	0.075	5	532	0.150
12:00 - 13:00	5	532	0.752	5	532	1.015	5	532	1.767
13:00 - 14:00	5	532	0.639	5	532	0.714	5	532	1.353
14:00 - 15:00	5	532	0.038	5	532	0.113	5	532	0.151
15:00 - 16:00	5	532	0.376	5	532	0.301	5	532	0.677
16:00 - 17:00	5	532	0.602	5	532	0.526	5	532	1.128
17:00 - 18:00	5	532	1.541	5	532	1.805	5	532	3.346
18:00 - 19:00	5	532	0.188	5	532	0.789	5	532	0.977
19:00 - 20:00	1	400	0.000	1	400	0.000	1	400	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			7.595			7.556			15.151

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter summary

Trip rate parameter range selected:	185 - 750 (units: sqm)
Survey date date range:	01/01/14 - 21/05/19
Number of weekdays (Monday-Friday):	5
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY
MULTI-MODAL TAXIS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	400	0.000	1	400	0.000	1	400	0.000
07:00 - 08:00	5	532	0.038	5	532	0.038	5	532	0.076
08:00 - 09:00	5	532	0.038	5	532	0.038	5	532	0.076
09:00 - 10:00	5	532	0.000	5	532	0.000	5	532	0.000
10:00 - 11:00	5	532	0.000	5	532	0.000	5	532	0.000
11:00 - 12:00	5	532	0.000	5	532	0.000	5	532	0.000
12:00 - 13:00	5	532	0.038	5	532	0.038	5	532	0.076
13:00 - 14:00	5	532	0.000	5	532	0.000	5	532	0.000
14:00 - 15:00	5	532	0.000	5	532	0.000	5	532	0.000
15:00 - 16:00	5	532	0.000	5	532	0.000	5	532	0.000
16:00 - 17:00	5	532	0.000	5	532	0.000	5	532	0.000
17:00 - 18:00	5	532	0.000	5	532	0.000	5	532	0.000
18:00 - 19:00	5	532	0.000	5	532	0.000	5	532	0.000
19:00 - 20:00	1	400	0.000	1	400	0.000	1	400	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.114			0.114			0.228

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY
MULTI-MODAL OGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	400	0.000	1	400	0.000	1	400	0.000
07:00 - 08:00	5	532	0.000	5	532	0.000	5	532	0.000
08:00 - 09:00	5	532	0.000	5	532	0.000	5	532	0.000
09:00 - 10:00	5	532	0.038	5	532	0.038	5	532	0.076
10:00 - 11:00	5	532	0.000	5	532	0.000	5	532	0.000
11:00 - 12:00	5	532	0.000	5	532	0.000	5	532	0.000
12:00 - 13:00	5	532	0.000	5	532	0.000	5	532	0.000
13:00 - 14:00	5	532	0.000	5	532	0.000	5	532	0.000
14:00 - 15:00	5	532	0.000	5	532	0.000	5	532	0.000
15:00 - 16:00	5	532	0.000	5	532	0.000	5	532	0.000
16:00 - 17:00	5	532	0.000	5	532	0.000	5	532	0.000
17:00 - 18:00	5	532	0.000	5	532	0.000	5	532	0.000
18:00 - 19:00	5	532	0.000	5	532	0.000	5	532	0.000
19:00 - 20:00	1	400	0.000	1	400	0.000	1	400	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.038			0.038			0.076

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY
MULTI-MODAL CYCLISTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	400	0.000	1	400	0.000	1	400	0.000
07:00 - 08:00	5	532	0.075	5	532	0.000	5	532	0.075
08:00 - 09:00	5	532	0.075	5	532	0.038	5	532	0.113
09:00 - 10:00	5	532	0.000	5	532	0.000	5	532	0.000
10:00 - 11:00	5	532	0.000	5	532	0.000	5	532	0.000
11:00 - 12:00	5	532	0.000	5	532	0.000	5	532	0.000
12:00 - 13:00	5	532	0.113	5	532	0.038	5	532	0.151
13:00 - 14:00	5	532	0.038	5	532	0.075	5	532	0.113
14:00 - 15:00	5	532	0.000	5	532	0.000	5	532	0.000
15:00 - 16:00	5	532	0.000	5	532	0.075	5	532	0.075
16:00 - 17:00	5	532	0.000	5	532	0.000	5	532	0.000
17:00 - 18:00	5	532	0.000	5	532	0.038	5	532	0.038
18:00 - 19:00	5	532	0.000	5	532	0.000	5	532	0.000
19:00 - 20:00	1	400	0.000	1	400	0.000	1	400	0.000
20:00 - 21:00	1	400	0.000	1	400	0.000	1	400	0.000
21:00 - 22:00	1	400	0.000	1	400	0.000	1	400	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.301			0.264			0.565

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY
MULTI-MODAL VEHICLE OCCUPANTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	400	0.000	1	400	0.000	1	400	0.000
07:00 - 08:00	5	532	0.940	5	532	0.188	5	532	1.128
08:00 - 09:00	5	532	3.647	5	532	1.316	5	532	4.963
09:00 - 10:00	5	532	0.940	5	532	0.451	5	532	1.391
10:00 - 11:00	5	532	0.000	5	532	0.000	5	532	0.000
11:00 - 12:00	5	532	0.075	5	532	0.075	5	532	0.150
12:00 - 13:00	5	532	0.940	5	532	1.015	5	532	1.955
13:00 - 14:00	5	532	0.789	5	532	0.789	5	532	1.578
14:00 - 15:00	5	532	0.075	5	532	0.113	5	532	0.188
15:00 - 16:00	5	532	0.414	5	532	0.602	5	532	1.016
16:00 - 17:00	5	532	0.526	5	532	0.902	5	532	1.428
17:00 - 18:00	5	532	1.466	5	532	2.970	5	532	4.436
18:00 - 19:00	5	532	0.150	5	532	1.353	5	532	1.503
19:00 - 20:00	1	400	0.000	1	400	0.000	1	400	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			9.962			9.774			19.736

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY
MULTI-MODAL PEDESTRIANS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	400	0.000	1	400	0.000	1	400	0.000
07:00 - 08:00	5	532	0.789	5	532	0.038	5	532	0.827
08:00 - 09:00	5	532	1.917	5	532	0.677	5	532	2.594
09:00 - 10:00	5	532	0.414	5	532	0.113	5	532	0.527
10:00 - 11:00	5	532	0.113	5	532	0.075	5	532	0.188
11:00 - 12:00	5	532	0.338	5	532	0.752	5	532	1.090
12:00 - 13:00	5	532	1.692	5	532	1.504	5	532	3.196
13:00 - 14:00	5	532	0.338	5	532	0.827	5	532	1.165
14:00 - 15:00	5	532	0.075	5	532	0.038	5	532	0.113
15:00 - 16:00	5	532	0.602	5	532	0.489	5	532	1.091
16:00 - 17:00	5	532	0.188	5	532	0.865	5	532	1.053
17:00 - 18:00	5	532	0.451	5	532	0.865	5	532	1.316
18:00 - 19:00	5	532	0.038	5	532	0.752	5	532	0.790
19:00 - 20:00	1	400	0.000	1	400	0.000	1	400	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			6.955			6.995			13.950

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY
MULTI-MODAL BUS/TRAM PASSENGERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	400	0.000	1	400	0.000	1	400	0.000
07:00 - 08:00	5	532	0.414	5	532	0.000	5	532	0.414
08:00 - 09:00	5	532	0.489	5	532	0.075	5	532	0.564
09:00 - 10:00	5	532	0.188	5	532	0.038	5	532	0.226
10:00 - 11:00	5	532	0.038	5	532	0.000	5	532	0.038
11:00 - 12:00	5	532	0.000	5	532	0.263	5	532	0.263
12:00 - 13:00	5	532	0.489	5	532	0.564	5	532	1.053
13:00 - 14:00	5	532	0.038	5	532	0.113	5	532	0.151
14:00 - 15:00	5	532	0.000	5	532	0.000	5	532	0.000
15:00 - 16:00	5	532	0.038	5	532	0.150	5	532	0.188
16:00 - 17:00	5	532	0.000	5	532	0.188	5	532	0.188
17:00 - 18:00	5	532	0.075	5	532	0.188	5	532	0.263
18:00 - 19:00	5	532	0.000	5	532	0.301	5	532	0.301
19:00 - 20:00	1	400	0.000	1	400	0.000	1	400	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.769			1.880			3.649

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY
MULTI-MODAL TOTAL RAIL PASSENGERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	400	0.000	1	400	0.000	1	400	0.000
07:00 - 08:00	5	532	0.113	5	532	0.000	5	532	0.113
08:00 - 09:00	5	532	0.000	5	532	0.000	5	532	0.000
09:00 - 10:00	5	532	0.000	5	532	0.000	5	532	0.000
10:00 - 11:00	5	532	0.000	5	532	0.000	5	532	0.000
11:00 - 12:00	5	532	0.000	5	532	0.000	5	532	0.000
12:00 - 13:00	5	532	0.000	5	532	0.000	5	532	0.000
13:00 - 14:00	5	532	0.000	5	532	0.000	5	532	0.000
14:00 - 15:00	5	532	0.000	5	532	0.000	5	532	0.000
15:00 - 16:00	5	532	0.000	5	532	0.000	5	532	0.000
16:00 - 17:00	5	532	0.000	5	532	0.000	5	532	0.000
17:00 - 18:00	5	532	0.000	5	532	0.000	5	532	0.000
18:00 - 19:00	5	532	0.000	5	532	0.075	5	532	0.075
19:00 - 20:00	1	400	0.000	1	400	0.000	1	400	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.113			0.075			0.188

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY
MULTI-MODAL PUBLIC TRANSPORT USERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	400	0.000	1	400	0.000	1	400	0.000
07:00 - 08:00	5	532	0.526	5	532	0.000	5	532	0.526
08:00 - 09:00	5	532	0.489	5	532	0.075	5	532	0.564
09:00 - 10:00	5	532	0.188	5	532	0.038	5	532	0.226
10:00 - 11:00	5	532	0.038	5	532	0.000	5	532	0.038
11:00 - 12:00	5	532	0.000	5	532	0.263	5	532	0.263
12:00 - 13:00	5	532	0.489	5	532	0.564	5	532	1.053
13:00 - 14:00	5	532	0.038	5	532	0.113	5	532	0.151
14:00 - 15:00	5	532	0.000	5	532	0.000	5	532	0.000
15:00 - 16:00	5	532	0.038	5	532	0.150	5	532	0.188
16:00 - 17:00	5	532	0.000	5	532	0.188	5	532	0.188
17:00 - 18:00	5	532	0.075	5	532	0.188	5	532	0.263
18:00 - 19:00	5	532	0.000	5	532	0.376	5	532	0.376
19:00 - 20:00	1	400	0.000	1	400	0.000	1	400	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.881			1.955			3.836

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY
MULTI-MODAL TOTAL PEOPLE
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period
Total People to Total Vehicles ratio (all time periods and directions): 2.51

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	400	0.000	1	400	0.000	1	400	0.000
07:00 - 08:00	5	532	2.331	5	532	0.226	5	532	2.557
08:00 - 09:00	5	532	6.128	5	532	2.105	5	532	8.233
09:00 - 10:00	5	532	1.541	5	532	0.602	5	532	2.143
10:00 - 11:00	5	532	0.150	5	532	0.075	5	532	0.225
11:00 - 12:00	5	532	0.414	5	532	1.090	5	532	1.504
12:00 - 13:00	5	532	3.233	5	532	3.120	5	532	6.353
13:00 - 14:00	5	532	1.203	5	532	1.805	5	532	3.008
14:00 - 15:00	5	532	0.150	5	532	0.150	5	532	0.300
15:00 - 16:00	5	532	1.053	5	532	1.316	5	532	2.369
16:00 - 17:00	5	532	0.714	5	532	1.955	5	532	2.669
17:00 - 18:00	5	532	1.992	5	532	4.060	5	532	6.052
18:00 - 19:00	5	532	0.188	5	532	2.481	5	532	2.669
19:00 - 20:00	1	400	0.000	1	400	0.000	1	400	0.000
20:00 - 21:00	1	400	0.000	1	400	0.000	1	400	0.000
21:00 - 22:00	1	400	0.000	1	400	0.000	1	400	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			19.097			18.985			38.082

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY
MULTI-MODAL CARS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	400	0.000	1	400	0.000	1	400	0.000
07:00 - 08:00	5	532	0.639	5	532	0.150	5	532	0.789
08:00 - 09:00	5	532	1.992	5	532	1.504	5	532	3.496
09:00 - 10:00	5	532	0.602	5	532	0.414	5	532	1.016
10:00 - 11:00	5	532	0.000	5	532	0.000	5	532	0.000
11:00 - 12:00	5	532	0.038	5	532	0.075	5	532	0.113
12:00 - 13:00	5	532	0.714	5	532	0.977	5	532	1.691
13:00 - 14:00	5	532	0.639	5	532	0.714	5	532	1.353
14:00 - 15:00	5	532	0.038	5	532	0.113	5	532	0.151
15:00 - 16:00	5	532	0.376	5	532	0.301	5	532	0.677
16:00 - 17:00	5	532	0.564	5	532	0.489	5	532	1.053
17:00 - 18:00	5	532	1.541	5	532	1.767	5	532	3.308
18:00 - 19:00	5	532	0.188	5	532	0.789	5	532	0.977
19:00 - 20:00	1	400	0.000	1	400	0.000	1	400	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			7.331			7.293			14.624

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY
MULTI-MODAL LGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	400	0.000	1	400	0.000	1	400	0.000
07:00 - 08:00	5	532	0.000	5	532	0.000	5	532	0.000
08:00 - 09:00	5	532	0.038	5	532	0.038	5	532	0.076
09:00 - 10:00	5	532	0.000	5	532	0.000	5	532	0.000
10:00 - 11:00	5	532	0.000	5	532	0.000	5	532	0.000
11:00 - 12:00	5	532	0.038	5	532	0.000	5	532	0.038
12:00 - 13:00	5	532	0.000	5	532	0.000	5	532	0.000
13:00 - 14:00	5	532	0.000	5	532	0.000	5	532	0.000
14:00 - 15:00	5	532	0.000	5	532	0.000	5	532	0.000
15:00 - 16:00	5	532	0.000	5	532	0.000	5	532	0.000
16:00 - 17:00	5	532	0.038	5	532	0.038	5	532	0.076
17:00 - 18:00	5	532	0.000	5	532	0.038	5	532	0.038
18:00 - 19:00	5	532	0.000	5	532	0.000	5	532	0.000
19:00 - 20:00	1	400	0.000	1	400	0.000	1	400	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.114			0.114			0.228

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Calculation Reference: AUDIT-204602-220627-0614

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 06 - HOTEL, FOOD & DRINK
Category : K - CAFE
MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:
05 EAST MIDLANDS
LN LINCOLNSHIRE 1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Gross floor area
Actual Range: 190 to 190 (units: sqm)
Range Selected by User: 190 to 190 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/14 to 12/10/21

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:
Tuesday 1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:
Manual count 1 days
Directional ATC Count 0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:
Town Centre 1

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:
Built-Up Zone 1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:
E(b) 1 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:
All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:
15,001 to 20,000 1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:
50,001 to 75,000 1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:
0.6 to 1.0 1 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:
No 1 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:
No PTAL Present 1 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1 LN-06-K-01 CAFÉ & TEA ROOM LINCOLNSHIRE
RED LION SQUARE
STAMFORD

Town Centre
Built-Up Zone
Total Gross floor area: 190 sqm
Survey date: TUESDAY *12/10/21* *Survey Type: MANUAL*

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/K - CAFE
MULTI-MODAL TOTAL VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period
Total People to Total Vehicles ratio (all time periods and directions): 3.64

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00	1	190	0.526	1	190	0.000	1	190	0.526
09:00 - 10:00	1	190	3.684	1	190	2.105	1	190	5.789
10:00 - 11:00	1	190	4.211	1	190	4.211	1	190	8.422
11:00 - 12:00	1	190	4.211	1	190	3.684	1	190	7.895
12:00 - 13:00	1	190	4.737	1	190	5.263	1	190	10.000
13:00 - 14:00	1	190	4.211	1	190	4.211	1	190	8.422
14:00 - 15:00	1	190	2.632	1	190	3.684	1	190	6.316
15:00 - 16:00	1	190	2.632	1	190	3.158	1	190	5.790
16:00 - 17:00	1	190	0.526	1	190	1.053	1	190	1.579
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			27.370			27.369			54.739

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter summary

Trip rate parameter range selected:	190 - 190 (units: sqm)
Survey date date range:	01/01/14 - 12/10/21
Number of weekdays (Monday-Friday):	1
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/K - CAFE
MULTI-MODAL TAXIS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00	1	190	0.000	1	190	0.000	1	190	0.000
09:00 - 10:00	1	190	0.000	1	190	0.000	1	190	0.000
10:00 - 11:00	1	190	0.526	1	190	0.526	1	190	1.052
11:00 - 12:00	1	190	0.526	1	190	0.526	1	190	1.052
12:00 - 13:00	1	190	0.000	1	190	0.000	1	190	0.000
13:00 - 14:00	1	190	0.526	1	190	0.526	1	190	1.052
14:00 - 15:00	1	190	0.526	1	190	0.526	1	190	1.052
15:00 - 16:00	1	190	0.000	1	190	0.000	1	190	0.000
16:00 - 17:00	1	190	0.000	1	190	0.000	1	190	0.000
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.104			2.104			4.208

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/K - CAFE
MULTI-MODAL CYCLISTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00	1	190	0.000	1	190	0.000	1	190	0.000
09:00 - 10:00	1	190	0.526	1	190	0.526	1	190	1.052
10:00 - 11:00	1	190	0.000	1	190	0.000	1	190	0.000
11:00 - 12:00	1	190	0.000	1	190	0.000	1	190	0.000
12:00 - 13:00	1	190	1.053	1	190	0.526	1	190	1.579
13:00 - 14:00	1	190	0.000	1	190	0.526	1	190	0.526
14:00 - 15:00	1	190	0.000	1	190	0.000	1	190	0.000
15:00 - 16:00	1	190	0.000	1	190	0.000	1	190	0.000
16:00 - 17:00	1	190	0.000	1	190	0.000	1	190	0.000
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.579			1.578			3.157

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/K - CAFE
MULTI-MODAL VEHICLE OCCUPANTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00	1	190	0.526	1	190	0.000	1	190	0.526
09:00 - 10:00	1	190	5.263	1	190	2.632	1	190	7.895
10:00 - 11:00	1	190	5.789	1	190	5.263	1	190	11.052
11:00 - 12:00	1	190	5.263	1	190	5.263	1	190	10.526
12:00 - 13:00	1	190	5.789	1	190	6.842	1	190	12.631
13:00 - 14:00	1	190	5.789	1	190	5.789	1	190	11.578
14:00 - 15:00	1	190	3.158	1	190	5.263	1	190	8.421
15:00 - 16:00	1	190	3.684	1	190	4.737	1	190	8.421
16:00 - 17:00	1	190	0.526	1	190	1.053	1	190	1.579
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			35.787			36.842			72.629

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/K - CAFE
MULTI-MODAL PEDESTRIANS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00	1	190	0.526	1	190	0.000	1	190	0.526
09:00 - 10:00	1	190	8.421	1	190	4.211	1	190	12.632
10:00 - 11:00	1	190	6.842	1	190	6.316	1	190	13.158
11:00 - 12:00	1	190	9.474	1	190	9.474	1	190	18.948
12:00 - 13:00	1	190	10.000	1	190	8.947	1	190	18.947
13:00 - 14:00	1	190	7.895	1	190	8.947	1	190	16.842
14:00 - 15:00	1	190	5.263	1	190	5.263	1	190	10.526
15:00 - 16:00	1	190	4.737	1	190	6.316	1	190	11.053
16:00 - 17:00	1	190	0.526	1	190	4.211	1	190	4.737
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			53.684			53.685			107.369

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/K - CAFE
MULTI-MODAL BUS/TRAM PASSENGERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00	1	190	0.526	1	190	0.000	1	190	0.526
09:00 - 10:00	1	190	2.632	1	190	1.053	1	190	3.685
10:00 - 11:00	1	190	1.579	1	190	1.053	1	190	2.632
11:00 - 12:00	1	190	1.053	1	190	0.000	1	190	1.053
12:00 - 13:00	1	190	1.053	1	190	2.632	1	190	3.685
13:00 - 14:00	1	190	0.000	1	190	1.053	1	190	1.053
14:00 - 15:00	1	190	0.526	1	190	0.526	1	190	1.052
15:00 - 16:00	1	190	0.526	1	190	0.000	1	190	0.526
16:00 - 17:00	1	190	0.000	1	190	0.526	1	190	0.526
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			7.895			6.843			14.738

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/K - CAFE
MULTI-MODAL TOTAL RAIL PASSENGERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00	1	190	0.000	1	190	0.000	1	190	0.000
09:00 - 10:00	1	190	0.000	1	190	1.579	1	190	1.579
10:00 - 11:00	1	190	0.000	1	190	0.000	1	190	0.000
11:00 - 12:00	1	190	0.000	1	190	0.000	1	190	0.000
12:00 - 13:00	1	190	0.000	1	190	0.000	1	190	0.000
13:00 - 14:00	1	190	0.000	1	190	0.000	1	190	0.000
14:00 - 15:00	1	190	0.000	1	190	0.000	1	190	0.000
15:00 - 16:00	1	190	0.000	1	190	0.000	1	190	0.000
16:00 - 17:00	1	190	0.000	1	190	0.000	1	190	0.000
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			1.579			1.579

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/K - CAFE
MULTI-MODAL PUBLIC TRANSPORT USERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00	1	190	0.526	1	190	0.000	1	190	0.526
09:00 - 10:00	1	190	2.632	1	190	2.632	1	190	5.264
10:00 - 11:00	1	190	1.579	1	190	1.053	1	190	2.632
11:00 - 12:00	1	190	1.053	1	190	0.000	1	190	1.053
12:00 - 13:00	1	190	1.053	1	190	2.632	1	190	3.685
13:00 - 14:00	1	190	0.000	1	190	1.053	1	190	1.053
14:00 - 15:00	1	190	0.526	1	190	0.526	1	190	1.052
15:00 - 16:00	1	190	0.526	1	190	0.000	1	190	0.526
16:00 - 17:00	1	190	0.000	1	190	0.526	1	190	0.526
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			7.895			8.422			16.317

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/K - CAFE
MULTI-MODAL TOTAL PEOPLE
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period
Total People to Total Vehicles ratio (all time periods and directions): 3.64

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00	1	190	1.579	1	190	0.000	1	190	1.579
09:00 - 10:00	1	190	16.842	1	190	10.000	1	190	26.842
10:00 - 11:00	1	190	14.211	1	190	12.632	1	190	26.843
11:00 - 12:00	1	190	15.789	1	190	14.737	1	190	30.526
12:00 - 13:00	1	190	17.895	1	190	18.947	1	190	36.842
13:00 - 14:00	1	190	13.684	1	190	16.316	1	190	30.000
14:00 - 15:00	1	190	8.947	1	190	11.053	1	190	20.000
15:00 - 16:00	1	190	8.947	1	190	11.053	1	190	20.000
16:00 - 17:00	1	190	1.053	1	190	5.789	1	190	6.842
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			98.947			100.527			199.474

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/K - CAFE
MULTI-MODAL CARS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00	1	190	0.526	1	190	0.000	1	190	0.526
09:00 - 10:00	1	190	3.158	1	190	1.579	1	190	4.737
10:00 - 11:00	1	190	3.684	1	190	3.684	1	190	7.368
11:00 - 12:00	1	190	3.684	1	190	3.158	1	190	6.842
12:00 - 13:00	1	190	4.737	1	190	5.263	1	190	10.000
13:00 - 14:00	1	190	3.684	1	190	3.684	1	190	7.368
14:00 - 15:00	1	190	2.105	1	190	3.158	1	190	5.263
15:00 - 16:00	1	190	2.632	1	190	3.158	1	190	5.790
16:00 - 17:00	1	190	0.526	1	190	1.053	1	190	1.579
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			24.736			24.737			49.473

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/K - CAFE
MULTI-MODAL LGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00	1	190	0.000	1	190	0.000	1	190	0.000
09:00 - 10:00	1	190	0.526	1	190	0.526	1	190	1.052
10:00 - 11:00	1	190	0.000	1	190	0.000	1	190	0.000
11:00 - 12:00	1	190	0.000	1	190	0.000	1	190	0.000
12:00 - 13:00	1	190	0.000	1	190	0.000	1	190	0.000
13:00 - 14:00	1	190	0.000	1	190	0.000	1	190	0.000
14:00 - 15:00	1	190	0.000	1	190	0.000	1	190	0.000
15:00 - 16:00	1	190	0.000	1	190	0.000	1	190	0.000
16:00 - 17:00	1	190	0.000	1	190	0.000	1	190	0.000
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.526			0.526			1.052

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/K - CAFE
MULTI-MODAL Servicing Vehicles
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00	1	190	0.000	1	190	0.000	1	190	0.000
09:00 - 10:00	1	190	0.526	1	190	0.526	1	190	1.052
10:00 - 11:00	1	190	0.000	1	190	0.000	1	190	0.000
11:00 - 12:00	1	190	0.000	1	190	0.000	1	190	0.000
12:00 - 13:00	1	190	0.000	1	190	0.000	1	190	0.000
13:00 - 14:00	1	190	0.000	1	190	0.000	1	190	0.000
14:00 - 15:00	1	190	0.000	1	190	0.000	1	190	0.000
15:00 - 16:00	1	190	0.000	1	190	0.000	1	190	0.000
16:00 - 17:00	1	190	0.000	1	190	0.000	1	190	0.000
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.526			0.526			1.052

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Calculation Reference: AUDIT-204602-220627-0611

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	ES	EAST SUSSEX	2 days
05	EAST MIDLANDS		
	LN	LINCOLNSHIRE	1 days
	NT	NOTTINGHAMSHIRE	1 days
10	WALES		
	CF	CARDIFF	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: No of Dwellings
Actual Range: 15 to 24 (units:)
Range Selected by User: 6 to 467 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/14 to 24/11/21

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Tuesday	1 days
Wednesday	1 days
Thursday	1 days
Friday	2 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	5 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Town Centre	1
Suburban Area (PPS6 Out of Centre)	3
Neighbourhood Centre (PPS6 Local Centre)	1

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	4
Built-Up Zone	1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

C3	5 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:

All Surveys Included

Population within 1 mile:

15,001 to 20,000	2 days
25,001 to 50,000	2 days
50,001 to 100,000	1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

25,001 to 50,000	1 days
125,001 to 250,000	1 days
250,001 to 500,000	3 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	5 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

Yes	1 days
No	4 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	5 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1 CF-03-D-01 BLOCKS OF FLATS CARDIFF
TYN-Y-PARC ROAD
CARDIFF
WHITCHURCH
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total No of Dwellings: 24
Survey date: FRIDAY *07/10/16* *Survey Type: MANUAL*

2 ES-03-D-05 BLOCKS OF FLATS EAST SUSSEX
WALWERS LANE
LEWES

Town Centre
Built-Up Zone
Total No of Dwellings: 24
Survey date: FRIDAY *10/10/14* *Survey Type: MANUAL*

3 ES-03-D-06 FLATS & HOUSES EAST SUSSEX
WELLINGTON ROAD
BRIGHTON

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 15
Survey date: THURSDAY *16/10/14* *Survey Type: MANUAL*

4 LN-03-D-02 FLATS LINCOLNSHIRE
ADDISON DRIVE
LINCOLN

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 22
Survey date: WEDNESDAY *01/07/15* *Survey Type: MANUAL*

5 NT-03-D-02 BLOCK OF FLATS NOTTINGHAMSHIRE
WATCOMBE ROAD
NOTTINGHAM
CARRINGTON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 22
Survey date: TUESDAY *23/06/15* *Survey Type: MANUAL*

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL TOTAL VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period
Total People to Total Vehicles ratio (all time periods and directions): 3.07

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	21	0.037	5	21	0.103	5	21	0.140
08:00 - 09:00	5	21	0.037	5	21	0.112	5	21	0.149
09:00 - 10:00	5	21	0.056	5	21	0.131	5	21	0.187
10:00 - 11:00	5	21	0.065	5	21	0.084	5	21	0.149
11:00 - 12:00	5	21	0.084	5	21	0.047	5	21	0.131
12:00 - 13:00	5	21	0.037	5	21	0.075	5	21	0.112
13:00 - 14:00	5	21	0.075	5	21	0.056	5	21	0.131
14:00 - 15:00	5	21	0.093	5	21	0.065	5	21	0.158
15:00 - 16:00	5	21	0.075	5	21	0.084	5	21	0.159
16:00 - 17:00	5	21	0.131	5	21	0.065	5	21	0.196
17:00 - 18:00	5	21	0.159	5	21	0.121	5	21	0.280
18:00 - 19:00	5	21	0.093	5	21	0.056	5	21	0.149
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.942			0.999			1.941

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter summary

Trip rate parameter range selected:	15 - 24 (units:)
Survey date date range:	01/01/14 - 24/11/21
Number of weekdays (Monday-Friday):	5
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL TAXIS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	21	0.009	5	21	0.009	5	21	0.018
08:00 - 09:00	5	21	0.009	5	21	0.009	5	21	0.018
09:00 - 10:00	5	21	0.000	5	21	0.000	5	21	0.000
10:00 - 11:00	5	21	0.000	5	21	0.000	5	21	0.000
11:00 - 12:00	5	21	0.000	5	21	0.000	5	21	0.000
12:00 - 13:00	5	21	0.000	5	21	0.000	5	21	0.000
13:00 - 14:00	5	21	0.019	5	21	0.019	5	21	0.038
14:00 - 15:00	5	21	0.009	5	21	0.009	5	21	0.018
15:00 - 16:00	5	21	0.009	5	21	0.009	5	21	0.018
16:00 - 17:00	5	21	0.000	5	21	0.000	5	21	0.000
17:00 - 18:00	5	21	0.009	5	21	0.009	5	21	0.018
18:00 - 19:00	5	21	0.000	5	21	0.000	5	21	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.064			0.064			0.128

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL OGVS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	21	0.000	5	21	0.000	5	21	0.000
08:00 - 09:00	5	21	0.009	5	21	0.000	5	21	0.009
09:00 - 10:00	5	21	0.009	5	21	0.019	5	21	0.028
10:00 - 11:00	5	21	0.000	5	21	0.000	5	21	0.000
11:00 - 12:00	5	21	0.000	5	21	0.000	5	21	0.000
12:00 - 13:00	5	21	0.000	5	21	0.000	5	21	0.000
13:00 - 14:00	5	21	0.000	5	21	0.000	5	21	0.000
14:00 - 15:00	5	21	0.009	5	21	0.009	5	21	0.018
15:00 - 16:00	5	21	0.009	5	21	0.009	5	21	0.018
16:00 - 17:00	5	21	0.000	5	21	0.000	5	21	0.000
17:00 - 18:00	5	21	0.000	5	21	0.000	5	21	0.000
18:00 - 19:00	5	21	0.000	5	21	0.000	5	21	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.036			0.037			0.073

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL CYCLISTS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	21	0.000	5	21	0.009	5	21	0.009
08:00 - 09:00	5	21	0.009	5	21	0.028	5	21	0.037
09:00 - 10:00	5	21	0.000	5	21	0.000	5	21	0.000
10:00 - 11:00	5	21	0.000	5	21	0.000	5	21	0.000
11:00 - 12:00	5	21	0.000	5	21	0.000	5	21	0.000
12:00 - 13:00	5	21	0.009	5	21	0.000	5	21	0.009
13:00 - 14:00	5	21	0.000	5	21	0.000	5	21	0.000
14:00 - 15:00	5	21	0.000	5	21	0.000	5	21	0.000
15:00 - 16:00	5	21	0.000	5	21	0.009	5	21	0.009
16:00 - 17:00	5	21	0.000	5	21	0.009	5	21	0.009
17:00 - 18:00	5	21	0.019	5	21	0.000	5	21	0.019
18:00 - 19:00	5	21	0.000	5	21	0.000	5	21	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.037			0.055			0.092

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL VEHICLE OCCUPANTS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	21	0.019	5	21	0.131	5	21	0.150
08:00 - 09:00	5	21	0.037	5	21	0.196	5	21	0.233
09:00 - 10:00	5	21	0.056	5	21	0.150	5	21	0.206
10:00 - 11:00	5	21	0.103	5	21	0.131	5	21	0.234
11:00 - 12:00	5	21	0.093	5	21	0.056	5	21	0.149
12:00 - 13:00	5	21	0.075	5	21	0.084	5	21	0.159
13:00 - 14:00	5	21	0.056	5	21	0.065	5	21	0.121
14:00 - 15:00	5	21	0.121	5	21	0.093	5	21	0.214
15:00 - 16:00	5	21	0.103	5	21	0.112	5	21	0.215
16:00 - 17:00	5	21	0.252	5	21	0.093	5	21	0.345
17:00 - 18:00	5	21	0.150	5	21	0.215	5	21	0.365
18:00 - 19:00	5	21	0.140	5	21	0.075	5	21	0.215
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.205			1.401			2.606

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL PEDESTRIANS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	21	0.009	5	21	0.037	5	21	0.046
08:00 - 09:00	5	21	0.056	5	21	0.206	5	21	0.262
09:00 - 10:00	5	21	0.093	5	21	0.103	5	21	0.196
10:00 - 11:00	5	21	0.159	5	21	0.131	5	21	0.290
11:00 - 12:00	5	21	0.150	5	21	0.121	5	21	0.271
12:00 - 13:00	5	21	0.093	5	21	0.093	5	21	0.186
13:00 - 14:00	5	21	0.103	5	21	0.140	5	21	0.243
14:00 - 15:00	5	21	0.103	5	21	0.150	5	21	0.253
15:00 - 16:00	5	21	0.290	5	21	0.196	5	21	0.486
16:00 - 17:00	5	21	0.093	5	21	0.056	5	21	0.149
17:00 - 18:00	5	21	0.178	5	21	0.047	5	21	0.225
18:00 - 19:00	5	21	0.056	5	21	0.084	5	21	0.140
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.383			1.364			2.747

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL BUS/TRAM PASSENGERS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	21	0.000	5	21	0.056	5	21	0.056
08:00 - 09:00	5	21	0.009	5	21	0.000	5	21	0.009
09:00 - 10:00	5	21	0.000	5	21	0.009	5	21	0.009
10:00 - 11:00	5	21	0.019	5	21	0.047	5	21	0.066
11:00 - 12:00	5	21	0.000	5	21	0.009	5	21	0.009
12:00 - 13:00	5	21	0.019	5	21	0.028	5	21	0.047
13:00 - 14:00	5	21	0.019	5	21	0.028	5	21	0.047
14:00 - 15:00	5	21	0.019	5	21	0.037	5	21	0.056
15:00 - 16:00	5	21	0.019	5	21	0.009	5	21	0.028
16:00 - 17:00	5	21	0.056	5	21	0.019	5	21	0.075
17:00 - 18:00	5	21	0.019	5	21	0.000	5	21	0.019
18:00 - 19:00	5	21	0.037	5	21	0.009	5	21	0.046
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.216			0.251			0.467

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL TOTAL RAIL PASSENGERS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	21	0.000	5	21	0.009	5	21	0.009
08:00 - 09:00	5	21	0.000	5	21	0.000	5	21	0.000
09:00 - 10:00	5	21	0.000	5	21	0.000	5	21	0.000
10:00 - 11:00	5	21	0.000	5	21	0.000	5	21	0.000
11:00 - 12:00	5	21	0.000	5	21	0.000	5	21	0.000
12:00 - 13:00	5	21	0.000	5	21	0.009	5	21	0.009
13:00 - 14:00	5	21	0.000	5	21	0.009	5	21	0.009
14:00 - 15:00	5	21	0.000	5	21	0.000	5	21	0.000
15:00 - 16:00	5	21	0.000	5	21	0.000	5	21	0.000
16:00 - 17:00	5	21	0.000	5	21	0.000	5	21	0.000
17:00 - 18:00	5	21	0.000	5	21	0.000	5	21	0.000
18:00 - 19:00	5	21	0.019	5	21	0.000	5	21	0.019
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.019			0.027			0.046

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL PUBLIC TRANSPORT USERS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	21	0.000	5	21	0.065	5	21	0.065
08:00 - 09:00	5	21	0.009	5	21	0.000	5	21	0.009
09:00 - 10:00	5	21	0.000	5	21	0.009	5	21	0.009
10:00 - 11:00	5	21	0.019	5	21	0.047	5	21	0.066
11:00 - 12:00	5	21	0.000	5	21	0.009	5	21	0.009
12:00 - 13:00	5	21	0.019	5	21	0.037	5	21	0.056
13:00 - 14:00	5	21	0.019	5	21	0.037	5	21	0.056
14:00 - 15:00	5	21	0.019	5	21	0.037	5	21	0.056
15:00 - 16:00	5	21	0.019	5	21	0.009	5	21	0.028
16:00 - 17:00	5	21	0.056	5	21	0.019	5	21	0.075
17:00 - 18:00	5	21	0.019	5	21	0.000	5	21	0.019
18:00 - 19:00	5	21	0.056	5	21	0.009	5	21	0.065
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.235			0.278			0.513

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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TRIP RATE for Land Use 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL TOTAL PEOPLE
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period
Total People to Total Vehicles ratio (all time periods and directions): 3.07

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	21	0.028	5	21	0.243	5	21	0.271
08:00 - 09:00	5	21	0.112	5	21	0.430	5	21	0.542
09:00 - 10:00	5	21	0.150	5	21	0.262	5	21	0.412
10:00 - 11:00	5	21	0.280	5	21	0.308	5	21	0.588
11:00 - 12:00	5	21	0.243	5	21	0.187	5	21	0.430
12:00 - 13:00	5	21	0.196	5	21	0.215	5	21	0.411
13:00 - 14:00	5	21	0.178	5	21	0.243	5	21	0.421
14:00 - 15:00	5	21	0.243	5	21	0.280	5	21	0.523
15:00 - 16:00	5	21	0.411	5	21	0.327	5	21	0.738
16:00 - 17:00	5	21	0.402	5	21	0.178	5	21	0.580
17:00 - 18:00	5	21	0.364	5	21	0.262	5	21	0.626
18:00 - 19:00	5	21	0.252	5	21	0.168	5	21	0.420
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.859			3.103			5.962

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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TRIP RATE for Land Use 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL CARS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	21	0.028	5	21	0.065	5	21	0.093
08:00 - 09:00	5	21	0.019	5	21	0.093	5	21	0.112
09:00 - 10:00	5	21	0.028	5	21	0.084	5	21	0.112
10:00 - 11:00	5	21	0.047	5	21	0.065	5	21	0.112
11:00 - 12:00	5	21	0.037	5	21	0.019	5	21	0.056
12:00 - 13:00	5	21	0.037	5	21	0.075	5	21	0.112
13:00 - 14:00	5	21	0.047	5	21	0.028	5	21	0.075
14:00 - 15:00	5	21	0.056	5	21	0.028	5	21	0.084
15:00 - 16:00	5	21	0.028	5	21	0.047	5	21	0.075
16:00 - 17:00	5	21	0.121	5	21	0.037	5	21	0.158
17:00 - 18:00	5	21	0.131	5	21	0.112	5	21	0.243
18:00 - 19:00	5	21	0.084	5	21	0.047	5	21	0.131
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.663			0.700			1.363

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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TRIP RATE for Land Use 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL LGVS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	21	0.000	5	21	0.019	5	21	0.019
08:00 - 09:00	5	21	0.000	5	21	0.009	5	21	0.009
09:00 - 10:00	5	21	0.019	5	21	0.028	5	21	0.047
10:00 - 11:00	5	21	0.019	5	21	0.019	5	21	0.038
11:00 - 12:00	5	21	0.047	5	21	0.028	5	21	0.075
12:00 - 13:00	5	21	0.000	5	21	0.000	5	21	0.000
13:00 - 14:00	5	21	0.000	5	21	0.009	5	21	0.009
14:00 - 15:00	5	21	0.019	5	21	0.019	5	21	0.038
15:00 - 16:00	5	21	0.028	5	21	0.019	5	21	0.047
16:00 - 17:00	5	21	0.009	5	21	0.028	5	21	0.037
17:00 - 18:00	5	21	0.019	5	21	0.000	5	21	0.019
18:00 - 19:00	5	21	0.009	5	21	0.009	5	21	0.018
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.169			0.187			0.356

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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TRIP RATE for Land Use 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL MOTOR CYCLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	21	0.000	5	21	0.009	5	21	0.009
08:00 - 09:00	5	21	0.000	5	21	0.000	5	21	0.000
09:00 - 10:00	5	21	0.000	5	21	0.000	5	21	0.000
10:00 - 11:00	5	21	0.000	5	21	0.000	5	21	0.000
11:00 - 12:00	5	21	0.000	5	21	0.000	5	21	0.000
12:00 - 13:00	5	21	0.000	5	21	0.000	5	21	0.000
13:00 - 14:00	5	21	0.009	5	21	0.000	5	21	0.009
14:00 - 15:00	5	21	0.000	5	21	0.000	5	21	0.000
15:00 - 16:00	5	21	0.000	5	21	0.000	5	21	0.000
16:00 - 17:00	5	21	0.000	5	21	0.000	5	21	0.000
17:00 - 18:00	5	21	0.000	5	21	0.000	5	21	0.000
18:00 - 19:00	5	21	0.000	5	21	0.000	5	21	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.009			0.009			0.018

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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Appendix E Public Transport Capacity Assessment

Donore Project

Public Transport Capacity Assessment

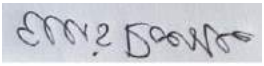
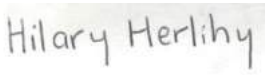
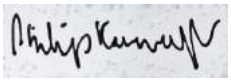
Land Development Agency

Project number: 60648061

November 2022

Delivering a better world

Quality information

Prepared by	Checked by	Verified by	Approved by
			
Ellis Roesler Graduate - Transport Planner	Hilary Herlihy Consultant	Philip Kavanagh Principal Consultant	Jennifer Searle Associate Director

Revision History

Revision	Revision date	Details	Authorized	Name	Position
0.1	16/11/2022	Draft	PK	Philip Kavanagh	Principal Consultant
02	17/11/2022	Draft	PK	Philip Kavanagh	Principal Consultant
03	18/11/2022	Final Draft	PK	Philip Kavanagh	Principal Consultant
3.1	18/11/2022	Final	JS	Jennifer Searle	Associate Director

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Figures

Tables

1. Introduction

1.1 Survey Introduction

On 13.10.22 and 18.10.22, surveyors assessed public transport capacities at various public transport stops surrounding the Donore project proposed development site. These stops were monitored between the peak hours of 07:00-10:00 and 16:00-19:00 . The Surveys included the Fatima Luas stop and the following bus stops:

- Stops 1365, 1381and 1382 on the South Circular Road;
- Stops 2315 and 2379 on Cork Street; and
- Stop 4857 on Rutledge Terrace.

Surveyors were able to calculate the departing capacities of each of these services as well as analyse timetables and the overall frequency of services in the area. Figure 1.1 illustrates each stop monitored and surveyed. The results of this survey as well as a brief analysis of each stop is outlined in the following report.

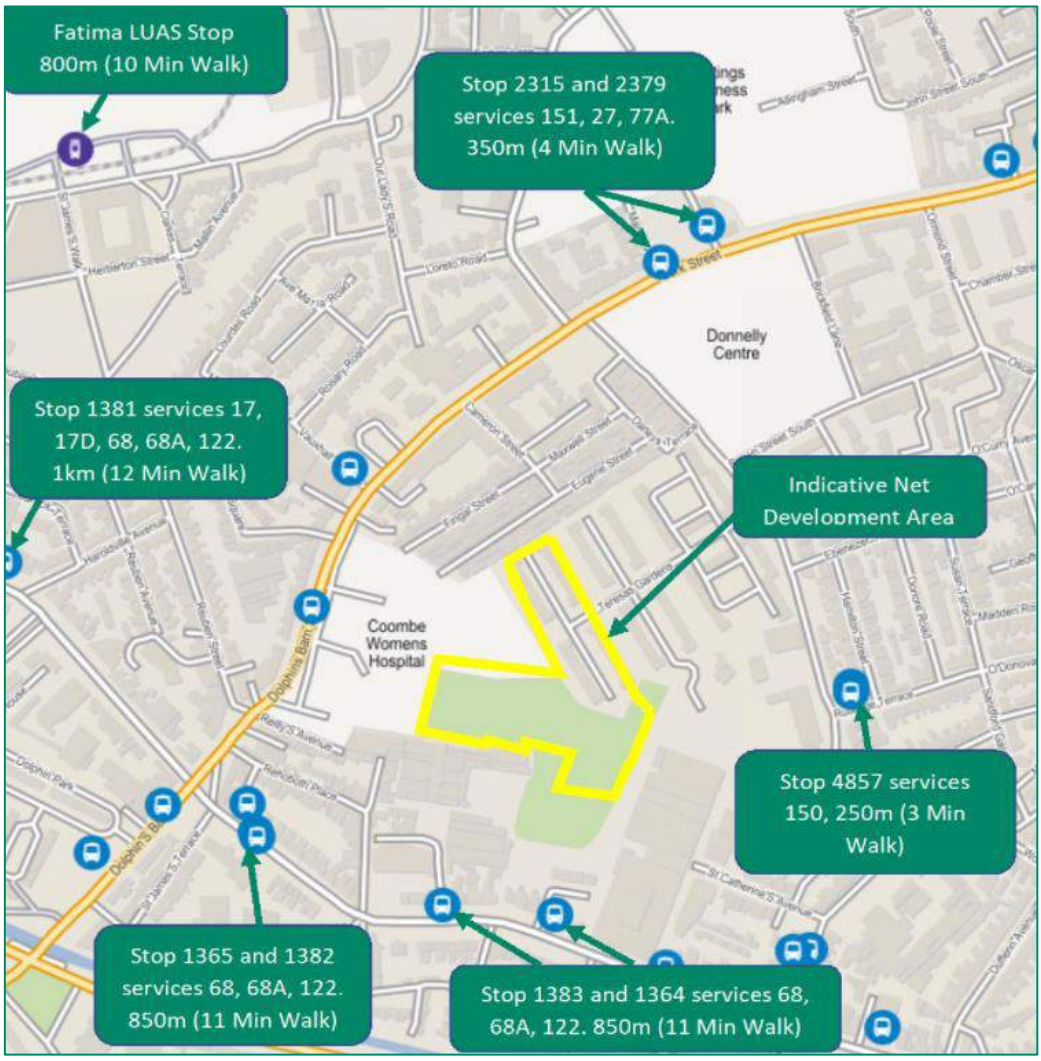

Figure 1.1 – Location of Development of Site and location of Surveyed Luas and Bus Stops

2. Existing Public Transport Network

There are a variety of public transport services in the study area surrounding the proposed development Table 2.1 and Table 2.2 details the existing public transport services in the area and the frequency of these services during peak hours both on weekdays and at weekends.

Table 2.1 – Frequency of Luas Service Serving Fatima Luas Stop

Fatima Luas Stop			Services AM and PM Peak Hours			
Direction	Distance to Proposed Development Site	Service	Monday to Friday (Peak 08:00 - 10:00 and 17:00 - 19:00)	Monday to Friday (Off Peak)	Saturday	Sunday
Eastbound - Inbound	900m - 11 min walk	to The Point	1 service every 3 - 5 minutes	1 service every 12 - 15 minutes	1 service every 12 - 15 minutes	1 service every 12 - 15 minutes
Westbound - Outbound		to Tallaght				
Eastbound - Inbound		to Connolly				
Westbound - Outbound		to Saggart				

Table 2.2 - Frequency of Bus Service Serving Bus Stops Within the Study Area of the Proposed Development Site

Route	Operator	Distance to Proposed Development Site	Route	Services Am and PM Peak Hours		
				Monday to Friday	Saturday	Sunday
17	Go Ahead Ireland	1km (12 min walk)	Rialto -Crumlin - Nutgrove -UCD- Blackrock	1 service every 20 mins	1 service every 20 mins	1 service every 20 mins
27	Dublin Bus	350m (4 min walk)	Jobstown – Blessington Road – Cork Street- Malahide Road	1 service every 10 mins	1 service every 10 mins	1 service every 15 mins
56A	Dublin Bus	350m (4 min walk)	Tallaght – Ballymount Road – St. Luke's Avenue- Ringsend road.	1 service every 1 hours and 15 mins	1 service every 1 hours and 15 mins	1 service every 1 hours and 15 mins
68	Dublin Bus	850m (11 min walk)	Hawkins Street – Dolphins Barn -Rialto – Bluebell-Clondalkin - Greenogue	1 service every 1 hour	1 service every 1 hour	1 service every 1 hours and 15 mins
77A	Dublin Bus	350m (4 min walk)	Citywest Road – Old Blessington Road – Cork Street – Ringsend Road	1 service every 20 mins	1 service every 20 mins	1 service every 30 mins
150	Dublin Bus	250m (3 min walk)	Hawkins Street – Patrick Street – Donore Avenue - Rossmore	1 service every 20 mins	1 service every 20 mins	1 service every 30 mins
151	Dublin Bus	350m (4 min walk)	Docklands (East Road)- Dolphins Barn – Parkwest - Foxborough	1 service every 20 mins	1 service every 20 mins	1 service every 30 mins
122	Dublin Bus	850m (11 min walk)	Drimnagh Road – Herberton Road – South Circular Road – Dorset Street – Ashington Park	1 service every 15 mins	1 service every 20 mins	1 service every 20 mins

2.1 Future Public Transport Network

There are a variety of public transportation enhancement initiatives taking place across the Greater Dublin Area (GDA) that have the potential to enhance transportation access around the proposed development site these are detailed within this section. The public transport proposals are set out within the Draft Greater Dublin Area Transport Strategy 2022-2042.

2.1.1 Changes to Luas Services

There are a number of expansions to the Luas Network Planned as outlined within the GDA Transport Strategy.

Of the proposals planned it is the Luas Lucan Line which will likely pass within close proximity of the proposed development site. However, there is no detailed route alignment published for this route as of yet. The indicative alignment for Luas Lucan is shown in Figure 2.1 below. The timeframe for the delivery of Luas Lucan is schedule for between 2031-2042. Luas Lucan is Measure LRT3 of the GDA strategy;

'Measure LRT3 – Luas Lucan It is intended to develop a light rail line from Lucan to the City Centre, supplementing and complementing the planned bus system, to serve the overall public transport needs in this area.'

It is unlikely that the current Luas Red Line services will change, and it is assumed service patterns will largely remain the same.

Figure 2.1 – Planned Future Luas Network up to 2040 (Draft Greater Dublin Area Transport Strategy 2022-2042)

2.1.2 Changes to Dublin Bus Network of Services

The Network of Dublin Metropolitan Bus Services are undergoing a major redesign in the form of the Dublin BusConnects program. The program includes a number of different work packages all aimed at improving bus services within the Dublin Metropolitan area, the packages include features such as;

- Improved bus Corridors;
- Network Redesign;
- Next Generation Ticketing;
- New Buses and Livery;
- Improved bus stops and shelters;
- Zero emissions bus fleet;
- New bus park and rides; and
- A simpler fare structure .

There are a variety of changes being made to the Dublin Bus system that are important to highlight. BusConnects, an initiative by the National Transport Authority aims to improve bus services throughout Ireland.

Bus connects will have a positive impact on the proposed development site greatly improving access to bus services and increase overall frequency of services in the study area.. The map below highlights the proposed routes and service frequencies of the BusConnects initiatives in the area surrounding the proposed development site.

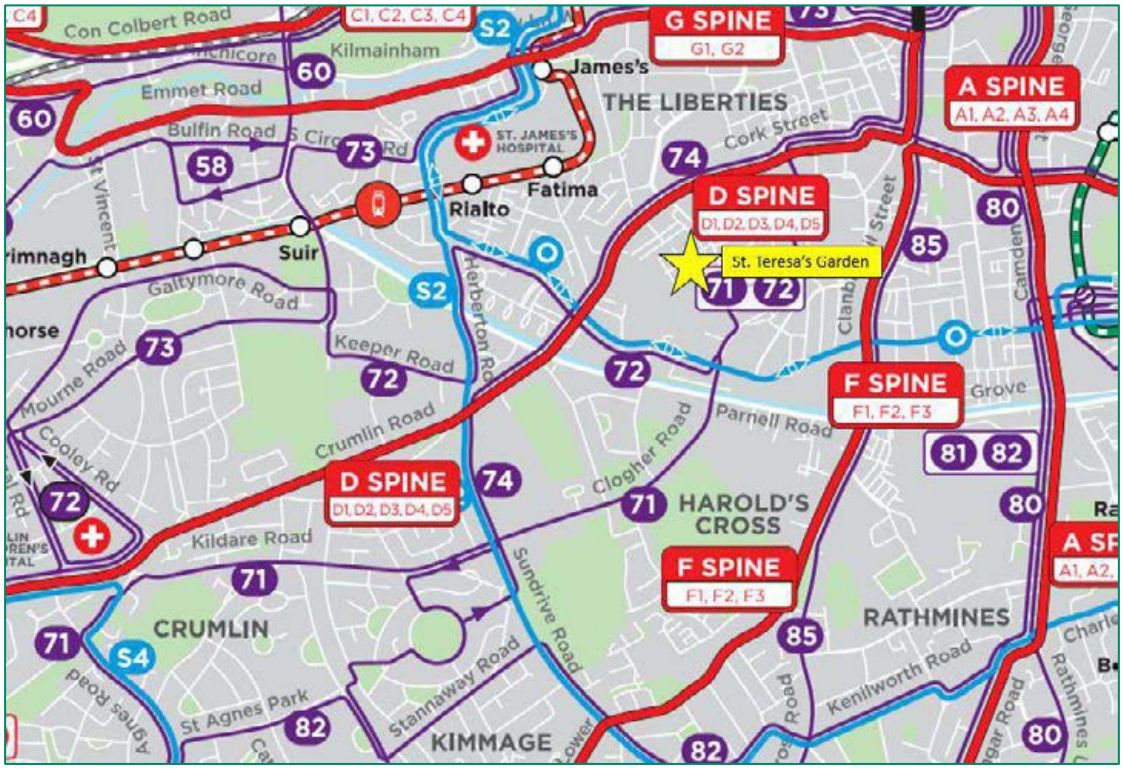

Figure 2.2 – Bus Connects Network Redesign

The proposed development site is clearly labelled on the map above just below the 'D Spine' route and just left of the 'F Spine' route. The improved service frequencies on the D and F spines through the BusConnects initiative would greatly enhance access to public transport services for those in the study area.

According to BusConnects, buses along the D-Spine would see a frequency of services every 4-8 minutes, seven days of the week. Buses on the F-Spine would see a frequency of services every 5-10 minutes, seven days of the week. Currently, services in this area are running every 10-20 minutes. In addition to the D and F spine The proposed development site will benefit from the new O route service operating an inner orbital service largely around the North and South Circular Roads operating at an 8 minute frequency from 07:00 to 18:00 Monday to Friday and 10 and 15 minute frequencies on Saturday and Sundays respectively. The 71 Tallaght - Ballymount - Warrenmount - East Wall and 72 Drimnagh - Warrenmount - East Wall will also serve the proposed development site at a30 min frequency 7 days a week.

The implementation of BusConnects initiatives in this area could greatly improve overall frequency and reliability of bus services in this study area.

3. Survey Results

3.1.1 Luas Services

The Fatima Luas stop is located on the service's Red Line. It travels both Eastbound and Westbound, completing its Eastbound trip either at The Point or Connolly station, and completing its Westbound trip either at Tallaght or Saggart. Surveyors collected departing capacities, departing times, and analysed this data in conjunction with Luas carriage seating, standing, and overall capacity. This survey was conducted on 13.10.22 between the hours of 7:00-10:00 and 16:00-19:00.

3.1.1.1 Fatima Luas Stop Eastbound Service AM and PM Survey Results

During the AM period, overall capacity averaged approximately 108 passengers per train, with a low of 28 passengers and a high of 270. During the PM period, overall capacity averaged approximately 138 passengers per train, with a low of 42 passengers, and a high of 256 passengers. Survey results are shown in Figure 3.1

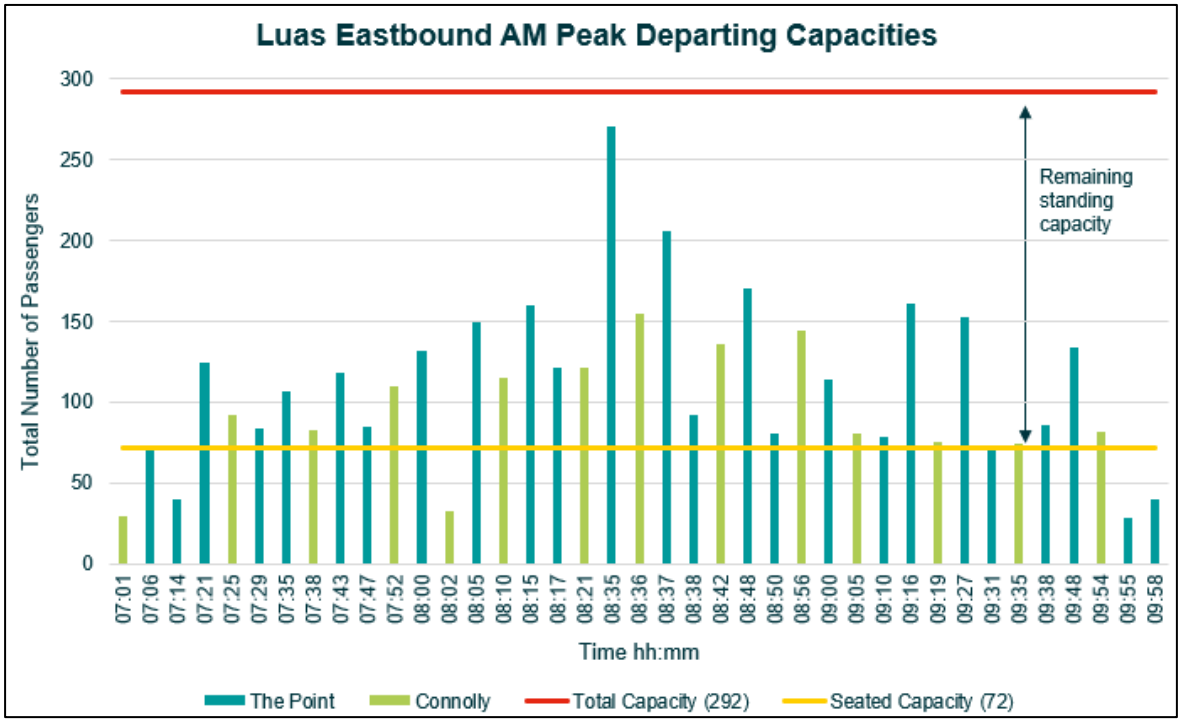

Figure 3.1 – Luas Eastbound AM Survey Results

Overall, the survey revealed that average PM departing capacities were higher than average AM departing capacities. During the AM period, the longest interval between services was 10 minutes, and the shortest interval was 1 minute. During the PM period, the longest interval between services was 14 minutes, and the shortest interval between services was 1 minute. Survey results are shown in Figure 3.2

It should be noted that the Eastbound PM service experienced some delays due to a technical issues at Jervis Station, which caused an infrequency of service and likely increased overall capacities.

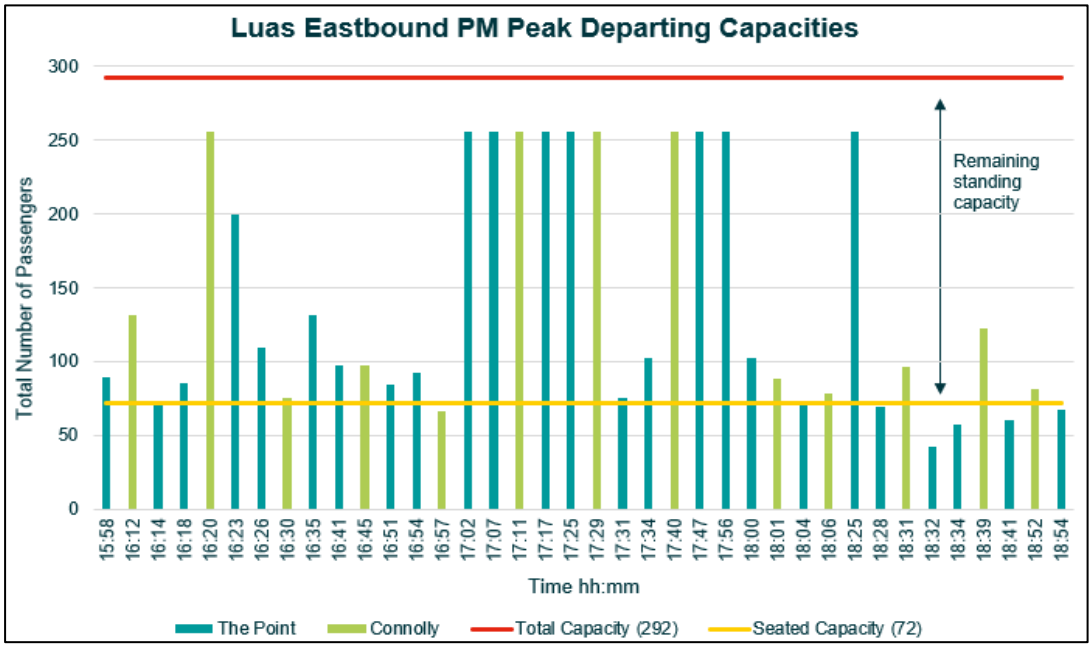

Figure 3.2 – Luas Eastbound PM Survey Results

3.1.1.2 Fatima Luas Stop Westbound Service AM and PM Survey Results

During the PM period, overall capacity averaged approximately 58 passengers per train, with a low of 7 passengers and a high of 115. During the PM period, overall capacity averaged approximately 171 passengers per train, with a low of 83 passengers, and a high of 256 passengers. Survey results are shown in Figure 3.3 Luas Westbound AM Survey Results

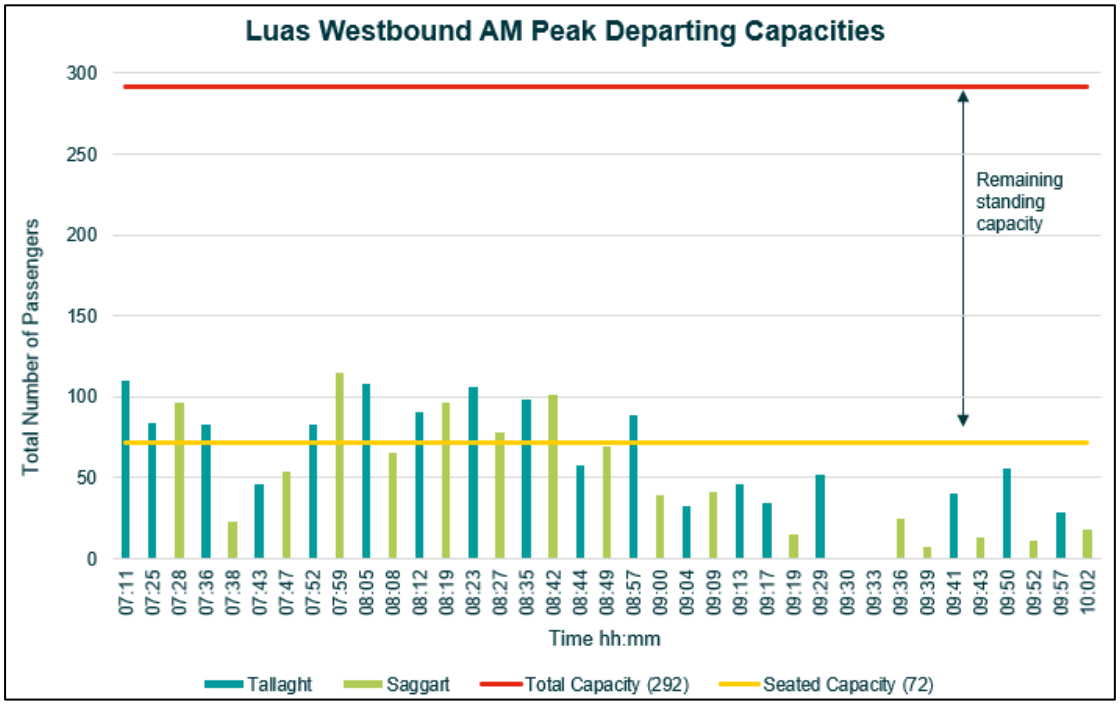

Figure 3.3 Luas Westbound AM Survey Results

Overall, the survey revealed that average PM departing capacities were higher than average AM departing capacities. During the AM period, the longest interval between services was 14 minutes, and the shortest interval was 2 minutes. During the PM period, the longest interval between services was 15 minutes, and the shortest interval between services was 1 minute. Survey results are shown in Figure 3.4.

However, it should be noted that the Westbound PM service likely experienced increased capacities and some delays due to a Shamrock Rovers v. Molde FK match taking place at Tallaght Stadium at 19:00.

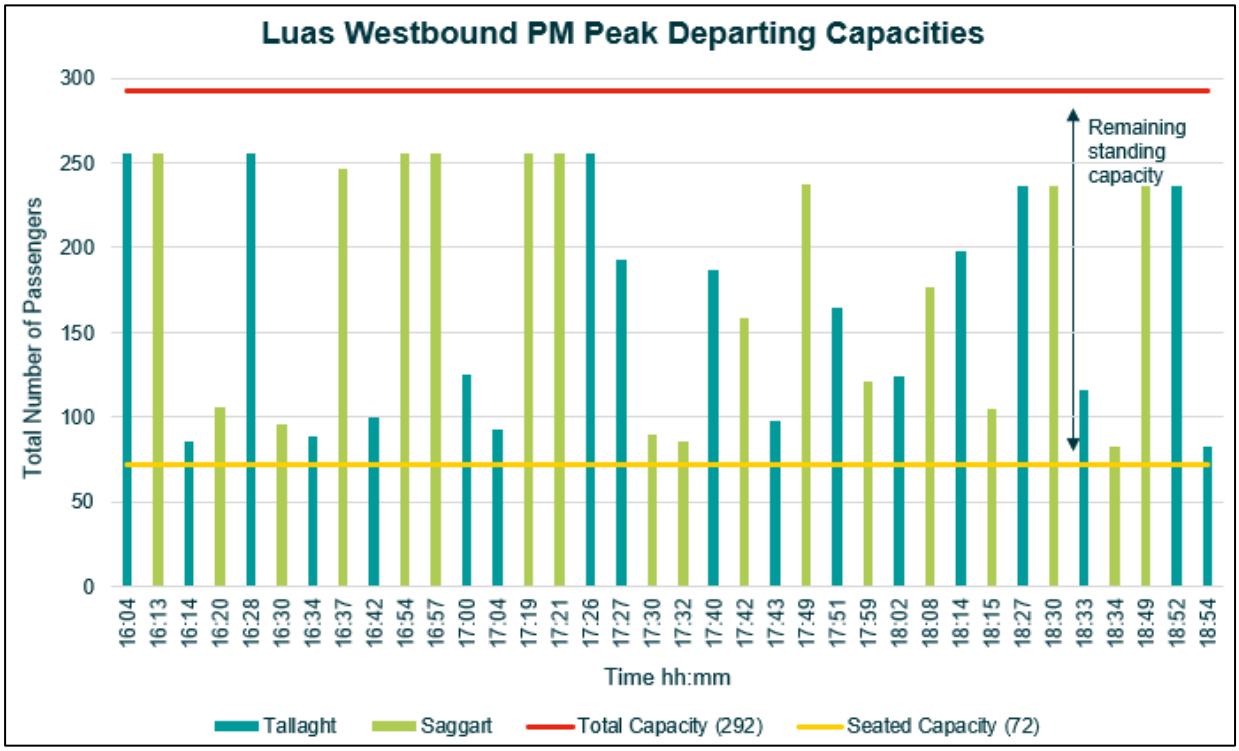

Figure 3.4 – Luas Westbound PM Survey Results

3.2 Bus Services

3.2.1 AM and PM Survey Results Stop 1382

Bus stop 1382 is located directly in front of Dolphin's Barn Church and services routes 122 (destination Ashington), 68 (destination Poolbeg Street) and 68A (destination Poolbeg Street). This stop was surveyed on 13.10.22.

The survey data compares the departing AM/PM capacities of buses servicing stop 1382 at Dolphin's Barn. During the AM period, overall capacity averaged 63 passengers per bus, with a low of 0 passengers and a high of 94. During the PM period, overall capacity averaged 16 passengers per bus, with a low of 3 passengers, and a high of 34 passengers.

Overall, the survey revealed that average AM departing capacities were higher than average PM departing capacities. During the AM period, the longest interval between services was 16 minutes, and the shortest interval was 1 minute. During the PM period, the longest interval between services was 21 minutes, and the shortest interval between services was 0 minutes, meaning the buses followed one after the other. Survey results are shown in Figure 3.5 and Figure 3.6.

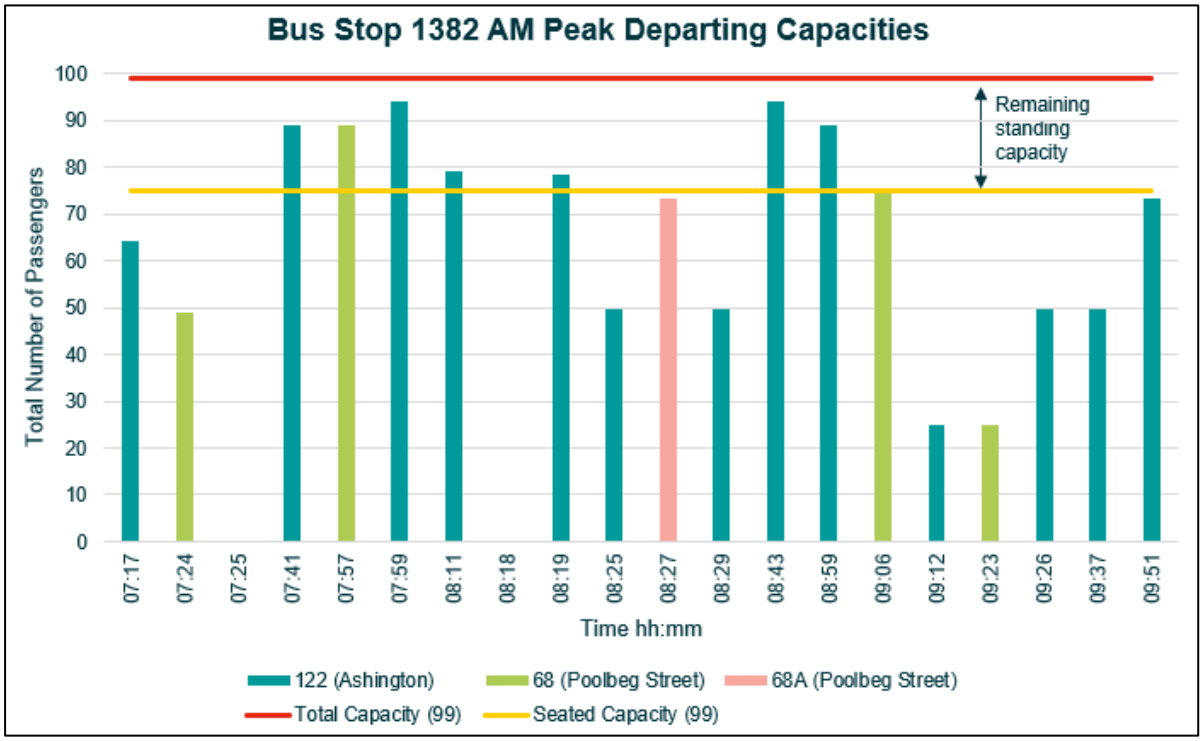

Figure 3.5 – Stop 1382 AM Peak Survey Results

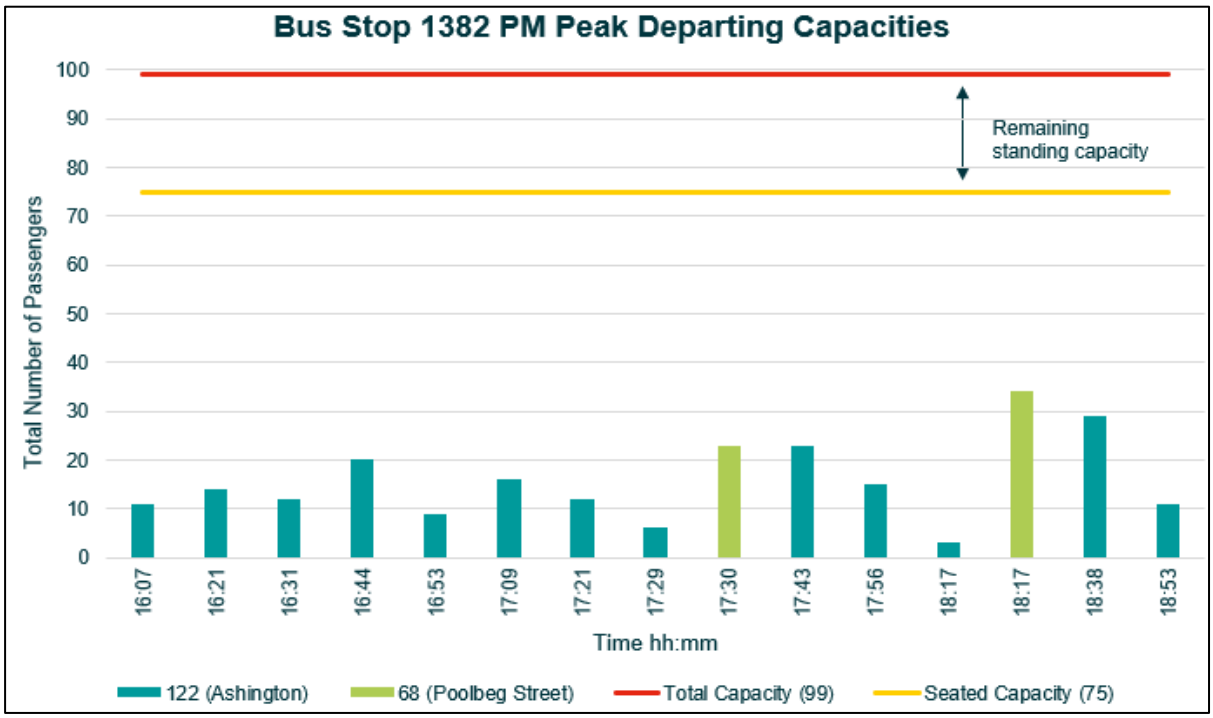

Figure 3.6 – Stop 1382 PM Peak Survey Results

3.2.2 AM and PM Survey Results for Stop 1365

Bus stop 1365 is located directly across from Dolphin's Barn Church and services routes 122 (destination Drimnagh Road) and 68 (destination Greenogue). This stop was surveyed on 13.10.22.

The data compares the departing AM/PM capacities of buses servicing stop 1365. During the AM period, overall capacity averaged 18 passengers per bus, with a low of 0 passengers and a high of 78. During the PM period, overall capacity averaged 25 passengers per bus, with a low of 5 passengers, and a high of 56.
Overall, the survey revealed that average PM departing capacities were higher than average AM departing capacities. During the AM period, the longest interval between services was 22 minutes, and the shortest interval was 3 minutes. During the PM period, the longest interval between services was 20 minutes, and the shortest

interval between services was 0 minutes, meaning the buses followed one after the other. Survey results are shown in Figure 3.7. and Figure 3.8

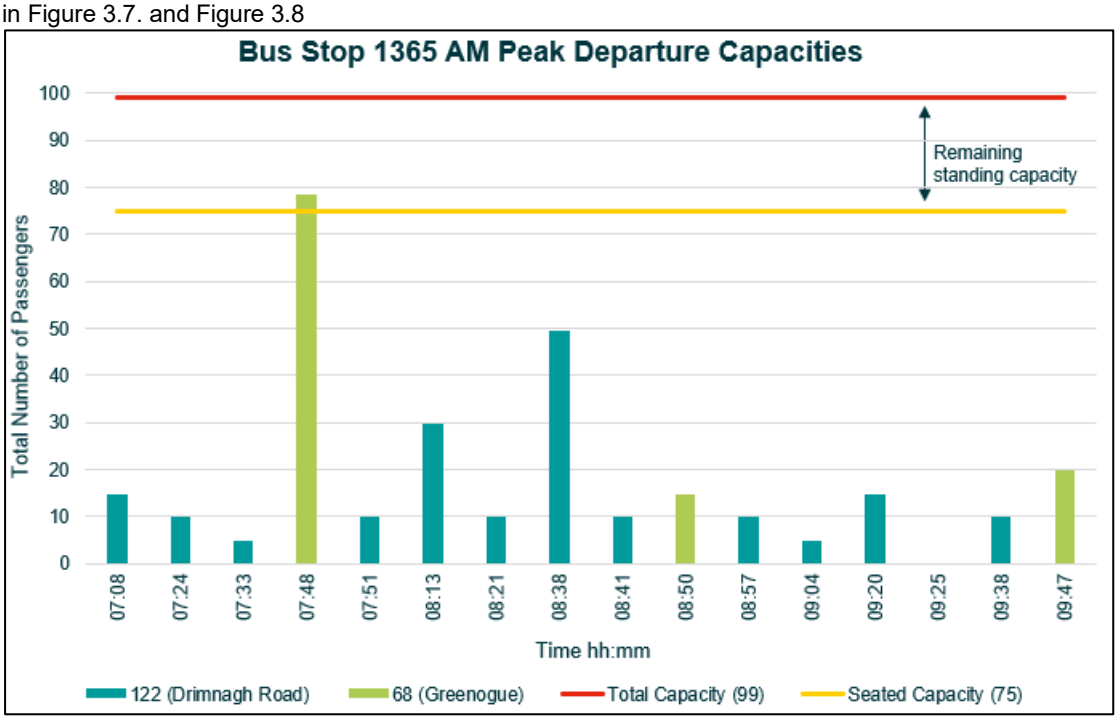

Figure 3.7 - Stop 1365 AM Peak Survey Results

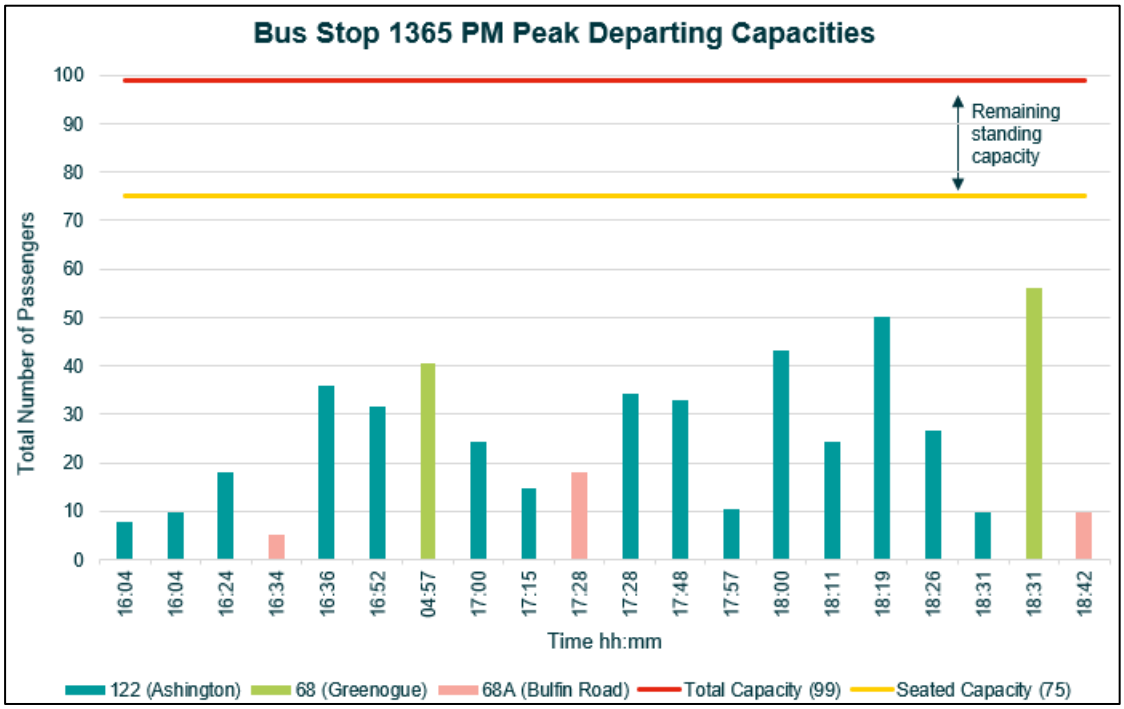

Figure 3.8 - Stop 1365 PM Peak Survey Results

3.2.3 AM and PM Survey Results for Stop 1381

Bus stop 1381 is located at St. Andrew's Centre and services routes 122 (destination Ashington), 17 (destination Blackrock Station), 68 (destination Poolbeg) and 17D (destination Dundrum). This stop was surveyed on 18.10.22.

The below data compares the departing AM/PM capacities of buses servicing stop 1381 at St. Andrew's Centre. During the AM period, overall capacity averaged 44 passengers per bus, with a low of 5 passengers and a high of 99. During the PM period, overall capacity averaged 23 passengers per bus, with a low of 0 passengers, and a high of 88.

Overall, the survey revealed that average AM departing capacities were higher than average PM departing capacities. During the AM period, the longest interval between services was 15 minutes, and the shortest interval

was 1 minute. During the PM period, the longest interval between services was 19 minutes, and the shortest interval between services was 0 minutes, meaning the buses followed one after the other.
Survey results are shown in Figure 3.9 and Figure 3.10.

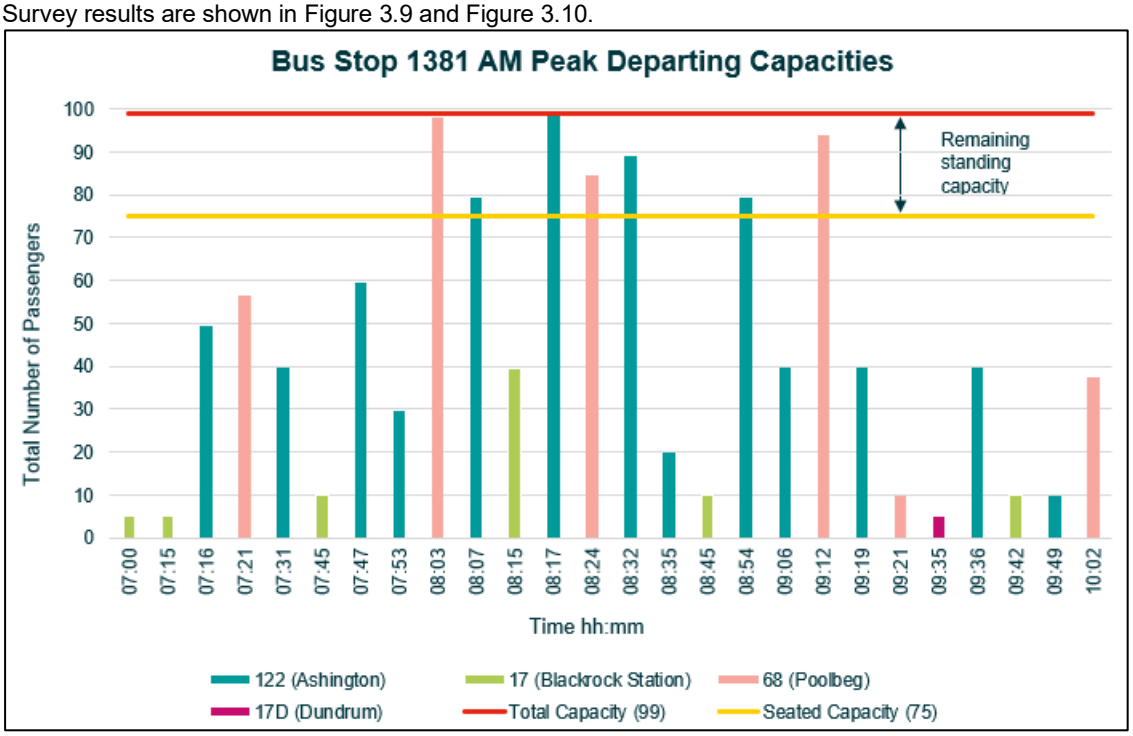

Figure 3.9 - Bus Stop 1381 AM Survey Results

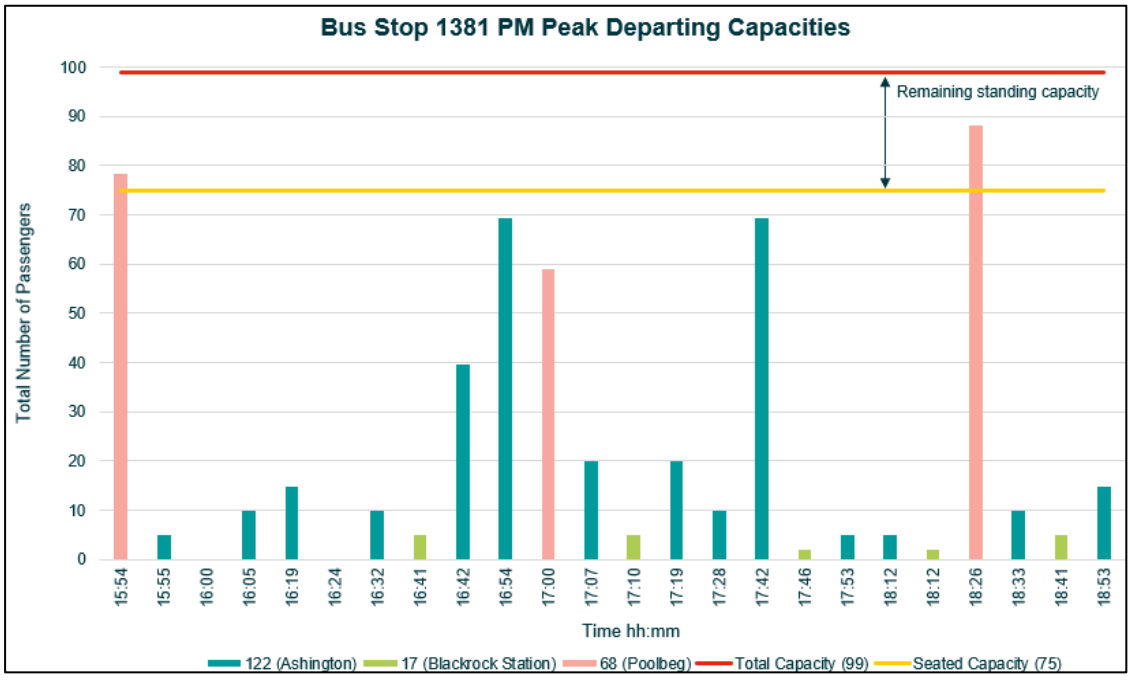

Figure 3.10 - Bus Stop 1381 PM Survey Results

3.2.4 AM and PM Survey Results for Stop 2315

Bus stop 2315 is located at The Coombe/Brickfield Lane and services routes 27 (destination Fortunestown Road), 151 (destination Foxborough Estate), 77A (destination Bianconi Avenue) and 56A (destination Bianconi Avenue). This stop was surveyed on 18.10.22.

The data compares the departing AM/PM capacities of buses servicing stop 2315. During the AM period, overall capacity averaged 17 passengers per bus, with a low of 1 passenger and a high of 65. During the PM period, overall capacity averaged 54 passengers per bus, with a low of 14 passengers and a high of 80.

Overall, the survey revealed that average PM departing capacities were higher than average AM departing capacities. During the AM period, the longest interval between services was 14 minutes, and the shortest interval was 0 minutes, meaning the buses followed one after the other. During the PM period, the longest interval between services was 13 minutes, and the shortest interval between services was 0 minutes, meaning the buses followed one after the other. Survey results are shown in Figure 3.11 and Figure 3.12

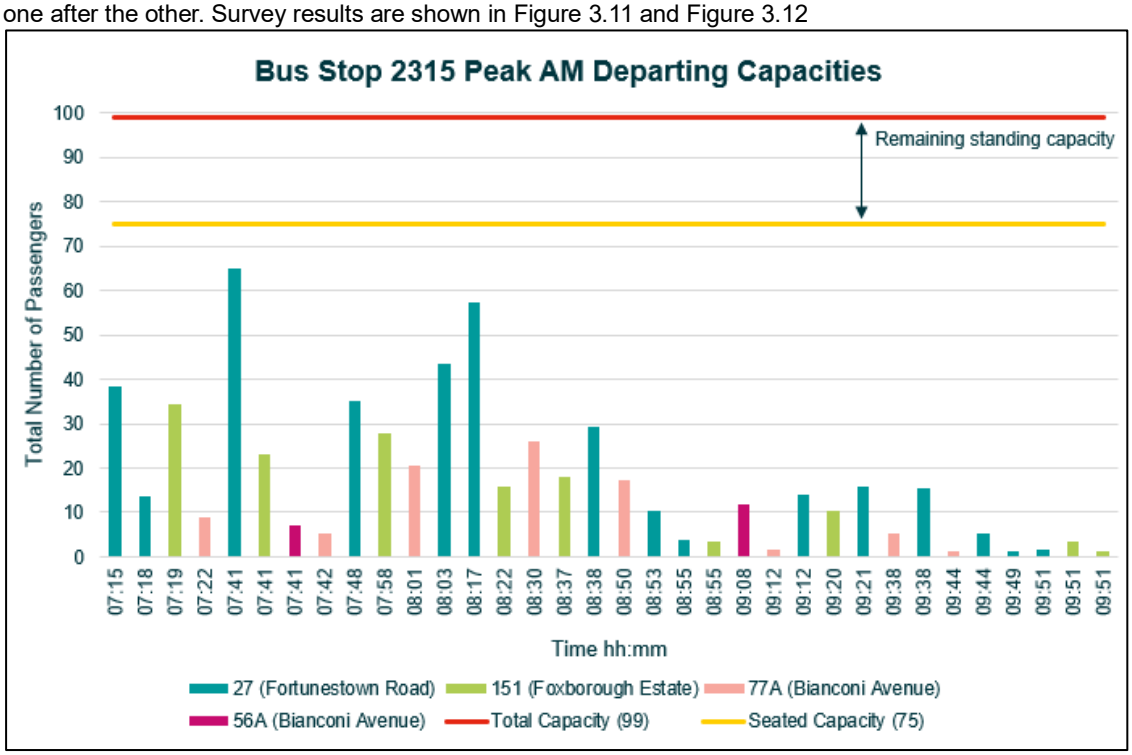

Figure 3.11 - Bus Stop 2315 AM Survey Results

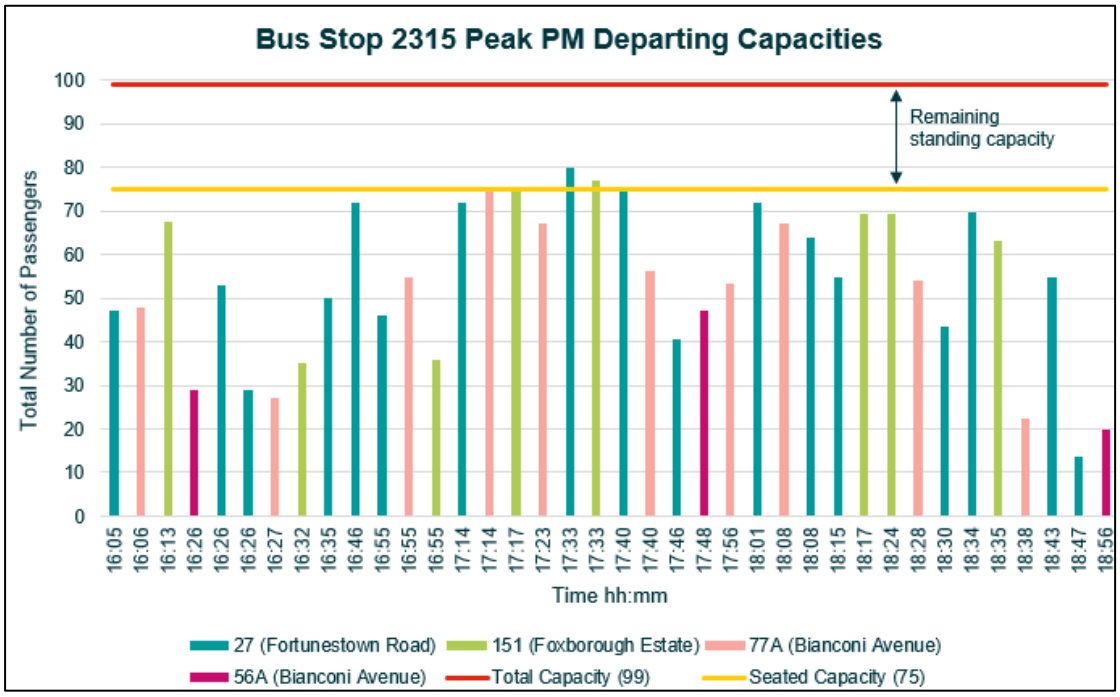

Figure 3.12 - Bus Stop 2315 PM Survey Results

3.2.5 AM and PM Survey Results for Stop 2379

Bus stop 2379 is located at The Coombe/Marion Villas and services routes 27 (destination Temple view Avenue), 151 (destination Bargy Road), 77A (destination Ringsend Road) and 56A (destination Ringsend Road). This stop was surveyed on 18.10.22.

The data compares the departing AM/PM capacities of buses servicing stop 2379. During the AM period, overall capacity averaged 51 passengers per bus, with a low of 4 passengers and a high of 98. During the PM period, overall capacity averaged 28 passengers per bus, with a low of 4 passengers and a high of 64.
Overall, the survey revealed that average AM departing capacities were higher than average PM departing capacities. During the AM period, the longest interval between services was 19 minutes, and the shortest interval was 0 minutes, meaning the buses followed one after the other. During the PM period, the longest interval between services was 17 minutes, and the shortest interval between services was 0 minutes, meaning the buses followed one after the other.
Survey results are shown in Figure 3.13 and Figure 3.14.

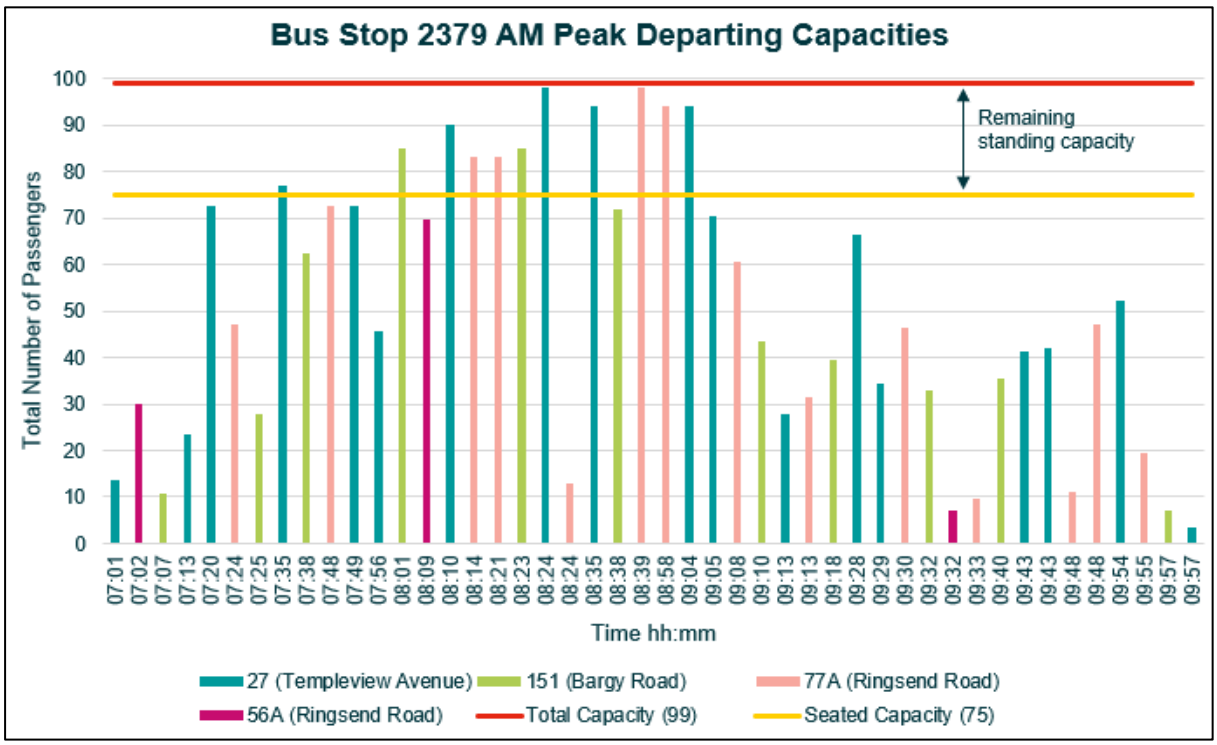

Figure 3.13 - Bus Stop 2379 AM Survey Results

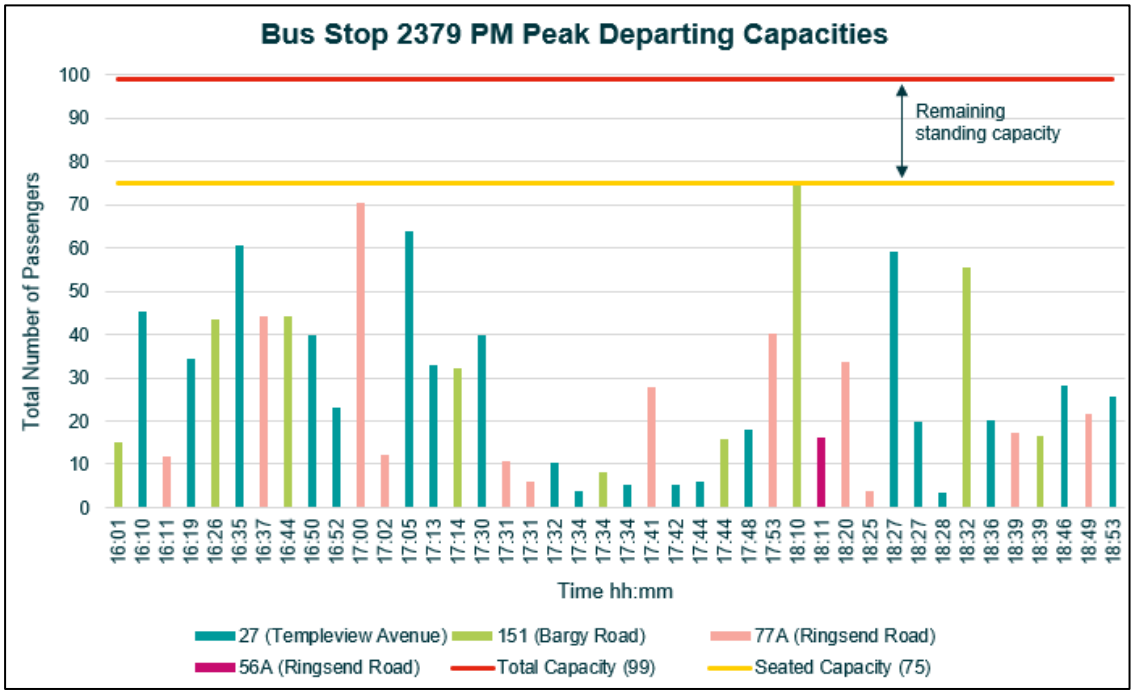

Figure 3.14 - Bus Stop 2379 PM Survey Results

3.2.6 AM and PM Survey Results for Stop 4857

Bus stop 4857 is located at Warrenmount/Rutledge Terrace and services route 150 (destination Hawkins Street). This stop was surveyed on 18.10.22.

The data compares the departing AM/PM capacities of bus route 150, servicing stop 4857. During the AM period, overall capacity averaged 40 passengers per bus, with a low of 5 passengers and a high of 99. During the PM period, overall capacity averaged 49 passengers per bus, with a low of 5 passengers and a high of 99.
Overall, the survey revealed that average PM departing capacities were higher than average AM departing capacities. During the AM period, the longest interval between services was 40 minutes, and the shortest interval was 2 minutes. During the PM period, the longest interval between services was 31 minutes, and the shortest interval between services was 4 minutes.
Survey results are shown in Figure 3.15 and Figure 3.16.

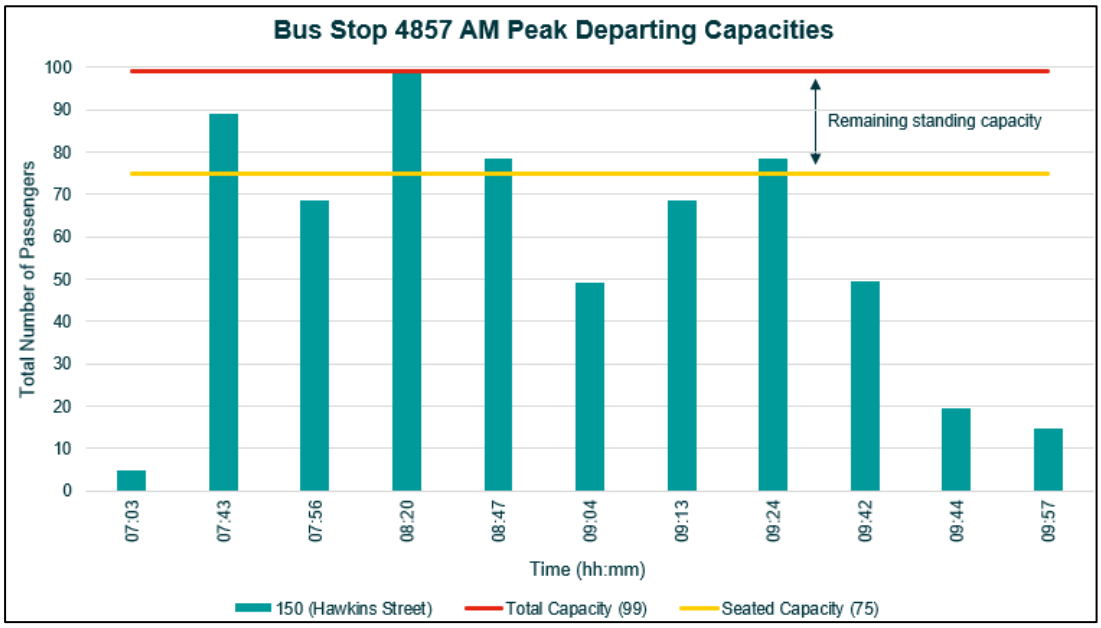

Figure 3.15 - Bus Stop 4587 AM Survey Results

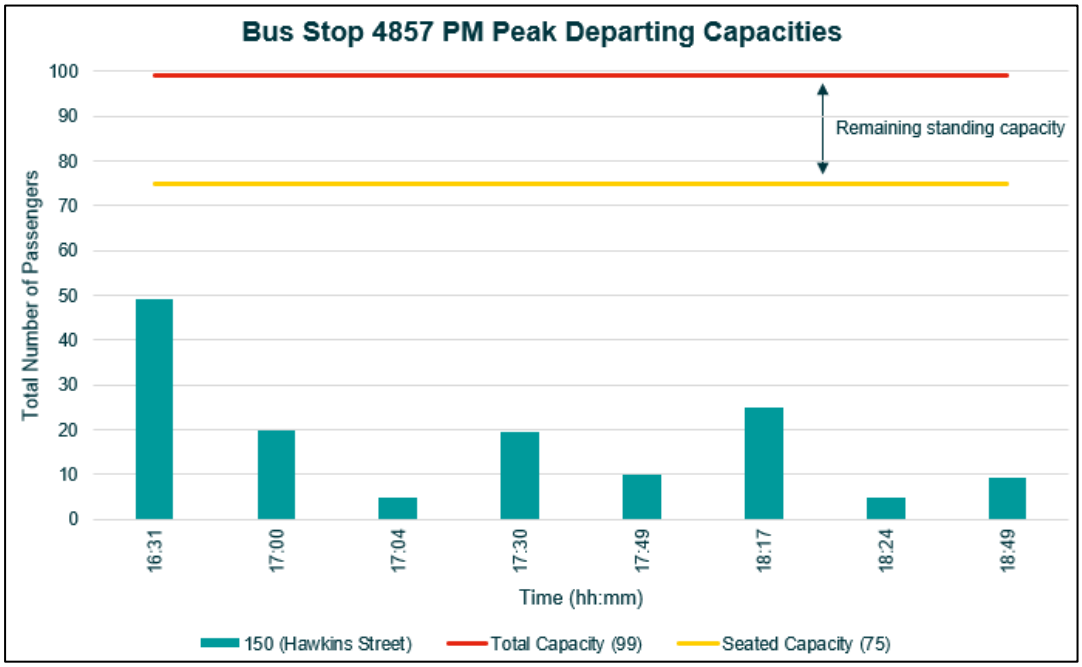

Figure 3.16 – Bus Stop 4587 PM Survey Results

3.3 Conclusion

The stop surveys and analysis highlight that there is spare capacity on all services surveyed during the AM and PM time periods with some services have significant level of spare capacity.

In addition, the survey data highlights that there is adequate spare capacity on Luas and bus in both directions during both time periods to meet the increased demand arising from the public transport trips generated from the TRICS analysis, as outlined within the AECOM Transport and Traffic Assessment (TTA).

The level of public transport trips forecast in the TRICS analysis are relatively low for this site and having regard to the survey results there is more than enough capacity to cater for this level of additional trip demand within both the AM and PM periods. Table 4.1 contains the public transport tips forecast in the TRICS analysis.

Table 3.1 – Public Transport Trips Rates from TRICS

Mode of Travel	Morning (08:00 - 09:00)		Evening (17:00 - 18:00)	
	Arrivals	Departures	Arrivals	Departures
Public Transport	9	3	30	13

4. Sensitivity Test

4.1 Overview

A public transport capacity sensitivity test was undertaken for St. Teresa's Garden site to assess if there is currently spare capacity on surveyed bus and Luas services to cater for a greater than forecast use of public transport by those departing the proposed development site. The test uses outputs of the TRICS analysis contained within the TTA prepared by AECOM for the AM peak period focusing on departures during the morning peak period of 08:15 - 09:15 This time period was chosen as it has the highest level of departures form the site in the TRICS analysis. The TRICS has forecast 1 public transport trip departing the site in the AM peak period which as shown in Section 2 there is more than sufficient capacity to cater for this trip.

4.2 Assumptions

In order to stress the existing public transport capacity and determine if there is the necessary capacity to cater for a higher than forecast public transport trips from the site it was it was assumed that 15% of all departure from the site in the AM peak period would depart on public transport which equates to 38 public transport trips as shown in Table 4.1.

Table 4.1 - TRICS Stress Test Trip Rate

Mode of Travel	Morning (08:15 - 09:15)	
	Arrivals	Departures
Vehicle	41	77
Vehicle Passenger	54	112
Cyclist	4	12
Pedestrian	58	106
Public Transport	9	3
Total People	122	231
Total One Way Flows	41	77
Total Two Way Flows	118	
15% of Total People	18	35

The following assumptions were used in carrying out the sensitivity stress test:

a. 15% of total people leaving the site in the AM peak hour are made by public transport, a marked increase on the TRICS output.

b. These trips are split 65% to bus and 35 % to Luas to match census analysis for travel in this area of the city.

c. The Luas and bus trips are again split 80:20 into Inbound (towards town): outbound (away from Town) direction.

d. 60% of both bus and Luas trips are assigned to vehicles in the busiest 30 minutes, as determined in the survey (part of the peak hour for bus travel), recognising a "peak within a peak".

e. The trips are then spread evenly over the buses in this busy 30-minute time-band.

For bus stops, the trips were assigned to each individual stop based on the level of services calling at that stop between 08:00 - 09:00. Table 4.2 contains the assignment of trips to bus stops within the survey area.

Table 4.2 – Allocation of Trips to Bus stops

Stop No.	No. of Services	% Breakdown of Services per Stop	No. of Trips per stop
Bus Inbound Direction			
1381	9	25%	5
1382	9	25%	5

4587	4	11%	2
2379	14	39%	7
Total Inbound	**36**		**18**
Bus Outbound Direction			
1365	6	33%	2
2315	12	67%	3
Total Outbound	**18**		**5**
Luas Inbound Direction			
Fatima	14	80%	10
Luas Outbound Direction			
Fatima	12	20%	2

4.3 Sensitivity Test

The following graphs were created to express the results of the TRICS analysis. During the hour of highest level of departure from the site (08:15-09:15). The graphs below show passenger capacity data at the highest hour of frequency, with the peak half-hour highlighted. The TRICS trip rates were assigned to a data point at random during the peak frequency period.

The TRICS trip rates were applied in a block however in reality it is highly unlikely that the trips would disperses the site in this manner within the AM peak period. Applying trips in this block fashion to services within the busiest half hour period for each stop represents a worst-case scenario. Figure 4.1 to Figure 4.8 present the results of the TRICS Sensitivity Analysis

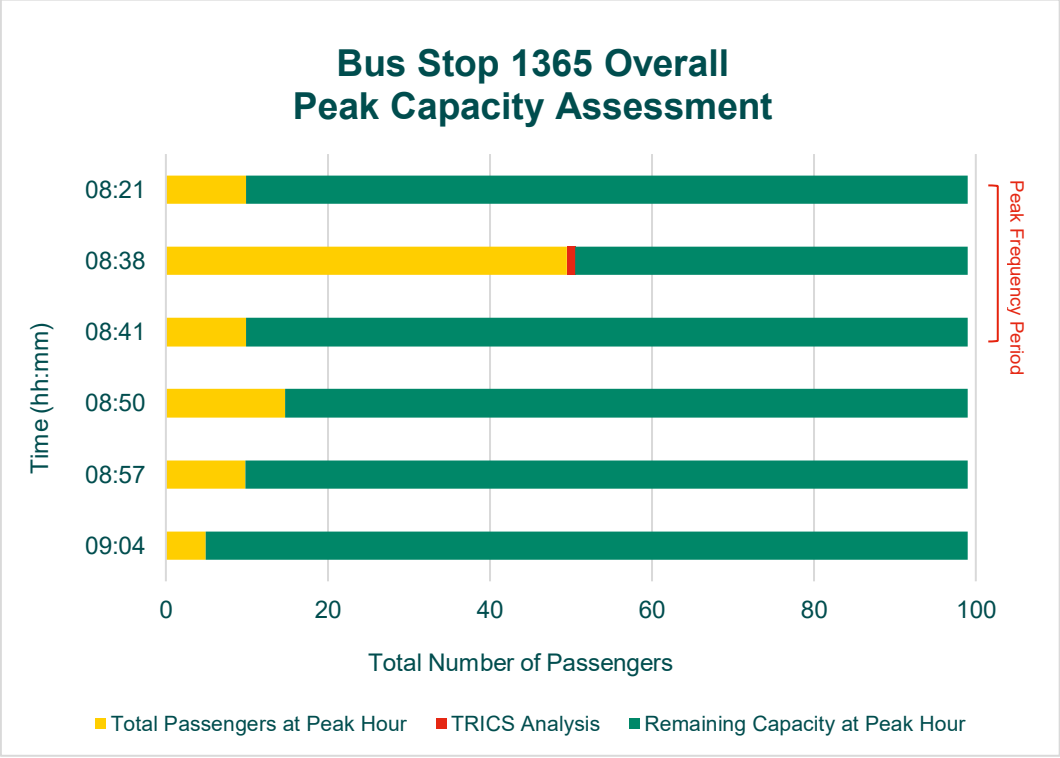

Figure 4.1 - Bus Stop 1365 Overall Peak Capacity Assessment

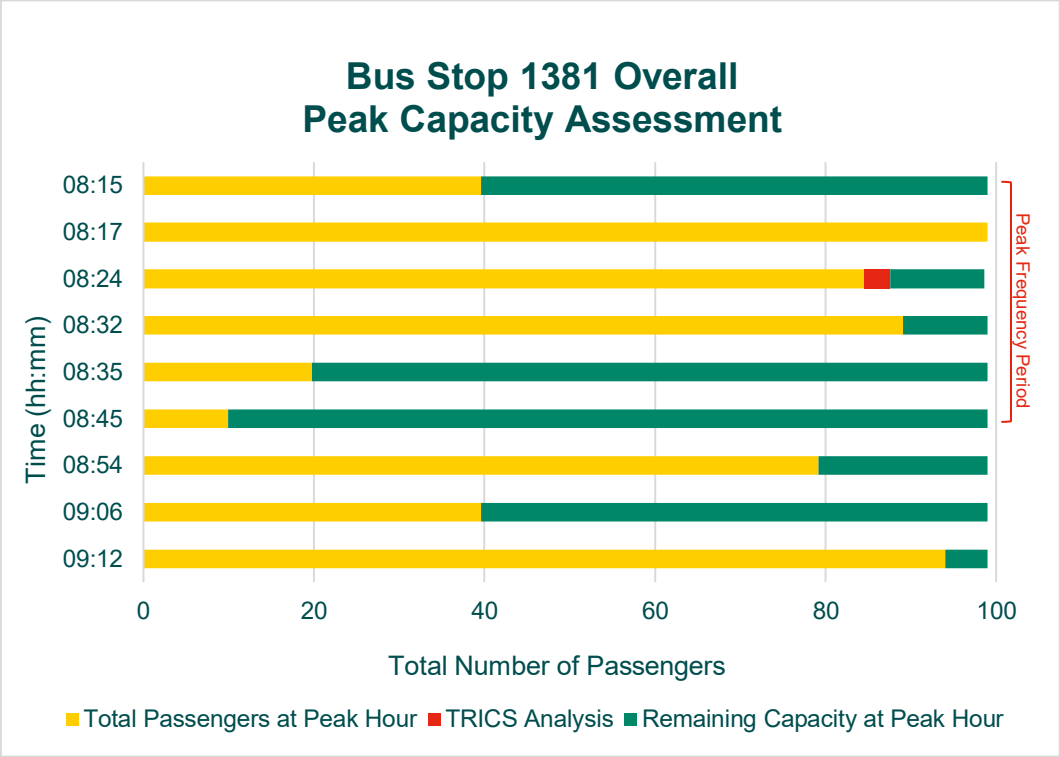

Figure 4.2 – Bus Stop 1381 Overall Peak Capacity Assessment

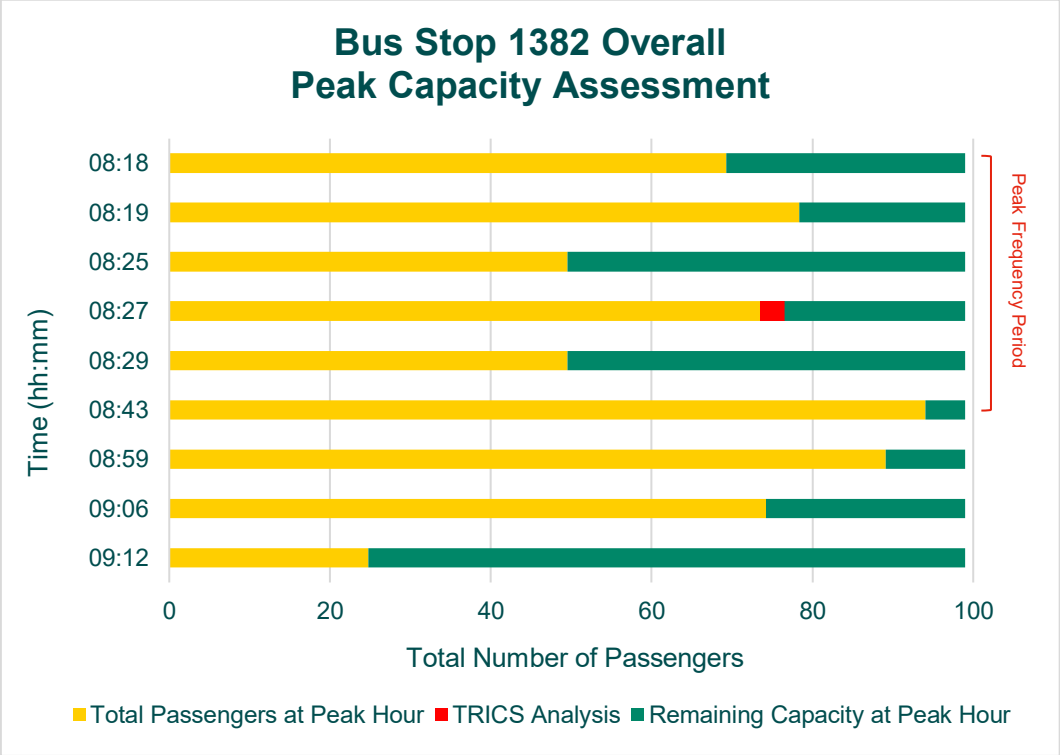

Figure 4.3 – Bus Stop 1382 Overall Peak Capacity Assessment

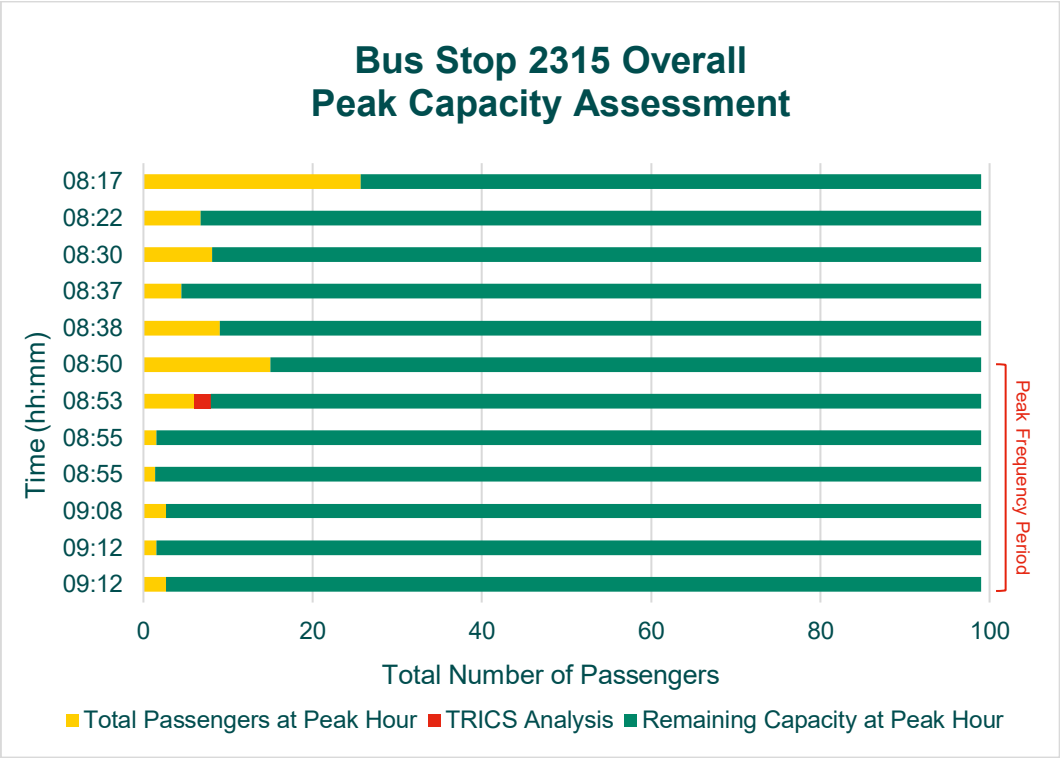

Figure 4.4 – Bus Stop 2315 Overall Peak Capacity Assessment

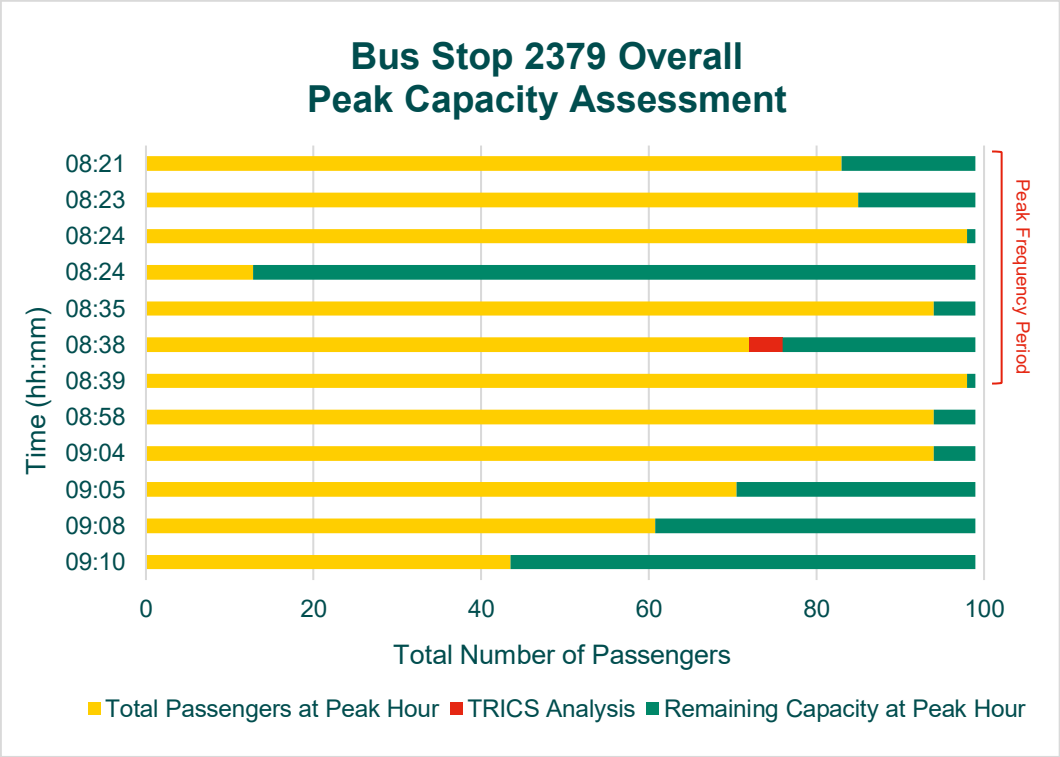

Figure 4.5 – Bus Stop 2379 Overall Peak Capacity Assessment

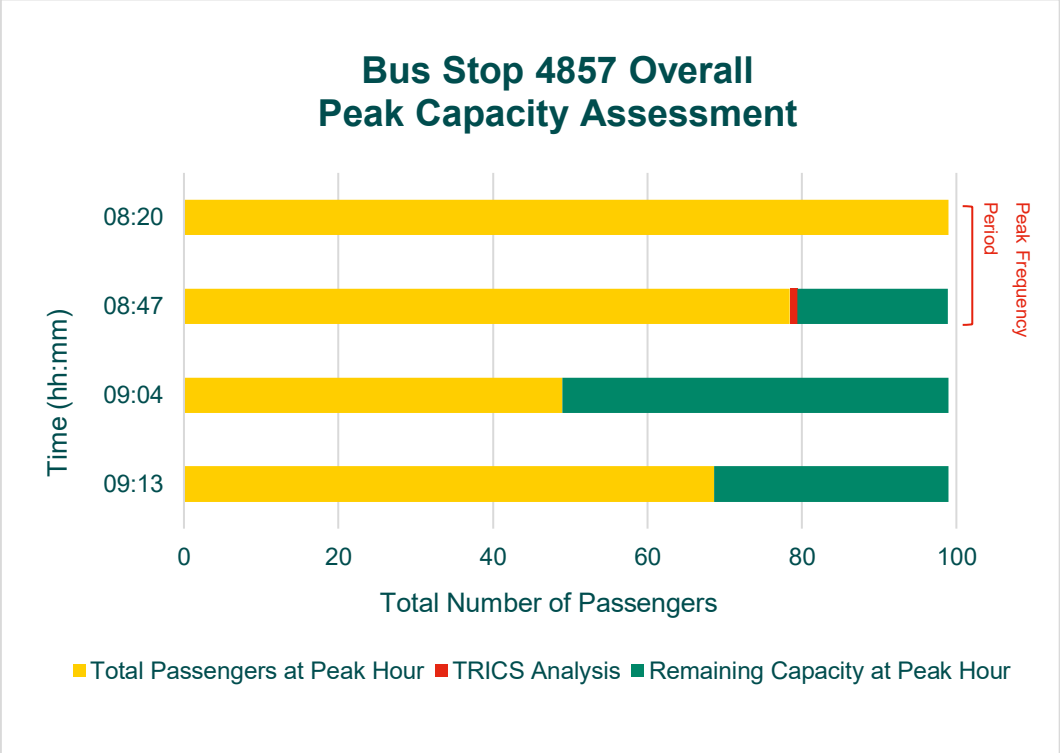

Figure 4.6 – Bus Stop 4857 Overall Peak Capacity Assessment

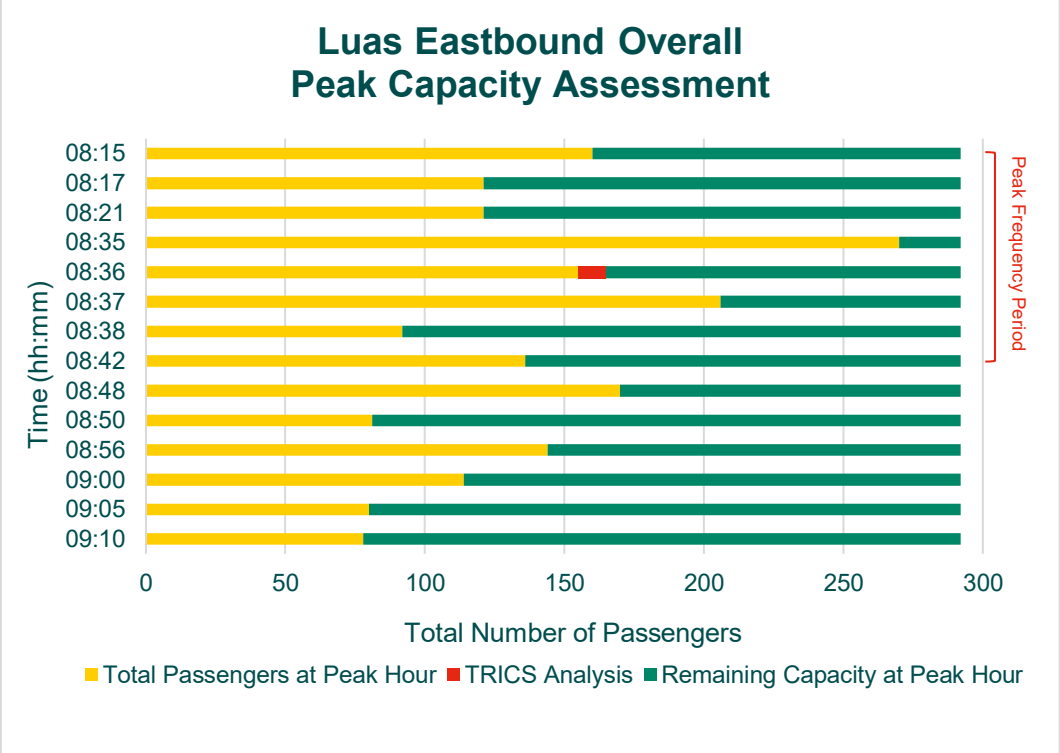

Figure 4.7 – Luas Eastbound Overall Peak Capacity Assessment

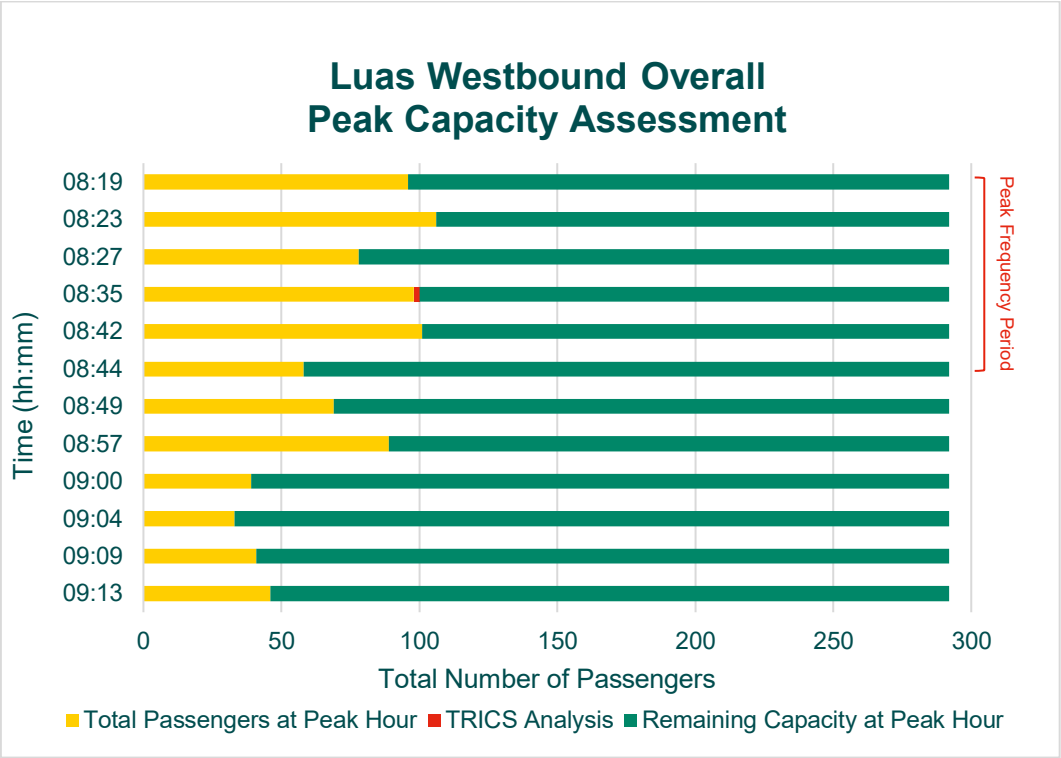

Figure 4.8 – Luas Westbound Overall Peak Capacity Assessment

4.4 Conclusion

The sensitivity analysis highlights that there is adequate capacity on all services, Luas and bus, for a higher than forecast level of public transport trips to depart Donore development site within the AM peak period the busiest period for departure from the site.

5. Conclusion

This public transport capacity assessment has assessed the capacity of existing transport services passing within close proximity to the proposed development site. The assessment has highlighted that there is more than enough capacity on existing service to cater for the forecast level of public transport trips from the site. The sensitivity analysis has also shown that there is sufficient capacity to accommodate a greater than forecast level of public transport trips from the site. It should also be noted the site well benefit from a significant increase in bus frequencies under BusConnects Network Redesign proposal which are currently being rolled out within the Dublin Metropolitan area on a phased basis.

It is therefore the conclusion of this assessment that there is sufficient capacity on existing public transport services to cater for the level of forecast trip demand from the Donore development site.

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Appendix F Social Audit

Community and Social Audit

In respect of the proposed development at

Proposed Residential Development - Donore Project, at Site of Former St. Teresa's Gardens Donore Avenue, Dublin 8

Prepared by

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On behalf of

The Land Development Agency

December 2022

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Project Title and Job No.:	**Project Donore 21154**
Document Title:	**Community and Social Audit**
Document No:	**Final**

Rev.	Status	Author(s)	Reviewed By	Approved By	Issue Date
01	Draft	DF	SB/JS	JS	18.11.2022
02	Final	DF	SB	SB	28.11.2022

Table of Contents

1.0 INTRODUCTION

1.1 The purpose of this report is to provide an audit of the existing social, cultural and community facilities serving Dublin's South-West Inner City. It provides information on the key population changes occurring in the area and the potential demographic changes arising from the redevelopment opportunities within this area. The report contains an audit of the existing social infrastructure in the area relating to:

- Community and social infrastructure;
- Open space, sport and recreation;
- Educational facilities;
- Healthcare facilities;
- Religious facilities;
- Arts and cultural facilities; and
- Retail provision.

1.2 These facilities are assessed in the context of proposed development of the subject site for residential use. In particular this assessment assesses if there is sufficient community facilities provision within the catchment to cater for the future needs of the population.

1.3 This report has been prepared on behalf of the Land Development Agency who propose to develop lands in partnership with Dublin City Council, the landowners, for a residential development, including 543 no. residential units, a childcare (creche) facility, artistic workspaces and cultural space, together with communal open spaces, play area, car parking and bicycle parking, on lands at the former St. Teresa's Garden's complex, Donore Avenue, Dublin 8.

1.4 This report provides an overview of the planning policy context as it relates to social and community infrastructure in the context of the proposed development the former St. Teresa's Gardens, Donore Avenue. This report provides a contextual overview of the area surrounding the site, an assessment of the social, cultural and community infrastructure within its catchment, identifies possible future needs in the area and demonstrates how this analysis has informed the community facilities proposed within the subject application.

1.5 The purpose of this Community and Social Audit is to determine if the South Dublin City area is well served by community related facilities to support the future residents of the proposed development. The study also forms an important information tool that can be used in the consideration of the redevelopment of other lands in the area.

1.6 The subject application site currently provides no community facility or open space for public use. In addition to the residential uses, the proposed development will comprise public open space of 3,408 sqm, communal amenity space of 4,417 sqm and a creche and other community, arts and cultural space Vehicular, pedestrian and cyclist access routes are provided from a new entrance to the north-west from Margaret Kennedy Road. Provision for further vehicular, pedestrian and cyclist access points have been made to facilitate connections to the planned residential schemes on the Bailey Gibson & Player Wills sites for which there are extant permissions (Ref. No.'s ABP-307221-20 and ABP-308917-20).

1.7 The proposed development will also provide for a 952 sq.m. of community, artist workspace, arts and cultural space, including a creche. These facilities will benefit the local area, and the existing and future residents and make a contribution to arts and cultural spaces available in the area. In addition, other communal support facilities,

including a mobility hub, open space, refuse facilities, cycling parking and storage facilities are proposed as part of the residential scheme, together with the inclusion of a retail/café unit. These new commercial units will increase the variety of uses and mix in the area. Therefore, the proposed development will result in a significant contribution to community facilities in the area.

1.8 A mobility hub is a place that brings together public, shared and active travel modes to facilitate ease of access and movement between transport options.

Dublin City Development Plan 2022-2028

1.9 The Dublin City Development Plan 2022-2028 was adopted in November 2022, and will come into effect on the 14th December 2022. As the text and maps of the adopted Plan have not been published as of the date of lodgement of this application, the below text is assumed to be the final plan, based on the proposed material amendments as agreed by the Council on 12 November 2022. An Bord Pleanála with of course assess the scheme against the published plan.

1.10 Using the same formatting as set out in the Material Alterations to the Draft Plan, Amendments to the Draft Plan are shown by way of bold green and underlined text {**Amendment**}, while deletions are shown in bold red text with strike through. (~~**deletion**~~).

1.11 Section 15.8.2 of the Development Plan states that "*All residential applications comprising of 50 or more units shall include a community and social audit to assess the provision of community facilities and infrastructure within the vicinity of the site and identify whether there is a need to provide additional facilities to cater for the proposed development*."

1.12 We note the following the relevant objectives as follows:

- ***"Policy QHSN45 – High Quality Neighbourhood and Community Facilities*** *It is the Policy of Dublin City Council to encourage and facilitate the timely and planned provision of a range of high-quality neighbourhood and community facilities which are multifunctional in terms of their use, adaptable in terms of their design and located to ensure that they are accessible and inclusive to all.* ***{To also protect existing community uses and retain them where there is potential for the use to continue.}"***
- ***"Policy QHSN46 – Community and Social Audit*** *To ensure that all residential applications comprising of 50 or more units shall include a community and social audit to assess the provision of community facilities and infrastructure within the vicinity of the site and identify whether there is a need to provide additional facilities to cater for the proposed development. Refer to Section 15.8.2 of Chapter 15: Development Standards"*
- **"Objective CUO22 – SDRAs and Large-Scale Developments**
  All new regeneration areas (SDRAs) and large scale developments above 10,000 sq. m. in total area ***{*}*** *must provide* ***{at a minimum}*** *5% community, arts and culture* ***{spaces including exhibition, performance,}*** *and artist workspaces* ***{predominantly}*** *internal floorspace as part of their development at the design stage. The option of relocating a portion (no more than half of this figure) of this to a site immediately adjacent to the area can be accommodated where it is demonstrated to be the better outcome and that it can be a contribution to an existing project in the immediate vicinity. The balance of space between cultural*

*and community use can be decided at application stage, from an evidence base/audit of the area. Such spaces must be designed to meet the identified need. {*Such developments shall incorporate both cultural/arts and community uses individually or in combination unless there is an evidence base to justify the 5% going to one sector.}"*

- ***"Community and Social Audit** All residential applications comprising of 50 or more units shall include a community and social audit to assess the provision of community facilities and infrastructure within the vicinity of the site and identify whether there is a need to provide additional facilities to cater for the proposed development.*
    - *A community and social audit should address the following:*
    - *Identify the existing community and social provision in the surrounding area covering a 750m radius.*
    - *Assess the overall need in terms of necessity, deficiency, and opportunities to share/ enhance existing facilities based on current and proposed population projections.*
    - *Justify the inclusion or exclusion of a community facility as part of the proposed development having regard to the findings of the audit."*

1.13 Green font illustrated proposed changes as part of Material Alterations to the Plan. The proposed development and this Social Infrastructure Audit are in accordance with the policies of the adopted Development Plan.

Strategic Development Regeneration Area (SDRA) 11

1.14 The proposed development is located within the Strategic Development Regeneration Area (SDRA) 11 (Formerly SDRA 12): (St Teresa's Gardens & Environs)', zoned Z14. We note, Section 15.1.15 of the Dublin City Development Plan 2022-2028 sets out the regeneration strategy for the area and provides further detail and objectives as to how this should take place. This application aligns itself with these objectives.

1.15 The following relevant guiding principles for development in SDRA 11 are set out in the Development Plan (please see Planning Report for full response to guiding principles) as follows:

Urban Structure

"The proposed urban structure provides a strategic blueprint for the future development of the SDRA, identifying key connections, public open spaces, locations for increased height and building frontages that will inform an urban design-led approach to the regeneration of this strategic area. The development of a network of streets and public spaces will be promoted to ensure the physical, social and economic integration of St. Teresa's Gardens with the former Player Wills and Bailey Gibson sites. The potential for further integration with the Coombe Hospital is indicated on the Guiding Principles Map but is indicative only. Regard will need to be had to any flooding constraints in the redevelopment of the Coombe Hospital lands in terms of land use and block layout. Integration of the White Heather Industrial Estate lands should be investigated in the future.

The movement framework and street structure, as illustrated in the Guiding Principles Map, introduces permeability through the site, based on proposed key east-west and north-south links and several proposed local access streets. Ensuring north/south (Cork St. and Donore Avenue connection to South Circular Road) permeability and east/west (Dolphin's Barn Street and Cork Street) is achieved. Generous well

designed, attractive multifunctional public open spaces with good orientation, connectivity, passive and active supervision/ overlooking etc. will be provided and will deliver high quality residential and public amenity.

A new public park is proposed as a landmark feature with passive supervision by residential and other uses; it will have a comprehensive landscaping strategy to provide significant greenery within the site and will make provision for a diverse range of recreational and sporting facilities for use by the wider neighbourhood and will provide for an area sufficient in size to accommodate a minimum 80 m by 130 m playing pitch."

1.16 The proposed development accords with the guiding principles of the SDRA through the provision of new pedestrian and cyclist access, public open space, and integration with the wider regeneration area. The proposed development will provide for a significant quantum of much needed housing including social housing, along with ancillary facilities including a creche community facilities and artist space.

1.17 The proposed development seeks to integrate with the wider regeneration of the area, in particular with separate proposals for the Player Wills and Bailey Gibson sites providing key linkage piece between Donore Avenue, South Circular Road and The Coombe Women & Infants University Hospital.

1.18 Other Source of Information that have informed this Audit include:

- Dublin City Cultural Strategy (2016-2021)
- Dublin City Cultural Audit and Map
- Dublin City Parks Strategy 2019-2022

Methodology

1.19 As part of this development proposal, we have carried out an assessment of the existing facilities in the area in order to assess the need for social and community infrastructure. A desktop study was used to collect the baseline information, this was then supplemented with a site visit and land use survey of the area to confirm this was up to date. The facilities in each category were recorded in an excel table then mapped.

1.20 In order to develop a suitable study area, it was considered that a 1.5 km radius from the site was a reasonable distance to walk or cycle. In accordance with the Development Plan, we have also noted the 750 m radius from the site. Using Openserviceroute.org we have prepared a series of Isochrones to illustrate the site's accessibility. Figure 1.1 to 1.3 represent a various travel distance accessible by a range of means.

1.21 Figures 1.1 and 1.2 illustrate walking distances from Donore avenue and Margaret Kennedy Road which are the proposed primary entrances to the scheme.

1.22 Figure 1.3 below illustrates cycling distance from Donore Avenue, this incorporates a large portion of the south inner City.

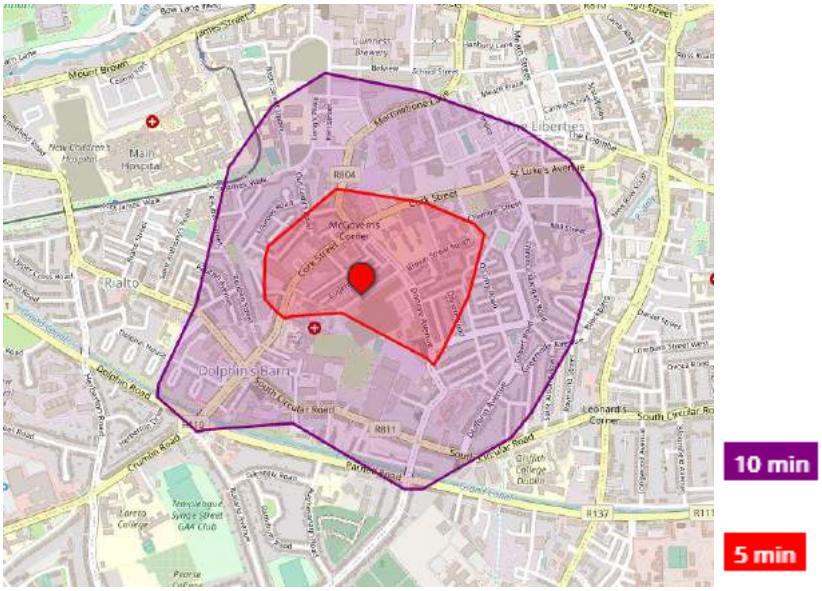

Figure 1.1: Walking distance at 5 and 10 minute intervals from Margaret Kennedy Road.

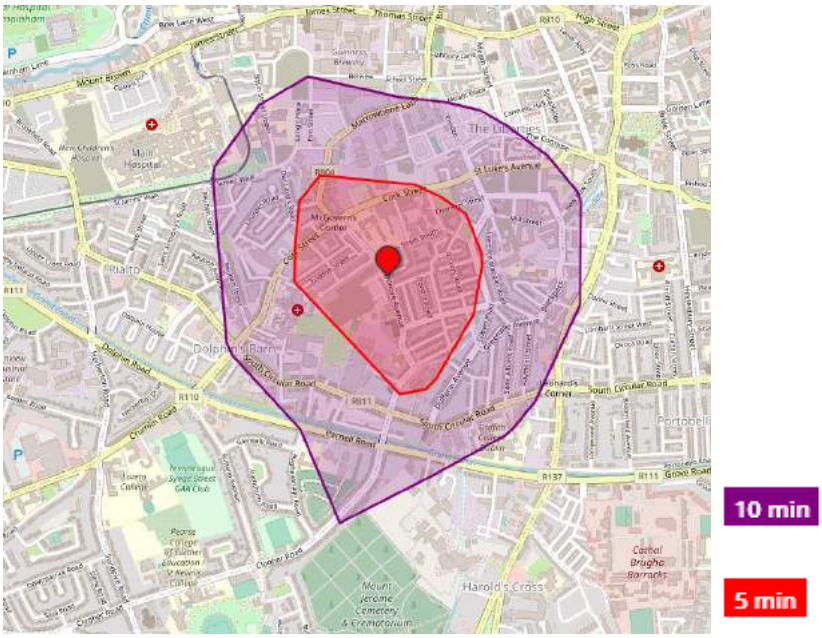

Figure 1.2: Walking distance at 5 and 10 minute intervals from Donore Avenue.

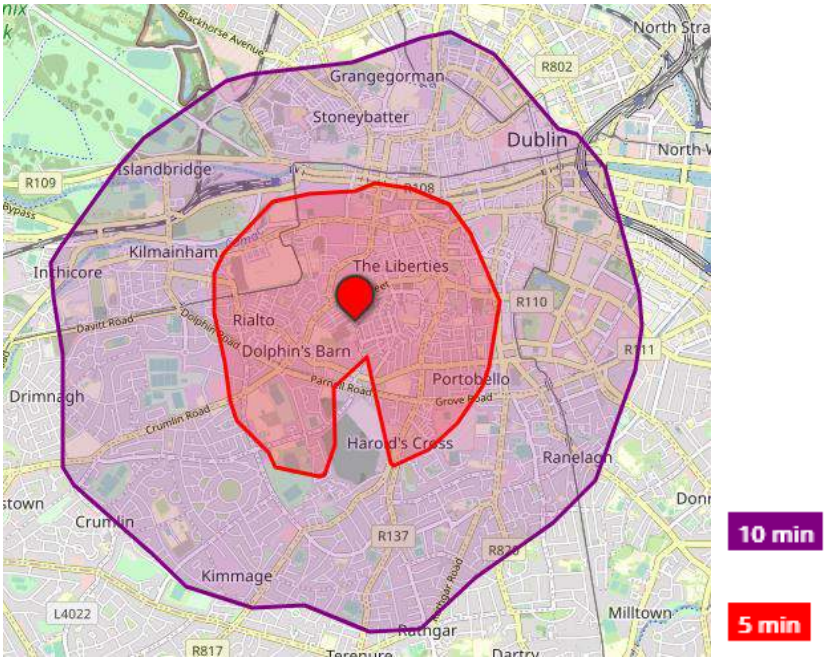

Figure 1.3: Cycling distance at 5 and 10 minute intervals from Donore Avenue

2.0 SOUTH INNER CITY AREA CONTEXT

2.1 The subject site is located on Donore Avenue which is situated in south Dublin City inside the canal ring, south-west of Dublin City Centre (1.6 km from Grafton Street and 2km from O'Connell Street). The wider area is predominately developed and comprising a broad mix of residential and commercial uses.

2.2 The site is highly accessible via a number of means. A range of Dublin Bus routes connects Cork Street town centre to the wider Dublin area including the No.'s 27, 56A, 77A and 151.

2.3 The Luas Redline provides a high frequency direct connection with wider Dublin City and Tallaght, the nearest station is the Fatima Luas stop located 750m or a 10-12 minute walk to the north-west.

2.4 It is planned by the NTA that Cork Street will be served by Bus Connects Core Route Corridor No. 9 'Greenhills to City Centre' in the near future. A planning application for this route is due to be submitted by the NTA to the Board in 2022.

2.5 The site is also close to a number of Dublin Bike Stations, enabling easy access to a network of bike share stations (Market Street South or St. James's Hospital).

2.6 Figure 3.1 shows the subject site in the context of South Dublin inner City.

Figure 2.1: Dublin City wider context (Source: Google Maps, 2022).

3.0 DEMOGRAPHIC PROFILE

3.1 In order to determine a profile of the immediate area for this Audit, it was decided to use to South-West Inner City Local Electoral Area (LEA)-5 as per the CSO SAPMAP[1], as seen in Figure 3.1 below as this encompasses a significant portion of the nearby City and considered the main area in which current and future residents are likely to avail of everyday services.

3.2 Dublin City covers an area of 115 km2 and has a population of 554,554 people (Census 2016). The population of the city is projected to increase to between 613,000 to 625,000 people up to 2026. Preliminary result from the 2022 Census state that County Dublin County has grown by 103,342 (7.7%) to 1,450,701 people from 1,347,359 No. people in 2016 however more detailed information relating to Dublin City and the LEA is not yet available as such the 2016 Census is the main point of reference.

3.3 The demographic date for the study area is obtained from the 2016 Census and relate to the Southwest Inner City Local Electoral Area (LEA 2019). The following areas are discussed:

- Population;
- Household Size;
- Age Profile;
- Social Class and Employment; and
- Educational Attainment.

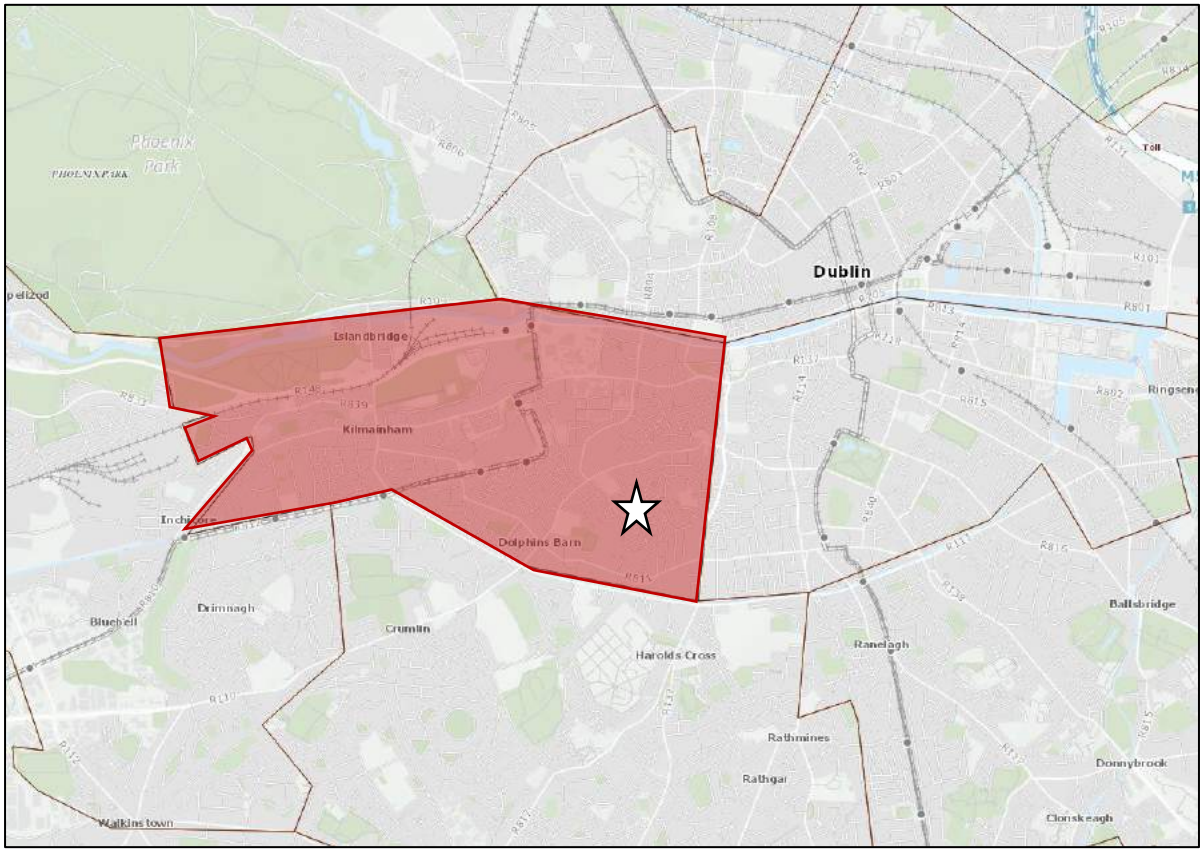

Figure 3.1: Study Area Boundary outlined in red with subject site indicated by white star; (Source: CSO, 2016).

[1]https://cso.maps.arcgis.com/apps/webappviewer/index.html?id=4d19cf7b1251408c99ccde18859ff739

Population

	LEA		Dublin City		State	
Year			**Population**	**% Change**	**Population**	**% Change**
2011	39,416		527,612		4,588,252	
2016	42,344	7.4%	554,284	4.6%	4,757,976	3.7%
2022 (preliminary)	Not available		Not available		5,123,536	7.6%

Table 3.1: Population Trends in Dublin City and the State, 2011-2016.

3.4 As can be seen from Table 3.1, LEA has experienced significant population growth above the growth rate in the State. The Dublin City Development Plan 2022-2028 projects population growth of 613,000 (low) to 625,000 (high) by 2026. A population of c. 554,500 was recorded in the 2016 census. This represents a c. 10.5% population increase at the lower end, and a c. 12.7% increase at the higher end over this period.

Age Profile

	LEA		Dublin City		State	
Age Group	**2016 Pop.**	**% Of Pop.**	**2016 Pop.**	**% Of Pop.**	**2016 Pop.**	**% Of Pop.**
0-19	6997	16.5%	111,994	20.2%	1,309,368	27.4%
20-39	21,439	50.6%	213,801	38.6%	1,322,467	27.7%
40-59	8,957	21.2%	132,649	23.9%	1,253,607	26.3%
60-79	3,940	9.3%	75,927	13.7%	727,831	15.2%
80+	1011	2.4%	20,183	3.6%	148,592	3.1%
Total	**42344**	**100.0%**	**554,554**	**100.0%**	**4,761,865**	**100%**

Table 3.2: Age Profile in LEA, Dublin City and the State, 2016; Source: CSO.

3.5 The table above shows the age profile of the LEA in comparison to Dublin City and the State. The above figure shows that Dublin City and the LEA has a generally younger population profile than seen more widely in the State with individuals ages 20-39 comprising the largest age group.

	LEA	
Household Size	**Private households (Number)**	**Persons in private households (Number)**
1 person households	5478	5478
2 person households	6503	13006
3 person households	3027	9081
4 person households	1753	7012
5 person households	680	3400
6 person households	204	1224
7 person households	57	399
8 or more persons households	29	258
Total households	**17731**	**39858**

Table 3.3: Household size in LEA, 2016; Source: CSO.

3.6 The table above shows the average household size for the south-west inner City LEA is 2.24. Based on this and the proposed unit numbers proposed, for the purposes of

this report we estimate the proposed development to result in 1,216 No. people (543 No. units x 2.24).

Social Class and Employment

	LEA		Dublin City		State	
Principal Economic Status	**Pop.**	**%**	**Pop.**	**%**	**Pop.**	**%**
At work	22,258	60.5%	265,670	56.4%	2,006,641	53.4%
Looking for first regular job	515	1.4%	4,686	1.0%	31,434	0.8%
Unemployed having lost or given up previous job	3,023	8.2%	34,514	7.3%	265,962	7.0%
Student	4,498	12.2%	53,067	11.3%	427,128	11.3%
Looking after home/family	1,602	4.4%	28,734	6.1%	305,556	8.1%
Retired	3,290	8.9%	63,637	13.5%	545,407	14.5%
Unable to work due to permanent sickness or disability	1,498	4.1%	18,665	4.0%	158,348	4.2%
Other	114	0.3%	2,368	0.5%	14,837	0.3%
Total	**36,798**	**100.0%**	**471,341**	**100.0%**	**3,755,313**	100%

Table 3.3: Employment Statistics of LEA, Dublin City and the State, 2016; Source: CSO.

3.7 The table above shows that the LEA area has an above average amount of the population at work, at 60.5% compared to the Dublin City of 56.4% or State average of 53.4% however it also has a higher-than-average percentage of unemployed at 8.2%.

3.8 The Labour Force Survey (LFS) is a continuous household survey carried out by the CSO and is the official source of employment and unemployment estimates for Ireland. The more recent statistical release indicated that the employment rate for those aged 15-64 was 72.8% in Q1 2022 compared to 65.6% in Q1 2021 and 69.6% in Q1 2020.

3.9 In Q1 2022, the employment rate for males aged 15-64 years was 77.2% compared to 68.6% for females. Looking at the rates by age group, the employment rate was lowest among those aged 15-19 years (27.1%) and highest among those aged 35-44 years (83.4%).

3.10 Unemployment decreased by 24,800 (-26.5%) for males to 68,800 in the year to Q1 2022 compared with a fall of 19,000 (-24.7%) to 58,000 for females over the same period.

	LEA		Dublin City		State	
Social Class	**LEA**	**%**	**Total**	**%**	**Pop.**	**%**
Professional workers	3,802	9.0%	53,492	9.6%	386,648	8.1%
Managerial and technical	10,788	25.5%	147,267	26.6%	1,336,896	28%
Non-manual	5,682	13.4%	89,661	16.2%	837,145	17.5%
Skilled manual	4,013	9.5%	62,892	11.3%	671,890	14.1%
Semi-skilled	3,938	9.3%	50,188	9.1%	501,103	10.5%
Unskilled	1,763	4.2%	20,871	3.8%	170,391	3.5%
All others gainfully occupied and unknown	12,358	29.2%	130,183	23.5%	857,792	18%
Total	**42,344**	**100.0%**	**554,554**	**100.0%**	**4,761,865**	**100%**

Table 3.4: Socio Economic group of LEA, Dublin City and the State, 2016; Source: CSO

3.11 The figures presented in Table 5.4 above suggest that the Dublin City area has a close employment trend when compared to the State average. In terms of socio-economic group. Within the LEA less workers are non-manual, skilled manual and semi-skilled compared to the State averages.

3.12 The social class of an area is directly related to educational attainment. This will be further discussed below.

Educational Attainment

	LEA		DCC		State	
Educational Attainment	**Pop**	**%**	**Pop**	**%**	**Pop.**	**%**
No Formal Education	356	1.3%	5,807	1.5%	52,214	1.6%
Primary Education	2,755	9.7%	43,102	11.3%	334,284	10.7%
Lower Secondary	2,354	8.3%	44,219	11.6%	449,766	14.5%
Upper Secondary	3,378	11.9%	56,059	14.7%	573,643	18.5%
Technical or Vocational qualification	1,651	5.8%	25,005	6.6%	271,532	8.7%
Advanced Certificate/Completed Apprenticeship	885	3.1%	14,191	3.7%	182,318	5.8%
Higher Certificate	1,108	3.9%	14,340	3.8%	153,351	4.9%
Ordinary Bachelor Degree or National Diploma	2,395	8.5%	27,047	7.1%	237,117	7.6%
Honours Bachelor Degree, Professional qualification or both	4,504	15.9%	50,756	13.3%	331,293	10.6%
Postgraduate Diploma or Degree	4,804	17.0%	53,063	13.9%	284,107	9.1%
Doctorate(Ph.D) or higher	478	1.7%	5,897	1.5%	28,759	0.9%
Not stated	3,630	12.8%	41,268	10.8%	198,668	6.4%
Total	**28,298**	**100.0%**	**380,754**	**100.0%**	**3,097,052**	**100%**

Table 3.4: Education Level in LEA, Dublin City and the State, 2016; Source: CSO.

3.13 As can be seen from Table 5.4 above, the LEA area has a high level of educational attainment in third level relative to the State.

3.14 The percentage of the population with no formal education in the LEA (1.3%) is lower than the State average (1.6%). Education attainment at secondary level is also lower than the State averages, as is the percentage of the population in LEA a Technical or Vocational qualification relative to the State average, with figures of 6.7% and 8.7%, respectively.

3.15 The following graphics illustrate the level of car ownership to be found in the area, together with the modal split used by existing residents to travel to work, school & college, based on the 2016 Census of Population. From these pie-charts it is evident that while 50% of the population do have access to a car, over 75% of the population use public transport, or cycling or walking to commute to education or work. The Donore Project seeks to build on and promote sustainable travel as the predominant mode of transport for residents within the proposed apartment scheme.

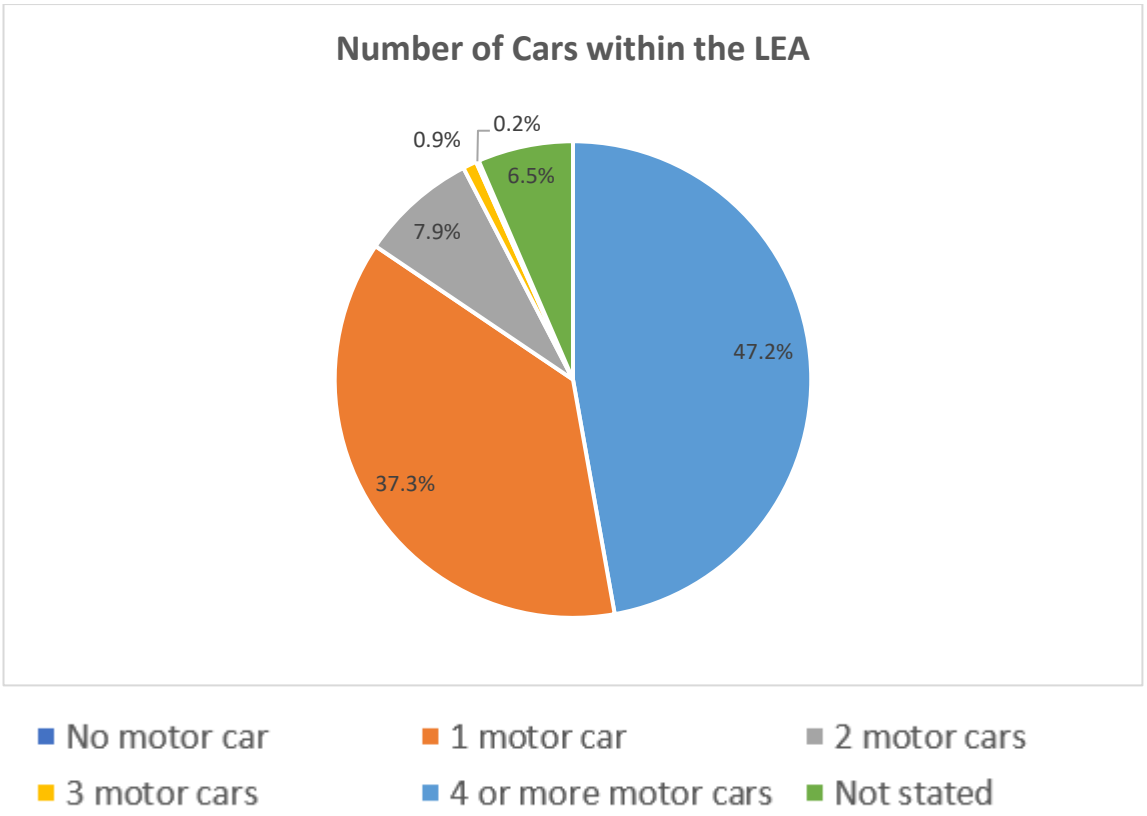

Figure 3.2: Households with cars in the LEA (Source: CSO, 2016)

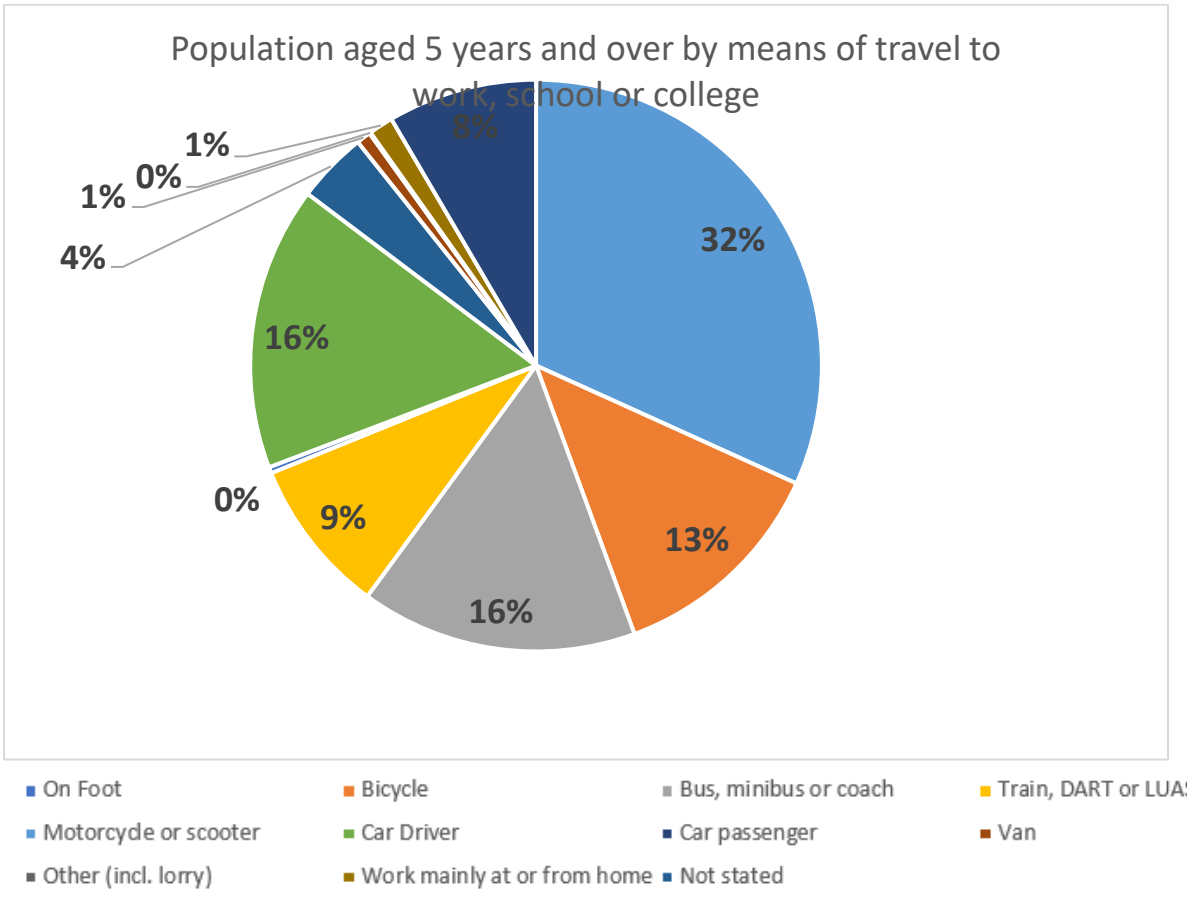

Figure 3.3: Mode of travel to school / work in the LEA (Source: CSO, 2016).

4.0 PLANNING POLICY REVIEW

4.1 The key provisions of national, regional and local planning policy as it relates to the proposed development and this assessment are set out in the following sections. The key policy and guidance documents of relevance to the proposed development are as follows:

- Project Ireland 2040 - National Planning Framework;
- Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas (2009);
- Sustainable Urban Housing: Design Standards for New Apartments - Guidelines for Planning Authorities (2020);
- Guidelines for Planning Authorities on Childcare Facilities (2001);
- Regional Spatial and Economic Strategy for the Eastern and Midland Region (RSES) 2019;
- Dublin City Development Plan 2022-2028.

National Planning Framework

4.2 The National Planning Framework (hereby abbreviated to NPF) is the core high-level strategic plan for shaping the future growth and development of Ireland until 2040. The NPF sets out that 50% of future population is to be accommodated within the existing footprint of Dublin and the other 4 cities.

4.3 The NPF approach includes National Strategic Outcome 10 which seeks to provide *'access to quality Childcare, Education and Health services'*. While the NPF provides no guidance on what infrastructure is required to service new developments of different sizes, a hierarchy of settlements and related infrastructure notes that cities, i.e. central and/or urban locations, may provide all infrastructure within accessible walking area or accessible on transport networks. Figure 3.1 illustrates the hierarchy of settlements and related infrastructure.

4.4 With the lack of alternative guidance and in order to provide a policy and evidence-based approach this Assessment, we will use the NPF hierarchy of settlements to assess the infrastructure within close proximity of the subject area. As set out in Section 3, it is considered a catchment area of infrastructure within 15 minutes walking distance is appropriate.

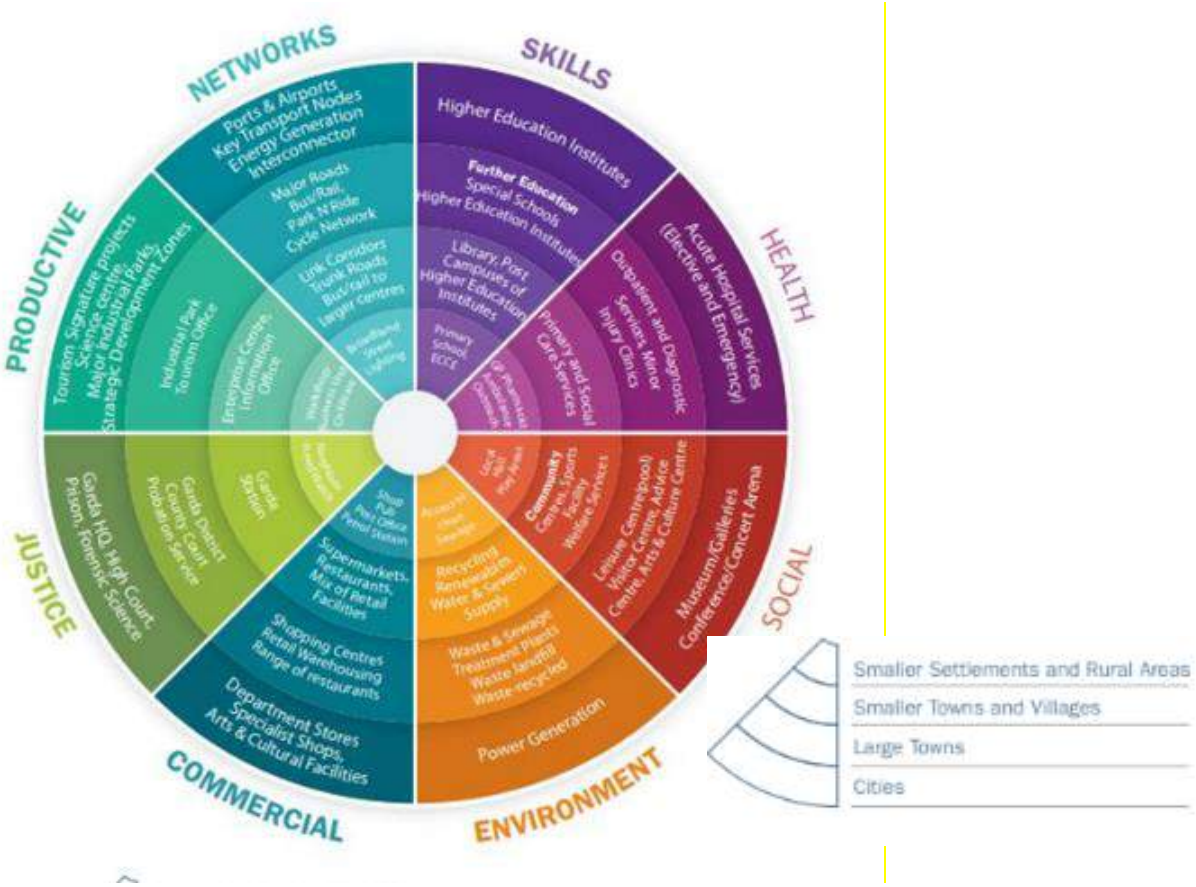

Figure 4.1: NPF Hierarchy of Settlements and Related Infrastructure (Source: National Planning Framework).

4.5 The NPF also includes the following objectives in relation to social infrastructure needs:

"NPC 30- *Local planning, housing, transport/ accessibility and leisure policies will be developed with a focus on meeting the needs and opportunities of an ageing population along with the inclusion of specific projections, supported by clear proposals in respect of ageing communities as part of the core strategy of city and county development plans.*

"NPC 31- *Prioritise the alignment of targeted and planned population and employment growth with investment in:*

• A childcare/ECCE planning function, for monitoring, analysis and forecasting of investment needs, including identification of regional priorities;
• The provision of childcare facilities and new and refurbished schools on well located sites within or close to existing built-up areas, that meet the diverse needs of local populations;
• The expansion and consolidation of Higher Education facilities, particularly where this will contribute to wider regional development, and
• Programmes for life-long learning, especially in areas of higher education and further education and training where skills gaps are identified."

4.6 These objectives highlight the need to safeguard and construct policy for key areas of the population, such as children and ageing communities and therefore to ensure that facilities which cater for all aspects of the population are in place in urban areas and areas of increasing development.

Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas (2009)

4.7 These guidelines were published by the Department of the Environment, Heritage and Local Government in order to set out the key principles that should be adopted within developments and used by the Planning Authorities both in writing their Development Plans and in assessing new developments. The sections under this document that are relevant to this social and community infrastructure audit / assessment are outlined below.

4.8 The Guidelines state that one of the fundamental questions to be addressed during the planning process is "*the relationship and linkages between the area to be (re)developed and established neighbourhoods, including the availability of existing community facilities, and the provision of pedestrian and cycle networks*."

4.9 The Guidelines state that Planning Authorities should ensure efficient and integrated provision of schools, childcare, community centres, healthcare facilities and district/neighbourhood centres are made available for the wider community. We note the following requirements set out in the Guidelines that relate to social infrastructure:

- **Schools:** "*No substantial residential development should proceed without an assessment of existing schools' capacity or the provision of new school facilities in tandem with the development*." This is further clarified as requiring applications for 200+ units to be accompanied by a report detailing the school capacity of the area and the impact of the development.
- **Childcare**: In accordance with the Childcare Guidelines 2001, the Guidelines recommend the provision of one childcare facility (equivalent to a minimum of 20 child places) for every 75 dwelling units. However, the Guidelines state "*the threshold for such provision should be established having regard to the existing geographical distribution of childcare facilities and the emerging demographic profile of areas, in consultation with city / county childcare committees. The location of childcare facilities should be easily accessible by parents, and the facility may be combined with other appropriate uses, such as places of employment*."
- **Community Centres**: The Guidelines state that provision of community centres is to be assessed by the local authority but should be in a central area and near public transport facilities.
- **Healthcare facilities:** The Guidelines state that the provision of healthcare facilities should be determined in conjunction with the Health Services Executive and the needs of the elderly and disabled should be taken into consideration in health care facilities, accessibility, caretaking facilities and residential development.
- **District/Neighbourhood Centres:** The provision of new retail in new district or neighbourhood centres will be influenced by the Development Plan Retail Strategy.

Sustainable Urban Housing: Design Standards for New Apartments (2020)

4.10 The following outlines the relevant social and community infrastructure requirements of the Apartment Guidelines 2020 of relevance to this assessment. Section 4.7 of the Apartment Guidelines 2020 states the following in relation to childcare facilities:

"Notwithstanding the Planning Guidelines for Childcare Facilities (2001), in respect of which a review is to be progressed, and which recommend the provision of one childcare facility (equivalent to a minimum of 20 child places) for every 75 dwelling units, the threshold for provision of any such facilities in apartment schemes should be established having regard to the scale and unit mix of the proposed development and

the existing geographical distribution of childcare facilities and the emerging demographic profile of the area. One-bedroom or studio type units should not generally be considered to contribute to a requirement for any childcare provision and subject to location, this may also apply in part or whole, to units with two or more bedrooms." (Emphasis added)

Childcare Facilities: Guidelines for Planning Authorities (2001)

4.11 As summarised above, the *"Guidelines for Planning Authorities on Childcare Facilities"* (2001) indicate that Development Plans should facilitate the provision of childcare facilities in appropriate locations.

4.12 The Guidelines recommend that in larger new housing estates, Planning Authorities should require the provision of a minimum of one childcare facility with 20 places for each 75 dwellings. The threshold for provision should be established having regard to existing location of facilities and the emerging demography of the area where new housing is proposed. The Guidelines advise that sites should be identified for such facilities as an integral part of the pre-planning discussions.

4.13 The following definition of Childcare is included in the Guidelines:

"In these Guidelines, "childcare" is taken to mean full day-care and sessional facilities and services for pre-school children and school-going children out of school hours. It includes services involving care, education, and socialisation opportunities for children. Thus, services such as pre-schools, naíonraí (Irish language playgroups), day-care services, crèches, playgroups, and after-school groups are encompassed by these Guidelines. Conversely childminding, schools, (primary, secondary and special) and residential centres for children are not covered by these Guidelines."

The Guidelines state that "*planning authorities should require the provision of at least one childcare facility for new housing areas unless there are significant reasons to the contrary for example, development consisting of single bed apartments or where there are adequate childcare facilities in adjoining developments. For new housing areas, an average of one childcare facility for each 75 dwellings would be appropriate. (See also paragraph 3.3.1 and Appendix 2 below). The threshold for provision should be established having regard to the existing geographical distribution of childcare facilities and the emerging demographic profile of areas. Authorities could consider requiring the provision of larger units catering for up to 30/40 children in areas of major residential development on the basis that such a large facility might be able to offer a variety of services – sessional/drop in/after-school, etc'. Regional Spatial and Economic Strategy for the Eastern and Midland Region (RSES) 2019*

4.14 The Regional Spatial and Economic Strategy for the Eastern and Midland Region (RSES) 2019 sets out a 12-year strategic development framework for the Eastern and Midland Region. Supportive of the implementation of the NPF, the RSES reflects its focus on the provision of accessible services and facilities for communities within the Eastern and Midland Region.

4.15 Section 9.1 of the RSES details that the availability of, and access to, services and facilities, inclusive of healthcare services, education facilities and community/recreational facilities is key to creating healthier places. This is supported by Regional Policy Objective 9.14 which calls for Local Authorities to *"support the planned provision of easily accessible social, community, cultural and recreational*

facilities and ensure that all communities have access to a range of facilities that meet the needs of the communities they serve".

4.16 In addition, the Metropolitan Area Strategic Plan (MASP) set out in the RSES emphasises the need to provide accessible services and facilities and supports "ongoing collaboration between regional stakeholders to ensure that social infrastructure such as education, health and community facilities are provided in tandem with the development of strategic development areas".

Dublin City Development Plan 2022-2028

4.17 The Dublin City Development Plan was adopted by the City Council on the 12th November and will become operational on the 14th December 2022. A number of policies and objectives relating to the social and community infrastructure requirements of new developments are predominantly contained within Chapter 5 of the Development Plan, titled *'Quality Housing and Sustainable Neighbourhoods'*, and Chapter 12 / 15, the most relevant of which are included below.

- **Community and Social Audit (policy QHSN46):** *"To ensure that all residential applications comprising of 50 or more units shall include a community and social audit to assess the provision of community facilities and infrastructure within the vicinity of the site and identify whether there is a need to provide additional facilities to cater for the proposed development. Refer to Section 15.8.2 of Chapter 15: Development Standards.'*
- **15-Minute City (policy QHSN10):** *'It is the Policy of Dublin City Council to promote the* ***(~~concept~~)*** ***{realisation}*** *of the 15-minute city which provides for liveable, sustainable urban neighbourhoods and villages throughout the city that deliver healthy placemaking, high quality housing and well designed,* ***{intergenerational and accessible,}*** *safe and inclusive public spaces served by local services, amenities****(, sports facilities)*** *and sustainable modes of* ***{public and accessible}*** *transport* ***{where feasible}****."*
- **High Quality Apartment Development (Policy QHSN34):** *'To promote the provision of high-quality apartments within sustainable neighbourhoods by achieving suitable levels of amenity within individual apartments, and within each apartment development, and ensuring that suitable social infrastructure and other support facilities are available in the neighbourhood.'*
- ***"Policy QHSN45 – High Quality Neighbourhood and Community Facilities*** *It is the Policy of Dublin City Council to encourage and facilitate the timely and planned provision of a range of high-quality neighbourhood and community facilities which are multifunctional in terms of their use, adaptable in terms of their design and located to ensure that they are accessible and inclusive to all.* ***{To also protect existing community uses and retain them where there is potential for the use to continue.}"***
- **Phasing (Policy QHSN47):** *'To require that larger schemes which will be developed over a considerable period of time are developed in accordance with an agreed phasing programme to ensure that suitable physical, social and community infrastructure is provided in tandem with the residential development and that substantial infrastructure is available to initial occupiers.'*
- **Inclusive Social and Community Infrastructure (Policy QHSN48):** *'To support the development of social and community infrastructure that is inclusive and accessible in its design and provides for needs of persons with disabilities, older people, migrant communities and children and adults with additional needs including the sensory needs of the neurodiverse.'*

- **Amenities and Retail (Policy QHSN49)** *'To ensure all areas of the city, including those that have Local Area Plans, deliver social infrastructure, sports and recreational facilities, retail outlets, schools and infrastructure in accordance to an agreed phasing programme to ensure large neighbourhoods are not left isolated without essential services."*
- **Sláintecare Plan (Policy QHSN50):** *'To support the Health Service Executive and other statutory, voluntary and private agencies in the provision of appropriate healthcare facilities - including the system of hospital care and the provision of community-based primary care facilities, mental health and wellbeing facilities including Men's Sheds - and to encourage the integration of healthcare facilities in accessible locations within new and existing communities in accordance with the government Sláintecare Plan.'*
- **Childcare Facilities (Policy QHSN 53):** *'To facilitate the provision of appropriately designed and sized fit-for-purpose affordable childcare facilities as an integral part of proposals for new residential and mixed-use developments, subject to an analysis of demographic and geographic need undertaken by the applicant in consultation with the Dublin City Council Childcare Committee, in order to ensure that their provision and location is in keeping with areas of population and employment growth.'*
- **Objective CUO22 – "SDRAs and Large-Scale Developments** *All new regeneration areas (SDRAs) and large scale developments above 10,000 sq. m. in total area **{*}** must provide **{at a minimum}** 5% community, arts and culture **{spaces including exhibition, performance,}** and artist workspaces **{predominantly}** internal floorspace as part of their development at the design stage. The option of relocating a portion (no more than half of this figure) of this to a site immediately adjacent to the area can be accommodated where it is demonstrated to be the better outcome and that it can be a contribution to an existing project in the immediate vicinity. The balance of space between cultural and community use can be decided at application stage, from an evidence base/audit of the area. Such spaces must be designed to meet the identified need. {*Such developments shall incorporate both cultural/arts and community uses individually or in combination unless there is an evidence base to justify the 5% going to one sector.}*
- **Objective CUO26 'Co-Design and Audits –** *"Large development applications (over 10,000 sq. m., either in phases or as one application) will, in the absence of a DCC local area culture audit (COU38 refers), be required to undertake a cultural audit for the local area to identify shortcomings within the area; and to work with DCC Arts Office to identify and agree appropriate arts or cultural uses, preferably as part of a co-design process in advance of lodging an application, for inclusion in the development. Such audits shall be informed by the existing cultural mapping resources in the Dublin City Cultural Infrastructure Study and by Culture Near You maps."*
- **Objective CUO40 Cultural and Artistic Space Audit** – "*To aim to undertake during the life of the development plan, an audit and implementation plan for each Electoral Area of the Council to assess the current and future needs with regard to cultural and artistic spaces and to set a series of actions, policy tools and initiatives to address identified shortfalls"*

4.18 Section 12.5.3 of the Plan relates to 'Supporting Cultural Vibrancy in the City'. As part of the preparatory work for the Development Plan, a Cultural Infrastructure Study was undertaken of the city, and is published as a background document for the Plan. The study provides a detailed analysis of the extent of cultural infrastructure within the city; where challenges lie; and makes a number of recommendations. It is noted that there are no significant deficits of cultural space in the immediate vicinity of the application

site referenced in the audit. The report indicates DCC should aspire to provide 5% increase in the provision of cultural assets per annum over the life of the Development Plan.

4.19 The report also states that "*It is essential that new neighbourhoods include appropriate cultural infrastructure in order to create a place establish a sense of community and foster social cohesion*". As outlined in MW Architectural Design Statement, in addition to the public open space, a publicly accessible cultural and exhibition space is proposed including a childcare facility. There is also a retail unit proposed for the benefit of proposed residents and the wider community.

5.0 EXISTING COMMUNITY FACILITIES

5.1 A survey was carried out of the existing social infrastructure in the within 1.5 km radius of the subject site under the following headings:

- Community and Social Infrastructure
- Open Space, Sport and Recreation
- Education Facilities
- Healthcare Facilities
- Religious Facilities
- Arts & Cultural Facilities
- Retail.

5.2 In addition, we have mapped the key resources within 1.5 km of the subject site in the above categories. 1.5 km is considered a reasonable maximum distance to travel via range of transport including walking, cycling and public transport. The area is well provided for in many regards, as such the list is not exhaustive due to the number of such facilities nearby, instead the survey focuses on the most convenient and relevant such facilities. As can be seen in Figure 5.1 below, the site is regarded as being extremely well connected to existing community facilities.

Community and Social Infrastructure

5.3 Quality neighbourhoods should be responsive to the needs of local communities, play an important role in quality-of-life factors and foster a wider sense of community and active citizenship.

5.4 Community Facilities are considered to include youth services, local authority offices, welfare services, libraries, Garda and fire stations, and community services.

5.5 Dublin City has a strong network of community groups and clubs, many of which are voluntary groups. Our survey identified a large range of community facilities within the study area

5.6 Key providers in the area include Donore Youth and Community Centre, Fatima Groups United Family Resource Centre, Rialto Youth Project, Ashgrove Community Centre, Dublin's Men's Shed, Fr Lar Redmond Community Centre and Dolphin House Community Centre, *inter alia*. These facilities provide an essential role in responding to local community needs.

5.7 Dublin City Council is currently preparing plans for an extensive refurbishment and expansion of the fire damaged Donore Community Centre which will provide over 1,400m2 of community space to serve the area.

5.8 Dublin City also has a large-scale library network. Libraries provide useful facilities to local residents including free broadband and wireless internet service, self-service printing/scanning, photocopying, study space, children's learning zone, garden space, citizen's information centre, large print book collection, daily newspapers as well as application forms for motor tax, passport etc. and a community noticeboard / information.

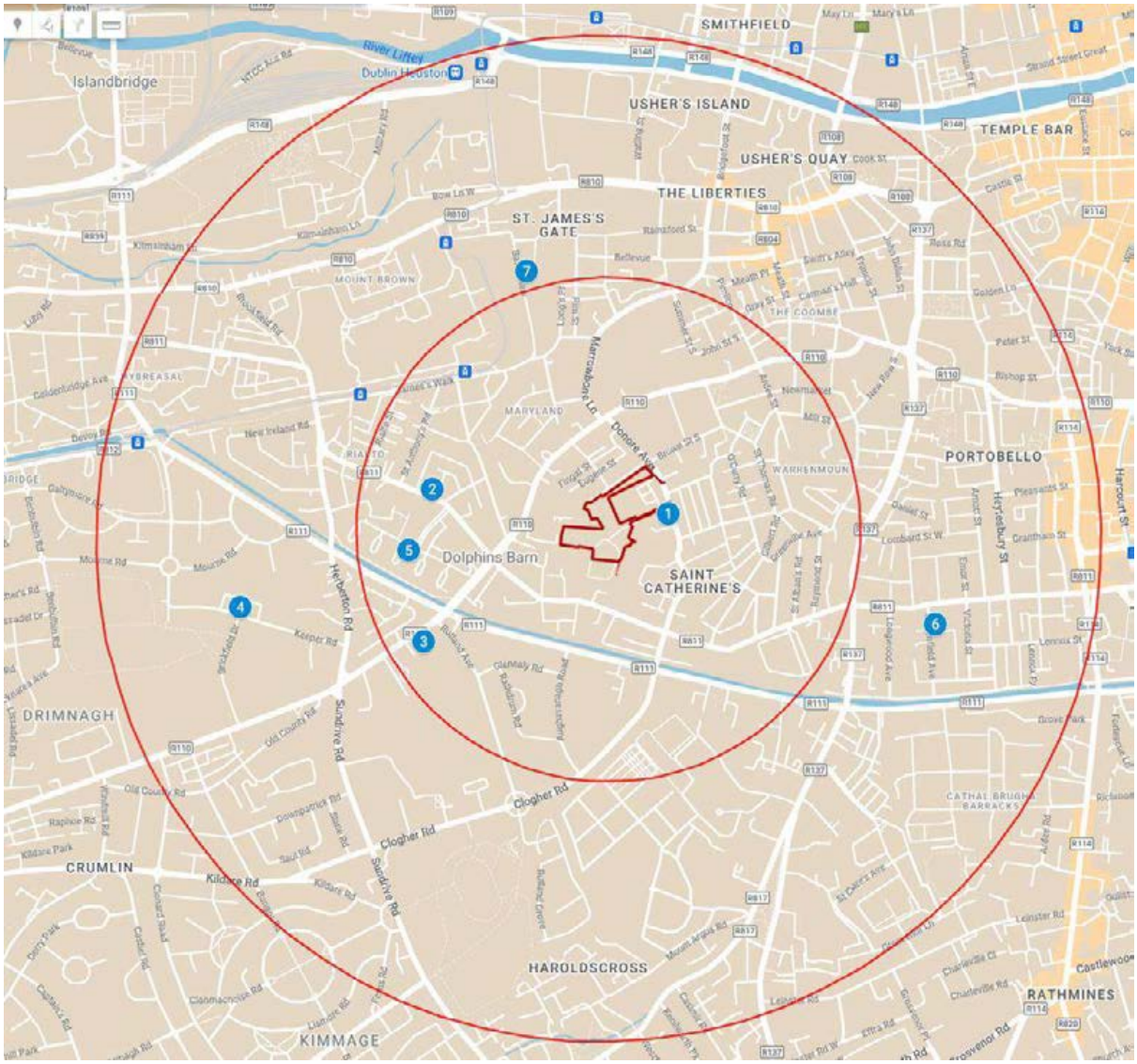

Figure 5.1: Overview of Community facilities within 750m and 1.5 km of the subject site.

	Name	Type	Address
1	Donore Youth and Community Centre (currently closed)	Community Resource	Dan Project GYDP Foroige, Donore Ave, Saint Catherine's, Dublin 8
2	Rialto Youth Project	Community Resource	468 S Circular Rd, Saint James' (part of Phoenix Park), Dublin 8, D08 H51F
3	Clay Youth Project	Community Resource	31A Crumlin Rd, Crumlin, Dublin 12
4	Fr Lar Redmond Community Centre	Community Resource	53A Keeper Rd, Crumlin, Dublin 12
5	Dolphin House Community Centre	Community Resource	Dolphin House, Rialto, Dublin, D08 H9DX
6	St Kevin's Community Centre	Community Resource	45 Bloomfield Ave, Portobello, Dublin 8, D08 X2E7
7	Fountain Youth Project	Community Resource	2A Basin View, Ushers, Dublin 8, D08 N2E9
8	South Inner City Community Development Association (SICCDA)	Community Resource	90 Meath Street, Dublin 8, D08 TPH9

9	Fatima Groups United Family Resource Centre	Community Resource	3 Reuben Plaza, Rialto, Dublin
10	Dublin's Men's Shed	Community Resource	10-11 Earl Street South, Dublin 8, Ireland
11	Southwest Inner-City Network (SWICN)	Community Resource	Digital Court, Rainsford St, The Liberties, Dublin 8

Table 6.1: Overview of key community facilities within 750m and 1.5 km of the subject site.

5.9 We also note the following ancillary community facilities in the area:

Name	Type	Address
1. Dolphin's Barn Fire Station - Dublin Fire Brigade	Fire Brigade	Parnell Rd, Drimnagh, Dolphins Barn, Co. Dublin, D12 C520
2. Kevin Street Garda Station	Garda Station	41 Kevin Street Upper, Dublin
3. Kilmainham Garda Station	Garda Station	High Road, Kilmainham Ln, Kilmainham, Dublin 8
4. Sundrive Road Garda Station	Garda Station	110 Crumlin Rd, Crumlin, Dublin
5. An Post	Post office	2 Reuben St, Saint James' (part of Phoenix Park), Dublin 8, D08 FR80
6. An Post Cork St	Post office	McGoverns Corner, Cork St, The Liberties, Dublin
7. An Post Dolphin's Barn	Post office	41A Dolphin's Barn, Saint James' (part of Phoenix Park), Dublin
8. An Post Leonard's Corner	Post office	Clanbrassil Street Upper Clanbrassil Street Upper, Portobello, Dublin 8, D08 KA07
9. DCC Bring Centre	Recycling Centre	Rutland Ave, Crumlin, Dublin 12, D12 ED72
10. Citizens Information Centre (Liberties)	Social Welfare	90 Meath St, The Liberties, Dublin 8, D08 TPH9
11. Intreo Centre Cork Street, Dublin 8	Social Welfare	Guild Building, Cork St, Dublin 8, D08 XH90
12. Dolphin's Barn Library	library	Parnell Rd, Crumlin, Dublin, D12 ET22
13. Donore Community Centre (currently closed following fire)	Community Centre	Donore Avenue, Dublin 8

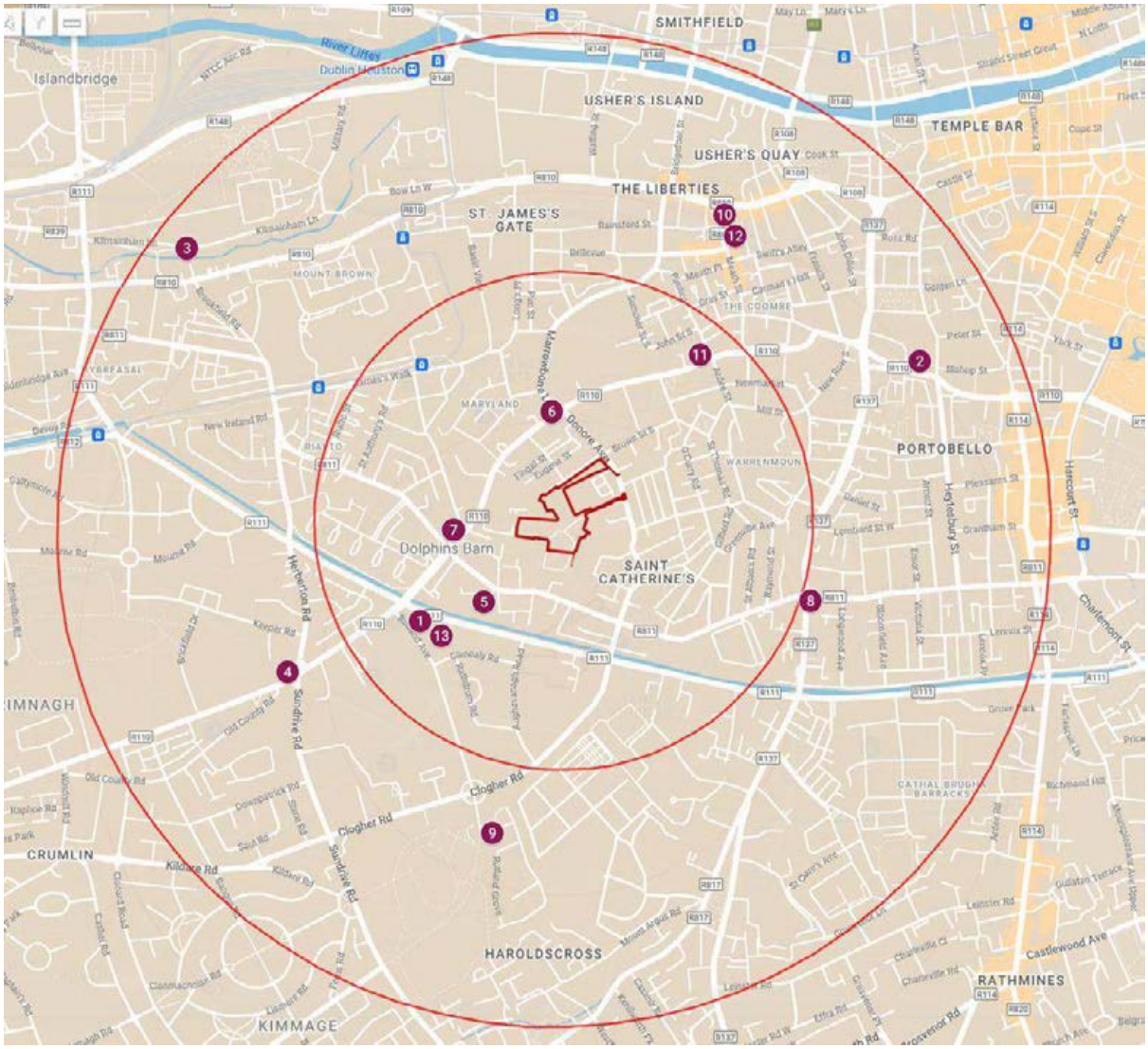

Figure 5.2: Overview of ancillary community facilities within 750m and 1.5 km of the subject site.

5.10 As set out above, it is considered the existing and proposed uses within the catchment area offer excellent service provision for the community. The surrounding area also benefits from other community, social, and ancillary infrastructure, including community centres, and essential public services.

Open Space, Sport & Recreation

5.11 Recreation and open space are an important part of every community's life. They require pro-active encouragement and enhancement to ensure participation by all within the local community. This section of the audit seeks to identify the type, functions, location and maintenance requirements of open spaces within the wider area and includes:

- An assessment of the quality and condition of facilities and fitness for purpose;
- The levels of use, needs and differing aspirations for open space by the community; and
- An evaluation of the existing provision against the identified needs, such as to identify areas of deficiency or surplus and other issues and opportunities.

5.12 The immediate area has a large range of open space areas suitable for cycling, running and walking. Despite its predominately developed and urban character, there are a range of open space and recreation areas nearby. For the purposes of this study open space and recreation facilities are considered to include parks, playgrounds, multi-use games areas, leisure facilities and sports pitches used by GAA, soccer and other clubs.

5.13 Quality recreation, leisure and amenity facilities have a fundamental impact on quality of life. It can improve social integration and cohesiveness. Sporting, recreation and leisure activities are of primary importance to the quality of life enjoyed by the local community.

5.14 We also note a number of Scout groups in the area including the 35th Dublin Donore Scout Group, 87th Polish Scout Group and 42nd Dublin Scout Group which provide an important recreational service for younger people.

5.15 There are a number of larger key parks discussed in detail below in addition to other open spaces and sport facilities in the vicinity (see accompanying map Figure 5.7).

(1) Weaver Park

5.16 Weaver Park is in the heart of the Liberties in Dublin's city centre. The park has a playground, a skatepark, benches and a pergola.

Figure 5.3: Weaver Park (Source: Google Images, 2022).

(2) Brickfield Park

5.17 Brickfield Park is in Drimnagh on the city's Southside. The park has a playground, soccer and all-weather pitches.

Figure 5.4: Brickfield Park (Source: Google Images, 2022).

(3) Eamonn Ceannt Park

5.18 Eamonn Ceannt Park in Crumlin is named after one of the executed leaders of the 1916 Rising. The park has soccer pitches, a 9-a-side all weather pitch, changing facilities, tennis courts, a basketball court, running track and an outdoor gym. It is also home to Dublin City's velodrome.

Figure 5.5: the Eamonn Ceannt Park (Source: Google Images, 2022).

(4) Flanagan's Field Community Garden

5.19 Flanagan's Fields community garden is an inner-city community garden located on Reuban Street and named after Dublin-born Michael Flanagan. The garden was established in 2010 and is still very much popular in the community. The garden

combines 21st-century growing methods and cutting-edge technology to grow a range of nutritious food.

Figure 5.6: Flanagan's Fields community garden (Source: Google Images, 2022).

5.20 This assessment demonstrates that there are a number of open space, sports and recreational uses within the study area. The proposed open spaces will make an important contribution to the existing open space in the area. As such it is considered that there is plenty of open space and sports activities located in the vicinity of the subject site which can accommodate the additional population that will be generated by the proposed development.

5.21 The facilities indicated above are deemed to be within a reasonable distance of the subject site. This is in addition to open spaces in close proximity to the site. Thus, the scheme includes good provision of sports and recreational facilities which will enhance the provision in the area.

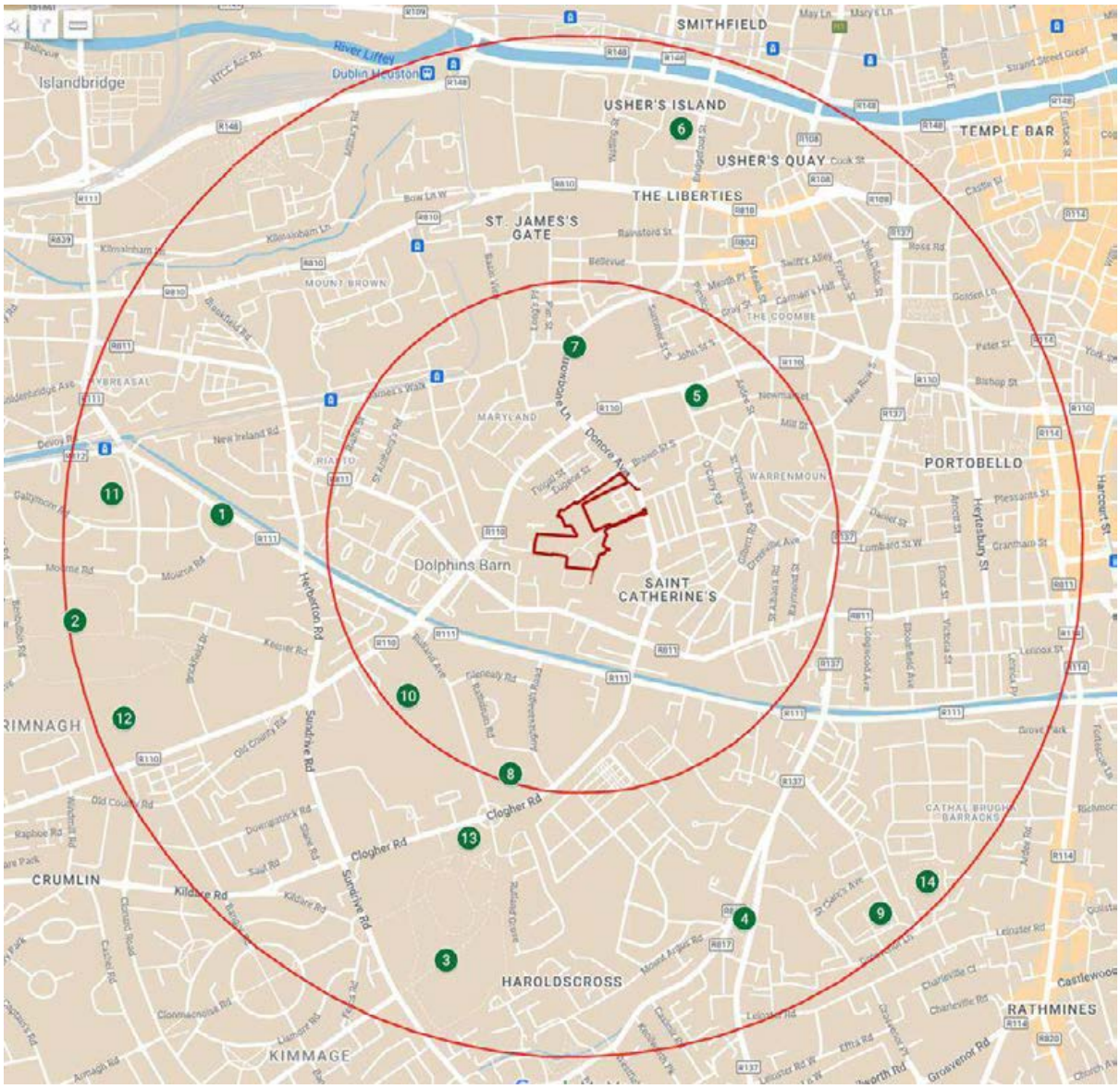

Figure 5.7: Overview of Open Space and Recreation Facilities within 750m and 1.5 km.

Name	Type	Address
1. Dolphin Rd Park and Outdoor Public Gym	Park	137 New Ireland Rd, Rialto, Drimnagh, Dublin, D08 FE0R
2. Brickfield Park	Park	Brickfield Park, Drimnagh, Dublin
3. Eamonn Ceannt Park	Park	Eamonn Ceannt Park, Harold's Cross, Dublin
4. Harold's Cross Park	Park	Harold's Cross Rd, Harold's Cross, Dublin
5. Weaver Park	Park	128 Cork St, Merchants Quay, Dublin, D08 K5RH
6. Bridgefoot Park	Park	Bridgefoot Street, Dublin 8.
7. Flanagan's Fields community garden	Garden	8 Reuben St, Ushers, Dublin 8, D08 W6F3
8. St Catherine's Community Sports Centre, The Liberties	Sports Centre	Marrowbone Ln, The Liberties, Dublin 8

9. Transport Club	Sports grounds	129A Rutland Ave, Crumlin, Dublin 12, D12 YH50
10. Stratford Lawn Tennis Club	Sports grounds	Grosvenor Square, Rathmines, Dublin, D06 HP90
11. Templeogue Synge Street GAA grounds	Sports grounds	65B, 65B Crumlin Rd, Crumlin, Dublin 12, D12 CPR2
12. Good Counsel GAA Club	Sports grounds	Davitt Rd, Goldenbridge, Drimnagh, Dublin 12
13. Iveagh Sports grounds	Sports grounds	Guinness Athletic Union Iveagh Grounds, Crumlin Rd, Crumlin, Dublin, D12 TY0R
14. Lourdes Celtic Football Club	Sports grounds	Sundrive Pavilion Eamonn Ceannt Park, Crumlin, Dublin 12
15. Portobello GAA Club	Sports grounds	Grosvenor Lane, Leinster Rd, Dublin 6, D06 PP29
16. Flanagan's Field Community Garden	Community Garden	8 Reuben St, Ushers, Dublin 8, D08 W6F3
17. Drimnagh Boxing Club	Recreation	Keeper Rd, Drimnagh, Dublin
18. 35th Dublin Donore Scout Group	Recreation	Arbutus Ave, Parnell Rd, Harold's Cross, Dublin 12
19. 87th Polish Scout Group	Recreation	100 Parnell Rd, Crumlin, Dublin
20. 55th Dublin Scout Group	Recreation	9, Village House, Dolphin's Barn St, Dolphin Barn, Dublin 8, D08 WF58

Educational Facilities

5.22 The following range of education facilities including: pre / after school, primary, secondary, third level colleges and further education facilities were identified within close proximity of the subject site.

5.23 The map below illustrates the high concentration of schools within a 1.5 km radius of the subject site. Appendix 1-2 lists details of individuals facilities.

5.24 The proposed development includes a childcare facility; the rationale and justification for this facility is set out in Appendix 3.

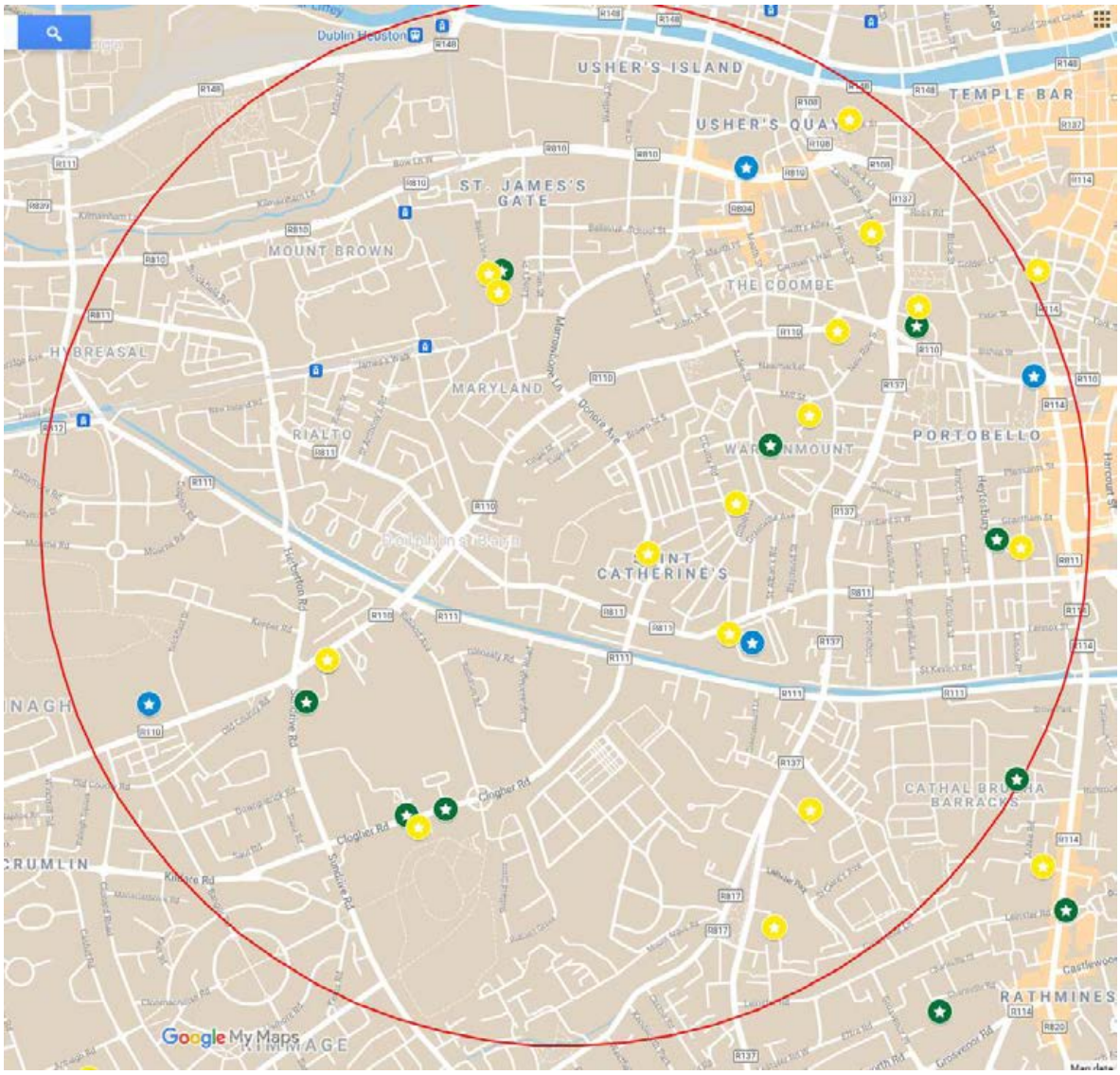

Figure 5.8: Overview of Education Facilities within 1.5 km with approximate locations.

	Primary Schools
	Secondary Schools
	Third level institutes

Primary Schools

5.25 The primary education sector includes a range of school types, including state-funded schools, special schools and private primary schools. The state-funded schools include religious schools, non-denominational schools, multi-denominational schools and Gaelscoileanna (Irish-medium schools).

5.26 The State pays the bulk of the building and running costs of state-funded primary schools. Although children are not obliged to attend school until the age of six, almost all children begin school in the September following their fourth birthday. Nearly 40% of four-year-olds and almost all five-year-olds are enrolled in infant classes in primary schools (sometimes called national schools). Primary education consists of an eight-year cycle: junior infants, senior infants, and first to sixth classes. Pupils normally transfer to post-primary education at the age of twelve.

5.27 We note 18 No. primary schools within 1.5 km of the subject site, catering for 3,577 No. pupils. Please see Appendix 2 for full list of these primary schools.

5.28 Based on an average primary school-going age cohort of 12% of the population (as per the Department of Education methodology for calculating school demand), the additional post-primary school-going population which would be required to be planned for within the South-West Inner City area equates to c. 201 no. children (5.8% of 3,577 at maximum occupancy).

Secondary Schools

5.29 The post-primary education sector comprises secondary, vocational, community and comprehensive schools. Secondary schools are privately owned and managed. Vocational schools are state-established and administered by Education and Training Boards (ETBs), while community and comprehensive schools are managed by Boards of Management.

5.30 Post-primary education consists of a three-year Junior Cycle (lower secondary), followed by a two- or three-year Senior Cycle (upper secondary), depending on whether the optional Transition Year (TY) is taken.

5.31 Students usually begin the Junior Cycle at age 12. The Junior Certificate examination is taken after three years. The main objective of the Junior Cycle is for students to complete a broad and balanced curriculum, and to develop the knowledge and skills that will enable them to proceed to Senior Cycle education The Senior Cycle caters for students in the 15-to-18-year age group. It includes an optional Transition Year, which follows immediately after the Junior Cycle. We have surveyed the number of schools in the wider 1.5 km area, as these schools are likely to serve the future residents of the proposed development.

5.32 We note 8 No. post-primary schools within 1.5 km of the subject site, catering for 1,968 No. pupils. Please see Appendix 3 for full list of these primary schools.

5.33 Based on an average secondary primary school-going age cohort of 8.5 % of the population (as per the Department of Education methodology for calculating school demand), the additional post-primary school-going population which would be required to be planned for within the South-West Inner City area equates to c. 143 no. children (7.2 % of 1,968 at maximum occupancy).

5.34 Following a nationwide demographic exercise carried out by the Department of Education and Science into the current and future need for primary and post-primary school places across the country, the Minister announced plans in April 2018, for the establishment of 42 new schools over the following 4 years (2019 to 2022). 26 of these schools are intended for primary level and 16 at post-primary level. However, the requirement for new schools is kept under on-going review and in particular would have regard to the impact of the increased rollout of housing provision to meet balanced regional development as outlined in Project Ireland 2040.

5.35 Considering the relatively small projected increase of students to the nearby school going population we consider there to be sufficient capacity within the existing schools for the future population.

Enrolment Trends

5.36 The Department of Education and Skills (DoES) reported in November 2021 that enrolment figures for primary schools in Ireland were likely to have reached peak levels in 2018 and are now projected to gradually decline in all population scenarios, with the preferred M1F2 scenario] suggesting a low point of c. 440,000 pupils by 2033. This is 120,860 lower than current figures. The DoES projection then anticipates an increase, expected to rise to 474,888 by 2040, an increase of 34,300 primary pupils over a 7-year period (2033-2040), in line with revised migration and fertility assumptions for the country. The latest statistical release by the DES in this respect state states: "Enrolments in primary schools in Ireland in 2020 stood at 561,411 down by almost 6,000 on 2019 (567,716)."

"…the sharpest fall is anticipated in the early period and will average 12,000 pupils per year between 2022 and 2028. Following the low point, in 2033 enrolments will rise more slowly in 2034-2036 before accelerating in 2040 (+6,967)"

5.37 Post-primary enrolments, however, is expected to continue to rise in the short-term and to reach record levels in 2024, with peak of c. 408,000 pupils, before falling gradually to c. 317,000 pupils by 2039. The DES report states:

"Enrolments in post-primary schools have risen by 26,923 (8%) over the past five years and are projected to continue rising over the short term. Under M1F2 they are projected to peak in 2024 with 408,794 pupils, some 29,610 higher than in 2020."

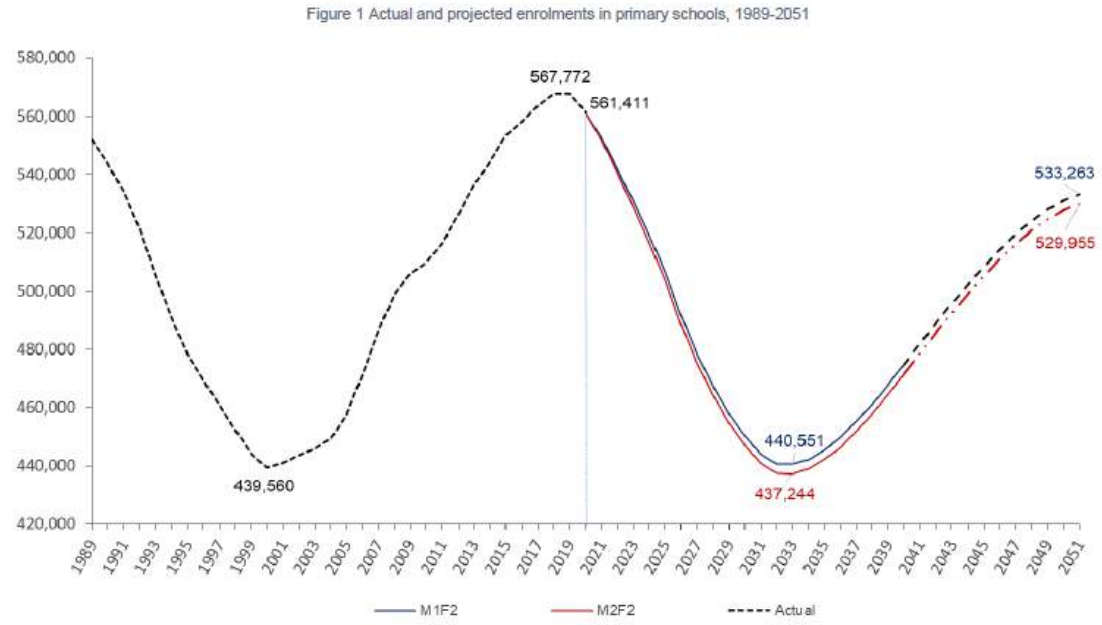

Figure 5.9: Projections of Enrolment at Primary Level, 1989–2051, organized by growth projection scenarios created by the CSO. (Source: DoE, November 2021).

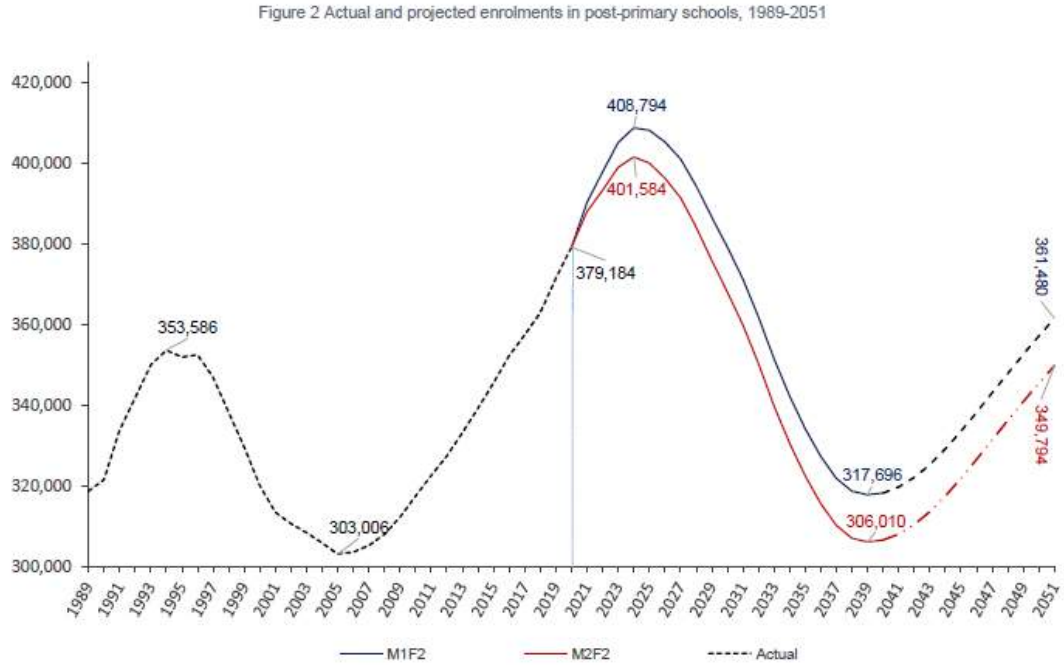

Figure 5.10: Projections of Enrolment at Post-Primary Level, 1989–2051, organized by growth projection scenarios created by the CSO. (Source: DoE, November 2021).

Schools' Admissions Notices

5.38 As per Section 63 of the Education (Admissions to School) Act, in 2018, the schools are required to publish an Annual Admissions Notice each year with key information about the annual admissions process. This Act further states that, although the schools can decide when to run their admissions process, they cannot accept applications for admissions for the school year concerned before 1 October in the previous year. This review helped determine the trend in schools for admitting students into the classes

each year. The admissions notices for almost all the schools (Primary and Post-Primary) indicated the spaces made available are for Junior Infants (722 spaces) in Primary Schools and first year (384 spaces) in Post Primary Schools. It should be noted that these are spaces made available for the academic 2022/2023, not existing capacity. Where schools have not provided sufficient information on their intake for the next academic year these have been assumed to be zero.

5.39 The schools have a combined total of 1,106 spaces available for 2022-2023 academic year of which 722 no. space catered to primary schools, 384 no. spaces to post primary schools.

Potential Impact on the Study Area

5.40 Using the projected enrolment figures for Dublin Region, produced within the Department of Education's publication Projections for full-time enrolment: Primary and Second Level, 2021-2040, we were able to extrapolate the future enrolment for the 2025-26 academic year for the study area.

5.41 The report projects the enrolment figures in primary schools within Dublin region to drop by 9.81% between academic years 2020/21 and 2025/26. Applying this future projection figure to the current enrolment figures within the study area it is estimated that the enrolments in 18 primary schools identified in the assessment are set to reduce by 350 spaces by the 2025/26 academic year.

5.42 At the post primary level, the report projects the enrolment figures to increase by 7.65% between the academic years 2020/21 and 2025/26. This would result in an increase of 150 children in the 8 post primary schools identified within the study area by 2025/26 academic year. We note that the indicative change figures provided are an estimate of potential enrolments at each school level based on the regional population projections included in the DoE report and do not represent localized values.

Third Level and Further Education

5.43 Third-level education in the Republic of Ireland includes all education after second level, encompassing higher education in universities and colleges and further education on Post Leaving Certificate (PLC) and other courses.

5.44 There are a number of third level institutes in the surrounding area which include:

- Trinity College, Dublin (TCD) is located at the heart of Dublin City Centre c.2.1 km from the subject site. Trinity College is widely considered one of Europe's elite universities, in part due to its historical significance. Academically, it is divided into three faculties comprising 23 schools, offering degree and diploma courses at both undergraduate and postgraduate levels. It now has over 15,000 undergraduate and postgraduate students.
- The National College of Art and Design (NCAD) is Ireland's oldest art institution, offering the largest range of art and design degrees at undergraduate and postgraduate level in the country. Originating as a drawing school in 1746, many of the most important Irish artists, designers and art educators have studied or taught in the college. The College has around 950 full-time students and a further 600 pursuing part-time courses.
- Technological University Dublin's Aungier Street Campus is located c.1.3 km m east of the subject site. The university was formed by the amalgamation of three existing institutes of technology in the Dublin area – Dublin Institute of

Technology, Institute of Technology, Blanchardstown, and Institute of Technology, Tallaght. TU Dublin now has over 3,000 staff and a student population of 28,500. The College of Business, the School of Media and the Department of Legal Studies are based in Aungier Street. Student facilities include the library; students' union area; computer rooms and cafeteria.

- Given the highly accessible nature of the site other large-scale universities such as Technological University Dublin's Tallaght Campus and University College Dublin are conveniently accessible via public transport (Luas and Bus respectively).
- There are a number of other further education facilities such as Griffith College, Pearse College, and Crumlin College of Further Education within close distance of the subject site.

5.45 It is clear that this part of Dublin City is well served by all types of education facilities.

Childcare Facilities

5.46 Within just c.1.5 km alone we noted 28 No. childcare facilities providing a range of services from full day to sessional for a range of age profiles with a cumulative capacity for 1,337 No. children. We have prepared a childcare facility assessment as part of this application, and this is contained within Appendix 3 which sets out full details of existing childcare facilities, and an assessment of future needs.

5.47 Considering the proposed development's characteristics, namely unit mix; the demographic profile of the area and the permitted provision of childcare facilities, the scale of development existing, under construction and permitted for the area, we submit that the proposed childcare facility as proposed as part of the overall apartment scheme is sufficient to meet the demand of the future population created by the proposed development.

5.48 The provision of a Creche/Childcare Facility of c.664 sqm (equating to c. 130 no. child spaces), in combination with recently permitted and existing childcare facilities in the area, meets the requirements of delivering this proposed scheme of development.

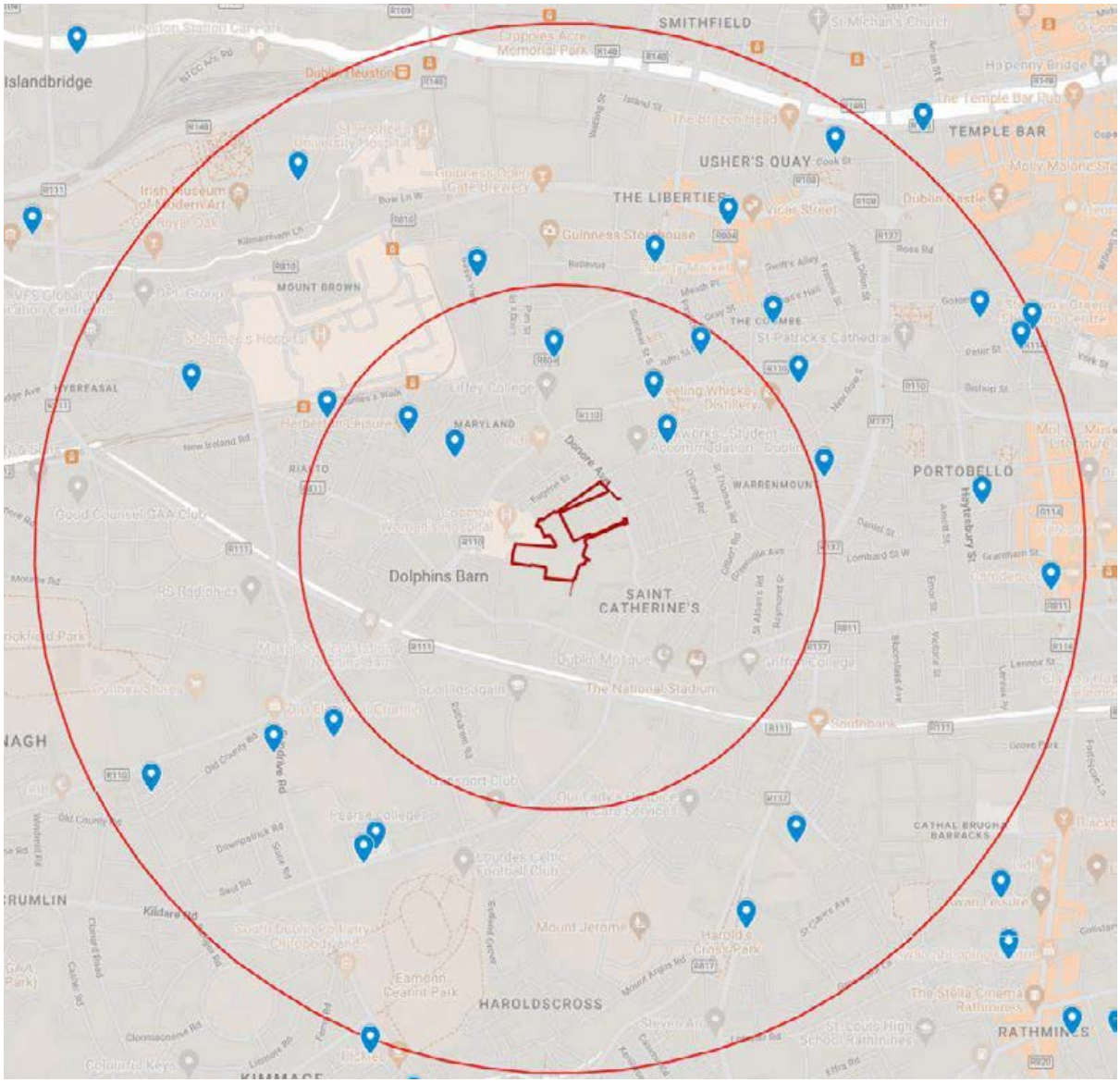

Figure 5.11 Overview of Childcare Facilities in within 1.5km (Source: Google Maps / Tulsa's Register of Early Year Services, dated: May 2022).

Healthcare Facilities

5.49 Healthcare within the study area is provided by a range of different organisations including public, voluntary and private agencies. The Health Services Executive is the primary agency responsible for delivering health and personal social services in Ireland. In recent years, primary care has been identified as the most effective and cost-efficient way to treat patients. This offsets dependence on the hospital system allowing most patient care to take place at local, community locations which feature multi-disciplinary teams of healthcare professionals working together.

5.50 For specialist services individuals may be willing to travel further, as the proposed development is located within the Great Dublin Area it has access to national public hospitals, private hospitals, high-tech hospitals, accident and emergency services, psychiatric hospitals, rehabilitation centres, orthopaedic hospital and hospices.

5.51 Many of the healthcare facilities are clustered around the City Centre. However, St. James' Hospital and The Coombe Women & Infants Hospital are located in close

proximity to the subject site providing a significant range of healthcare needs. The National Children's Hospital is currently under construction within the James's Hospital Campus and will provide a world class facility in the future. In addition, there are 2 other primary care centres in the area including Inchicore Primary Care Centre and Rialto Primary Care Centre, for more everyday healthcare needs.

5.52 We also note the Donore Community Drug & Alcohol Team whom are working with the community of Donore Avenue and the surrounding areas to assist all those affected by addiction problems, to promote healthy well-being and to improve the quality of life for those who use the service. This service is based in the Donore Youth and Community Centre.

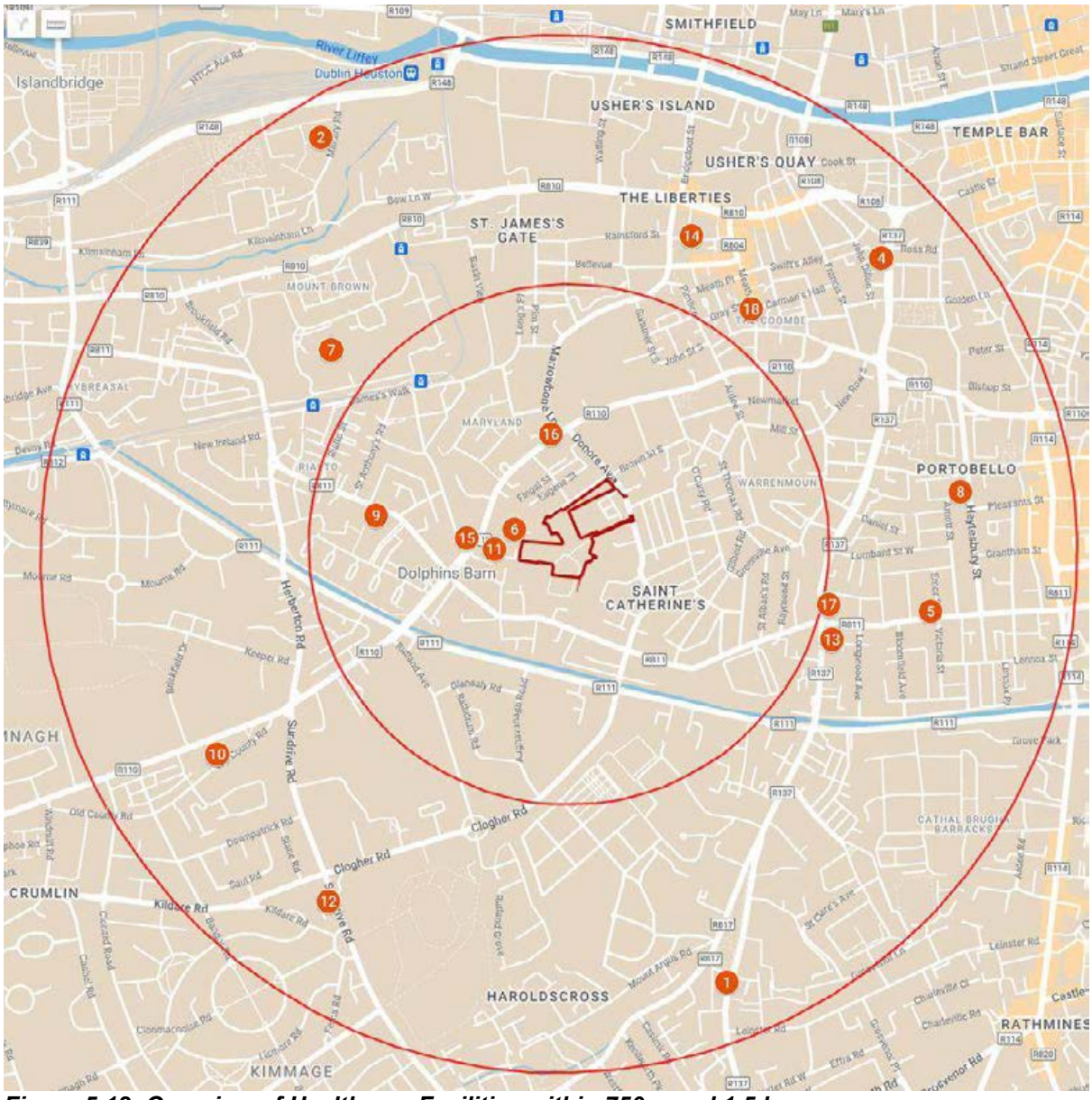

Figure 5.12: Overview of Healthcare Facilities within 750m and 1.5 km.

Name	Type	Address
1. Crown Dental Clinic	Dentist	196 Harold's Cross Rd, Terenure, Dublin, D6W VN24
2. Dublin Dental Specialist Clinic	Dentist	Heuston South Quarter, Unit 8A Dargan Building, Military Rd, Dublin
3. HSE Dental Clinic	Dentist	Old County Rd, Crumlin, Dublin
4. Patrick Street Dental	Dentist	Ardilaun Court, Nicholas House, Patrick St, The Liberties, Dublin 8
5. Portobello Dental Clinic	Dentist	34 S Circular Rd, Portobello, Dublin, D08 PHK2
6. Coombe Women's Hospital	Hospital	Cork St, Saint James' (part of Phoenix Park), Dublin, D08 XW7X
7. St. James's Hospital	Hospital	James St, Saint James' (part of Phoenix Park), Dublin 8, D08 NHY1
8. Old Meath Hospital	Primary Care Centre	Old meath hospital, Heytesbury St, Dublin
9. Rialto Primary	Primary Care Centre	383 S Circular Rd, Saint James' (part of Phoenix Park), Dublin 8, D08 RY99
10. Old County Road Health Centre	Primary Care Centre	57 Old County Rd, Crumlin, Dublin 12, D12 KT66
11. Coombe Family Practice	Private practice	8 Dolphin's Barn St, Saint James' (part of Phoenix Park), Dublin
12. Dr Catherine King	Private practice	172 Sundrive Rd, Kimmage, Dublin, D12 V2CY
13. South Circular Road GP Clinic	Private practice	106a S Circular Rd, Wood Quay, Dublin, D08 K2V6
14. Thomas Court Medical Centre	Private practice	1 St Catherine's Ln W, The Liberties, Dublin 8
15. Coombe Community Pharmacy	Pharmacy	Unit 2 Earls Court Building, Dolphin's Barn St, Dublin, D08 RDC9
16. Your Local Pharmacy	Pharmacy	McGoverns Corner, 2 Cork St, The Liberties, Dublin 8, D08 NP22
17. Leonards Corner Pharmacy	Pharmacy	106 S Circular Rd, Portobello, Dublin 8, D08 AHR8
18. Foley's Pharmacy	Pharmacy	39 Meath St, The Liberties, Dublin 8, D08 T0X4

Table 6.2: Overview of Healthcare Facilities within 750m and 1.5 km.

5.53 It is evident that there is a wide-ranging number and variety of health care facilities in the area. This level of provision within proximity to the subject site constitutes excellent service provision for the community and is considered sufficient to cater for the additional needs arising from the proposed development.

Religious Facilities

5.54 Religious and community facilities are a very important part in the provision of neighbourhood facilities. Due to its primacy and historic nature Dublin City has a range of religious facilities. In many cases, as described below community facilities are associated with these religious facilities.

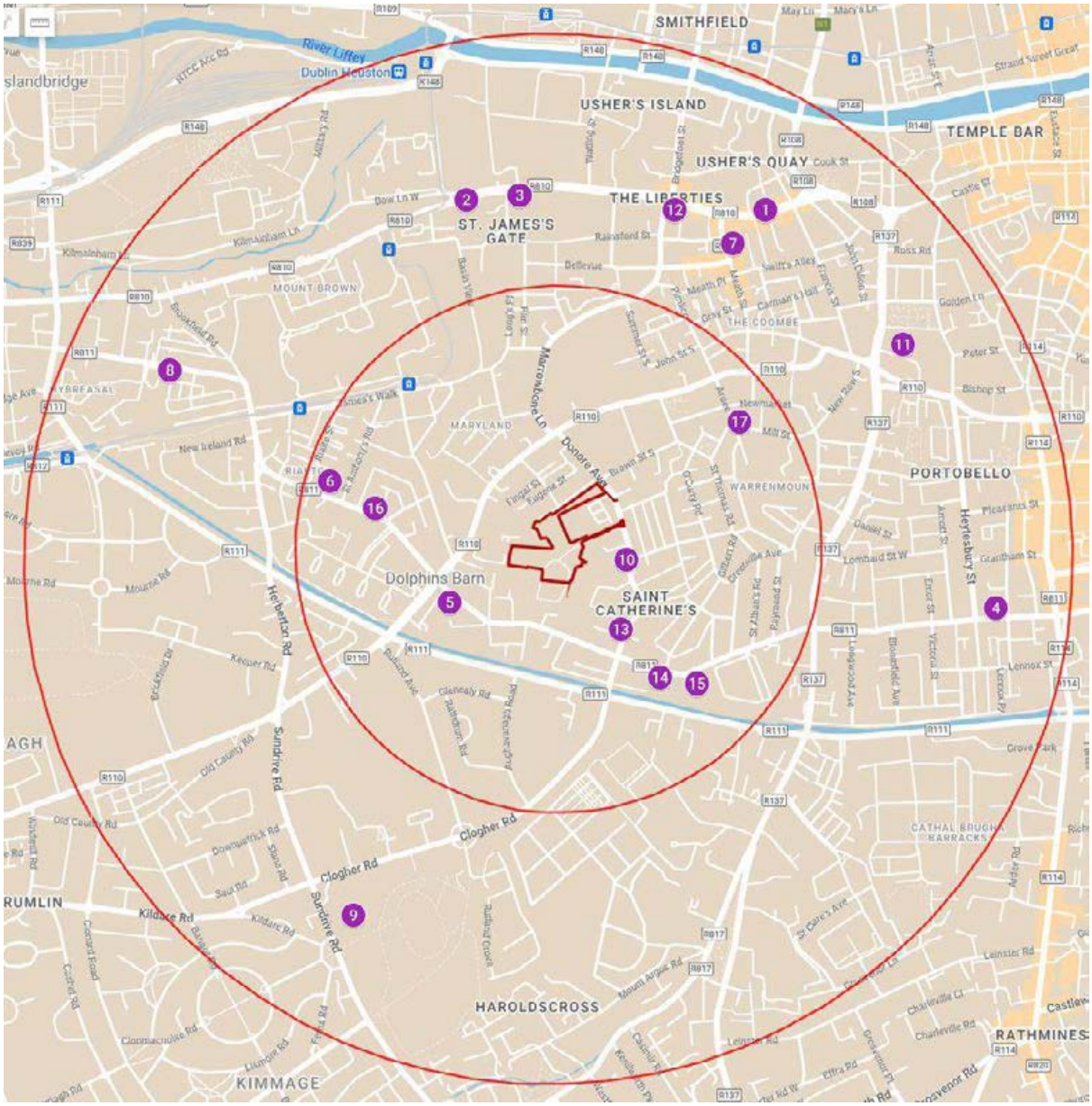

Figure 5.13: Overview of Religious Facilities within 750m and 1.5 km.

Name	Description
1. John's Lane Church	Catholic
2. Parish of St James	Catholic
3. Saint James's Roman Catholic Church	Catholic
4. St. Kevin's Church, Harrington Street, Dublin	Catholic
5. Our Lady of Dolours Church	Catholic

6. Rialto Parish Roman Catholic Church	Catholic
7. St Catherine's Church, Dublin	Catholic
8. St Peter's Church	Catholic
9. St. Bernadette's Church	Catholic
10. St. Teresa's Church	Catholic
11. St Patrick's Cathedral	Church of Ireland
12. Saint Catherine's Church of Ireland	Church of Ireland
13. St. Catherine & St. James' Church of Ireland	Church of Ireland
14. Dublin Mosque	Islam
15. All Nations Church	Not specified
16. House of the Rock	Not specified
17. Liberty Church	Not specified

Table 6.4: Overview of Religious Facilities within 750m and 1.5 km.

Arts & Cultural Facilities

5.55 It is widely recognised that arts and culture are key cornerstones in the sustainable development of new communities, helping to define and preserve identity, promote social activity, and offer valuable educational and economic returns. Dublin City has a strong network of artists, performers and musicians promoting cultural activities. Many of these organisations are difficult to pinpoint on a map, however this section attempts to identify some of the active organisations in the area.

5.56 Dublin City Council Arts Office provides a service that supports the development of creative people and communities through the Arts. Provision and support of high-quality arts experiences are central to the service. This is realised through research, programmes, events, grants and awards and the development of on-line and off-line resources.

5.57 Community, arts, cultural and exhibition space together with artist and photography studios, are proposed to be located within the Player Wills Factory as part of the adjacent Hines's development (ABP-308917-20). Provision for the expansion of St Catherine's National School has been accommodated within the Player Wills site within the application by Hines (ABP Reg. Ref. (ABP-308917-20).

Dublin City Cultural Audit and Map

5.58 DCC commissioned Turley to prepare a Cultural Audit and Map with recommendations in order to deliver Priority 2(4) and 3(1) of the Dublin City Cultural Strategy (2016-2021). This has in turn informed the preparation of the Dublin City Development Plan 2022 – 2028, The Dublin City Cultural Audit and Map is an audit, map and a dynamic database with cultural information about the city. Information on the map includes arts and heritage, parks and nature, sport and fitness, food, hobbies, community involvement and education, as well as artists and makers who call Dublin home.

5.59 We have cross referenced the findings of this audit which references many types of cultural and community facilities in Dublin. Figure 5.

5.60 In addition to the above, the following arts and cultural facilities have been identified in the study and provided a variety of uses to the community:

Name	Type	Address
1. The Royal Hospital Kilmainham in Kilmainham	Art Gallery	Military Road, Saint James' (part of Phoenix Park), Dublin 8
2. St. James's Gate Brewery	Museum	53 James's Street St James's Gate, Dublin 8
3. College of Dance	Venue	St. Catherine's Sports Centre, Marrowbone Lane, Dublin, D08 W5WC
4. The Village	Venue	Wexford St, Portobello, Dublin
5. Vicar Street	Venue	58-59 Thomas St, The Liberties, Dublin 8
6. Whelan's	Venue	25 Wexford St, Portobello, Dublin 2, D02 H527
7. Fumbally Exchange	Creative collective	Argus House, Blackpitts, The Liberties, Dublin 8
8. Islamic Foundation of Ireland	Cultural Centre	163 S Circular Rd, Saint Catherine's, Dublin 8, D08 F642
9. Afro-Eire	Music school	Church Park Ave, Harold's Cross, Dublin
10. Gallery Zozimus	Gallery and antiques	57 Francis St, The Liberties, Dublin 8, D08 HY72
11. Sarah Walsh, Artist. (formerly SCWalsh Painter & Printmaker)	Artist	Studio HX2 Mart Harolds Cross Village Studios, 18A Greenmount Ln, Harold's Cross, Dublin 12, D12 C953
12. Peter Young - Stained Glass Artist / Ireland	Artist	107 Cork St, Saint Catherine's, Dublin 8, D08 FX4C
13. Mia McVey Designs	Artist	Bow Ln W, Saint James' (part of Phoenix Park), Dublin, D08 NW89
14. ayelet lalor	Artist	Maryland, Dublin
15. Pallas Projects/Studios	Artist	115–117 The Coombe, Dublin 8 Ireland D08 A970
16. Teeling Whiskey Distillery	Tourist attraction	13-17 Newmarket, The Liberties, Dublin 8, D08 KD91
17. The Dublin Liberties Distillery	Tourist attraction	33 Mill St, The Liberties, Dublin, D08 V221
18. Irish Jewish Museum	Museum	3 Walworth Rd, Portobello, Dublin 8, D08 TD29

Table 6.5: Key cultural Facilities in South Dublin Inner City within 750m and 1.5 km.

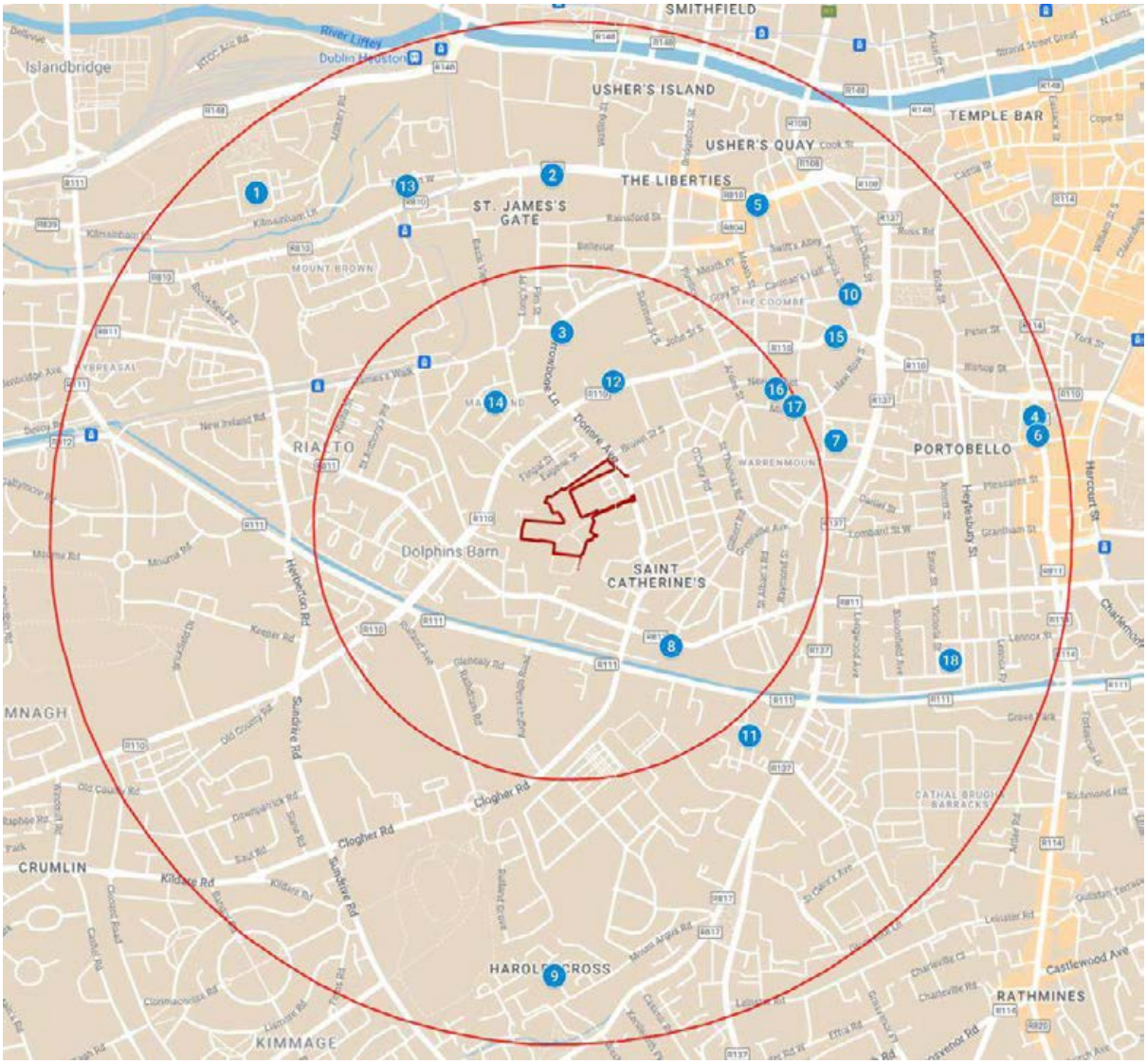

Figure 5.14: Overview of cultural resources (Source: Google Maps, 2022).

5.61 We note the following large-scale museum and locations in close proximity to the site from the map which have multiple functions in the area:

The Irish Museum of Modern Art

5.62 The Royal Hospital Kilmainham in Kilmainham, Dublin, is a former 17th-century hospital at Kilmainham in Ireland. The structure now houses the Irish Museum of Modern Art. The Royal Hospital in Kilmainham was finally restored by the Irish Government in 1984 and opened as the Irish Museum of Modern Art (IMMA). In recent years, Royal Kilmainham Hospital has become a popular location for concerts during the summer months.

St. James's Gate Brewery

5.63 St. James's Gate Brewery was founded in 1759, by Arthur Guinness and has historic significance in the area and internationally, now being a major tourist attraction. Originally leased in 1759 to Arthur Guinness at £45 per year for 9,000 years, the St. James's Gate area has been the home of Guinness ever since. The company has

since bought out the originally leased property, and during the 19th and early 20th centuries, the brewery owned most of the buildings in the surrounding area, including many streets of housing for brewery employees, and offices associated with the brewery. The attached exhibition on the 250-year-old history of Guinness is called the Guinness Storehouse.

Vicar Street

5.64 Vicar Street is a concert, performing arts centre and events venue in Dublin, Ireland. Located on Thomas Street, Dublin 8, Vicar and is known for music and comedy. Vicar St has a seated capacity of 1050 and a standing capacity of 1500. Opened in 1998 and Extended in 2002. Vicar Street is owned by Harry Crosbie and operated by Peter Aiken.

College of Dance, St. Catherine's Sports Centre

5.65 Founded in 1990, The College of Dance is now recognised as Ireland's premier dance college providing full-time, foundation level, professional dance and performing arts training. Its' graduates have gone on to study, and win scholarships to, some of the most prestigious international conservatoires for dance and theatre studies. Graduates can be found working in these fields worldwide.

Assessment

5.66 In response to Objective CUO22 which requires 5% of floorspace for developments above 10,000 sq.m, and as set out in the Statement of Consistency and the Architectural Design Statement, the proposal provides for significant planning benefits including the provision public open space, improved permeability in this area of the city, café, mobility hub, arts and cultural space, artist workspace, mobility hub, childcare facility, and a significant quantum of social and affordable housing.

5.67 The proposed development consists of a residential scheme containing 543 No. apartments with a Net Internal Area of 36,218m2. 5% of this area equates to 1,811m2. A minimum of 50% of this area must be provided on site in the form of community/arts/cultural space, which equates to 905.5m2.

5.68 Within the proposed development the applicant proposes to provide 952m2 of internal floor space devoted to a mixture of community, arts and cultural space, broken down as follows:

- Community: Creche 664m2
- Arts: Artist Workspaces 160m2
- Culture: Cultural space 128m2

5.69 For further detail on this space please see MW's Architectural Design Statement and associated drawings.

5.70 In order to meet the 5% requirement, this leaves a shortfall of 857m2 of floorspace to be provided within the vicinity of the site. It is proposed that that this shortfall of 857m2 would be accommodated within the proposed refurbished and extended nearby Donore Community Centre (which has been closed in recent years), which when complete, will have over 1,400m2 of community space. We attach a letter from Dublin City Council confirming acceptance of this proposal to satisfy compliance with Objective CU022.

The proposed development is considered to be acceptable in this regard. Accordingly, the needs of the future residents within the proposed development regarding cultural uses are adequately met. The proposed development will also support existing facilities in the area.

Retail

5.71 Dublin City has a wide range of choice and type of retail uses in the immediate area. Key retail facilities are concentrated in the St. Stephen's Green (located just outside 1.5km distance of the centre point of the site), George's Street and Grafton Street areas. In addition, there are a number of neighbourhood and local centres catering for more everyday needs, including a range of convenience and local shops along Cork Street.

5.72 Crumlin Shopping Centre (currently undergoing redevelopment), Clanbrassil Street is also located nearby which provides for a range of everyday needs and services.

5.73 The following mix of retail uses were noted in these neighbourhood and local centres:

- Clothes and retail
- Book shops
- Restaurants and cafes
- Hairdressers and barbers
- Pharmacies
- Electronics
- Discount food stores
- Post office
- Banks and credit unions
- Mechanics and Car repairs
- Social welfare and other civic services (Intreo Centre Cork Street)

5.74 When considering the range of retail and other services available nearby and within in Dublin City Centre, it is considered that the proposed development is well provided for. The proposed development will provide a small scale retail unit for everyday needs.

5.75 There are a range of existing shops and services along Cork Street including supermarkets, pharmacies, pubs and cafes much of which are located within a 5 minute walking distance of the site.

5.76 The scheme will support existing businesses and help vacant units on Cork Street find occupiers through the influx of additional people in the area.

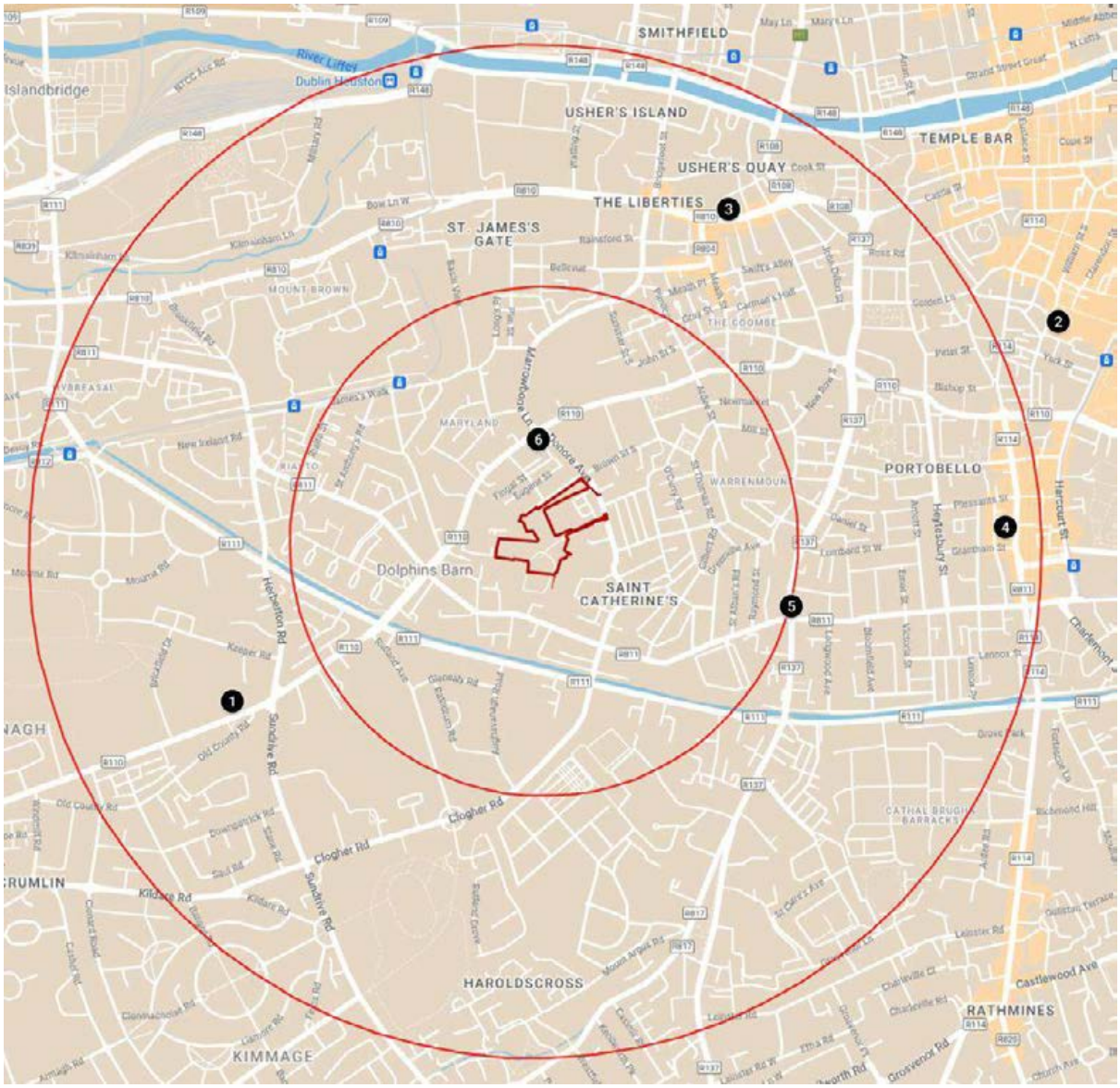

Figure 5.15: Key Retail Facilities in Dublin City within 750m and 1.5 km.

Name	Type	Address
1. Dunnes Stores	Shopping Centre	Crumlin Shopping Centre, Crumlin Rd, Crumlin, Dublin 12, D12 DRP4
2. Stephen's Green Shopping Centre	Shopping Centre	St Stephen's Green, Dublin, D02 HX65
3. Thomas Street	Local Retail	51 - 52 Thomas St, The Liberties, Dublin
4. Camden Street	Local Retail	The Lennox Building, 47-51 Richmond St S, Saint Kevin's, Dublin 2, D02 FK02
5. Clanbrassil Street	Local Retail	106 S Circular Rd, Portobello, Dublin 8, D08 AHR8
6. Cork Street	Local Retail	Cork Street.

Table 6.6: Key Retail Facilities in Dublin City within 750m and 1.5 km.

6.0 DEVELOPMENT PROPOSAL

6.1 It is considered that the proposed development will make a significant contribution to the built environment in Dublin City.

6.2 The development proposal has considered all of the requirements of SDRA12 and the Dublin City Development Plan, in particular the provision of the following:

- Public open space
- Retail / café unit
- Artist workspace, arts and cultural space including a childcare facility

6.3 The development will consist of the construction of a residential scheme of 543 no. apartments on an overall site of 3.26 ha.

6.4 The development (GFA of c. 53,227 sqm) contains the following mix of apartments: 225 No. 1 bedroom apartments (36 no. 1-person & 189 no. 2-person), 274 No. 2 bedroom apartments (including 52 No. 2 bed 3 person apartments and 222 No. 2 bed 4 person apartments), 44 No. 3 bedroom 5-person apartments, together with retail/café unit (168 sq.m.), mobility hub (52 sq.m.) and 952 sq.m. of community, artist workspace, arts and cultural space, including a creche, set out in 4 No. blocks.

6.5 The breakdown of each block will contain the following apartments:

- Block DCC1 comprises 111 No. apartments in a block of 6-7 storeys;
- Block DCC 3 comprises 247 No. apartments in a block of 6-15 storeys;
- Block DCC5 comprises 132 No. apartments in a block of 2-7 storeys;
- Block DCC6 comprises 53 No. apartments in a block of 7 storeys;

6.6 The proposed development will also provide for public open space of 3,408 sqm, communal amenity space of 4,417 sqm and an outdoor play space associated with the creche. Provision of private open space in the form of balconies or terraces is provided to all individual apartments.

6.7 The proposed development will provide 906 no. residential bicycle parking spaces which are located within secure bicycle stores. 5% of these are over-sized spaces which are for large bicycles, cargo bicycles and other non-standard bicycles. In addition, 138 spaces for visitors are distributed throughout the site.

6.8 A total of 79 no. car parking spaces are provided at undercroft level. Six of these are mobility impaired spaces (2 in each of DCC1, DCC3 & DCC5). 50% of standard spaces will be EV fitted. Up to 30 of the spaces will be reserved for car sharing (resident use only). A further 15 no. on-street spaces are proposed consisting of:

- 1 no. accessible bay (between DCC5 & DCC6)
- 1 no. short stay bay (between DCC5 & DCC6)
- 1 no. crèche set-down / loading bay (between DCC5 & DCC6)
- 1 no. set-down / loading bay (northern side of DCC5)
- 1 no. set-down/loading bay (northern side of DCC 3)
- 10 no. short stay spaces (north-east of DCC1)

6.9 In addition, 4 no. motorcycle spaces are also to be provided.

6.10 Vehicular, pedestrian and cyclist access routes are provided from a new entrance to the north-west from Margaret Kennedy Road. Provision for further vehicular, pedestrian and cyclist access points have been made to facilitate connections to the planned residential schemes on the Bailey Gibson & Player Wills sites for which there are extant permissions (Ref. No.'s ABP-307221-20 & ABP-308917-20).

6.11 The development will also provide for all associated ancillary site development infrastructure including site clearance & demolition of boundary wall along Margaret Kennedy Road and playing pitch on eastern side of site and associated fencing/lighting, the construction of foundations, ESB substations, switch room, water tank rooms, storage room, meter room, sprinkler tank room, comms room, bin storage, bicycle stores, green roofs, hard and soft landscaping, play equipment, boundary walls, attenuation area and all associated works and infrastructure to facilitate the development including connection to foul and surface water drainage and water supply.

6.12 The proposed development will also support the refurbishment and extended nearby Donore Community Centre (which has been closed in recent years), which when complete, will have over 1,400m2 of community space.

7.0 CONCLUSION

7.1 The purpose of this Assessment is to determine if the South Dublin Inner City area is well served by community related facilities to support the future residents of the proposed development.

7.2 In summary, it is considered that South Dublin inner city has a range open space and recreational facilities including a large number of education facilities, higher level college, and a good provision of community and local retail facilities located throughout the area. As such the facilities that South Dublin City currently offers are considered to be of a high standard and capable of meeting the needs of further residents of the Proposed scheme. They will be supplemented by the community and recreational facilities that will be development within the proposed scheme and adjoining sites as part of the regeneration of the St. Teresa's Gardens and adjoining land and will be able to support the future residents of the proposed development.

7.3 The site as it currently stands, provides no contribution to the built environment through public realm or retail for public use. The proposed development will include public open space, childcare, community, arts and cultural space, retail and high-quality pedestrian & cycling routes which will benefit the existing and the future residents in the area. Taken together with the additional community and recreational facilities planned by the City Council in the immediate vicinity of the subject site, the area will be well served by community, arts and cultural facilities to serve existing and future residents.

APPENDIX 1: LIST OF PRIMARY SCHOOLS WITHIN 1.5 km

Roll Number	Official Name	Address (Line 1)	Address (Line 2)	Ethos Description	Female	Male	Enrolment per Return	Admissions Notice
1. 13611D	Presentation Primary School	Warrenmount	Blackpitts	Catholic	130	74	204	50
2. 15625B	St Catherines West N S	Donore Avenue	South Circular Road	Church Of Ireland	101	101	202	27
3. 16786H	St Brigids Primary School	The Coombe	Dublin 8	Catholic	185	64	249	108
4.	SCOIL MHUIRE OGH 1	Crumlin Road	Dublin 12	Catholic	132	84	216	54
5. 17683C	Muire Og 2 Loreto Con	Crumlin Road	Dublin 12	Catholic	105	88	193	60
6. 17893N	Sancta Maria C B S	Synge Street	Dublin 8	Catholic	27	77	104	28
7. 18386B	Marist National School	Clogher Road	Crumlin	Catholic	189	50	239	60
8. 18477E	Scoil Na Mbrathar	John Dillon Street	Dublin 8	Catholic	14	154	168	22
9. 19480V	St Patricks	St Patrick's Close	Dublin 8	Church Of Ireland	15	15	30	48
10. 19933J	Scoil Treasa Naofa	Petrie Road	Donore Avenue	Catholic	70	110	180	26
11. 20012S	Griffith Barracks Multi D School	The Old Guardhouse	South Circular Road	Multi Denominational	167	194	361	56
12. 20104A	St Audoens Ns	Cook Street	Merchant's Quay	Catholic	79	102	181	22
13. 20429F	St. James's Primary School	Basin Lane	James' Street	Catholic	131	129	260	40
14. 20430N	Canal Way Educate Together National School	Basin Street Upper	Dublin 8	Multi Denominational	170	210	380	54
15. 16651H	St Clares Convent N S	Harold's Cross Road	Dublin 6W	Catholic	93	121	214	24
16. 14556D	St Endas	Whitefriar Street	Dublin 8	Catholic	61	62	123	21
17. 17603B	Scoil Iosagain Boys Senior	Aughavannagh Road	Dublin 12	Catholic		85	85	22

18. 00743W	Mater Dei National School	Basin Lane, James Street,	Dublin 8	Catholic	137	51	188	0
						Total	**3,577**	**722**

Source: last updated July 2022 https://www.gov.ie/en/collection/primary-schools/

APPENDIX 2: LIST OF POST-PRIMARY SCHOOLS WITHIN 1.5 km

Roll Number	Official School Name	Address 1	Address 2	Eircode	School Gender - Post Primary	Ethos/Religion	Female	Male	Total	Admissions Notice
1. 60560E	St Marys College	73-79 Lower Rathmines Road	Dublin 6	D06CH79	Boys	Catholic		467	467	96
2. 60660I	St Patricks Cathedral Grammar School	St Patricks Close	Dublin 8	D08WK19	Mixed	Church of Ireland	122	134	256	48
3. 60470D	Christian Brothers, Synge St.	Synge Street CBS Secondary School	Synge Street	D08R283	Boys	Catholic		279	279	48
4. 60800V	Loreto College	Crumlin Road	Dublin 12	D12E196	Girls	Catholic	381		381	72
5. 60792C	Presentation College	Warrenmount	Clarence Mangan Road	D08W0X7	Mixed	Catholic	131		131	48
6. 60410I	C.B.S. James Street	James's Street	Dublin 8	D08K338	Mixed	Catholic	53	108	161	
7. 70160R	Clogher Road Community College	Clogher Road	Crumlin	D12YP11	Mixed	Multi Denominational	50	134	184	
8. 68365A	Harolds Cross Educate Together Secondary School	151 -153 Harold's Cross Road	Dublin 6W	D6WHP44	Mixed	Multi Denominational	54	55	109	72
Total	**1,968**									**384**

Source: Statistics last updated July 2022 https://www.gov.ie/en/collection/post-primary-schools/#20212022

APPENDIX 3: CHILDCARE FACILITIES ASSESSMENT

Policy Context

Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas (2009)

The Guidelines state in Chapter 4 – Planning for Sustainable Neighbourhoods, that Planning Authorities should ensure efficient and integrated provision of schools, childcare, community centres, healthcare facilities and district/neighbourhood centres are made available for the wider community.

Section 4.5 of the Guidelines includes recommendations in response to childcare provision and specifically states the following:

"The Department's guidelines on childcare facilities (DoEHLG 2001) emphasise the importance of local assessment of the need to provide such facilities at the development plan or local area plan stage, having regard to the provision of existing facilities in the area. When considering planning applications, in the case of larger housing schemes, the guidelines recommend the provision of one childcare facility (equivalent to a minimum of 20 child places) for every 75 dwelling units. However, ***the threshold for such provision should be established having regard to the existing geographical distribution of childcare facilities and the emerging demographic profile of areas****, in consultation with city / county childcare committees. The location of childcare facilities should be easily accessible by parents, and the facility may be combined with other appropriate uses, such as places of employment."* (Emphasis added)

This report seeks to demonstrate that having regard to the existing and planned geographical distribution of childcare facilities in the area and having regard to the demand for childcare facilities from future residents of the development.

Guidelines for Planning Authorities on Childcare Facilities (2001)

The "Guidelines for Planning Authorities on Childcare Facilities" (2001) indicate that Development Plans should facilitate the provision of childcare facilities in appropriate locations. The Guidelines recommend that in larger new housing estates, Planning Authorities should require the provision of a minimum of one childcare facility with 20 places for each 75 dwellings. The threshold for provision should be established having regard to existing location of facilities and the emerging demography of the area where new housing is proposed. The Guidelines advise that sites should be identified for such facilities as an integral part of the pre-planning discussions.

The Guidelines state that '*planning authorities should require the provision of at least one childcare facility for new housing areas unless there are significant reasons to the contrary for example, development consisting of single bed apartments or where there are adequate childcare facilities in adjoining developments. For new housing areas, an average of one childcare facility for each 75 dwellings would be appropriate. (See also paragraph 3.3.1 and Appendix 2 below).* ***The threshold for provision should be established having regard to the existing geographical distribution of childcare facilities and the emerging demographic profile of areas.*** *Authorities could consider requiring the provision of larger units catering for up to 30/40 children in areas of major residential development on the basis that such a large facility might be able to offer a variety of services – sessional/drop in/after-school, etc'*. (Emphasis added)

We understand that a review of the Childcare Guidelines is scheduled by the Department, predicated on the accepted view that the current guidelines are too onerous / prescriptive.

Sustainable Urban Housing: Design Standards for New Apartments - Guidelines for Planning Authorities (2020)

The recommendations of the 2001 Childcare Facility Guidelines, outlined above, must be considered in the context of the Sustainable Urban Housing: Design Standards for New Apartments 2020, i.e., more recent Section 28 Ministerial Guidelines.

Section 4.7 of the Apartment Guidelines 2020 states the following in relation to childcare facilities:

"Notwithstanding the Planning Guidelines for Childcare Facilities (2001), in respect of which a review is to be progressed, and which recommend the provision of one child-care facility (equivalent to a minimum of 20 child places) for every 75 dwelling units, the threshold for provision of any such facilities in apartment schemes should be established having regard to ***the scale and unit mix of the proposed development and the existing geographical distribution of childcare facilities and the emerging demographic profile of the area****.* ***One-bedroom or studio type units should not generally be considered*** *to contribute to a requirement for any childcare provision and subject to location, this may also apply in part or whole, to units with two or more bedrooms*." (Emphasis added)

Demographic Profile

In order to gather a complete understanding of the immediate area we have prepared the following age profile of the local area focusing on education requirements (i.e., 0-19 years of age). The subject site is located in the Dublin City Council (DCC) local authority area and the South-West Inner City Local Electoral Area. The selected study area comprises the electoral divisions within a 1km radius as illustrated in Figure 1 below. For the purposes of comparison, we have also included figures for the state. Full figures are included as Appendix A.

Electoral divisions (ED's) were excluded were only marginally within the 1km radius. In total the following 13 No. ED's were included.

- Crumlin B
- Crumlin C
- Kimmage C
- Merchant's Quay B
- Merchant's Quay C
- Merchant's Quay F
- Merchant's Quay D
- Merchant's Quay E
- Ushers Quay F
- Ushers Quay C
- Ushers Quay D
- Ushers Quay E
- Wood Quay B

Figure 1: electoral divisions within 1km with site located. (Source: CSO 2016; Google Earth).

	State	%	LEA	%	DCC	%	EDs 1km	%
0-4	331,515	7.0%	2421	5.7%	30683	5.5%	2119	4.5%
05-12_	548,693	11.5%	2627	6.2%	42603	7.7%	2432	5.2%
13-19_	429,160	9.0%	1949	4.6%	38708	7.0%	1908	4.0%
Total population		**4,761,865**	**42,344**		**554,554**		**37,565**	

Table 1: Population for State, Dublin City & Local Electoral Areas broken down by age cohorts (source CSO Census 2016)

As clearly illustrated from the above, the numbers of children ages 0-4 requiring childcare are significantly lower than the state average. The LEA is similar to that of the wider DCC area but the selected ED's have a lower average at 4.5%.

Household Size

As evident from the below CSO (2016) figures, the household size in both DCC and the LEA are smaller than the state average.

Area	Households	Persons	Average Household Size
LEA 2019 South West Inner City	17,731	39,858	2.3
Dublin City Council	211,747	525,229	2.5
State	1,697,665	4,666,376	2.8

Table 2: Comparison of household size between the state, DCC and the LEA (CSO, 2016).

Applying the average household size to the proposed development resulting in an estimated population of 1,216 no. people.

Existing Childcare Providers

Within a radius of c.1.5 km from the subject site we noted 28 No. childcare facilities providing a range of services from full day to sessional for a range of age profile with a cumulative capacity for 1,337 No. children. Appendix B sets out full details of these 28 No. childcare facilities. Their geographic distribution is shown on Figure 2 below.

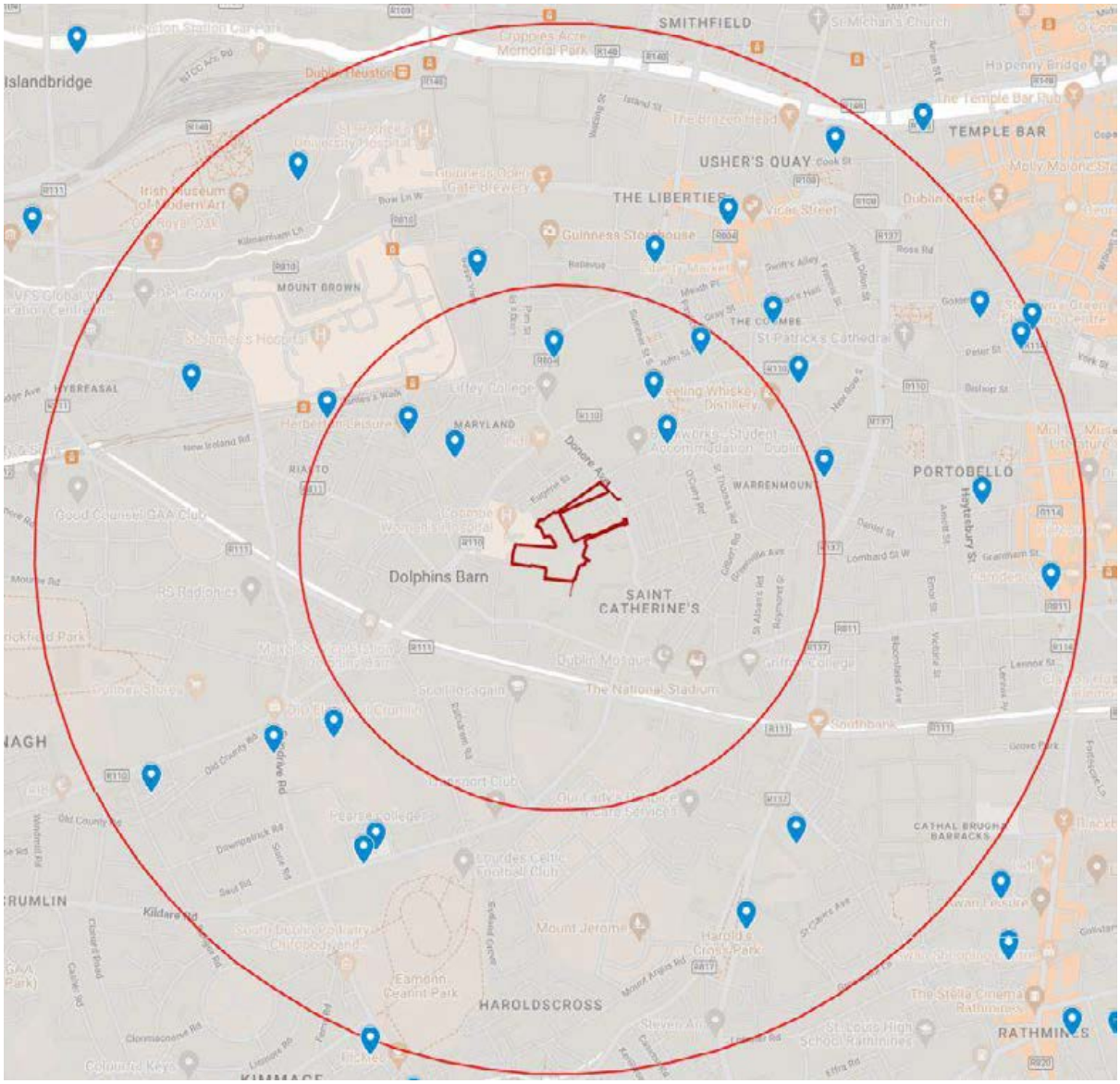

Figure 2: Overview of Childcare Facilities in within 750m and 1.5km (Source: Google Maps / Tulsa's Register of Early Year Services, August 2022).

Permitted Childcare Facilities

We note 2 No. permitted childcare facilities (subject to JR) in the immediate area at the following locations:

- Bailey Gibson (ABP-307221-20): a childcare facility/creche at ground floor level in BG1 with a gross floor area of 233 square metres.

- Player Wills (ABP-308917-20): a childcare facility with GFA of 275 sqm with dedicate play area.

Existing Childcare Demand

The CSOs Quarterly National Household Survey (QNHS), Childcare, Quarter 3 2016 is the most current available published national data on childcare statistics. It provides the following information of relevance to this assessment. This survey found that 19% of pre-school children in the State are cared for in a crèche / Montessori / playgroup / after school facility, with the highest rate of use to be found in Dublin at 25%.

According to Census 2016, there are 2,119 no. children aged between 0-4 years within the subject area (study area indicated in Figure 1). Based on data presented in QNHS, which demonstrates that 25% of school children in the Dublin area are cared for in a crèche/Montessori/playgroup/after school facility, this would indicate that there is an existing requirement for circa. 530 no. pre-school places in this catchment (2,119 / .25).

The analysis of existing facilities provided above demonstrates that there is a good level of facilities in the area catering for the demand for childcare provision. Therefore, it can reasonably be assumed that the existing population are being accommodated in the local area (by the 28 No. providers within 1.5 km with capacity for 1,337 spaces) and do not need to travel out of local area to avail of childcare facilities.

Assessment of Childcare Need

There are a number of ways to estimate the number of childcare places which would be required the needs of the residentials of the proposed apartment scheme. The first is to estimate the total population which the design of the scheme could accommodate. Based on the unit numbers and unit mix, it is estimated that if each unit was fully occupied to its design capacity, the proposed development could accommodate a population of 1,685 people.

Data extrapolated from Census 2016 identified that 5.7% of the local area population were children 0-4 years of age in the LEA. Applying this percentage to the projected population which could be housed in the proposed development would give an estimate of 96 No. children under 5 of the projected resident population.

Then as noted above only around one quarter of such pre-school age children in Dublin avail of childcare facilities, this would suggest that as few as 24 No. children may require the use of such a creche facility on site.

A second approach is to apply the methodology as set out in the Childcare Guidelines, as updated by the Apartment Guidelines, which states:

"Notwithstanding the Planning Guidelines for Childcare Facilities (2001), in respect of which a review is to be progressed, and which recommend the provision of one child-care facility (equivalent to a minimum of 20 child places) for every 75 dwelling units, the threshold for provision of any such facilities in apartment schemes should be established having regard to the scale and unit mix of the proposed development and the existing geographical distribution of childcare facilities and the emerging demographic profile of the area. One-bedroom or studio type units should not generally be considered to contribute to a requirement for any childcare provision and subject to location, this may also apply in part or whole, to units with two or more bedrooms."

The proposed development entails the following unit mix:

Types	Unit Numbers

1 bed	225
2 bed, 3 person	52
2 bed, 4 person	222
3 bed	44
Total	543
Total excluding 1 bed & 2 bed-3 person	318

Considering the above unit mix, the childcare requirement on the basis of 1 facility catering for 20 places per 75 No. units (excluding 1 bed units & 2 bed – 3 persons units) would be 85 No. places. (318 / 75 X 20 = 85).

Given that this figure is higher than the theoretical children projected population, it is proposed that a creche facility capable of accommodating 85 No. children will be provided on site as part of the overall development, in accordance with the Childcare Guidelines.

Appendix A: Age Profile Data

Age Group	LEA	DCC	State	ED's
0	598	6,602	62,257	509
1	476	6,123	64,029	405
2	483	6,050	66,318	440
3	419	5,949	68,076	375
4	445	5,959	70,835	390
5	411	5,930	72,404	368
6	394	5,836	72,517	363
7	352	5,713	72,166	320
8	331	5,454	71,524	296
9	300	5,004	66,950	274
10	277	4,901	64,793	262
11	262	4,868	64,014	264
12	300	4,897	64,325	285
13	252	4,861	63,531	227
14	246	5,066	62,813	240
15	221	4,938	61,643	218
16	216	5,090	60,989	222
17	246	5,430	61,318	256
18	371	6,499	61,294	365
19	397	6,824	57,572	380
20-24	4,109	44,484	273,636	3643
25-29	6,443	60,867	297,435	5043
30-34	6,120	58,889	361,975	4728
35-39	4,767	49,561	389,421	3823
40-44	3,084	38,021	357,460	2697
45-49	2,343	34,093	326,110	2192
50-54	1,866	31,743	299,935	1814
55-59	1,664	28,792	270,102	1649
60-64	1,338	23,755	238,856	1400
65-69	1,127	20,984	211,236	1268
70-74	835	17,027	162,272	913
75-79	640	14,161	115,467	757
80-84	517	10,857	81,037	612
85+	494	9,326	67,555	567
Total	42,344	554,554	4,761,865	37565

(Source: CSO, 2016)

Age	Merchants Quay C	Usher F	Merchant Quay D	Wood Quay B	Merchants Quay E	Ushers E	Ushers C	Ushers D	Merchants Quay F	Crumlin B	Kimmage C	Crumlin C	Merch Quay B
0	30	32	22	40	25	23	74	37	107	29	38	24	28
1	38	22	28	31	29	20	56	28	24	31	30	27	41
2	42	32	30	27	14	22	87	28	23	34	36	32	33
3	31	29	20	29	21	25	58	27	18	31	20	41	25
4	35	32	30	24	12	26	49	35	36	40	26	19	26
5	36	24	26	16	24	21	54	29	21	37	25	30	25
6	29	27	18	24	13	29	49	25	24	38	28	37	22
7	26	24	23	25	12	27	43	21	20	30	25	22	22
8	18	16	24	28	13	27	39	29	7	22	35	22	16
9	20	15	16	18	21	17	42	12	18	34	22	29	10
10	19	18	15	22	7	24	43	18	12	31	16	20	17
11	19	20	9	21	11	15	37	11	20	34	22	28	17
12	27	20	24	19	7	21	41	19	16	32	20	19	20
13	20	14	11	17	4	18	37	16	10	24	10	27	19
14	19	17	9	14	5	23	34	14	12	28	18	28	19
15	24	25	6	13	8	14	29	11	9	27	15	23	14
16	19	13	9	9	12	12	30	16	8	42	22	16	14
17	21	20	13	19	19	21	28	7	7	43	12	30	16
18	32	19	11	22	50	20	48	35	19	38	11	25	35
19	30	24	12	23	98	18	32	23	13	32	15	24	36
20-24	371	222	180	327	590	139	304	184	214	196	243	168	505
25-29	631	352	246	528	325	184	524	262	302	204	473	188	824
30-34	552	346	276	421	315	179	541	284	302	214	386	216	696
35-39	378	354	207	340	249	163	438	224	262	187	317	199	505
40-44	250	276	171	276	133	119	305	175	187	209	196	175	225
45-49	172	220	156	228	119	100	245	147	115	207	139	147	197
50-54	144	197	104	200	87	93	203	115	87	202	126	132	124

55-59	130	176	104	153	72	115	151	109	77	177	133	133	119
60-64	116	167	90	112	62	96	119	83	59	165	123	115	93
65-69	107	160	89	131	40	65	88	64	52	174	123	88	87
70-74	64	137	53	84	35	43	57	47	20	136	92	98	47
75-79	47	147	59	60	25	22	42	21	30	110	83	72	39
80-84	40	137	53	57	15	25	29	16	17	73	74	49	27
85+	29	150	41	56	17	24	27	16	10	57	89	28	23
Total	3,566	3,484	2,185	3,414	2,489	1,790	3,983	2,188	2,158	2,968	3,043	2,331	3,966

(Source: CSO, 2016)

Appendix B
Existing Childcare Facilities in Local Area [August 2022]

Tusla Number	Service Name	Address	Town	Age Profile	Service Type	No. Of Children Service Can Accommodate
TU2015DY269	Kiddies Korner	292 Sundrive Road, Crumlin	Dublin 12	0 - 6 Years	Full Day Part Time Sessional	40
TU2015DY237	Loreto Preschool	Loreto Primary School, Crumlin Road, Crumlin	Dublin 12	2 - 6 Years	Sessional	33
TU2015DY341	Pearse College Nursery	Pearse College, Clogher Road, Crumlin	Dublin 12	0 - 6 Years	Full Day Part Time Sessional	93
TU2015DY286	Stepping Stones Montessori	23 Ardagh Road, Crumlin	Dublin 12	2 - 6 Years	Sessional	11
TU2015DY241	The Marist Creche	Marist Primary School, Clogher Road, Crumlin	Dublin 12	2 - 6 Years	Sessional	40
TU2015DY381	D2 Montessori	6 Camden Street Upper	Dublin 2	1 - 5 Years	Full Day Part Time Sessional	52
TU2015DY332	YMCA Childcare	YMCA Childcare, 53 Aungier Street	Dublin 2	0 - 6 Years	Full Day Part Time	129
TU2015DY297	Leinster Park Montessori	139 Harolds Cross Road, Harolds Cross	Dublin 6W	2 - 6 Years	Sessional	31
TU2015DY295	St. Clare's Pre-School Limited	St. Clare's Pre School, Harolds Cross Road, Ha	Dublin 6W	2 - 6 Years	Sessional	22
TU2015DY305	Bowers Childcare Ltd	Block C, Brabazon Hall, Ardee Street	Dublin 8	0 - 6 Years	Full Day Part Time Sessional	50
TU2015DY244	Connolly Children's Centre	Ashgrove Community Centre, The Coombe, I	Dublin 8	1 - 6 Years	Full Day Part Time Sessional	40
TU2015DY357	Dolphin Creche	310 - 311 Dolphins House, Rialto	Dublin 8	1 - 6 Years	Part Time	21
TU2015DY246	Fatima Groups United Children's Day	78 Reuben Street, Rialto	Dublin 8	1 - 5 Years	Full Day Part time	58
TU2015DY285	Lighthouse Montessori School	6a Pleasants Street	Dublin 8	2 - 5 Years	Full Day Part Time	21
TU2016DY022	Mayfield Montessori	8 Mayfield Road, Kilmainham	Dublin 8	2 - 6 Years	Sessional	22
TU2015DY312	Mercy Family Centre	South Brown Street, Weaver Square	Dublin 8	0 - 5 Years	Part Time	170
TU2015DY291	Safari Childcare	The Hibernia Building, Heuston Sth Quater,	Dublin 8	1 - 6 Years	Full Day Part Time Sessional	120

TU2015DY342	School St & Thomas Court Bawn FRC	School Street, Pimlico	Dublin 8	0 - 5 Years	Full Day Part Time Sessional	52
TU2015DY334	Sophia Nurturing Centre	Sophia Housing, 25 Cork Street	Dublin 8	0 - 6 Years	Full Day Sessional	21
TU2015DY403	St John of God Menni Early Services	25 Cork St.	Dublin 8	0 - 6 Years	Sessional	6
TU2015DY337	St. Audoen's Pre-school	Cook St, Merchants Quay	Dublin 8	3 - 6 Years	Sessional	11
TU2015DY346	Wee Tots Creche and Pre School	Fountain Resource Group, 2A Basin Street	Dublin 8	0 - 6 Years	Full Day Part Time Sessional	44
TU2015DY261	Whitefriars Childcare Ltd	Alexandra Walk, Whitefriar Street	Dublin 8	0 - 5 Years	Full Day Part Time	40
TU2015DY401	Whitefriars Childcare Ltd	Newmarket Hall, St Lukes Avenue, Cork St.	Dublin 8	2 - 6 Years	Sessional	29
TU2019DY008	Footprints Early Years	St Catherines Sport Centre, Merchants Quay,	Dublin 8	2 - 6 Years	Part Time Sessional	22
TU2015DY248	St Joseph's ECDS	St Josephs Early Childhood Care Education Centre, Morningstar Road,	Dublin 8	2 - 6 Years	Full Day, Sessional	32
TU2015DY290	Child's Play	Blackpitts House, 1A St. Kevin's Avenue, Blackpitts	Dublin 8	0 - 6 Years	Full Day, Part Time, Sessional	70
TU2015DY369	Saoirse Waldorf School T/A Dublin Steiner School	92 Meath St	Dublin 8	3 - 5 Years	Full Day	32
TU2015DY358	Scallywags Creche	Carmelite Community Centre, 56 Angier Street	Dublin 2	1 - 6 Years	Part Time	25
					Total	**1,337**

(Source: Tusla Register of Early Years services Link: https://www.tusla.ie/uploads/content/Dublin_Aug22_1.pdf)

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Appendix F

Appendix 5.1. Bat Fauna Assessment

05th December 2022

Prepared by: Bryan Deegan (MCIEEM) of Altemar Ltd.
On behalf of: The Land Development Agency

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SUMMARY

Structure:	The site consists of a mixed greenfield site, built land brownfield site, and an existing construction compound. There are a number of walls and trees located on site.
Location:	A site located on the former St. Teresa's Gardens, Donore Avenue, Dublin 8.
Bat species present:	During the 2021 survey, a single Soprano Pipistrelle (*Pipistrellus pygmaeus*) roost was noted within ivy to the south of the subject site (outside the site outline). Minor foraging was also noted within the proposed site during this survey. During the 2022 survey, the single Soprano Pipistrelle roost noted in 2021 was no longer being used. Minor foraging and transiting were noted during the 2022 survey.
Proposed work:	Residential Development.
Impact on bats:	No confirmed bat roosts bat roosts will be lost. No trees of bat roosting potential are noted on site. The proposed development will change the local environment as new structures are to be erected and some of the existing vegetation will be removed. The development is likely to displace bats from foraging at the site during construction. Based on the small number of common species found using the site the displacement from this site it will not have any significant effect on local bat populations, and that any such effect will be only significant at the local level. No bat roosts or potential bat roosts will be lost due to this development. However, foraging activity on site may be reduced in the short-medium term until the landscaping matures. The proposed development is not in proximity to sensitive bat areas. The potential for collision risk and impact on flight paths in relation to bats is considered is considered low due to the low level of bat activity on site and the buildings would be deemed to be clearly visible to bats.
Survey by:	Bryan Deegan MCIEEM
Survey date:	27th August 2021 and 7th July 2022

Receiving Environment

Background

The Land Development Agency, on behalf of Dublin City Council, gives notice of its intention to make an application for approval to An Bord Pleanála for a seven year permission in relation to a proposed residential development at this site located on the former St. Teresa's Gardens, Donore Avenue, Dublin 8. The site is bound by Donore Avenue to the north-east, Margaret Kennedy Road to the north-west, The Coombe Women & Infants University Hospital to the west, the former Bailey Gibson factory buildings to the south-west, and the former Player Wills factory to the south-east. The development will consist of the construction of a residential scheme of 543 no. apartments on an overall site of 3.26 ha.

The current site is part of the overall Strategic Development & Regeneration Area (SDRA) 11. This site lies at the centre of the SDRA 11 lands.

The development (GFA of c. 53,227 sqm) contains the following mix of apartments: 225 No. 1 bedroom apartments (36 no. 1-person & 189 no. 2-person), 274 No. 2 bedroom apartments (including 52 No. 2 bed 3 person apartments and 222 No. 2 bed 4 person apartments), 44 No. 3 bedroom 5-person apartments, together with retail/café unit (168 sq.m.), mobility hub (52 sq.m.) and 952 sq.m. of community, artist workspace, arts and cultural space, including a creche, set out in 4 No. blocks.

The breakdown of each block will contain the following apartments:

- Block DCC1 comprises 111 No. apartments in a block of 6-7 storeys;
- Block DCC 3 comprises 247 No. apartments in a block of 6-15 storeys;
- Block DCC5 comprises 132 No. apartments in a block of 2-7 storeys;
- Block DCC6 comprises 53 No. apartments in a block of 7 storeys;

The proposed development will also provide for public open space of 3,408 sqm, communal amenity space of 4,417 sqm and an outdoor play space associated with the creche. Provision of private open space in the form of balconies or terraces is provided to all individual apartments.

The proposed development will provide 906 no. residential bicycle parking spaces which are located within secure bicycle stores. 5% of these are over-sized spaces which are for large bicycles, cargo bicycles and other non-standard bicycles. In addition, 138 spaces for visitors are distributed throughout the site.

A total of 79 no. car parking spaces are provided at undercroft level. Six of these are mobility impaired spaces (2 in each of DCC1, DCC3 & DCC5). 50% of standard spaces will be EV fitted. Up to 30 of the spaces will be reserved for car sharing (resident use only). A further 15 no. on-street spaces are proposed consisting of:

- 1 no. accessible bay (between DCC5 & DCC6)
- 1 no. short stay bay (between DCC5 & DCC6)
- 1 no. crèche set-down/ loading bay (between DCC5 & DCC6)
- 1 no. set-down / loading bay (northern side of DCC5)
- 1 no. set-down/loading bay (northern side of DCC 3)
- 10 no. short stay spaces (north-east of DCC1)

In addition, 4 no. motorcycle spaces are also to be provided.

Vehicular, pedestrian and cyclist access routes are provided from a new entrance to the north-west from Margaret Kennedy Road. Provision for further vehicular, pedestrian and cyclist access points have been made to facilitate connections to the planned residential schemes on the Bailey Gibson & Player Wills sites for which there are extant permissions (Ref. No.'s ABP-307221-20 & ABP-308917-20).

The development will also provide for all associated ancillary site development infrastructure including site clearance & demolition of boundary wall along Margaret Kennedy Road and playing pitch on eastern side of site and associated fencing/lighting, the construction of foundations, ESB substations, switch room, water tank rooms, storage room, meter room, sprinkler tank room, comms room, bin storage, bicycle stores, green roofs, hard and soft landscaping, play equipment, boundary walls, attenuation area and all associated works and infrastructure to facilitate the development including connection to foul and surface water drainage and water supply.

The proposed site outline and location are demonstrated in Figure 1. The proposed site outline overlaid on the most recent satellite imagery available on Google Earth Pro (dated 03/2022) is demonstrated in Figure 2. The proposed site layout plan and elevations are demonstrated in Figures 3 & 4.

***Figure 1**. Proposed site outline and location*

Figure 2 *– Proposed site outline and location – Google Earth Pro (Image dated 03-2022)*

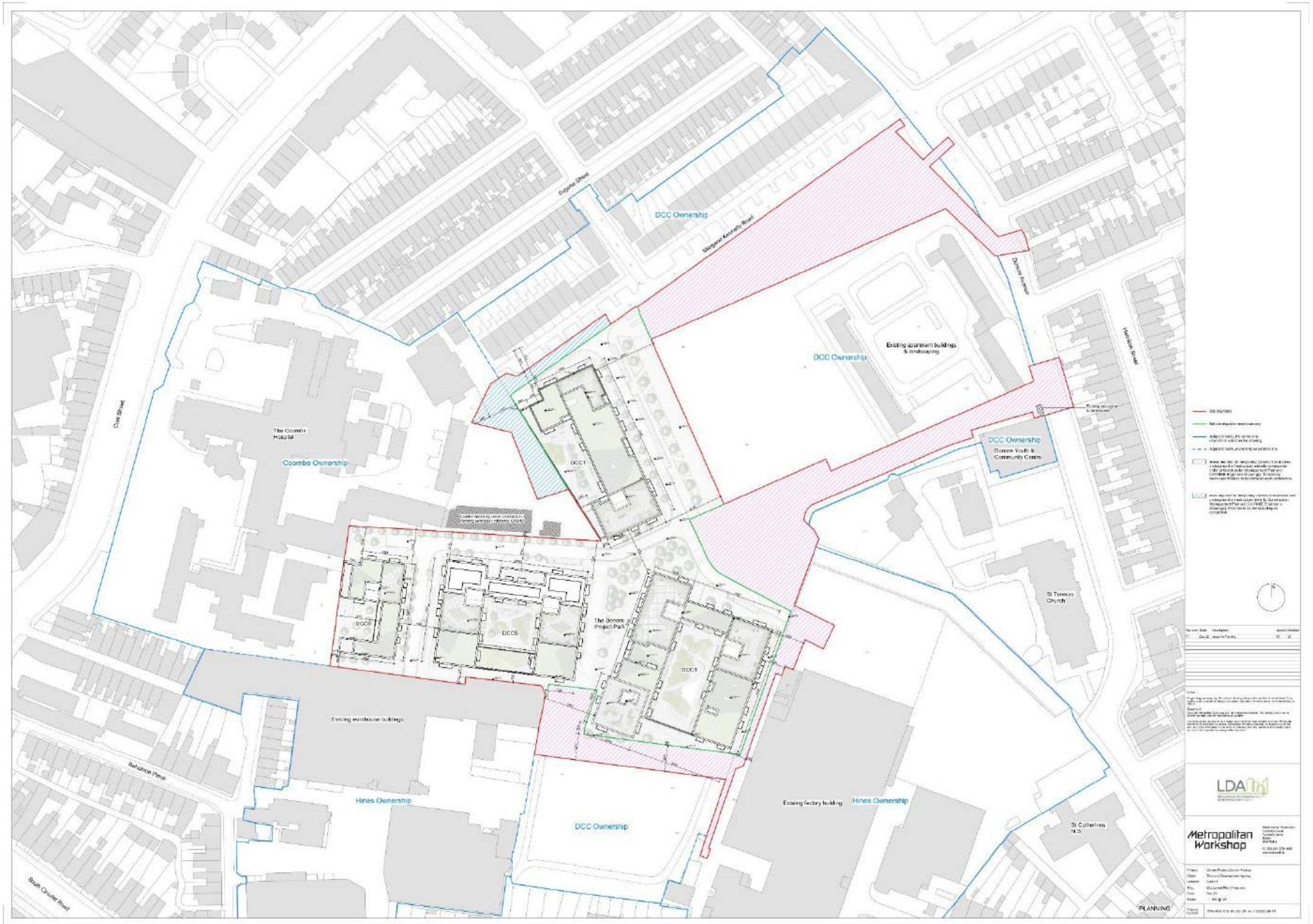

Figure 3 *– Proposed site layout plan*

Figure 4 *– Proposed site elevations*

Landscape

A landscape strategy has been prepared by AECOM to accompany this planning application. The proposed landscape masterplan is demonstrated in Figure 5.

Lighting

A Mechanical & Electrical Report has been prepared by AECOM to accompany this planning application. This report outlines the following measures adopted within the lighting strategy for the subject site:

i. '*Consciously positioned luminaires, so as to limit negative spill and light pollution whilst also maintaining the required lux levels uniformly across the pedestrian footpath around the development.*
ii. *An asymmetrical beam optic is employed to physically contain unnecessary light spillage and light pollution.*
iii. *Illumination levels within the Donore Project residential roads will be kept to a minimum to meet the conditions of classification P4, that is, 5-lux average with a minimum of 1-lux, as set out in Table 3 of IS EN 13201-2:2015; a uniformity ratio of 0.2 will be achieved in all areas. Said scheme also complies with the National Transport Authority's (NTA) guidance's for cycle/pedestrian routes) at ground level as per Dublin City Council requirements while maintaining uniformity. It should be noted that this minimum light level meets the minimum safe levels for pedestrians as set out in BS5489-1:2013.*
iv. *It is proposed that 6-metre-high LED lamp standards will provide illumination to the residential roads. This design is cognisant of the fact that light pollution both in terms of sky glow and light spill. It is assumed that the public will be required to match the existing development for consistency. Based on initial information provided these shall be Thorn Lighting ISARO Pro. Lighting poles shall be provisionally provided at 20m centres, subject to verification at the next stage of design.*
v. *On the pedestrian walkway throughout the Donore Project site and the pedestrian walkway exiting the site, features type luminaires will be provided. These areas are designed to classification P4 (5 Lux average, with a minimum of 1 Lux, as stipulated in IS EN 13201-2:2015).*'

The proposed external lighting layout is demonstrated in Figure 6.

Figure 5 *– Proposed landscape masterplan*

Figure 6 *– Proposed external lighting layout*

Competency of Assessor

This report has been prepared by Bryan Deegan MSc, BSc (MCIEEM). Bryan has over 26 years of experience providing ecological consultancy services in Ireland. He has extensive experience in carrying out a wide range of bat surveys including dusk emergence, dawn re-entry and static detector surveys. He also has extensive experience reducing the potential impact of projects that involve external lighting on Bats. Bryan trained with Conor Kelleher author of the Bat Mitigation Guidelines for Ireland (Kelleher and Marnell (2022)) and Bryan is currently providing bat ecology (impact assessment and enhancement) services to Dun Laoghaire Rathdown County Council primarily on the Shanganagh Park Masterplan. The desk and field surveys were carried out having regard to the guidance: Bat Surveys for Professional Ecologists – Good Practice Guidelines 3rd Edition (Collins, J. (Ed.) 2016) and Marnell, Kelleher and Mullen (2022), Bat Mitigation Guidelines for Ireland V2 (which update and replace the Bat Mitigation Guidelines for Ireland published in 2006).

Legislative Context

Wildlife Act 1976 (as amended by, inter alia, the Wildlife (Amendment) Act 2000).

Bats in Ireland are protected by the Wildlife (Amendment) Act 2000. Based on this legislation it is an offence to wilfully interfere with or destroy the breeding or resting place of any species of bat. Under this legislation it is an offence to "*Intentionally kill, injure or take a bat, possess or control any live or dead specimen or anything derived from a bat, wilfully interfere with any structure or place used for breeding or resting by a bat, wilfully interfere with a bat while it is occupying a structure or place which it uses for that purpose. "*

Habitats Directive- Council Directive 92/43/EEC 1992 on the conservation of natural habitats and of wild fauna and flora has been transposed into Irish Law, including, via, *inter alia*, the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended). See Art.73 of the 2011 Regulations which revokes the 1997 Regulations.

Annex II of the Council Directive 92/43/EEC 1992 on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive) lists animal and plant species of Community interest, the conservation of which requires the designation of Special Areas of Conservation (SACs); Annex IV lists animal and plant species of Community interest in need of strict protection. All bat species in Ireland are listed on Annex IV of the Directive, while the Lesser Horseshoe Bat (*Rhinolophus hipposideros*) is protected under Annex II which related to the designation of Special Areas of Conservation for a species.

Under the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended), all bat species are listed under the First Schedule and, pursuant to, *inter alia*, Part 6 and Regulation 51, it is an offence to:

- Deliberately capture or kill a bat;
- Deliberately disturb a bat particularly during the period of breeding, hibernating or migrating;
- Damage or destroy a breeding site or resting place of a bat;
- Keep, sell, transport, exchange, offer for sale or offer for exchange any bat taken in the wild.

Bat survey

Onsite trees and walls were inspected for bats and/or their signs using a powerful torch (141 Lumens) – Petzl MYO RXP. The site survey was supplemented by a review of Bat Conservation Ireland's (BCIreland) National Bat Records Database. A bat detector and emergent survey was carried out by Bryan Deegan on the 27th August 2021 and 7th July 2022.

Survey methodology

As outlined in Marnell et al. 2022 '*The presence of a large maternity roost can normally be determined on a single visit at any time of year, provided that the entire structure is accessible and that any signs of bats have not been removed by others. However, most roosts are less obvious. A visit during the summer or autumn has the advantage that bats may be seen or heard. Buildings (which for this definition exclude cellars and other underground structures) are rarely used for hibernation alone, so droppings deposited by active bats provide the best clues. Roosts of species which habitually enter roof voids are probably the easiest to detect as the droppings will normally be readily visible. Roosts of crevice-dwelling species may require careful searching and, in some situations, the opening up of otherwise inaccessible areas. If this is not possible, best judgement might have to be used and a*

precautionary approach adopted. Roosts used by a small number of bats, as opposed to large maternity sites, can be particularly difficult to detect and may require extensive searching backed up by bat detector surveys (including static detectors) or emergence counts.' In relation to the factors influencing survey results the guidelines outlines the following *'During the winter, bats will move around to find sites that present the optimum environmental conditions for their age, sex and bodyweight and some species will only be found in underground sites when the weather is particularly cold. During the summer, bats may be reluctant to leave their roost during heavy rain or when the temperature is unseasonably low, so exit counts should record the conditions under which they were made. Similarly, there may be times when females with young do not emerge at all or emerge only briefly and return while other bats are still emerging thus confusing the count. Within roosts, bats will move around according to the temperature and may or may not be visible on any particular visit. Bats also react to disturbance, so a survey the day after a disturbance event, may give a misleading picture of roost usage.'*

The survey involved the methodologies outlined in Collins (2016) which included the roost inspection methodologies i.e. external methodology outlined in section 5.2.4.1 and the internal survey outlines in section 5.2.4.2 of the guidelines. In addition, the methodologies for Presence absence surveys (Section 7) was carried out for dust emergent surveys.'

As outlined in Collins (2016) 'The bat active period is generally considered to be between April and October inclusive (although the season is likely to be shorter in northern latitudes). However, because bats wake up during mild conditions, bat activity can also be recorded during winter months.'

Survey Results

Trees as potential bat roosts.

A ground level roost assessment was carried and used to examine the trees on site for features that could form bat roosts. Potential roosting features include heavy ivy growth, broken limbs, areas of decay, vertical or horizontal cracks, cracks in bark etc. No buildings are on site. No trees of bat roosting potential are noted on site. No roosting bats were noted on site. However, to the south of the site (outside the proposed development site), a single (soprano pipistrelle (*Pipistrellus pygmaeus*) was noted emerging from ivy in 2021. No bats were noted emerging from the ivy in 2022.

Emergent/detector surveys.

Emergent/detector surveys were carried out by Bryan Deegan on the 27th August 2021 and 7th July 2022.

The detector surveys were undertaken within the active bat season and the transects covered the entire site multiple times during the night. Weather conditions were good with mild temperatures of greater than 10ºC after sunset. Winds were light and there was no rainfall. Insects were observed in flight during both surveys.

As outlined in Collins (2016) in relation to weather conditions '*The aim should be to carry out surveys in conditions that are close to optimal (sunset temperature 10ºC or above, no rain or strong wind.), particularly when only one survey is planned…. Where surveys are carried out when the temperature at sunset is below 10ºC should be justified by the ecologist and the effect on bat behaviour considered.*' There were no constraints in relation to the surveys carried out. All areas of the site were accessible and weather conditions were optimal for bat assessments.

At dusk, bat detector surveys were carried out onsite using a*n Echo meter touch 2 Pro* detector to determine bat activity. Bats were identified by their ultrasonic calls coupled with behavioural and flight observations.

Foraging activity of two bat species (soprano pipistrelle (*Pipistrellus pygmaeus*) and common pipistrelle (*Pipistrellus pipistrellus*) were noted along the southern side of the site. No foraging was noted in other areas of the site. No buildings are on site (with the exception of the active construction compound). No trees of bat roosting potential are noted on site. No roosting bats were noted on site. However, to the south of the site (outside the proposed development site), a single (soprano pipistrelle (*Pipistrellus pygmaeus*) was noted emerging from ivy in 2021. No bats were noted emerging from the ivy in 2022.

Bat assessment findings

Review of local bat records

The review of existing bat records (sourced from Bat Conservation Ireland's National Bat Records Database) within a 2km^2 grid (Reference grid O13L) encompassing the study area reveals that three of the nine known Irish species have been observed locally (Table 1). The National Biodiversity Data Centre's online viewer was consulted in order to determine whether there have been recorded bat sightings in the wider area. This is visually represented in Figures 7-10. The following species were noted in the wider area: Daubenton's Bat (*Myotis daubentonii*), Brown Long-eared Bat (*Myotis daubentonii*), Whiskered Bat (*Myotis mystacinus*), Natterer's Bat (*Myotis nattereri*), Nathusius's Pipistrelle (*Pipistrellus nathusii*), Soprano Pipistrelle (*Pipistrellus pygmaeus*), and Lesser Noctule (*Nyctalus leisleri*) (Figures 7-10).

Table 1: *Status of bat species within a 2km^2 grid encompassing the subject site (Reference no. O13L)*

Species name	Record count	Date of last record	Note
Lesser Noctule (*Nyctalus leisleri*)	5	28/05/2016	Mammals of Ireland 2016-2025
Pipistrelle (*Pipistrellus pipistrellus sensu lato)*	3	31/05/2009	National Bat Database of Ireland
Soprano Pipistrelle (*Pipistrellus pygmaeus)*	7	30/09/2009	National Bat Database of Ireland

Figure 7. Daubenton's Bat (*Myotis daubentonii*) (purple) and Brown Long-eared Bat (*Plecotus auritus*) (yellow) (Source NBDC) (Site location – red circle)

Figure 8. Whiskered Bat (*Myotis mystacinus*) (yellow) and Natterer's Bat (*Myotis nattereri*) (purple) (Source NBDC) (Site location – Red Circle)

Figure 9. Soprano Pipistrelle (*Pipistrellus pygmaeus*) (yellow), Nathusius's Pipistrelle (*Pipistrellus nathusii*) (purple), and both Soprano Pipistrelle and Nathusius's Pipistrelle (orange) (Source NBDC) (Site location – Red Circle

Figure 10. Lesser Noctule (*Nyctalus leisleri*) (purple) (Source NBDC) (Site location – red circle)

Plate 1. Area to the south of the site where a single Soprano pipistrelle emerged in the 2021 survey.

Evaluation of Results

The bat surveys comply with bat survey guidance documentation including Marnell et al (2022) and Collins (2016). Foraging activity of two bat species (soprano pipistrelle (*Pipistrellus pygmaeus*) and common pipistrelle (*Pipistrellus pipistrellus*) were noted along the southern area of the site. No foraging was noted in other areas of the site. No buildings are on site (with the exception of the active construction compound). No trees of bat roosting potential are noted on site. No roosting bats were noted on site. However, to the south of the site (outside the proposed development site), a single (soprano pipistrelle (*Pipistrellus pygmaeus*) was noted emerging from ivy in 2021. No bats were noted emerging from the ivy in 2022. The site is of relatively low importance to the local bat population.

Potential Impact of the development on Bats

During the 2021 survey, a single Soprano Pipistrelle (*Pipistrellus pygmaeus*) roost was noted within ivy to the south of the subject site. Minor foraging was also noted within the proposed site during this survey. During the 2022 survey, the single Soprano Pipistrelle roost noted within the ivy to the south of the site in 2021 was no longer used. Minor foraging and transiting were noted during the 2022 survey The proposed development will change the local environment as new structures are to be erected and some of the existing vegetation will be removed. The development is likely to displace bats from foraging at the site during construction. Based on the fact that the single Soprano pipistrelle roost noted in 2021 was no longer there during the 20222 survey, and that a small number of common species found using the site, the displacement from this site it will not have any significant effect on local bat populations, and that any such effect will be only negative at the local level. No bat roosts or potential bat roosts will be lost due to this development and the species expected to occur onsite should persist in the area. However, foraging activity on site may be reduced in the short-medium term until the landscaping matures. The proposed development is not in proximity to sensitive bat areas. The potential for collision risk and impact on flight paths in relation to bats is considered is considered low due to the low level of bat activity on site and the buildings would be deemed to be clearly visible to bats.

Mitigation Measures

As outlined in Marnell et al. (2022) "*Mitigation should be proportionate. The level of mitigation required depends on the size and type of impact, and the importance of the population affected*." In addition as outlined in Marnell et. al (2022) '*Mitigation for bats normally comprises the following elements:*

- *Avoidance of deliberate, killing, injury or disturbance – taking all reasonable steps to ensure works do not harm individuals by altering working methods or timing to avoid bats. The seasonal occupation of most roosts provides good opportunities for this*
- *Roost creation, restoration or enhancement – to provide appropriate replacements for roosts to be lost or damaged*
- *Long-term habitat management and maintenance – to ensure the population will persist*
- *Post-development population monitoring – to assess the success of the scheme and to inform management or remedial operations.*'

A single Soprano Pipistrelle roost was noted within ivy to the south of the subject site (outside the site) during the 2021 survey, however, no bats were noted roosting on site during the 2022 survey. No trees of bat roosting potential are noted on site. The level of activity on site is low with common bat species foraging on site. As a result, the following mitigation will be implemented:

- Lighting at all construction stages will be done sensitively on site with no direct lighting of site boundaries and lands to the south of the proposed development.
- Lighting during operation will be controlled and spill in to the site to the south of the site.

Predicted Residual Impact of Planned Development on Bats

Foraging activity of two common bat species (soprano pipistrelle (*Pipistrellus pygmaeus*) and common pipistrelle (*Pipistrellus pipistrellus*) were noted along the southern side of the site. No foraging was noted in other areas of the site. No buildings are on site (with the exception of the active construction compound) . No trees of bat roosting potential are noted on site. No bat roosts were noted on site. However, to the south of the site (outside the proposed development site), a single (soprano pipistrelle (*Pipistrellus pygmaeus*) was noted emerging from ivy in 2021. No bats were noted emerging from the ivy in 2022. Therefore, the proposed development will not result in the loss of any bat roost as no bats are roosting onsite. The proposed development will change the local environment. There would be expected to be a short to medium term reduction in foraging until the landscaping and in particular the trees within the landscaping proposal mature. Based on the small number of common species found using the site the displacement from this site it will not have any significant effect on local bat populations, and that any such effect will be only negative at the local/site level.

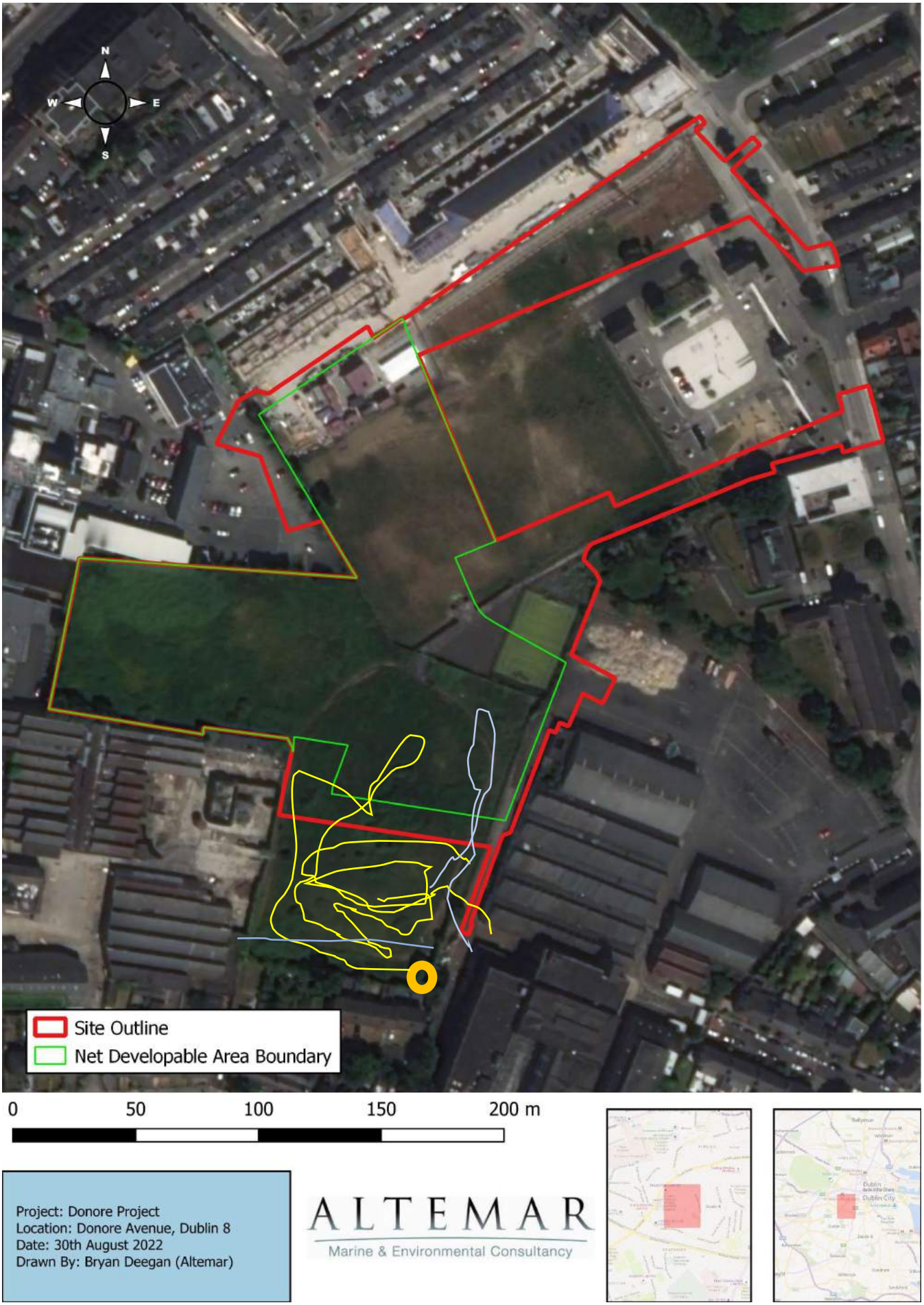

Figure 11. Bat foraging on site. Soprano pipistrelle (yellow) and Common pipistrelle (blue). Bat roost within ivy noted in 2021 (orange circle).

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Appendix G

Appendix 5.2. St Teresa's Gardens-Donore Winter Bird/Flightline Survey March 29th, 2022

Introduction

In March 2022 a winter bird survey was conducted at Saint Teresa's Gardens, in Dublin City Centre, by Hugh Delaney, a freelance ecologist (Birds primarily) with an experienced background in bird surveying on numerous sites with ecological consultancies over 10+ years. Hugh, a lifelong birder, is local to the Dun Laoghaire-Rathdown area in Dublin and is especially familiar with the bird life and its ecology in the environs going back over 30 years.

Winter Bird Survey Methodology

The survey at Saint Teresa's were conducted specifically to ascertain if the site was on the path of flightlines of species moving over the site as birds transition from one site to another, in a Dublin context the species concerned would be Brent Geese and wader species like Curlew, Oystercatcher and Black-tailed Godwit. Winter bird surveys are conducted from soon after sunrise until late in the afternoon before sunset, the site is monitored throughout the day and all bird species utilizing the site recorded, including species flying through overhead. Checks are also made on suitable habitat nearby or adjacent the site for comparative purposes and to monitor any interchange of birds between sites. Target species (species of more special interest) utilizing the site will be mapped and estimates of the time these species frequented the site recorded.

Site Location

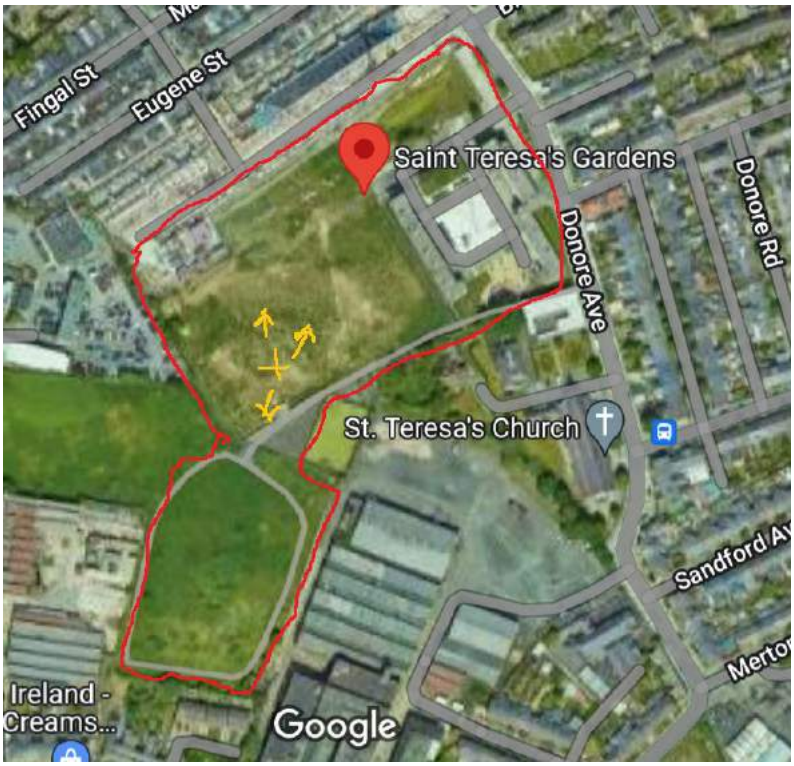

Figure 1. Site Location – St Teresa's Gardens in Dublin City, site boundary marked in red, optimal vantage point marked in yellow, which gave optimal all-round views around site and over the old flats.

Site Description

Disused site comprising rough grassland at the main area adjacent to old flats, more advanced vegetated area to the south with some bushes and low trees.

Specific site survey methodology

Continual observation of site, primarily from the area marked in yellow on map, but site also walked regularly during the day.

Survey results

March 29th, 2022

Sunrise- 07.06hrs/Sunset 19.55hrs. Weather – Wind F2 North, Cloud 6/8, Dry, 10c, Excellent visibility. On-site 07.45hrs – 17.00hrs.

Species recorded – Herring Gull, Lesser black-backed Gull, Starling, Linnet, Goldfinch, Greenfinch, Dunnock, Wren, Feral Pigeon, Woodpigeon, Blue Tit, Great Tit, Goldcrest, Blackbird, Song Thrush, House Sparrow, Grey Wagtail, Meadow Pipit, Hooded Crow, Magpie, Jackdaw.

Observations from 07.45hrs – 12.00hrs –

Herring Gulls were noted regularly flying over and around the site, but were not noted foraging on-site, with the birds landing onto the old flats occasionally only. Maximum counts of 22 noted at 10.10hrs moving around the site and 16 at 11.30hrs. Occasional Lesser black-backed Gull also noted in smaller numbers, with maximum count of 4 at 09.40hrs, also not foraging on-site but occasionally landing onto roof of old flats. Other species recorded were passerines foraging on-site with Linnet (<5) and Goldfinch (<3) foraging on rough ground near St Teresa's. Blackbird, Song Thrush, Goldcrest and House Sparrow noted foraging on area at the south of the site. Starling, Woodpigeon, Magpie, Hooded Crow and Jackdaw mainly recorded passing over the site. A movement of Meadow Pipits (<10) was noted passing north over the site from 11.30hrs-12.30hrs were likely migrants. No other target species recorded.

Observations from 12.00hrs – 17.00hrs –

Herring and Lesser black-backed Gull activity less frequent over the site in afternoon with maximum counts of Herring (<12) at 13.30hrs and Lesser black-backed (<4) at 14.10hrs. Passerine activity mostly confined to area at south side of site with Greenfinch, Dunnock, Wren, Song Thrush, Blackbird, Blue Tit and Great Tit noted foraging in the area. Goldcrest (<2) noted at south of site at 14.15hrs. A Song Thrush was noted bringing food to a nest site at the south of the site was an early nester. No other Target species recorded.

Comments and observations on the survey results

21 bird species were recorded from observations made at the St Teresa's site. Results from the surveys suggest that the site is not an ex-situ foraging or roosting site for species of qualifying interest from nearby Special protection areas (SPA's). The open ground habitat on-site was judged to be sub-optimal for Gulls, Geese or Wader species. Results also suggest that the site is not a regular flightline path for such species like Brent Geese or other species of significant interest, checks on data bases (Irishbirding.com for example) suggest this part of the city has no history of foraging Geese or other significant species with the closest known sites being Crumlin farther to the south.

Appendix H

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Ground Investigations Ireland

Saint Teresa's Gardens

AECOM

Waste Classification & GQRA Report

October 2021

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APPENDICES

1.0 Preamble

Ground Investigations Ireland (GII) was appointed by AECOM to carry out a Waste Classification & Generic Quantitative Risk Assessment (GQRA) for a proposed development at Saint Teresa's Gardens, Dublin 8. All site investigation works were carried out under the supervision of a GII Geo-Environmental Engineer. The site investigation works were completed between May and October 2021.

2.0 Purpose & Scope

The purpose of the waste classification and environmental assessment was as follows.

- Assess the site in terms of historical use and environmental setting;
- Assess any impact on groundwater quality from site activities;
- Assess ground gas risk for any future development;
- Classification, in terms of waste management and final disposal outlets, of material that may require disposal following excavation during the construction phase; and
- Development of Generic Quantitative Risk Assessment (GQRA).

The scope of the work undertaken to facilitate the waste classification exercise included the following:

- Site walkover;
- Desk study;
- Develop a preliminary site conceptual model;
- Boring of eleven (11 No.) window sample boreholes;
- Excavation of seven (7 No.) trial pits;
- Boring of fifteen (15 No.) cable percussion boreholes;
- Boring of sixteen (15 No.) follow on rotary core boreholes;
- Boring of sixteen (1 No.) rotary core borehole from ground level;
- Collection of subsoil samples for chemical analysis;
- Collection of groundwater and surface water samples for chemical analysis;
- Ground gas monitoring;
- Environmental laboratory testing;
- Waste classification;
- Development of GQRA; and
- Develop a revised conceptual site model.

3.0 Limitations

GII has prepared this report for the sole use of AECOM. No other warranty, express or implied, is made as to the professional advice included in this report or other services provided by GII.

The conclusions and recommendations contained in this report are based upon information provided by others and the assumption that all relevant information has been provided by those bodies from whom it has been requested. Information obtained from third parties has not been independently verified by GII, unless otherwise stated in this report.

This report has been prepared in line with best industry standards and within the project's budgetary and time constraints. The methodology adopted and the sources of information used by GII in providing its services are outlined in this report.

The work described was undertaken between May and October 2021, this report is based on the conditions encountered and the information available during that period. The scope of this Report and the services are accordingly factually limited by these circumstances.

Site investigations including the site investigation locations, the sampling strategy and all analytical suites were selected by the consultant engineer.

GII disclaim any undertaking or obligation to advise any person of any change in any matter affecting the Report, which may come or be brought to GII's attention after the date of the Report.

The conclusions presented in this report represent GII's best professional judgement based on review of site conditions observed during any site visit and the relevant information available at the time of writing. The opinions and conclusions presented are valid only to the extent that the information provided was accurate and complete.

The investigation was focused on a broad assessment of the subsoil quality across the site. The assessment did not extend to the identification of asbestos containing materials associated with any on-site structures.

The waste classification exercise is reflective of and applicable to the ground conditions on site at the time of the site investigation and sampling. Alterations to the ground conditions or any further excavations carried out on site following the investigation are not reflected in this report.

4.0 Site Location and Layout

The site is located at Saint Teresa's Garden, Dublin 8 (Figure 1 Appendix 1). At the time of the assessment the site was comprised of open grassed areas in the south, the east and north with a section in the west which was occupied by a construction compound/carpark for works which were being undertaken in the adjacent Coombe Hospital. The surrounding land use was a mix of commercial and residential

5.0 Site History

GII reviewed the aerial photographs and historical maps maintained by the Ordnance Survey of Ireland (OSI) and the google imagery records. These included the 6-inch maps that were produced between 1829 and 1842, the 25-inch maps that were produced between 1888 and 1913 and the 6-inch Cassini Maps that

were produced between the 1830's and 1930's. The site itself is undeveloped on all historical maps reviewed.

The lands to the south of the site are occupied by a "Nursery and Female School" on the 6-inch map. The Nursery and Female School have been replaced with the "Rehoboth Factory" and "" in the 25-inch map and with the "Factory and Printing Works" and "Tobacco Factory" in the Cassini Map.

Based on a review of the OSI and Google Imagery aerial photograph records the northern portion of the site consisted of apartment blocks since at least 1995. These were demolished by May 2018. The site was all grassed until 2021 when the construction compound/carpark area was developed.

6.0 Environmental Setting

Details of the environmental setting are outlined in Table 1. Data relating to site topography, hydrology, geology, hydrogeology and ecology of the area have been obtained from resources held by the Environmental Protection Agency (EPA), the Geological Survey of Ireland (GSI), OSI, National Parks and Wildlife Service (NPWS), the Water Framework Directive (Water Matters) website and the Office of Public Works (OPW) Flood Maps Viewer. All relevant environmental setting data are presented in Figures 5 to 12 in Appendix 1.

Table 1 Environmental Setting

Environmental Feature	Relevant Details
Topography	The regional topography slopes to the north towards the River Liffey.
Hydrology & Catchment	Surface Water Courses: The closest surface water feature is the River Poddle which is located approximately 600m to the east of the site. The Poddle is culverted at this point. The Poddle discharges to the River Liffey approximately 1.3km to the north of the site.
Geology	Quaternary Geology: The GSI Quaternary Geology map classifies the subsoil underlying the site as till derived from Limestone (TLs). The GSI map indicates a pocket of gravels to the south east of the site.
	Bedrock Geology: The bedrock underlying the site is the Lucan Formation (Calp) which is comprised of dark grey limestone and shale.
	Karst Features: There are no recorded karst features within 10km of the site.

Environmental Feature	Relevant Details
Hydrogeology	<u>Aquifer Classification:</u> The Lucan Formation has been classified by the GSI as a Locally Important Aquifer which is moderately productive in local zones (Ll).
	<u>Aquifer Vulnerability:</u> The GSI have developed a system that ranks an aquifer is terms of the intrinsic geological and hydrogeological characteristics that determine the ease with which that aquifer may be contaminated by human activities. The GSI have used this system to assign a "vulnerability" category to each aquifer nationwide. The vulnerability of groundwater depends on: ▪ The time of travel of infiltrating water (and contaminants); ▪ The relative quantity of contaminants that can reach the groundwater; and ▪ The contaminant attenuation capacity of the geological materials through which the water and contaminants infiltrate. The depth of subsoil and the subsoil type overlying the aquifer are directly linked to the vulnerability. The GSI vulnerability map indicates that the vulnerability for the majority of the site is Moderate. The south eastern section of the site is classified as high due to the presence of the gravels adjacent to the that area.
	<u>Groundwater Flow Direction:</u> The groundwater flow direction is assumed to reflect the regional topography and be to the north toward the River Liffey. There may be some local groundwater flow towards the River Poddle to the east.
	<u>Well Search:</u> A review of the GSI groundwater well database indicates that there are no groundwater abstraction points within 1km of the site.
Flood Risk	The Office of Public Works (OPW) has produced flood risk maps that identify areas that may be susceptible to flooding during extreme events. The flood maps are predictive flood maps, as they provide predicted flood extent and other information for a design flood event that has an estimated probability of occurrence rather than information of floods that have occurred in the past. The maps identify the risk from fluvial and coastal flooding. The OPW rates risk in terms of %. These percentages are linked to return events or chance of occurrence in any given year:

Environmental Feature	Relevant Details
	▪ 10% - 1 in 10 chance in any given year; ▪ 1% - 1 in 100 chance in any given year; and ▪ 0.1% - 1 in 1,000 chance in any given year. They are also commonly referred to in terms of a return period (e.g., the 100-year flood event), although it should be understood that this does not mean the length of time that will elapse between two such events occurring, as, although unlikely, two or more very severe events may occur within a very short space of time. Based on the review of the OPW maps the northern section of the site may be susceptible to flooding in the low probability scenario. The site appears to be low risk for flooding in all other probability scenarios. Flooding maps are included in Appendix 2.
Radon	A review of the EPA national radon map was carried out. The radon map is broken into 10km^2 grids. Each grid is ranked based on the percentage of dwellings within that grid where radon is present at levels greater than 200 Becquerel per metre cubed (Bq/m^3). The radon map has five categories: <1 %, 1 to 5 %, 5 to 10 %, 10 to 20 % and greater than 20 %. The subject site is located within a grid where between 1% and 5% of the residences will have radon levels lower than 200Bq/m^3, making it low to moderate risk for radon.
Landslide Susceptibility	The GSI have mapped the country in terms of landslide susceptibility. The site is low risk in terms of landslide susceptibility.
Natura 2000 Sites	A review of the National Parks and Wildlife Services (NPWS) databases indicates that the closest protected sites are the South Dublin Bay Special Area of Conservation (SAC) and the South Dublin Bay and River Tolka Estuary Special Protected Area (SPA) both of which are located downstream of and approximately 5km to the east of the site.

7.0 Preliminary Conceptual Site Model

The preliminary conceptual site model (CSM) has been compiled based on potential sources of contamination, contamination migration pathways and receptors potentially linked to the site. The preliminary CSM has been developed based on the information collected during the desk study phase of the works and the site walkover completed by GII.

The preliminary CSM considered the following three elements:

- A source – a substance that is in, on or under the land and has the potential to cause harm or to cause pollution;
- A receptor – in general terms, something that could be adversely affected by a contaminant, such as people, an ecological system, property, or a water body; and
- A pathway – a route or means by which a receptor can be exposed to, or affected by, a contaminant source.

The CSM considers the linkage of the three elements as a source – pathway – receptor pollution linkage.

7.1. Potential Sources

The potential sources of contamination and particular pollutants of concern revealed as part of the desk top study have been summarised in Table 2.

Table 2 Potential Sources of Contamination

Potential Source	Potential Contaminants of Concern	Source Area
• Potential for widespread made ground deposits of unknown origin. • Potentially impacted by organic and inorganic contaminants. • Made ground deposits are potentially a source of ground gases. • Potential for groundwater impacted by organic and inorganic contaminants.	• Metals • Hydrocarbons • Asbestos • Polycyclic Aromatic Hydrocarbons (PAH) • Volatile and Semi Volatile Organic Carbons (VOC/sVOC) • Polychlorinated Biphenols (PCB) • Methane • Carbon Dioxide • Carbon Monoxide • Hydrogen Sulphide	• A review of the historical maps has not identified any significant sources of contamination on site. • Off-site sources of potential contamination have been identified. The lands to the south had been in use as a Printing Works and a Tobacco Factory.

7.2. Potential Receptors

Human Receptors

The proposed use of the site is mixed density housing with some commercial/retail units. It is believed that the potential future on site human receptors can be considered to be residential without homegrown produce and some commercial users.

Offsite human receptors are considered to make up a mix of residential both with and without homegrown produce as well as commercial users.

Due to the urban setting it is not believed that groundwater abstraction will make up any part of the human water supply for the development. A review of the GSI groundwater abstraction database revealed that there are no groundwater abstraction points within 1km of the site.

Volatile constituents which may be present in groundwater have the potential to cause risk to human health via volatilisation and migration of vapours into overlying buildings or outdoor air space followed by inhalation.

Human Health Exposure during the construction process has not been considered as it is assumed that the appropriate control measures/mitigation measures will be implemented during the construction phase to protect all human receptors within and outside the site.

Controlled Waters

The following controlled waters were identified as part of the desk study.

- Underlying bedrock aquifer – locally important aquifer which is moderately productive only in local zones;
- There is no recorded groundwater abstraction within 1km of the site;
- The GSI quaternary geology indicates that the site is underlain by limestone derived till which will not be a source of potable water for future site users;
- The closest surface water feature is the River Poddle which is located approximately 600m to the east of the site. The Poddle is culverted at this point and is not a potable water source.

Potential Pathways

There are several potential pathways for future site users which are based on the expected future use of the site. The potential pathways are presented in Table 3.

Table 3 Potential Receptors and Pathways

Receptor	Potential Pathway
Future site users based on mixed (medium and high) density residential with some commercial development	1. Dermal contact with surface or shallow soils. 2. Ingestion of surface or shallow soils. 3. Inhalation of dust from surface or shallow soils. 4. Ingestion of non-volatile or inhalation of volatile constituents resulting from permeation from contaminated groundwater or subsoil into potable water supply infrastructure.

Controlled waters	1. Leaching of contaminants from made ground deposits or contaminated natural subsoil deposits to underlying bedrock aquifer – vertical migration. 2. Lateral migration of impacted groundwater within the superficial deposits or underlying bedrock aquifer. 3. Discharge of impacted groundwater to local surface water features as base flow.

8.0 Subsurface Exploration

8.1. General

During the ground investigation a programme of intrusive investigation specified by the Consulting Engineer was undertaken to determine the sub surface conditions at the proposed site. Regular sampling and in-situ testing was undertaken in the exploratory holes to facilitate the geotechnical descriptions and to enable laboratory testing to be carried out on the soil samples recovered during excavation and drilling.
The procedures used in this site investigation are in accordance with Eurocode 7 Part 2: Ground Investigation and testing (ISEN 1997 – 2:2007) and B.S. 5930:2015.

8.2. Trial Pits

The trial pits were excavated using a JCB 3CX excavator at the locations shown in Figure 13. The locations were checked using a CAT scan to minimise the potential for encountering services during the excavation. The trial pits were sampled, logged and photographed by a Geotechnical Engineer/Engineering Geologist prior to backfilling with arisings. Notes were made of any services, inclusions, pit stability, groundwater encountered and the characteristics of the strata encountered and are presented on the trial pit logs which are provided in Appendix 3 of this Report.

8.3. Window Sampling

The window sampling was carried out at the locations shown in Figure 13 using a Tecop Tec 10 percussion drilling rig. The window sampling consists of a 1m long steel tube with a cutting edge and an internal plastic liner which is mechanically driven into the ground utilising a 50kg weight falling a height of 500mm. Upon completion of the 1m sample, the tube is withdrawn and the plastic liner removed and sealed for logging and sub sampling by a Geotechnical Engineer/Engineering Geologist. The tube is replaced in the borehole and a subsequent 1m sample can be recovered. Occasionally outer casing or a reduced diameter tube is utilised to enable the window sample to progress in difficult drilling conditions. Geotechnical or environmental soil samples can be recovered from each of the liners following logging. The window sample records are provided in Appendix 4 of this Report.

8.4. Cable Percussion Boreholes

The Cable Percussion Boreholes were drilled, at the locations shown in Figure 13, using a Dando 2000 drilling rig with regular in-situ testing and sampling undertaken to facilitate the production of geotechnical logs and laboratory testing.

The standard method of boring in soil for site investigation is known as the Cable Percussion method. It consists of using a Shell in non cohesive soils and a clay cutter in cohesive soils, both operated on a wire cable. Very hard soils, boulders and other hard obstructions are broken up by chiselling and the fragments removed with the Shell. Where ground conditions made it necessary, the borehole was lined with 200mm diameter steel casing. While the use of the Cable Percussion method of boring gives the maximum data on soil conditions, some mixing of laminated soil is inevitable. For this reason, thin lenses of granular material may not be noticed. Disturbed samples were taken from the boring tools at suitable depths, so that there is a representative sample at the top of each change in stratum and thereafter at regular intervals down the borehole until the next stratum was encountered. The disturbed samples were then sealed and sent to the laboratory where they were visually examined to confirm the description of the relevant strata.

Standard Penetration Tests were carried out in the boreholes. The results of these tests, together with the depths at which the tests were taken are shown on the accompanying borehole records. The test consists of a thick wall sampler tube, 50mm external diameter, being driven into the soil by a monkey weighing 63.5kg and with a free drop of 760mm. For gravels and glacial till the driving shoe was replaced by a solid 60º cone. The Standard Penetration Test number referred to as the 'N' value is the number of blows required to drive the tube 300mm, after an initial penetration of 150mm. The number gives a guide to the consistency of the soil and can also be used to estimate the relative strength/density at the depth of the test and also to estimate the bearing capacity and compressibility of the soil. The cable percussion borehole logs are provided in Appendix 5 of this Report.

8.5. Rotary Boreholes

The rotary coring was carried out by a track mounted T44 Beretta rig at the locations shown in Figure 13. The rotary boreholes were completed from the ground surface or alternatively, where noted on the individual borehole log, from the base of the cable percussion borehole where a temporary liner was installed to facilitate follow-on rotary coring.

The T44 Beretta is equipped with rubber tracks which allow for short travel on pavement surfaces avoiding any damage to the surface. The T44 Beretta utilises a triple tube core barrel system operated using a wireline drilling process. The outer barrel is rotated by the drill rods and at its lower end, carries the coring bit. The inner barrel is mounted on a swivel so that it does not rotate during the process. The third barrel or liner is placed within the second one to retain the core intact and to preserve as much as possible the fabric of the drilling stratum. The core is cut by the coring bit and passes to the inner liner. The core is brought up to the surface within the inner barrel on a small diameter wire rope or line attached to the "overshoot" recovery tool which is then placed into a core box in order of recovery. A drilling fluid, typically air mist or water flush is passed from the surface through hollow drill rods to the drill bit, and is used to cool the drill bit. Temporary casing is used in some situations to support unstable ground or to seal off fissures or voids.

It should be noted that the rotary coring can only achieve limited recovery in overburden, particularly granular or weakly cemented strata due to the flushing medium washing away the cohesive fraction during coring. The recovery achieved, where required is noted on the borehole logs and core photographs are provided to allow assessment of the core recovered. The rotary borehole logs are provided in Appendix 5 of this Report.

8.6. Surveying

The exploratory hole locations have been recorded using a KQGeo M8 GNSS System which records the coordinates and elevation of the locations to ITM as required by the project specification. The coordinates and elevations are provided on the exploratory hole logs in the appendices of this Report.

8.7. Groundwater/Gas Monitoring Installations

Groundwater and/or Gas Monitoring Installation were installed upon the completion of the boreholes to enable sampling and the determination of the equilibrium groundwater level. The typical groundwater monitoring installation consists of a 50mm HDPE slotted pipe with a pea gravel response zone and bentonite seal installed to the Engineers specification. Where required the standpipe is sealed with a gas tap and finished with a durable steel cover fixed in place with a concrete surround. The installation details are provided on the exploratory hole logs in the appendices of this Report.

9.0 Ground Conditions

9.1. General

The ground conditions encountered during the investigation are summarised below with reference to insitu and laboratory test results. The full details of the strata encountered during the ground investigation are provided in the exploratory hole logs included in the appendices of this report.

The sequence of strata encountered was consistent across the site and generally comprised;

- Topsoil/Fill
- Made Ground
- Cohesive Deposits
- Bedrock

TOPSOIL: Topsoil was encountered in the majority of exploratory holes and was present to a maximum depth of 0.20m BGL.

Fill: Granular Fill was encountered at exploratory holes completed within the Coombe Hospital building site and staff car park. These exploratory holes included WS01, WS02, WS03, WS04, BH06, BH08, BH09 and BH10. The deposit was present to a maximum depth of 0.50m BGL.

MADE GROUND: Made Ground deposits were encountered either from ground level or beneath the Topsoil/Fill and were present to variable depths of between 0.70m and 2.30m BGL. These deposits were described generally as *dark brown slightly sandy slightly gravelly Clay with occasional cobbles and boulders* and contained *occasional fragments/pieces of concrete, brick, metal, glass, ceramic and plastic.* At BH07 and BH11, possibly made ground deposits were noted to a depth of 3.00m BGL. They have been referred to as possible made ground due to their low strength, however, no anthropogenic material was observed within these deposits.

COHESIVE DEPOSITS: Cohesive deposits were encountered beneath the Made Ground and were described typically as *brown/dark brown slightly sandy gravelly CLAY with occasional cobbles and boulders* overlying a *stiff dark grey/black slightly sandy gravelly CLAY with occasional cobbles and boulders*. The secondary sand and gravel constituents varied across the site and with depth, with granular lenses occasionally present in the glacial till matrix. The strength of the cohesive deposits typically increased with depth and was stiff or very stiff below 3.00m BGL at most borehole locations. These deposits had occasional, some or many cobble and boulder content where noted on the exploratory hole logs.

BEDROCK: The rotary core boreholes recovered *medium strong to strong thinly laminated dark grey fine grained argillaceous LIMESTONE interbedded with a medium strong to strong dark grey/black calcareous Mudstone*. This is typical of the Lucan Formation, which is noted on the Geological Survey of Ireland's mapping of the proposed site. Rare visible pyrite veins and calcite veins were noted during logging which are typically present within the Lucan formation.
The depth to rock varies from 4.20m BGL in BH12, to a maximum of 6.60m BGL in BH05 and BH10. The total core recovery is good, typically 100% with some of the uppermost runs dropping to 80 or 90%. The SCR and RQD both are relatively poor in the upper weathered zone, often recovered as non-intact, however both indices show an increase with depth in each of the boreholes.

9.2. Groundwater

Groundwater strikes are noted on the exploratory hole logs where they occurred and where possible drilling was suspended for twenty minutes to allow the subsequent rise in groundwater to be recorded. We would point out that these exploratory holes did not remain open for sufficiently long periods of time to establish the hydrogeological regime and groundwater levels would be expected to vary with the tide, time of year, rainfall, nearby construction and other factors.
Groundwater monitoring wells were installed in the boreholes BH-01, 05, 06, 14 and 17. The construction details are presented in the borehole logs.

10.0 Laboratory Analysis

10.1. Analysis Suite

In order to assess materials, which may be excavated and removed from site, in terms of waste classification, a selection of samples collected were analysed for a suite of parameters which allows for the

assessment of the soils in terms of total pollutant content for classification of materials as *hazardous* or *non-hazardous* (RILTA Suite). The suite also allows for the assessment of the soils in terms of suitability for placement at various categories of landfill. The parameter list for the RILTA suite includes analysis of the solid samples for arsenic, barium, cadmium, chromium, copper, cyanide, lead, nickel, mercury, zinc, speciated aliphatic and aromatic petroleum hydrocarbons, pH, sulphate, sulphide, moisture content, soil organic matter and an asbestos screen.

The total pollutant content analysis also provides analytical data which can be used to assess the quality of the subsoils underlying the site and allow an assessment of their suitability for a range of proposed uses against generic assessment criteria.

The RILTA suite also includes those parameters specified in the EU Council Decision establishing criteria for the acceptance of waste at Landfills (Council Decision 2003/33/EC), which for the solid samples are pH, total organic carbon (TOC), speciated aliphatic and aromatic petroleum hydrocarbons, BTEX, phenol, polychlorinated biphenyls (PCB) and PAH.

In line with the requirement of Council Decision 2003/33/EC a leachate was generated from the solid samples which was in turn analysed for antimony, arsenic, barium, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium, zinc, chloride, fluoride, soluble sulphate, sulphide, phenols, dissolved organic carbon (DOC) and total dissolved solids (TDS). The suite was selected due to the unknown origin of the material underlying the site and no evidence of specific contaminants of concern highlighted in the site history.

The laboratory testing was completed by Element Materials Technology (EMT) in the UK; EMT is a UKAS accredited laboratory. The full laboratory reports are included in Appendix 6.

10.2. Asbestos

Asbestos fibres were not detected in the samples. The laboratory did not identify asbestos containing materials (ACMs) in the samples.

11.0 Waste Classification

GII understands that any materials which may be excavated and removed from site would meet the definition of waste under the Waste Framework Directive. Due to the varying levels of anthropogenic materials encountered in the made ground there are potentially two sets of List of Waste (LoW)[1] codes with "mirror" entries which may be applied to excavated materials to be removed from site.

1. 17-05-03* (soil and stone containing dangerous substances, classified as hazardous) or 17-05-04 (soil and stone other than those mentioned in 17-05-03, not hazardous); or
2. 17-09-03* (other construction and demolition wastes (including mixed wastes) containing hazardous substances) or 17-09-04 (mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03).

[1] Formerly European Waste Catalogue Codes (EWC Codes)

Where waste is a mirror entry in the LoW, it can be classified via a process of analysis against standard criteria set out in the Waste Framework Directive. The assessment process is described in detail in guidance published by the Irish (EPA Waste Classification, List of Waste & Determining if Waste is Hazardous or Non-Hazardous, June 2015) and UK regulatory authorities (Guidance on the Classification and Assessment of Waste: Technical Guidance WM3, 2015). The assessment involves comparison of the concentration of various parameters against defined threshold values.

The specific LoW code which should be applied to the material at each sample location is summarised in Appendix 8. These codes are only applicable where the material is being removed from a site as a waste.

GII use HazWasteOnline™, a web-based commercial waste classification software tool which assists in the classification of potentially hazardous materials. This tool was used to determine whether the materials sampled are classified as hazardous or non-hazardous. The use of the online tool is accepted by the EPA (EPA 2014).

The conclusions presented in the report are based on GII's professional opinion. **It should be noted that the environmental regulator (in this case the EPA) and the waste acceptor (in this case a landfill operator) shall decide whether a waste is hazardous or non-hazardous and suitable for disposal at their facility.**

11.1. HazWasteOnLineTM Results

In total, sixty-one (61 No.) samples were assessed using the HazWasteOnLine™ Tool. All samples were classified as being non-hazardous. The complete HazWasteOnLine™ report for all samples is included in Appendix 7. Initially the sample BH-09 0.20m to 0.9m BGL was classified as hazardous based on the hazardous properties HP4[2] (Irritant) and HP8[3] (Corrosive) due to elevated levels of pH. The elevated pH was likely due to the presence of concrete in made ground as noted throughout the material logged. Although the pH above 11.5 indicates that the material may be corrosive where pH is being used as the basis of the classification, the acid/alkali reserve[4] can be taken into consideration. The acid/alkali reserve provides a measure of the capability of an acid or alkali to maintain its pH, combined with pH it provides a good indication of corrosivity. The acid/alkali reserve is determined by titration and is expressed as the grams of sodium hydroxide (equivalent) per 100 g of substance required to adjust the pH to the appropriate value. A waste should be considered as corrosive if:

- pH + 1/12 alkali reserve ≥ 14.5; or
- pH - 1/12 acid reserve ≤ -0.5.

If a waste is not classified as corrosive on this basis, it may be classified as irritant if:

[2] Waste which on application can cause skin irritation or damage to the eye.
[3] Waste which on application can cause skin corrosion.
[4] Young, J.R., How, M.J., Walker, A.P. and Worth, W.H.M. 1988. "Classification as corrosive or irritant to skin of preparations containing acidic or alkaline substances, without testing on animals", Toxic In Vitro 2(1): 19-26.

- pH + 1/6 alkali reserve ≥ 13; or
- pH - 1/6 acid reserve ≤ 1.

Further analysis of the samples indicates that the alkali reserves demonstrate that the material is neither corrosive and or irritant. The sample is therefore not considered hazardous.

Table 4 Alkali Reserve Calculation

Parameter	WS-04 0.7m		
Alkali Reserve	0.002		
pH	11.86		
		Corrosive	
		Lower Limit	Upper Limit
pH + 1/12 alkali reserve	11.86	-0.5	14.5
		Irritant	
		Lower Limit	Upper Limit
pH + 1/6 alkali reserve	11.86	1	13

The specific LoW code which should be applied to the material at each SI location is summarised in Appendix 8. The assigning of the LoW code is based on observations recorded in the window samples, trial pits and boreholes, an estimation of the % of anthropogenic material present and the results of the HazWasteOnline™ output. The final LoW codes applied at the time of disposal may vary due to variations in % of anthropogenic material observed in the excavation phase. Where there is in excess of 2%[5] anthropogenic material observed the LoW code 17 09 04 may be applied.

11.2. Landfill Waste Acceptance Criteria

Waste Acceptance Criteria (WAC) have been agreed by the EU (Council Decision 2003/33/EC) and are only applicable to material if it is to be disposed of as a waste at a landfill facility. Each individual member state and licensed operators of landfills may apply more stringent WAC. WAC limits and the associated laboratory analysis are not suitable for use in the determination of whether a waste is hazardous or non-hazardous. The data have been compared to the WAC limits set out in Council Decision 2003/33/EC as well as the specific WAC which the EPA have applied to the Integrated Materials Solutions (IMS) Landfill in north County Dublin. The IMS landfill has higher limits for a range of parameters while still operating under an inert landfill licence. The WAC data considered in combination with the waste classification outlined in Section 11.0 allows the most suitable waste category to be applied to the material tested. The potentially applicable waste categories are summarised in Table 5. A summary of the WAC data including the waste category assigned to each sample is presented in Appendix 8.

[5] EPA (2020) - Guidance on Waste Acceptance Criteria at Authorised Soil Recovery Facilities.

Table 5 Potential Waste Categories for Disposal/Recovery

Waste Category	Classification Criteria
Category A Unlined Soil Recovery Facilities	Soil and Stone only which are free from[6] anthropogenic materials such as concrete, brick, timber. Soil must be free from "contamination" e.g. PAHs, Hydrocarbons[7].
Category B1 Inert Landfill	Reported concentrations within inert waste limits, which are set out by the adopted EU Council Decision 2003/33/EC establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 and Annex II of Directive 1999/31/EC (2002). Results also found to be non-hazardous using the HWOL[8] application.
Category B2 Inert Landfill	Reported concentrations greater than Category B1 criteria but less than IMS Hollywood Landfill acceptance criteria, as set out in their Waste Licence W0129-02. Results also found to be non-hazardous using the HWOL application.
Category C Non-Haz Landfill	Reported concentrations greater than Category B2 criteria but within non-haz landfill waste acceptance limits set out by the adopted EU Council Decision 2003/33/EC establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 and Annex II of Directive 1999/31/EC (2002). Results also found to be non-hazardous using the HWOL application.
Category C 1 Non-Haz Landfill	As Category C but containing < 0.001% w/w asbestos fibres.
Category C 2 Non-Haz Landfill	As Category C but containing >0.001% and <0.01% w/w asbestos fibres
Category C 3 Non-Haz Landfill	As Category C but containing >0.01% and <0.1% w/w asbestos fibres.
Category D Hazardous Treatment	Results found to be hazardous using HWOL Application.
Category D 1 Hazardous Disposal	Results found to be hazardous due to the presence of asbestos (>0.1%).

11.3. Final Waste Categorisation

All samples were assessed in terms of waste classification using the HazWasteOnLine™ tool and also the WAC set out in Council Decision 2003/33/EC and the IMS specific WAC to give a final waste categorisation to determine the most appropriate disposal route for any waste generated. The final and most applicable waste category for each sample is summarised in Appendix 8.

[6] Free from equates to less than 2%.
[7] Total BTEX 0.05mg/kg, Mineral Oil 50mg/kg, Total PAHs 1mg/kg, Total PCBs 0.05mg/kg and Asbestos No Asbestos Detected – EPA Guidance on Waste Acceptance Criteria at Authorised Soil Recovery Facilities, 2020.
[8] HazWasteOnLine™ Tool.

12.0 Groundwater Quality

Groundwater samples were collected from the groundwater monitoring wells on 13th October 2021 by a GII Geo-Environmental Engineer.

The groundwater levels in the well were recorded using a Geotechnical Instruments water level probe after which, the well was purged to remove the stagnant water in the well and surrounding gravel pack. Purging is necessary to ensure that the groundwater parameters measured are representative of the formation and not the stagnant water in the monitoring well or surrounding gravel filter. Recorded water levels are presented in Table 6.

Table 6 Measured Groundwater Levels

Borehole I.D.	Sample Date	Sample Time	Groundwater Level (mBGL)
BH01	13/10/2021	10:25:00	1.73
BH05	13/10/2021	11:15:00	1.19
BH06	13/10/2021	15:10:00	0.67
BH14	13/10/2021	13:00:00	0.86
BH17	13/10/2021	11:50:00	0.43

12.1. Laboratory Analysis

The laboratory analysis undertaken on the samples collected from the boreholes included dissolved arsenic, boron, barium, beryllium, cadmium, copper, chromium (III & VI), , lead, mercury, nickel, selenium, vanadium and zinc, polycyclic aromatic hydrocarbons (PAH), aliphatic and aromatic petroleum hydrocarbons, mineral oil, methyl tert butyl ether (MTBE), benzene toluene ethylbenzene and toluene (BTEX), total phenols, volatile organic compounds (VOCs), semi volatile organic compounds (sVOCs), sulphate, chloride, ortho phosphate, sulphide, surfactants, BOD, COD, fats oils and greases, chlorine, total nitrogen and total suspended solids.

12.2. Laboratory Results

The full laboratory test report is presented in Appendix 6 and the results are summarised in Tables 7 to 9. The tables include Interim Guideline Values (IGV) published by the EPA and the Groundwater Threshold Values (GTV) set out in the European Communities Environmental Objectives (Groundwater) Regulations (S.I. 9 of 2010).

The IGVs are not statutory but were developed to assist in the assessment of impacts on groundwater quality. The IGVs are based on, but are more conservative than, the Drinking Water quality standards. GTVs have only been established for core indicator parameters. To ensure a comprehensive assessment of the groundwater quality, the IGVs are presented for parameters for which there are no GTV.

The levels of barium in BH-05 and the levels of ammonia in BH-01 and BH-05 exceeded either the IGV or GTV. The levels of PAHs (Benzo(a)pyrene and Total PAHs) in BH-05 exceeded the IGV or GTV. The levels of TPH in BH-01, 05, 14 and 17 exceeded the IGV or GTV.

To assess the risks of inhalation of vapours associated with contaminated groundwater the groundwater analytical data was assessed against the Society of Brownfield Risk Assessment, Development of Generic Assessment Criteria for Assessing Vapour Risks to Human Health from Volatile Contaminants in Groundwater. Version- 1.0. February 2017. All levels detected were below the relevant GAC.

Volatile organic and semi-volatile organic compounds were not detected and therefore have not been presented against the GAC in tabular form in this report. The results are presented in the laboratory report in Appendix 6.

Table 7 Groundwater Metals and Inorganics

Parameter	BH01	BH05	BH06	BH14	BH17	LOD	Unit	EPA IGV[9]	GTV[10]	GAC Residential[11]
Dissolved Arsenic	<2.5	3.0	3.9	<2.5	<2.5	<2.5	µg/l	-	7.5	-
Dissolved Barium	52	113	18	52	70	<3	µg/l	100	-	-
Dissolved Beryllium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	µg/l	-	-	-
Dissolved Boron	54	95	44	49	68	<12	µg/l	-	750	-
Dissolved Cadmium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	µg/l	-	3.75	-
Total Dissolved Chromium	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	µg/l	-	37.5	-
Hexavalent Chromium	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	mg/l	0.03	-	-
Dissolved Copper	<7	<7	<7	<7	<7	<7	µg/l	-	1,500	-
Dissolved Lead	<5	<5	<5	<5	<5	<5	µg/l	-	18.75	-
Dissolved Mercury	<1	<1	<1	<1	<1	<1	µg/l	-	0.75	-
Dissolved Nickel	2	13	<2	4	8	<2	µg/l	-	15	-
Dissolved Selenium	<3	<3	<3	<3	<3	<3	µg/l	5	ne	-
Dissolved Vanadium	<1.5	<1.5	3.5	<1.5	<1.5	<1.5	µg/l	-	-	-
Dissolved Zinc	<3	<3	20	4	7	<3	µg/l	100	ne	-
Sulphate	60.9	88.2	43.7	66.4	61.8	<0.5	mg/l	-	187.5	-
Chloride	34.9	37.7	18.0	25.8	38.6	<0.3	mg/l	-	187.5	-
Ortho Phosphate	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/l	0.03	0.035	-

[9] EPA Report – Towards Setting Guideline Values for the Protection of Groundwater in Ireland, Interim Report, 2003.
[10] Groundwater Threshold Values as set out in S.I. 9 of 2010.
[11] SOCIETY OF BROWNFIELD RISK ASSESSMENT - Development of Generic Assessment Criteria for Assessing Vapour Risks to Human Health from Volatile Contaminants in Groundwater Version 1.0 February 2017.

Parameter	BH01	BH05	BH06	BH14	BH17	LOD	Unit	EPA IGV[9]	GTV[10]	GAC Residential[11]
Sulphide	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/l	-	-	-
Anionic Surfactants	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/l	0.2	-	-
BOD (Settled)	<1	1	<1	7	<1	<1	mg/l	-	-	-
COD (Settled)	40	23	<7	70	20	<7	mg/l	-	-	-
Fats Oils and Grease	<4	<4	<4	<4	<4	<4	mg/l	-	-	-
Free/Residual Chlorine	<0.02	<0.02	<0.02	0.06	<0.02	<0.02	mg/l	-	-	-
Ammoniacal Nitrogen as NH_3	0.41	0.28	0.03	0.08	0.12	<0.03	mg/l	-	0.175	-
Total Nitrogen	68.6	10.5	1.2	5.1	2.7	<0.5	mg/l	-	-	-
Total Suspended Solids	45509	7031	189	64	1592	<10	mg/l	-	-	-

Table 8 Groundwater PAHs

Parameter	BH01	BH05	BH06	BH14	BH17	LOD	Unit	EPA IGV	GTV	GAC Residential[12]
Naphthalene	<0.1	<0.1	<0.1	<0.1	<0.1	<0.013	µg/l	1	ne	220
Acenaphthylene	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	µg/l	ne	ne	220,000
Acenaphthene	<0.013	0.031	<0.013	<0.013	<0.013	<0.014	µg/l	ne	ne	170,000
Fluorene	<0.014	0.127	<0.014	<0.014	<0.014	<0.011	µg/l	ne	ne	210,000
Phenanthrene	<0.011	0.497	<0.011	<0.011	0.025	<0.013	µg/l	ne	ne	Note 1
Anthracene	<0.013	0.030	<0.013	<0.013	<0.013	<0.012	µg/l	10,000	ne	Note 1[13]
Fluoranthene	0.022	0.214	<0.012	<0.012	0.016	<0.013	µg/l	1	ne	Note 1
Pyrene	0.024	0.256	<0.013	<0.013	0.018	<0.015	µg/l	ne	ne	Note 1
Benzo(a)anthracene	<0.015	0.056	<0.015	<0.015	<0.015	<0.011	µg/l	ne	ne	Note 1
Chrysene	0.012	0.067	<0.011	<0.011	<0.011	<0.018	µg/l	ne	ne	Note 1
Benzo(bk)fluoranthene	<0.018	0.066	<0.018	<0.018	<0.018	<0.016	µg/l	ne	ne	Note 1
Benzo(a)pyrene	<0.016	0.025	<0.016	<0.016	<0.016	<0.011	µg/l	0.01	0.0075	Note 1
Indeno(123cd)pyrene	<0.011	<0.011	<0.011	<0.011	<0.011	<0.01	µg/l	0.05	ne	Note 1
Dibenzo(ah)anthracene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.011	µg/l	ne	ne	Note 1
Benzo(ghi)perylene	<0.011	0.011	<0.011	<0.011	<0.011	<0.195	µg/l	0.05	ne	Note 1
Coronene	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	ug/l			-
PAH 17 Total	<0.295	1.380	<0.295	<0.295	<0.295	<0.295	ug/l	ne	0.075	-
Benzo(b)fluoranthene	<0.01	0.05	<0.01	<0.01	<0.01	<0.01	µg/l	0.5	ne	Note 1
Benzo(k)fluoranthene	<0.01	0.02	<0.01	<0.01	<0.01	<0.1	µg/l	0.05	ne	Note 1

[12] SOCIETY OF BROWNFIELD RISK ASSESSMENT - Development of Generic Assessment Criteria for Assessing Vapour Risks to Human Health from Volatile Contaminants in Groundwater Version 1.0 February 2017.
[13] Reference Table 11 – Substances for which GAC_{gwvap} have not been derived due to being insufficiently volatile (Kaw < 4x10-4) or aqueous solubility (≤1 µg/L) - SOCIETY OF BROWNFIELD RISK ASSESSMENT - Development of Generic Assessment Criteria for Assessing Vapour Risks to Human Health from Volatile Contaminants in Groundwater Version 1.0 February 2017.

Table 9 Groundwater Hydrocarbons

Parameter	BH01	BH05	BH06	BH14	BH17	LOD	Unit	EPA IGV	GTV	GAC Residential [14]
TPH CWG										
Aliphatics										
>C5-C6	<10	<10	<10	<10	<10	<10	µg/l	ne	ne	1,900
>C6-C8	<10	<10	<10	<10	<10	<10	µg/l	ne	ne	1,500
>C8-C10	<10	<10	<10	<10	<10	<10	µg/l	ne	ne	57
>C10-C12	<5	<5	<5	139	<5	<5	µg/l	ne	ne	37
>C12-C16	<10	60	<10	610	<10	<10	µg/l	ne	ne	Note 1[15]
>C16-C21	<10	410	<10	1230	<10	<10	µg/l	ne	ne	Note 1
>C21-C35	1540	190	<10	10	400	<10	µg/l	ne	ne	Note 1
Total aliphatics C5-35	1540	660	<10	1989	400	<10	µg/l	10	ne	-
Aromatics										-
>C5-EC7	<10	<10	<10	<10	<10	<10	µg/l	ne	ne	210,000
>EC7-EC8	<10	<10	<10	<10	<10	<10	µg/l	ne	ne	220,000
>EC8-EC10	<10	<10	<10	<10	<10	<10	µg/l	ne	ne	1,900
>EC10-EC12	<5	<5	<5	<5	<5	<10	µg/l	ne	ne	6,800
>EC12-EC16	<10	70	<10	<10	<10	<10	µg/l	ne	ne	39,000
>EC16-EC21	<10	100	<10	<10	<10	<10	µg/l	ne	ne	Note 1
>EC21-EC35	750	<10	<10	<10	<10	<10	µg/l	ne	ne	Note 1
Total aromatics C5-35	750	170	<10	<10	<10	<10	µg/l	10	ne	-
Total aliphatics and aromatics(C5-35)	2290	830	<10	1989	400	<10	µg/l	10	ne	-
Mineral Oil (C10-C40)	1630	660	<10	1989	400	<10	ug/l	10	-	-
Total Phenols HPLC						<0.01	mg/l	0.5	ne	Note 1
MTBE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	ug/l	30	ne	8,300
Benzene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ug/l	ne	0.75	210
Toluene	<5	<5	<5	<5	<5	<5	ug/l	10	ne	230,000
Ethylbenzene	<1	<1	<1	<1	<1	<1	ug/l	10	ne	10,000
m/p-Xylene	<2	<2	<2	<2	<2	<2	ug/l	10	ne	9,900
o-Xylene	<1	<1	<1	<1	<1	<1	ug/l	10	ne	1,200

[14] SOCIETY OF BROWNFIELD RISK ASSESSMENT - Development of Generic Assessment Criteria for Assessing Vapour Risks to Human Health from Volatile Contaminants in Groundwater Version 1.0 February 2017.
[15] Reference Table 11 – Substances for which GAC_{gwvap} have not been derived due to being insufficiently volatile (Kaw < 4x10-4) or aqueous solubility (≤1 µg/L) - SOCIETY OF BROWNFIELD RISK ASSESSMENT - Development of Generic Assessment Criteria for Assessing Vapour Risks to Human Health from Volatile Contaminants in Groundwater Version 1.0 February 2017.

13.0 Generic Quantitative Risk Assessment

GII has assessed the site investigation data including all factual site data and the laboratory data to compile a risk based assessment for the site. The chemical data have been assessed against Generic Assessment Criteria (GAC) appropriate for human health and controlled waters.
The proposed end use of the site is mixed (medium and high) density residential with potentially some commercial development. Based on the proposed end use the data is assessed against residential without homegrown produce GACs.

13.1.1. Human Health

Subsoils
A human health risk assessment has also been undertaken whereby metal concentrations are assessed against published generic assessment criteria (GACs). GII assessed the soil data collected from the window samples, trial pits and boreholes against the LQM/CIEH S4ULs for Human Health Risk Assessment (S4ULs)[16]. The S4ULs present soil assessment criteria for an extended range of 89 substances. For each substance, S4ULs have been derived for a range of generic land uses and Soil Organic Matter (%SOM) contents. All toxicological and physical-chemical inputs used in the derivation of the S4ULs are clearly identified and discussed. For each substance, S4ULs have been derived for six generic land uses (including the two Public Open Space land uses defined in C4SL guidance) and a range of Soil Organic Matter contents (organic contaminants only). All toxicological and physical-chemical data inputs used in the derivation of the S4ULs are presented and discussed in the publication. The proposed future use of the site is residential. In order to be conservative in terms of assessing any potential risk to future site users, the residential with homegrown produce S4UL criteria have been applied to the data.
Where an S4UL has not been defined for a specific element the result/concentration has been assessed against either:

1. The Contaminated Land: Applications in Real Environments (CL:AIRE) SP1010 – Development of Category 4 Screening Levels (C4SLs) for Assessment of Land Affected by Contamination; or
2. The CL:AIRE in association with The Environmental Industries Commission (EIC) and Association of Geotechnical and GeoEnvironmental Specialists (AGS) Soil Generic Assessment Criteria (GAC) for Human Health Risk Assessment.

The level of mercury detected in the sample BH-08 between 0.40m and 1.00m BGL exceeded the residential without homegrown produce S4UL. The concentrations in all other parameters in each sample are well below the specified GAC values. A full summary of the S4UL data is presented in Appendix 9.

[16] LQM/CIEH 'Suitable 4 Use Levels' (S4ULs). Copyright Land Quality Management Limited reproduced with permission; Publication Number S4UL3746. All rights reserved.

Groundwater

Groundwater will not be utilised on site for either irrigation or as a potable water supply however the inhalation risk has been considered. In terms of vapour inhalation risk, groundwater concentrations were compared against groundwater standards for a residential setting using:

The Society of Brownfield Risk Assessment, Development of Generic Assessment Criteria for Assessing Vapour Risks to Human Health from Volatile Contaminants in Groundwater. Version- 1.0. February 2017. All levels of volatile compounds in the groundwater were below the relevant GAC.

Ground Gases

To assess the on-site potential for hazardous ground gases, the window sample boreholes WS-02, WS-05, WS-06, WS07 and WS-10 were installed with ground gas monitoring wells to undertake an in-situ ground gas monitoring. The boreholes were installed with a 50mm (internal) diameter uPVC standpipe with a bentonite seal for the upper section and a gravel surround for the majority of the pipe, finished with a plastic end cap and gas bung. The wells were installed within the made ground deposits.

The monitoring and assessment were completed with cognisance of BS8485: 2007: Code of practice for the characterisation and remediation from ground gas affected developments, CIRIA Report C665, November 2007 and the NHBC Document; Guidance on the evaluation of development proposals on site where methane and carbon dioxide are present, March 2007.

Gas monitoring was completed between July and October 2021 using a geotechnical instruments GA 2000+ Gas Analyser with flow pod. The results of the monitoring rounds completed are summarised in Table 10.

Throughout the monitoring rounds completed the atmospheric pressure ranged from 995mb to 1020mb, with a maximum Carbon Dioxide (CO_2) concentration of 0.7%v/v being noted at WS-05. The maximum concentration of methane of 0.3% was noted in WS-07. The minimum Oxygen (O_2) concentration was noted in WS-10 (19.0%). The maximum flow rate observed was +0.3 l/h.

In accordance with CIRIA C665 the recorded methane and carbon dioxide concentrations have been converted to a Gas Screening Values (GSVs) for assessment as follows:

CO_2/CH_4 GSV = (CO_2/CH_4 (%) / 100) x Max Flow (l/h).

In accordance with CIRIA C665 Table 8.5 and 8.6 the site derived GSVs for Carbon Dioxide and Methane are 0.0006 and 0.0012 l/hr respectively. This equates to a CIRIA R149 Characteristic Situation 1 (Very Low Risk).

Table 10 Gas Monitoring Summary

Well ID	Sample Date	Methane (%)	Carbon Dioxide (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Oxygen (%)	Atmospheric Pressure (mb)	Flow (l/h)
WS-02	27/07/2021	0	0.3	2	2	20.4	1007	0.1
WS-02	05/08/2021	0	0.4	0	0	20.7	995	0.3
WS-02	11/08/2021	0	0.3	1	0	20.5	1009	0
WS-02	17/08/2021	0	0.2	0	0	20.9	1020	0.2
WS-05	27/07/2021	0	0.7	2	1	19.8	1007	0.1
WS-05	05/08/2021	0	0.4	1	0	20.1	995	0.1
WS-05	11/08/2021	0	0.5	1	0	20.2	1009	0
WS-05	17/08/2021	0	0.4	0	0	20.5	1020	0.2
WS-06	27/07/2021	0	0.3	9	1	20.5	1007	0
WS-06	05/08/2021	0	0.1	0	0	20.8	995	0.2
WS-06	11/08/2021	0	0.1	1	0	20.7	1009	0
WS-06	17/08/2021	0	0.1	1	0	20.8	1020	0.2
WS-07	27/07/2021	0.2	0.3	1	1	20.1	1007	0.2
WS-07	05/08/2021	0.3	0.2	0	1	20.1	995	0.2
WS-07	11/08/2021	0	0.4	1	0	20.2	1009	0
WS-07	17/08/2021	0	0.5	0	0	20.4	1020	0.2
WS-10	27/07/2021	0	0.1	1	1	20	1007	0.1
WS-10	05/08/2021	0.1	0.4	0	0	19	995	0.2
WS-10	11/08/2021	0	0.4	1	0	20.2	1009	0.0
WS-10	17/08/2021	0	0.3	0	0	20.1	1020	0.3

Table 11 Gas Risk Assessment Calculation Gas Screening Value

Well ID	Sample Date	Methane GSV	Carbon Dioxide GSV	Risk
WS-02	27/07/2021	0.0000	0.0003	0.0020
WS-02	05/08/2021	0.0000	0.0012	0.0000
WS-02	11/08/2021	0.0000	0.0000	0.0000
WS-02	17/08/2021	0.0000	0.0004	0.0000
WS-05	27/07/2021	0.0000	0.0007	0.0020
WS-05	05/08/2021	0.0000	0.0004	0.0010
WS-05	11/08/2021	0.0000	0.0000	0.0000
WS-05	17/08/2021	0.0000	0.0008	0.0000
WS-06	27/07/2021	0.0000	0.0000	0.0000
WS-06	05/08/2021	0.0000	0.0002	0.0000
WS-06	11/08/2021	0.0000	0.0000	0.0000
WS-06	17/08/2021	0.0000	0.0002	0.0020
WS-07	27/07/2021	0.0004	0.0006	0.0020
WS-07	05/08/2021	0.0006	0.0004	0.0000
WS-07	11/08/2021	0.0000	0.0000	0.0000
WS-07	17/08/2021	0.0000	0.0010	0.0000
WS-10	27/07/2021	0.0000	0.0001	0.0010
WS-10	05/08/2021	0.0002	0.0008	0.0000
WS-10	11/08/2021	0.0000	0.0000	0.0000
WS-10	17/08/2021	0.0000	0.0009	0.0000

13.1.2. Controlled Waters

Based on the desk study the underlying locally important bedrock aquifer has been assessed using the most applicable GAC. The aquifer has been assessed by comparing the groundwater quality data against the following:

1. The Environmental Protection Agency's Draft Interim Guidelines Values (IGVs) for the Protection of Groundwater,2003; and
2. European Union (Drinking Water) Regulations 2014. Statutory Instrument No. 122 of 2014 (GTVs).

The IGVs are not statutory but were developed to assist in the assessment of impacts on groundwater quality. The IGVs are based on, but are more conservative than, the Drinking Water quality standards. GTVs have only been established for core indicator parameters. To ensure a comprehensive assessment of the groundwater quality, the IGVs are presented for parameters for which there are no GTV.

The levels of barium in BH-05 and the levels of ammonia in BH-01 and BH-05 exceeded either the IGV or GTV. The levels of PAHs in BH-05 exceeded the IGV or GTV. The levels of TPH in BH-01, 05, 14 and 17 exceeded the GIVT or GTV.

14.0 Updated Conceptual Site Model

14.1.1. Sources

Soil

Based on the results of the GQRA, a very slight potential risk to human health (future residential users) was identified due to slightly elevated level of Mercury at one location within the made ground deposit. This single elected level is considered to be a hot spot and not pervasive across the site.

The single exceedance was located in the relatively shallow made ground deposits which may be removed as part of any future development works. It is likely that a basement is planned in which case the made ground material will likely be removed from site removing the source.

Metals detected in the made ground deposits, even at low levels, are potentially a source of contamination for controlled water such as groundwater and surface water through leaching.

As metals were not detected at significant level in the groundwater across the site the risk posed by leaching of metals from soils is not considered a significant source. Again due to the fact that it is likely that a basement is planned in which case the made ground material will likely be removed from site removing the source of potential leaching into the underlying aquifer.

Ground Gases

The made ground deposits are potentially a source of ground gas which may impact on human health. Based on the gas monitoring carried out on site the made ground deposits are not a significant source of

gas. Again due to the fact that it is likely that a basement is planned in which case the made ground material will likely be removed from site removing the source of ground gas and human health exposure.

Groundwater

Groundwater beneath the site has been shown on to be a risk in terms of vapour inhalation.

14.1.2. Receptors

Human

The future site use will be a mix of residential and commercial. The on-site human health receptors are considered to be residential (without home grown produce) and commercial users while off site human receptors can be considered to be a mix of commercial and residential also.

Controlled Waters

The following controlled waters were identified as part of the desk study and confirmed during the site works.

- Underlying bedrock aquifer – locally important aquifer which is moderately productive only in local zones;
- There is no recorded groundwater abstraction within 1km of the site;
- The GSI quaternary geology indicates that the site is underlain by limestone derived till which will not be a source of potable water for future site users;
- The closest surface water feature is the River Poddle which is located approximately 600m to the east of the site. The Poddle is culverted at this point and is not a potable water source.

14.1.3. Pathways

It is assumed that the future development will include a basement structure which will in turn result in the excavation and removal of significant quantities of the made ground deposits on site. It is also likely that a significant portion of the site will be occupied by hardstanding areas in the form of carparking, building footprint and pavements. The excavation and removal of material and the creation of hardstanding areas will significantly reduce any pathway to human receptors linked to the made ground deposits and any contaminants within said deposits. These pathways would include soil and dust ingestion, dermal contact and inhalation of fugitive dust.

A potential pathway remaining is the migration of vapour. This pathway is no considered to be viable as volatile compounds were not identified at the site in excess of relevant human health GAC.

There is a potential pathway from the made ground deposits, which have been shown to have elevated levels of TPH, PAHs and some metals, to the underlying bedrock aquifer. This pathway has been demonstrated by the exceeded of controlled water GACs during the site investigation. The removal of large

amounts of made ground and the reduction in recharge through the subsoil as a result of the development of hardstanding area will reduce this pathway. The presence of stiff glacial till beneath the made ground will also limit downward migration of contaminants to a degree.

There is a potential pathway between contaminated groundwater and the local surface water features. The nearest surface water feature, the River Poddle, is culverted which reduces the potential for discharge of groundwater to the River as baseflow. The site is underlain by stiff glacial till which is likely to be of low permeability. The bedrock aquifer underlying the site is classified by the GSI as Ll which in turn indicates that the aquifer has a limited and relatively poorly connected network of fractures, fissures and joints, giving a low fissure permeability. The combination of low permeability till and the poorly connected fracture system within the bedrock decreases the risk of travel of contaminants from the site to the river.

14.1.4. Risk Assessment

The revised CSM includes a risk assessment which was completed by considering the sources, pathways and receptors (pollutant linkages), an assessment of the human health and environmental risks with reference to the significance and degree of the risk. The risk assessment has been undertaken with cognisance of BS10175:2001 and CIRIA Document C552: 'Contaminated Land Risk assessment - A Guide to Good Practice'.
The rationale relating to the calculation of the risk based on severity of each hazard and the risk probability is outlined in Tables 12 to 14. The revised CSM is presented in Table 15.

Table 12 Hazard Severity Matrix

Category	Definition
Severe	Acute risks to human health, catastrophic damage to buildings/property, major pollution of controlled waters.
Medium	Chronic risk to human health, pollution of sensitive controlled waters, significant effects on sensitive ecosystems or species, significant damage to buildings or structures.
Mild	Pollution of non-sensitive waters, minor damage to buildings or structures.
Minor	Requirement for protective equipment during site works to mitigate health effects, damage to non-sensitive ecosystems or species.

Table 13 Risk Probability Matrix

Category	Definition
High likelihood	Pollutant linkage may be present, and risk is almost certain to occur in long term, or there is evidence of harm to the receptor.
Likely	Pollutant linkage may be present, and it is probable that the risk will occur over the long term.
Low likelihood	Pollutant linkage may be present, and there is a possibility of the risk occurring, although there is no certainty that it will do so.
Unlikely	Pollutant linkage may be present, but the circumstances under which harm would occur are improbable.

Table 14 Risk Matrix

	Potential Severity			
Probability	Severe	Medium	Mild	Minor
High likelihood	Very High	High	Moderate	Low/Moderate
Likely	High	Moderate	Low/Moderate	Low
Low Likelihood	Moderate	Low/Moderate	Low	Very Low
Unlikely	Low/Moderate	Low	Very Low	Very Low

Table 15 Revised Conceptual Site Model

Source	Pathway	Receptor	Severity	Likelihood	Potential Risk	Discussion
Mercury concentration in one made ground sample exceeded the GAC.	• Ingestion of soil and dust • Dermal contact • Inhalation of fugitive dust	• Future site users in residential scenario • Future site users in a commercial scenario • Off-site residents of neighbouring residential units • Off-site residents of neighbouring commercial units	Medium	Low Likelihood	Low assuming that there will not be a pathway to the made ground deposits following final development	The future development will most likely include widespread excavation and removal of made ground deposits to accommodate a basement structure. This will result in the removal of a significant portion of the source material and reduce the exposure pathway to future site users. Where made ground deposits are to be left in situ it is recommended that at last 750mm of clean material or a geomembrane is placed on top of the made ground.
Elevated Levels of TPH, PAHs and Metals in made ground samples	• Leaching from soil into underlying shallow groundwater • Leaching from soil into underlying bedrock aquifer	• Shallow groundwater • Bedrock aquifer	Medium	Likely	Moderate	The shallow groundwater within the bedrock aquifer has been shown to be impacted by TPH and low levels of PAHs. The deep groundwater has not been assessed. Significant quantities of the made ground are likely to be removed as part of the development reducing

						the risk of impact on groundwater. The site is underlain by stiff glacial till which will limit downward migration of contaminants to a degree.
Elevated Levels of TPH, PAHs and Metals detected in shallow groundwater	• Shallow groundwater discharging to adjacent River – Poddle or Liffey • Lateral migration of shallow groundwater • Downward migration of impacted groundwater	• River Poddle and Liffey • Downgradient shallow groundwater • Bedrock aquifer	Medium	Unlikely	Low	The River Poddle is culverted as it passes the site reducing the likelihood of groundwater discharge to the river. The aquifer has been classified as Ll indicating an Aquifer with a limited and relatively poorly connected network of fractures, fissures and joints, giving a low fissure permeability which decreases the risk of travel of contaminants from the site to the river within the aquifer.

15.0 References

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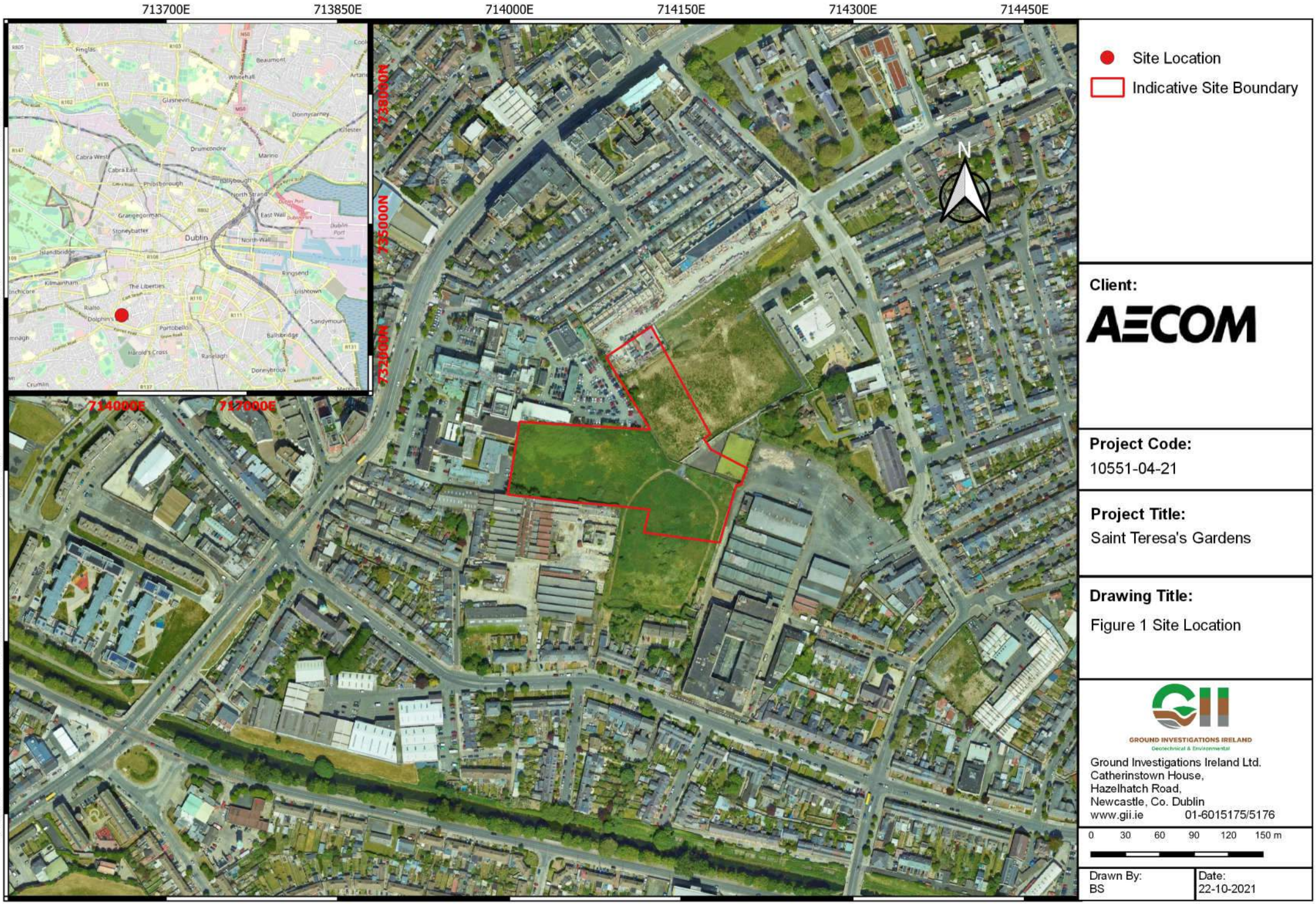
Nathanial, C.P.; McCaffrey, C.; Gillett, A.G.; Ogden, R.C. & Nathanial, J.F., *The LQM/CIEH S4ULs for Human Health Risk Assessment*, Land Quality Press, Nottingham (2015).

SOCIETY OF BROWNFIELD RISK ASSESSMENT - *Development of Generic Assessment Criteria for Assessing Vapour Risks to Human Health from Volatile Contaminants in Groundwater*, Version 1.0 February 2017.

APPENDIX 1 - Figures



Client:

AECOM

Project Code:
10551-04-21

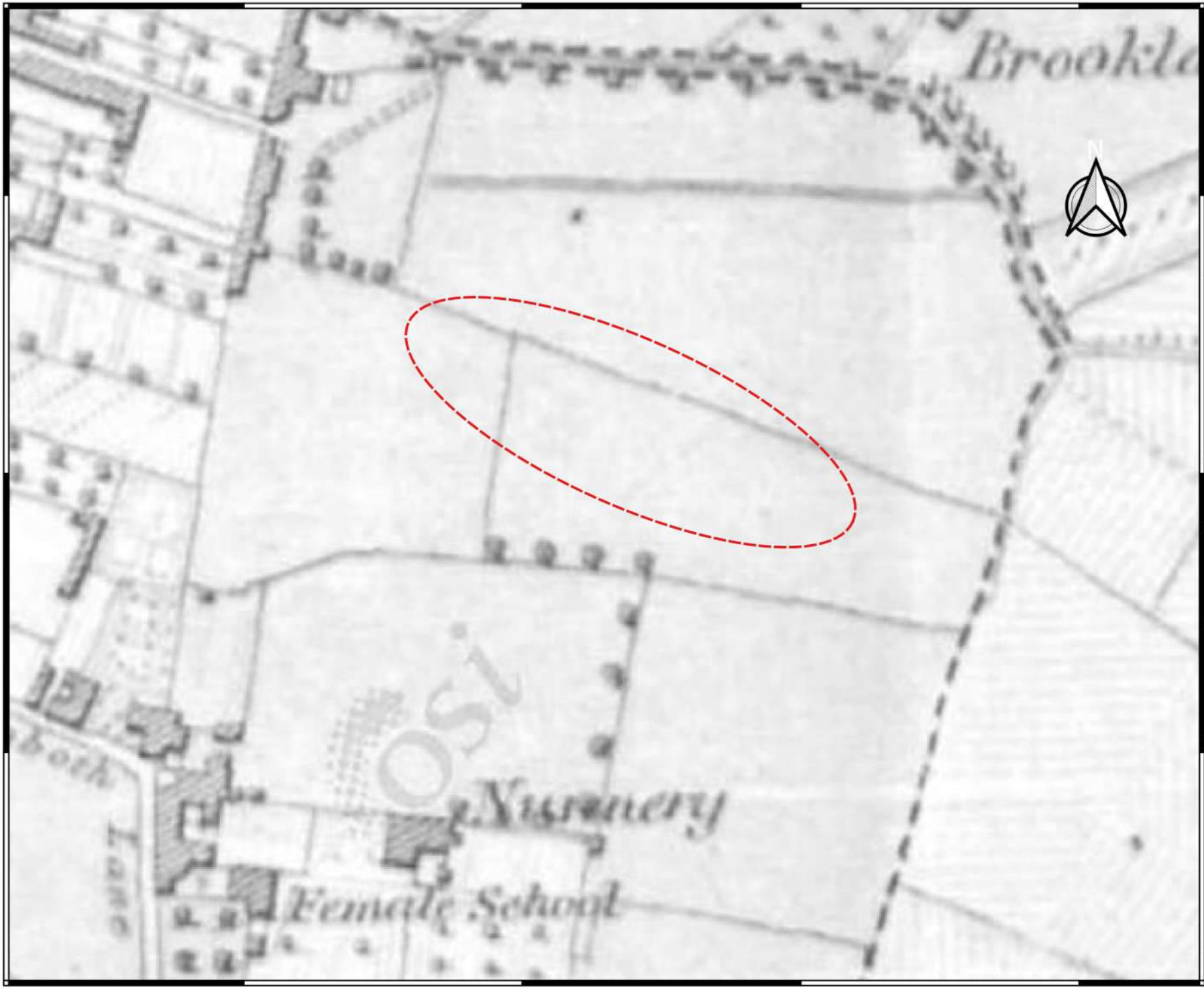
Project Title:
Saint Teresa's Gardens

Drawing Title:
Figure 1 Site Location

GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental
Ground Investigations Ireland Ltd.
Catherinstown House,
Hazelhatch Road,
Newcastle, Co. Dublin
www.gii.ie 01-6015175/5176

0 30 60 90 120 150 m

Drawn By:	Date:
BS	22-10-2021



Indicative Site Location

Client:

AECOM

Project Code:

10551-04-21

Project Title:

Saint Teresa's Gardens

Drawing Title:

Figure 2 OSI 6-Inch Map

GROUND INVESTIGATIONS IRELAND
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Catherinstown House,
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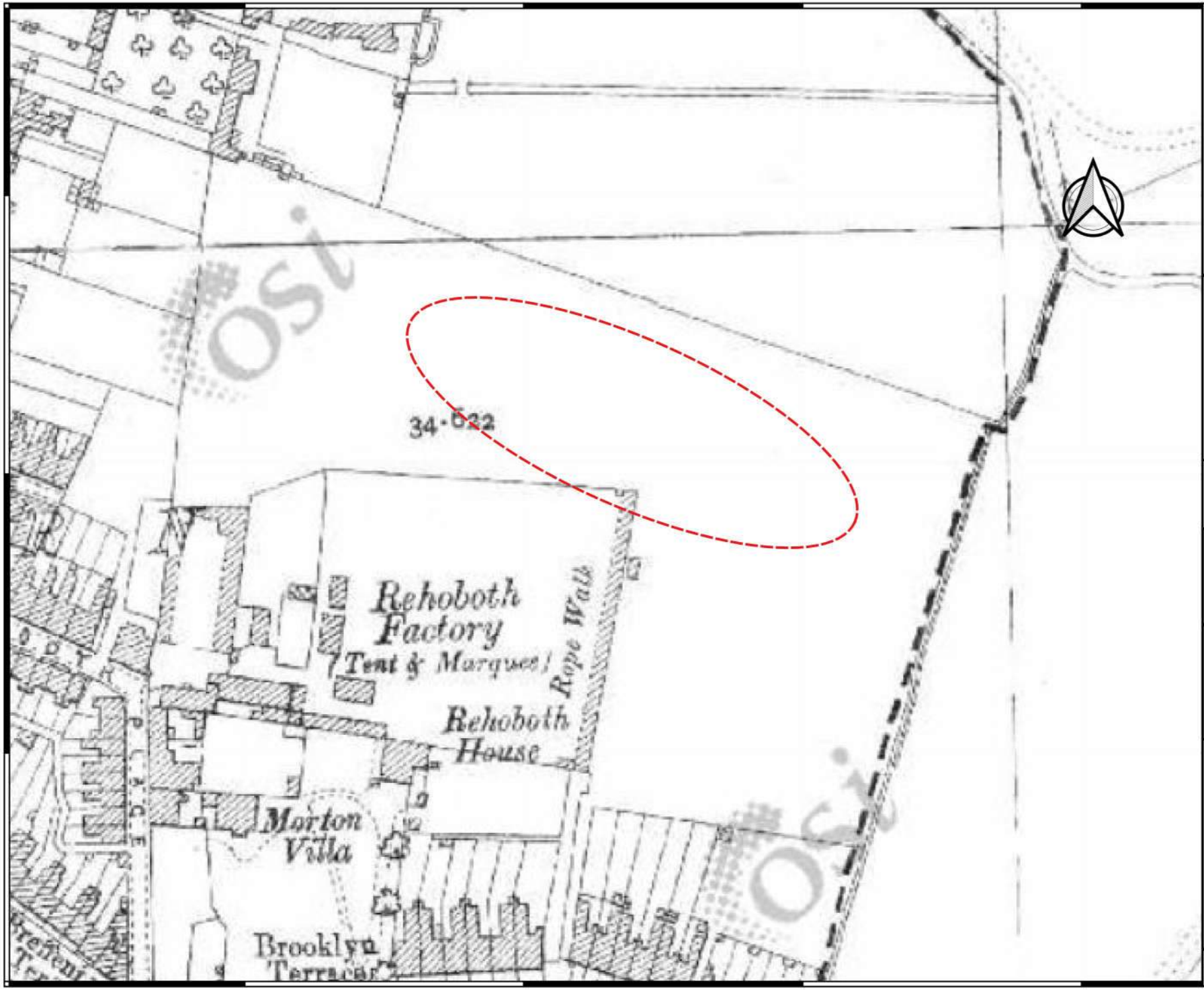
www.gii.ie 01-6015175/5176

Drawn By:	Date:
BS	12-10-2021



Client:

AECOM

Project Code:

10551-04-21

Project Title:

Saint Teresa's Gardens

Drawing Title:

Figure 3 OSI 25-Inch Map

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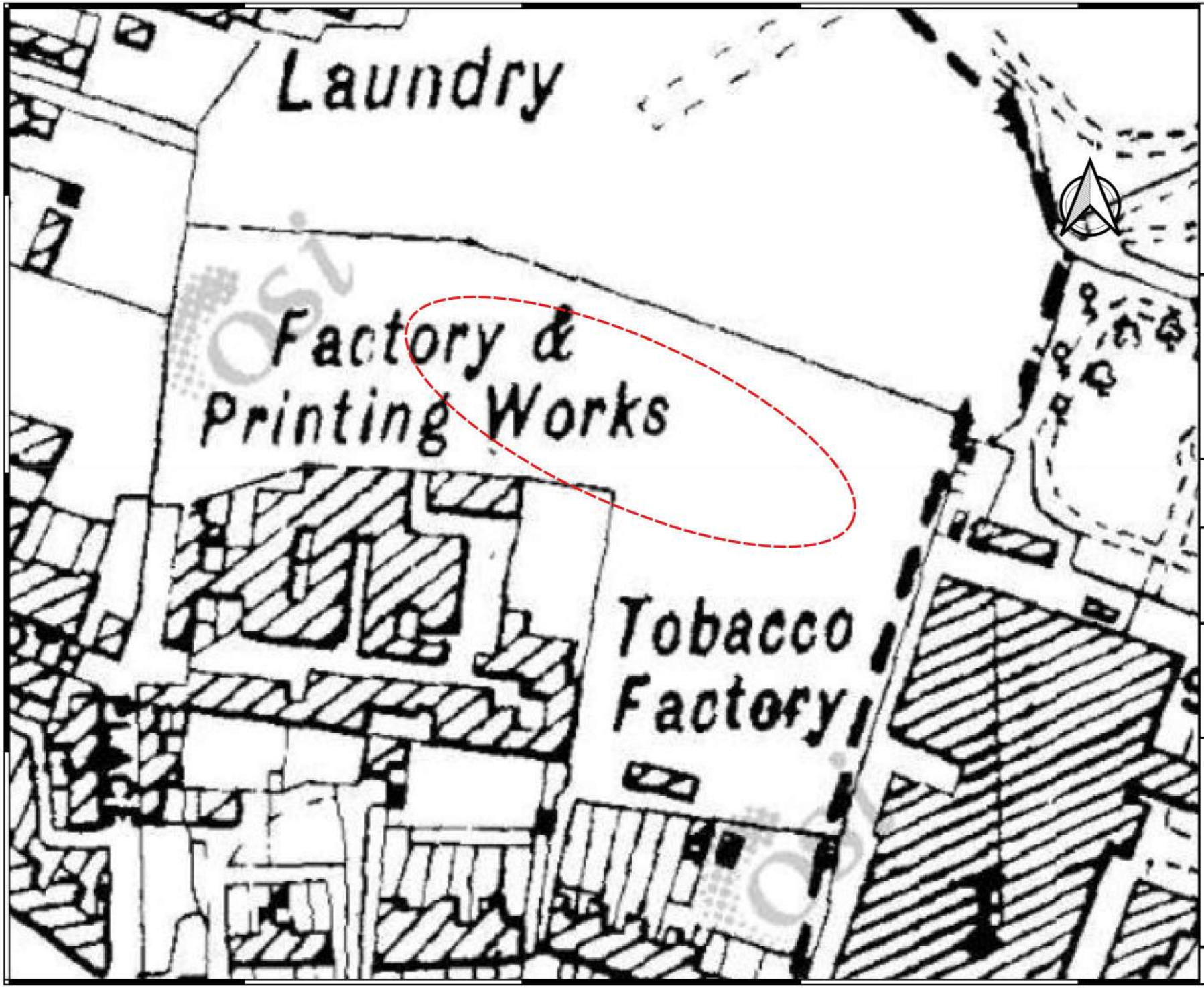
Drawn By:	Date:
BS	12-10-2021



Indicative Site Location

Client:

AECOM

Project Code:

10551-04-21

Project Title:

Saint Teresa's Gardens

Drawing Title:

Figure 4 OSI Cassini Map

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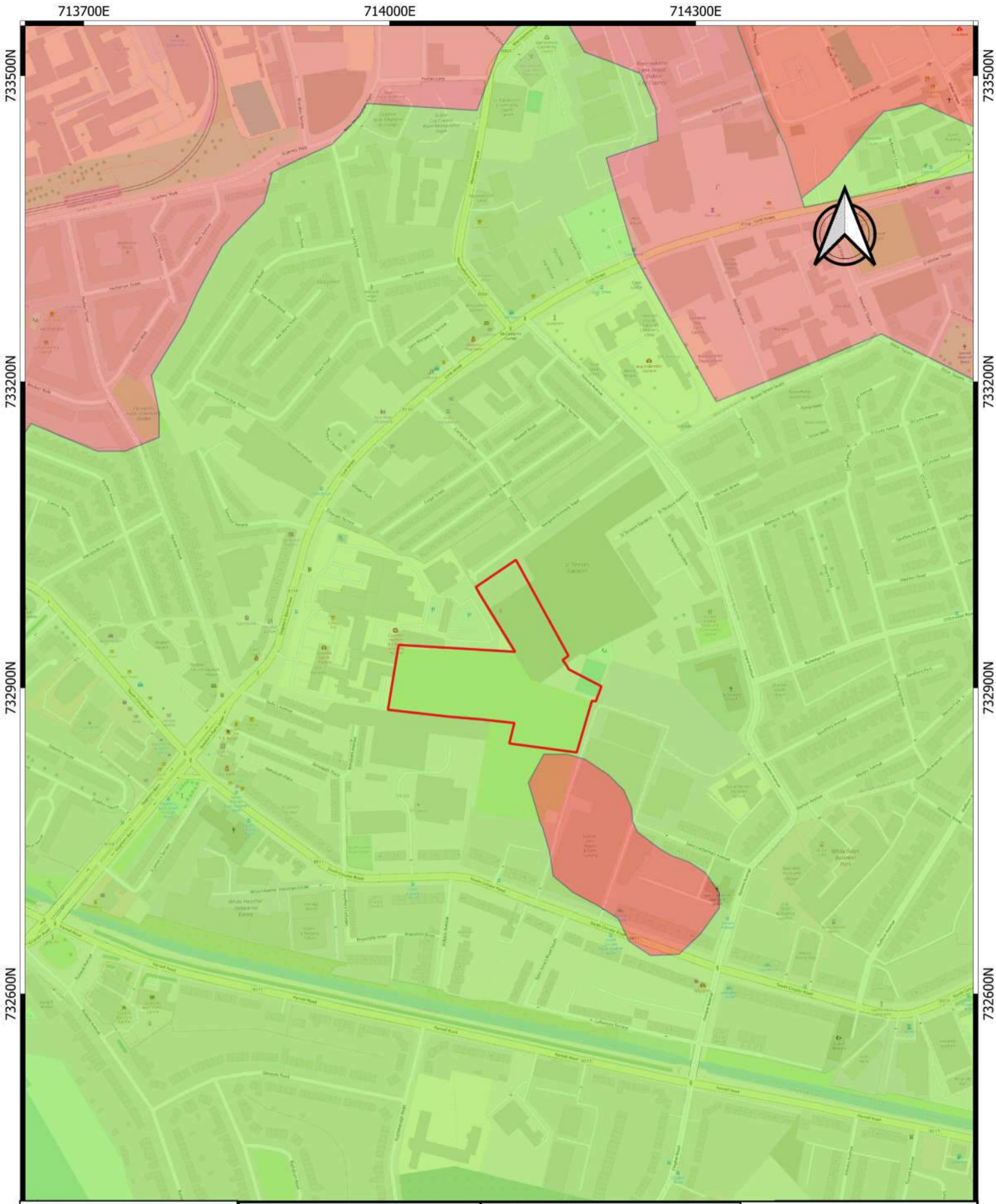
Drawn By:	Date:
BS	12-10-2021



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Client:
AECOM

0 50 100 150 200 m

Project Title:
Saint Teresa's Garden

Drawing Title:
Figure 5 Quaternary Geology

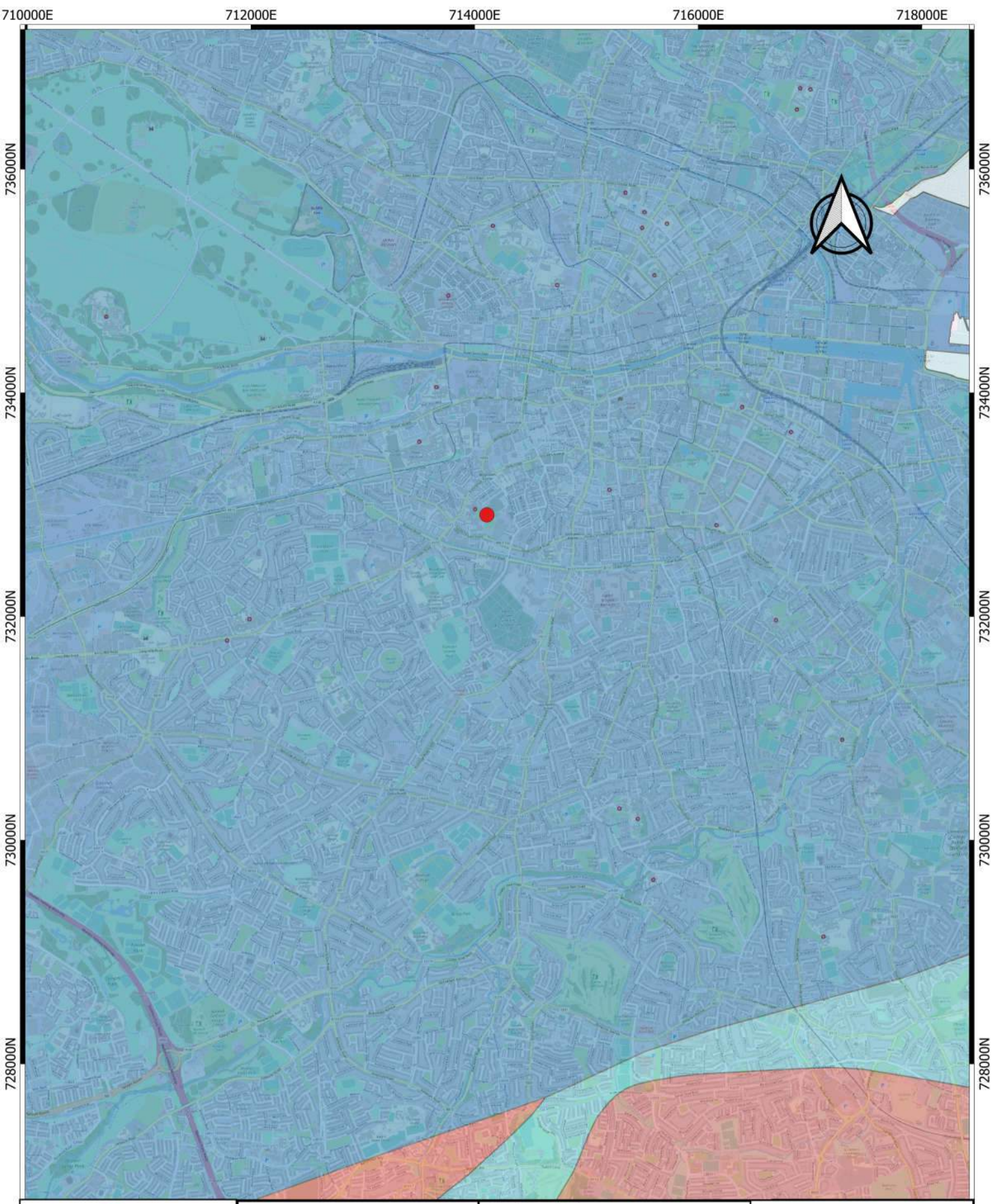
GII Project Reference:
10551-04-21

Drawn By:
BS

Date:
12-10-2021

Indicative Site Boundary

Quaternary Sediments
- GLs
- TLs
- Urban



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www.gii.ie 01-6015175/5176

Client:
AECOM

0 500 1,000 1,500 m

Project Title:
Saint Teresa's Garden

Drawing Title:
Figure 6 Bedrock Geology

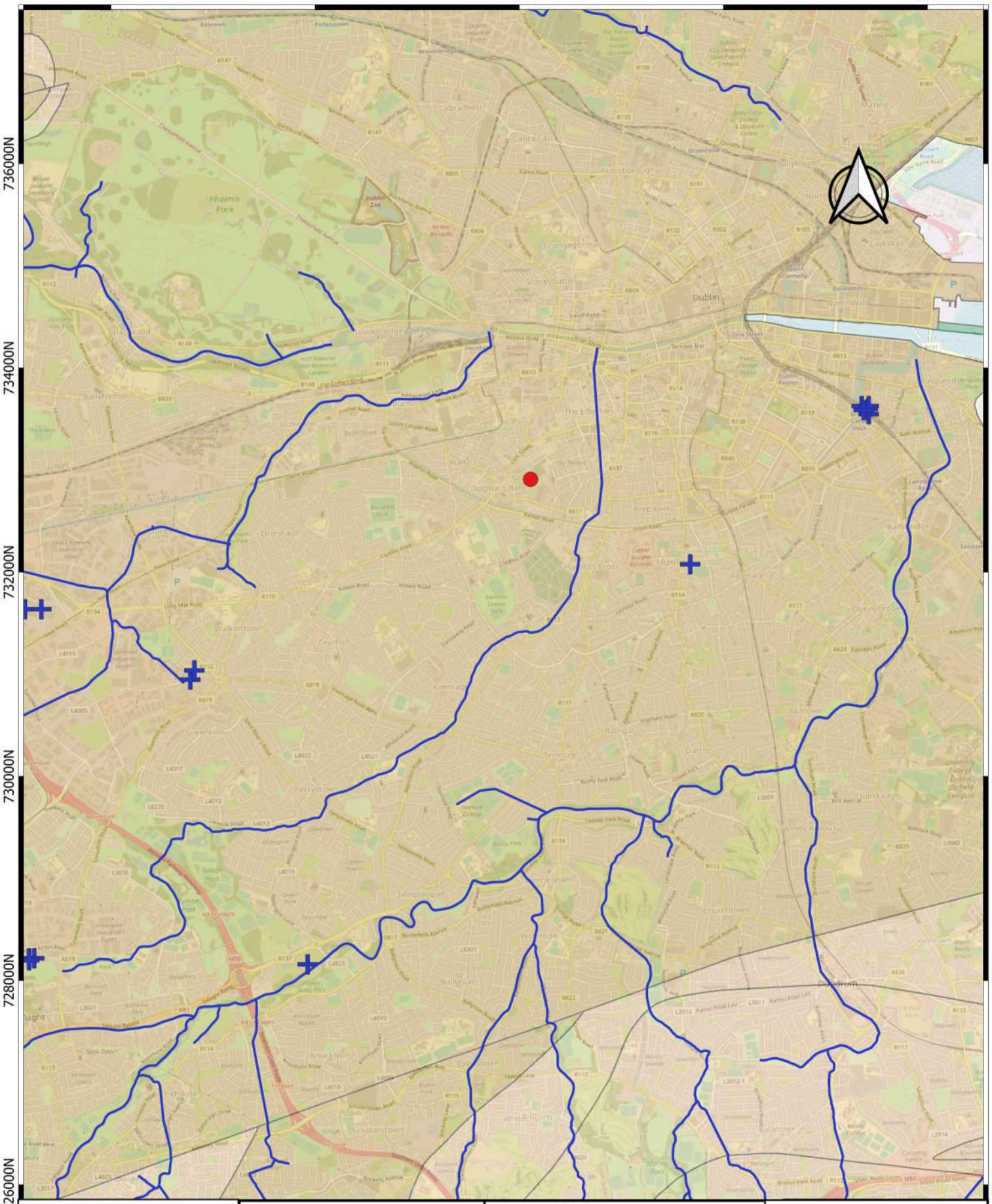
GII Project Reference:
10551-04-21

Drawn By:
BS

Date:
12-10-2021

Site Location

Bedrock Geology
- Butter Mountain Fm
- Lucan Formation
- Type 2e equigranular
- Type 2p microcline



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Geotechnical & Environmental

Ground Investigations Ireland Ltd.
Catherinstown House,
Hazelhatch Road,
Newcastle, Co. Dublin
www.gii.ie 01-6015175/5176

Client:
AECOM

0 600 1,200 1,800 m

Project Title:
Saint Teresa's Gardens

Drawing Title:
Figure 7 Aquifer Category

GII Project Reference:
10551-04-21

Drawn By:
BS

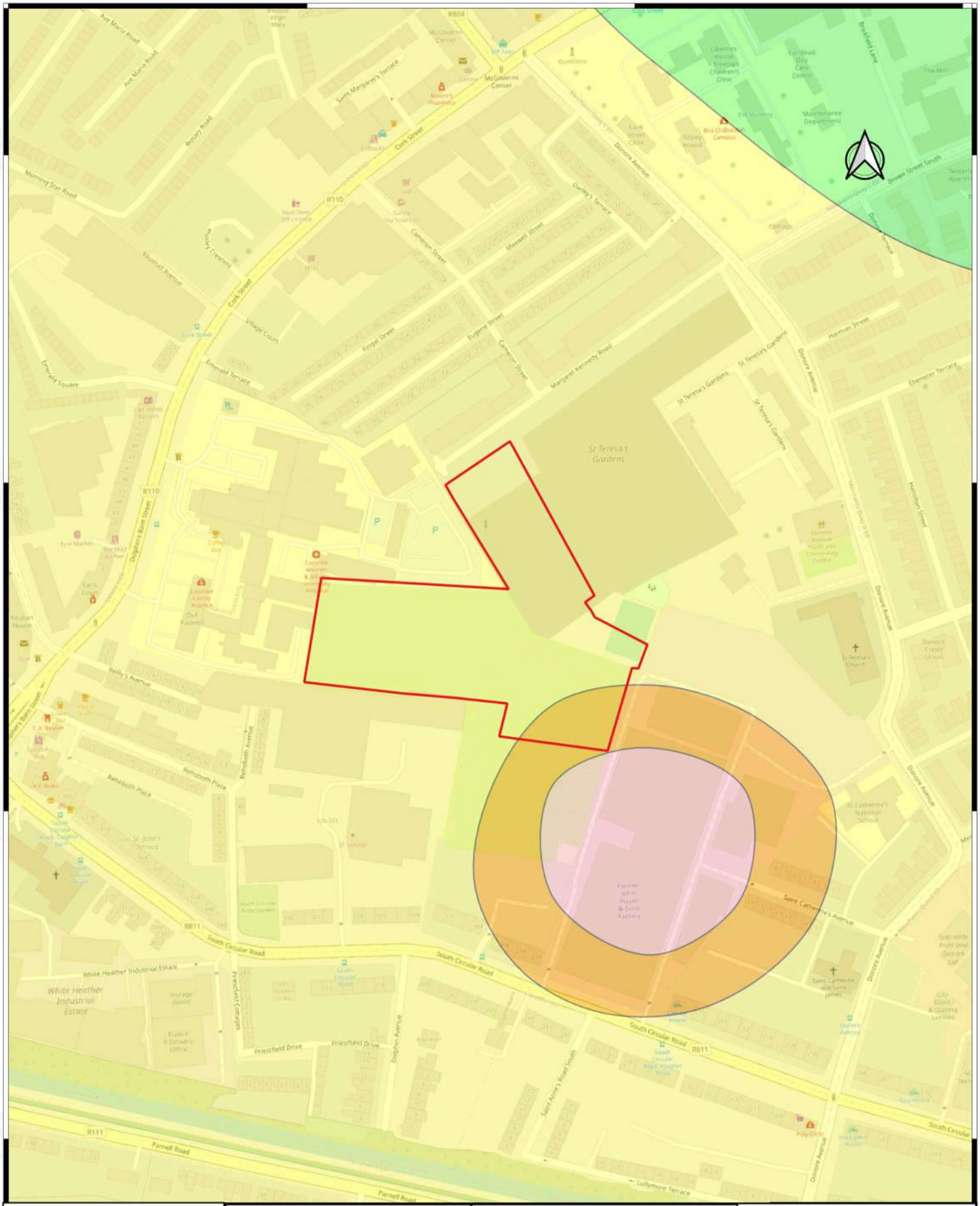
Date:
12-10-2021

Site Location

Bedrock Aquifer
- LI
- PI

Well/Spring

River/Stream



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Client:
AECOM

0 40 80 120 m

Project Title:
Saint Teresa's Gardens

Drawing Title:
Figure 8 Aquifer Vulnerability

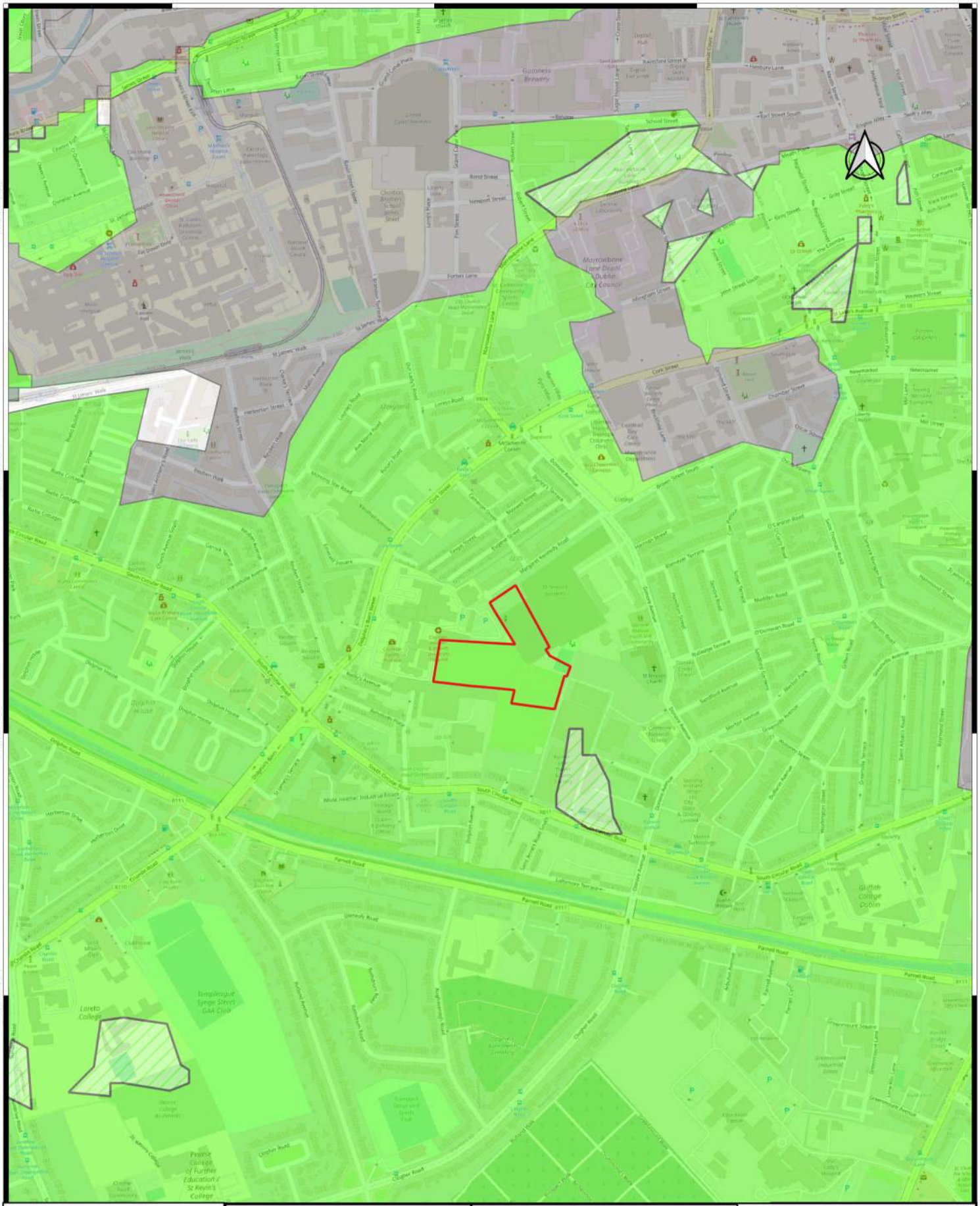
GII Project Reference:
10551-04-21

Drawn By: BS

Date: 12-10-2021

Indicative Site Boundary

Aquifer Vulnerability
- E
- H
- L
- M



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Client:
AECOM

0 100 200 300 m

Project Title:
Saint Teresa's Gardens

Drawing Title:
Figure 9 Landslide Susceptibility

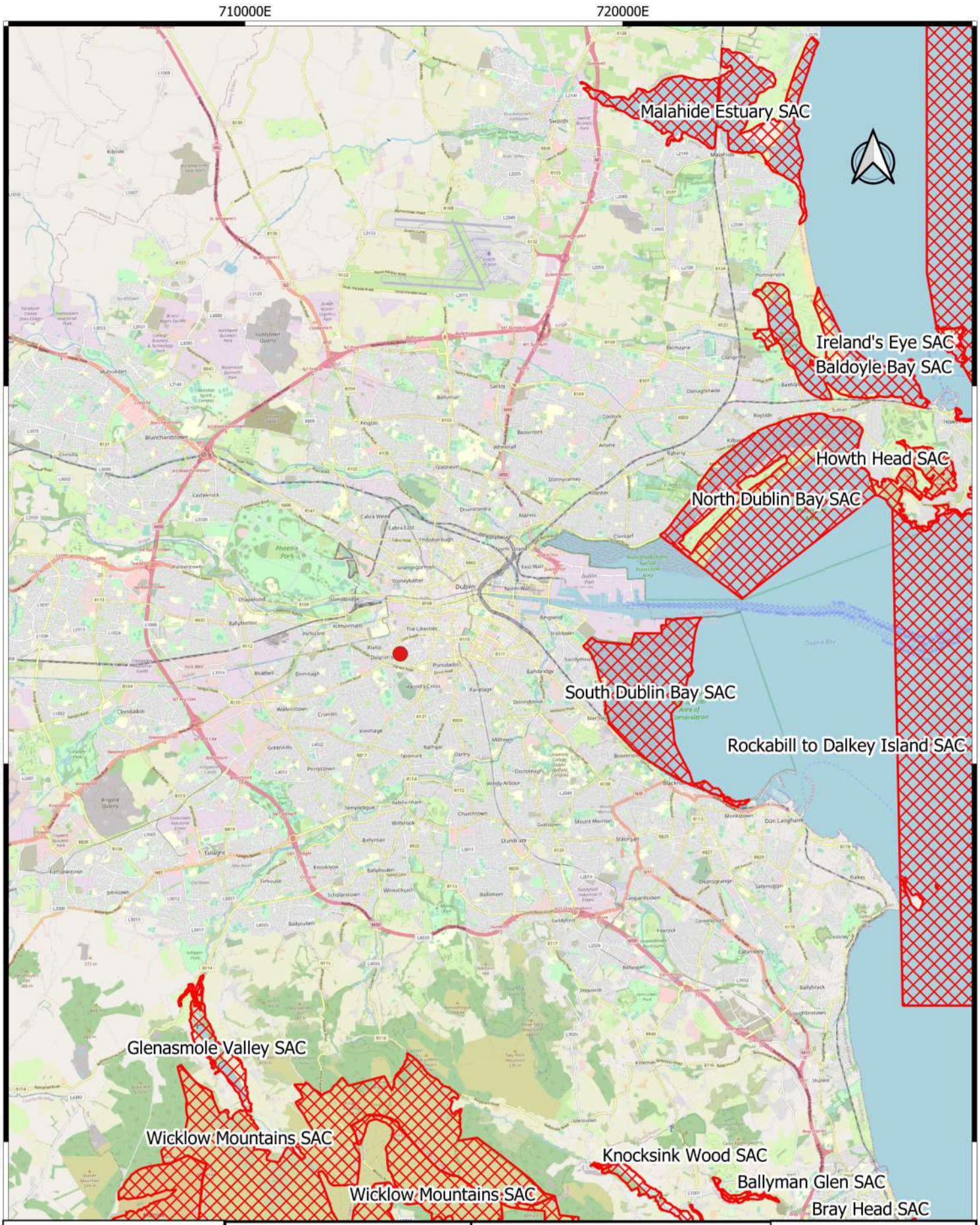
GII Project Reference:
10551-04-21

Drawn By: BS

Date: 12-10-2021

Indicative Site Boundary

Landslide Susceptibility
- Low
- Low (inferred)
- Made



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Hazelhatch Road,
Newcastle, Co. Dublin
www.gii.ie 01-6015175/5176

Client:
AECOM

Project Title:
Saint Teresa's Gardens

Drawing Title:
Figure 10 Special Area of Conservation

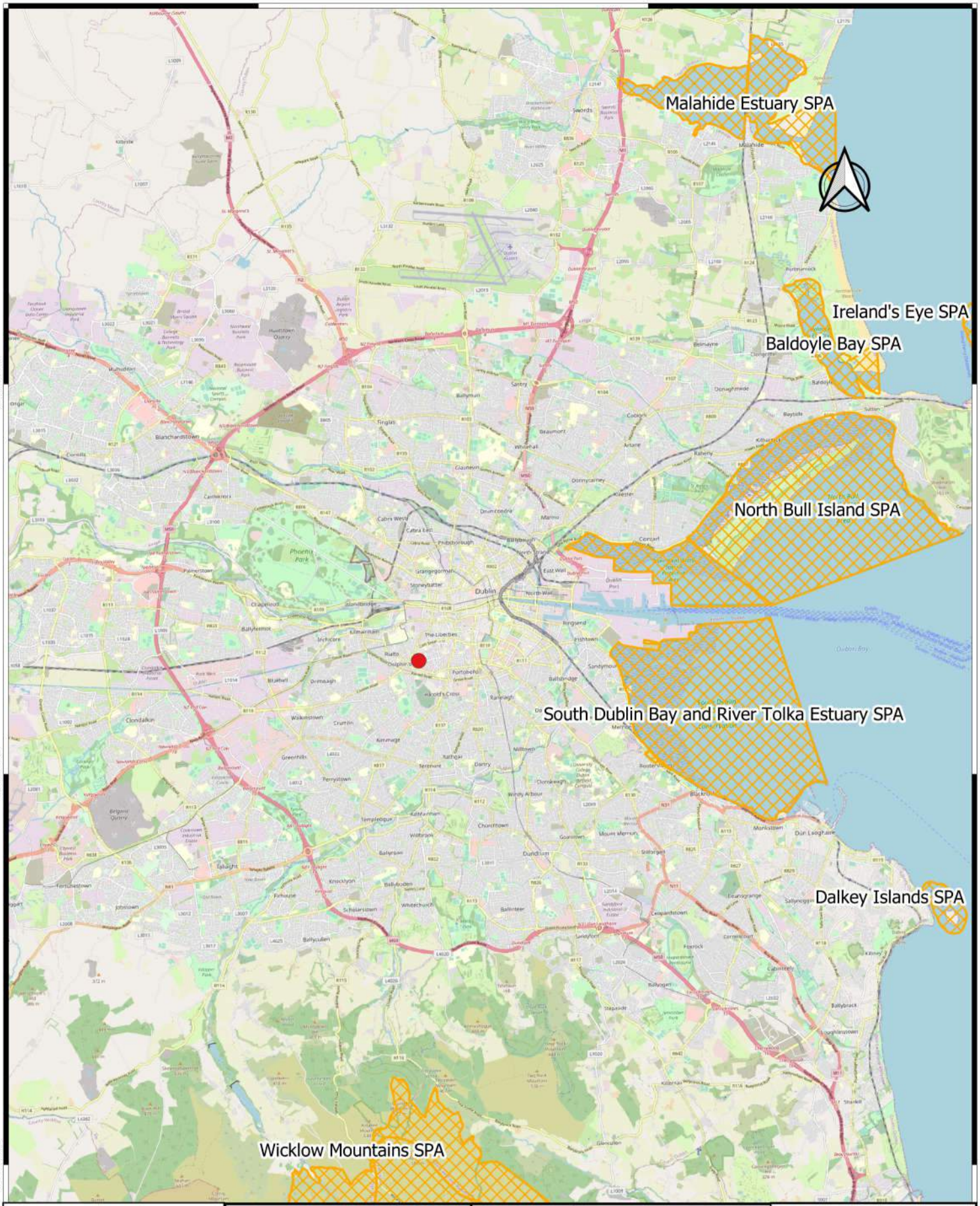
GII Project Reference:
10551-04-21

0 2.5 5 km

Drawn By:
BS

Date:
12-10-2021

Site Location
SAC



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www.gii.ie 01-6015175/5176

Client:
AECOM

Project Title:
Saint Teresa's Gardens

Drawing Title:
Figure 11 Special Protected

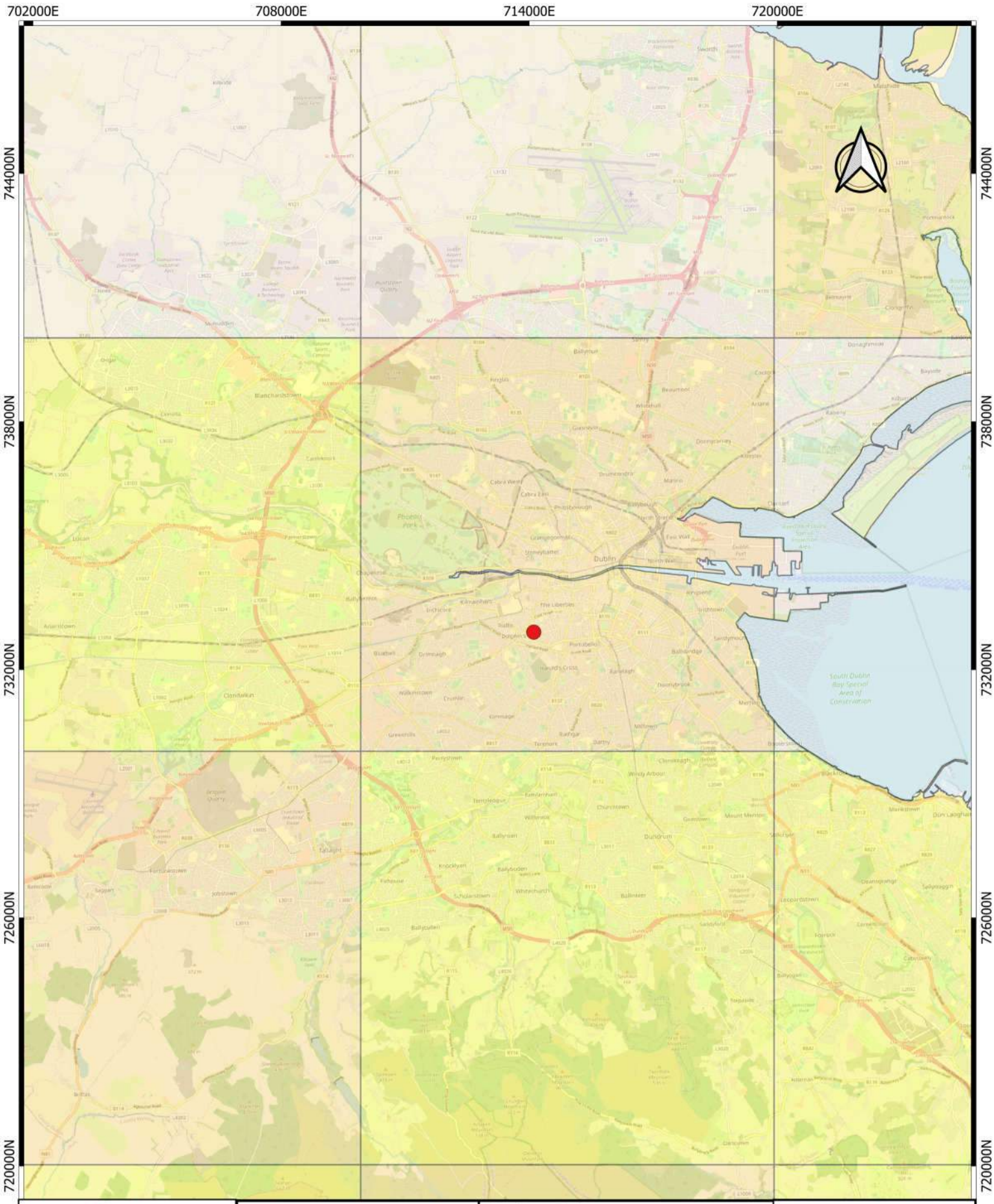
GII Project Reference:
10551-04-21

0 1 2 3 4 5 km

Drawn By:
BS

Date:
12-10-2021

Site Location
SPA



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Newcastle, Co. Dublin
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Client:
AECOM

Project Title:
Saint Teresa's Gardens

Drawing Title:
Figure 12 Radon

GII Project Reference:
10551-04-21

0 2.5 5 km

Drawn By:
BS

Date:
12-10-2021

Site Location

Radon
<1%
1% - 5%
5% - 10%

Indicative Site Boundary
Borehole
Trial Pit
Window Sample

Client:

Comhairle Cathrach Bhaile Átha Cliath
Dublin City Council

Project Code:
10551-04-21

Project Title:
St. Terersa's Gardens

Drawing Title:
Figure 13 SI Points

GROUND INVESTIGATIONS IRELAND
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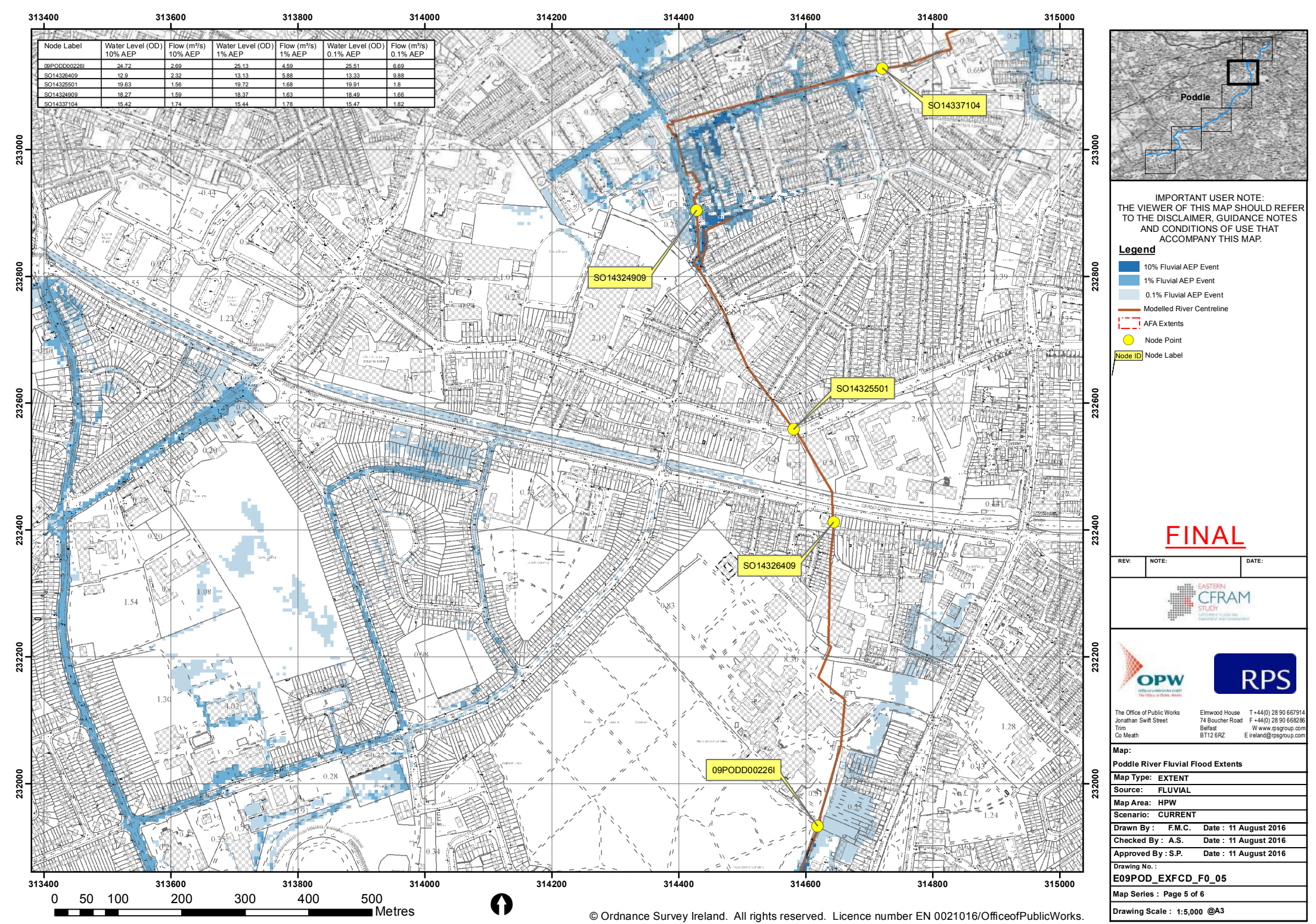
0 9 18 27 36 45 m

Drawn By:	Date:
JC	22-07-2021

APPENDIX 2 – Flood Maps



Node Label	Water Level (OD) 10% AEP	Flow (m³/s) 10% AEP	Water Level (OD) 1% AEP	Flow (m³/s) 1% AEP	Water Level (OD) 0.1% AEP	Flow (m³/s) 0.1% AEP
09PODD00226I	24.72	2.69	25.13	4.59	25.51	6.69
SO14326409	12.9	2.32	13.13	5.88	13.33	9.88
SO14325501	19.63	1.56	19.72	1.68	19.91	1.8
SO14324909	18.27	1.59	18.37	1.63	18.49	1.66
SO14337104	15.42	1.74	15.44	1.78	15.47	1.82

IMPORTANT USER NOTE:
THE VIEWER OF THIS MAP SHOULD REFER TO THE DISCLAIMER, GUIDANCE NOTES AND CONDITIONS OF USE THAT ACCOMPANY THIS MAP.

Legend

- 10% Fluvial AEP Event
- 1% Fluvial AEP Event
- 0.1% Fluvial AEP Event
- Modelled River Centreline
- AFA Extents
- Node Point
- Node ID Node Label

FINAL

REV:	NOTE:	DATE:

EASTERN CFRAM STUDY

OPW

RPS

The Office of Public Works
Jonathan Swift Street
Trim
Co Meath

Elmwood House
74 Boucher Road
Belfast
BT12 6RZ

T +44(0) 28 90 667914
F +44(0) 28 90 668286
W www.rpsgroup.com
E ireland@rpsgroup.com

Map:
Poddle River Fluvial Flood Extents

Map Type:	EXTENT
Source:	FLUVIAL
Map Area:	HPW
Scenario:	CURRENT
Drawn By :	F.M.C. Date : 11 August 2016
Checked By :	A.S. Date : 11 August 2016
Approved By :	S.P. Date : 11 August 2016
Drawing No. :	E09POD_EXFCD_F0_05
Map Series :	Page 5 of 6
Drawing Scale :	1:5,000 @A3

APPENDIX 3 – Trial Pit Records

Ground Investigations Ireland Ltd
www.gii.ie

Site St. Teresa's Gardens			**Trial Pit Number** PBT-05
Machine : 13 Tonne Excavator **Method :** Trial Pit	**Dimensions** 4.00m L x 1.00m W x 3.90m D	**Ground Level (mOD)** 19.06	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location (dGPS) 714161.8 E 732889.7 N	**Dates** 23/06/2021	**Engineer** AECOM	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.70)	Dark brown TOPSOIL with occasional rootlets. (possible made ground)		
				18.36	0.70	Soft to firm brown/grey slightly sandy slightly gravelly CLAY with occasional occasional subangular to subrounded cobbles		
					(1.70)			
				16.66	2.40	Stiff dark brown mottled grey slightly sandy slightly gravelly CLAY with occasional subanuglar to subrounded cobbles		
					(1.00)			
				15.66	3.40	Stiff dark grey slightly sandy slightly gravelly CLAY with occasional subangular to subrounded cobbles.		
					(0.50)			
				15.16	3.90	Complete at 3.90m		

Plan

Remarks

No groundwater encountered
Sidewalls stable
Plate Test carried out in trial pit at 1.10m BGL
Trial pit terminated at 3.90m BGL

Scale (approx)	Logged By	Figure No.
1:25	PM	10551-04-21.PBT-05

Ground Investigations Ireland Ltd
www.gii.ie

Site St. Teresa's Gardens			**Trial Pit Number** PBT-06
Machine : 13 Tonne Excavator **Method :** Trial Pit	**Dimensions** 4.00m L x 1.00m W x 3.30m D	**Ground Level (mOD)** 19.19	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location (dGPS) 714156.6 E 732867.9 N	**Dates** 23/06/2021	**Engineer** AECOM	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.50)	Dark brown TOPSOIL with occasional rootlets. (possible made ground)		
				18.69	0.50	Soft to firm light brown mottled grey slightly sandy slightly gravelly CLAY with occasional occasional subangular to subrounded cobbles		
					(0.70)			
				17.99	1.20	Firm dark brown slightly sandy gravelly CLAY with occasional subanuglar to subrounded cobbles		
					(1.00)			
				16.99	2.20	Stiff dark grey slightly sandy slightly gravelly CLAY with occasional subangular to subrounded cobbles.		
					(1.10)			
				15.89	3.30	Complete at 3.30m		

Plan

Remarks

No groundwater encountered
Sidewalls spalling at 1.50m
Plate Test carried out in trial pit at 1.20m BGL
Trial pit terminated at 3.30m BGL

Scale (approx)	Logged By	Figure No.
1:25	PM	10551-04-21.PBT-06

Ground Investigations Ireland Ltd
www.gii.ie

Site St. Teresa's Gardens			**Trial Pit Number** PBT-07
Machine : 13 Tonne Excavator **Method :** Trial Pit	**Dimensions** 4.00m L x 1.00m W x 3.50m D	**Ground Level (mOD)** 19.32	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location (dGPS) 714110 E 732978.6 N	**Dates** 23/06/2021	**Engineer** AECOM	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(1.00)	MADE GROUND: Dark brown slightly sandy gravelly Clay with occasional cobbles and boulders, and occasional pieces of red brick, concrete, plastic, and metal.		
				18.32	1.00	MADE GROUND: Light grey slightly sandy slightly gravelly silty Clay with occasional cobbles and boulders, and occasional pieces of red brick, plastic, ceramic and timber		
					(1.20)			
				17.12	2.20	Firm dark brown slightly sandy slightly gravelly CLAY with occasional subanuglar to subrounded cobbles		
					(1.10)			
				16.02	3.30	Stiff dark grey slightly sandy slightly gravelly CLAY with occasional subangular to subrounded cobbles		
					(0.20)			
				15.82	3.50	Complete at 3.50m		

Plan

Remarks

No groundwater encountered
Plate Test carried out in trial pit at 1.50m BGL
Trial pit terminated at 3.50m BGL

Scale (approx)	Logged By	Figure No.
1:25	PM	10551-04-21.PBT-07

Ground Investigations Ireland Ltd
www.gii.ie

Site St. Teresa's Gardens			**Trial Pit Number** TP-01
Machine : JCB 3CX **Method :** Trial Pit	**Dimensions** 3.40m L x 0.60m W x 3.00m D	**Ground Level (mOD)** 19.30	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location 714132.4 E 732992.8 N	**Dates** 17/05/2021	**Engineer** AECOM	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-1.00	EN			19.10	(0.20) 0.20	Light brown TOPSOIL with occasional rootlets.		
0.50	B				(0.80)	MADE GROUND: Dark brown slightly sandy gravelly Clay with occasional subangular to subrounded cobbles and boulders and occasional pieces of red and yellow brick metal plastic ceramics and concrete.		
1.00-3.00	EN			18.30	1.00	Soft to firm light grey slightly sandy silty CLAY.		
1.50	B				(1.00)			
2.50	B		Water strike(1) at 2.60m.	17.30	2.00	Soft to firm light brown mottled grey slightly silty slightly sandy gravelly CLAY with occasional subangular to subrounded cobbles.		1
					(1.00)			
				16.30	3.00	Complete at 3.00m		

Plan

Remarks

Spalling at 0.60m
Slow water ingress at 2.60m BGL

Scale (approx)	Logged By	Figure No.
1:25	PM	10551-04-21.TP-01

Ground Investigations Ireland Ltd
www.gii.ie

Site St. Teresa's Gardens			**Trial Pit Number** TP-02
Machine : JCB 3CX **Method :** Trial Pit	**Dimensions** 3.50m L x 0.60m W x 3.00m D	**Ground Level (mOD)** 19.45	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location 714152.7 E 732958.8 N	**Dates** 17/05/2021	**Engineer** AECOM	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-1.00	EN				(0.20)	Light brown TOPSOIL with occasional rootlets.		
				19.25	0.20	MADE GROUND: Dark brown slightly sandy slightly gravelly Clay with occasional subangular to subrounded cobbles and occasional pieces of metal plastic red and yellow brick and concrete.		
0.50	B				(0.80)			
1.00-3.00	EN			18.45	1.00	Firm light brown mottled grey slightly silty slightly sandy gravelly CLAY with occasional subangular to subrounded cobbles.		
1.50	B				(2.00)			
2.50	B							
				16.45	3.00	Complete at 3.00m		

Plan

Remarks

Spalling at 1.80m
No groundwater encountered

Scale (approx)	Logged By	Figure No.
1:25	PM	10551-04-21.TP-03

Ground Investigations Ireland Ltd
www.gii.ie

Site St. Teresa's Gardens			**Trial Pit Number** TP-03
Machine : JCB 3CX **Method :** Trial Pit	**Dimensions** 3.50m L x 0.60m W x 3.00m D	**Ground Level (mOD)** 19.30	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location 714135.8 E 732926.9 N	**Dates** 17/05/2021	**Engineer** AECOM	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-1.00	EN				(0.20)	Light brown TOPSOIL with occasional rootlets.		
				19.10	0.20	MADE GROUND: Dark brown slightly sandy sightly gravelly Clay with occasional subangular to subrounded cobbles and occasional pieces of metal plastic red and yellow brick and concrete.		
0.50	B				(0.80)			
1.00-3.00	EN			18.30	1.00	Firm light brown mottled grey slightly silty slightly sandy gravelly CLAY with occasional subangular to subrounded cobbles.		
1.50	B				(2.00)			
2.50	B							
				16.30	3.00	Complete at 3.00m		

Plan

Remarks

Spalling at 1.80m
No groundwater encountered

Scale (approx)	Logged By	Figure No.
1:25	PM	10551-04-21.TP-03

Ground Investigations Ireland Ltd
www.gii.ie

Site St. Teresa's Gardens			**Trial Pit Number** TP-04
Machine : JCB 3CX **Method :** Trial Pit	**Dimensions** 3.60m L x 0.60m W x 3.90m D	**Ground Level (mOD)** 19.10	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location 714125.9 E 732899.5 N	**Dates** 23/06/2021	**Engineer** AECOM	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-1.40	EN					Dark brown TOPSOIL with occasional rootlets.		
					(0.40)			
				18.70	0.40	MADE GROUND: Light brown slightly sandy slightly gravelly Clay with occasional subangular to subrounded cobbles and occasional pieces of plastic red brick and ceramics.		
0.50	B							
					(1.00)			
1.40-2.50	EN			17.70	1.40	Stiff dark brown slightly sandy slightly gravelly CLAY with occasional subangular to subrounded cobbles.		
1.50	B							
					(1.10)			
2.50	B			16.60	2.50	Stiff dark grey slightly silty slightly sandy slightly gravelly CLAY with occasional subangular to subrounded cobbles.		
2.50-3.90	EN							
					(1.40)			
3.50	B							
				15.20	3.90	Complete at 3.90m		

Plan

Remarks

No groundwater encountered
Sidewalls spalling at 1.30m
Trial pit terminated at 3.90m BGL

Scale (approx)	Logged By	Figure No.
1:25	PM	10551-04-21.TP-04

APPENDIX 4 – Window Sample Records

Ground Investigations Ireland Ltd
www.gii.ie

Site St. Teresa's Gardens			**Number** WS-01
Machine : Tech 10 **Method :** Drive-in Windowless Sampler	**Dimensions** 88mm to 3.00m	**Ground Level (mOD)** 19.65	**Client** Aecom	**Job Number** 10551-04-21
	Location 714023.6 E 732898.1 N	**Dates** 23/06/2021	**Project Contractor** Ground Investigations Ireland	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-1.00	ES					MADE GROUND: Grey fine to coarse slightly sandy subangular Gravel with occasion subangular to subrounded cobbles		
0.25	ES				(0.50)			
0.50	ES			19.15	0.50	MADE GROUND: Light brown slightly silty, slightly sandy slightly gravelly Clay with occasional subangular to subrounded cobbles, and occassional fragments of terram and bricks		
					(0.50)			
1.00	ES			18.65	1.00	Light greyish brown slightly silty slightly sandy gravelly CLAY with occasional subangular to subrounded cobbles, Gravel is subangular to subrounded fine to coarse		
1.00-2.00	ES				(1.00)			
2.00	ES			17.65	2.00	Dark brown slightly gravelly very sandy CLAY with occasional subangular to subrounded cobbles		
					(0.60)			
2.60-3.00	ES			17.05	2.60	Dark brown fine to coarse SAND		
					(0.20)			
				16.85	2.80	Dark grey slightly silty, very sandy slightly gravelly CLAY with occasional subangular to subrounded cobbles		
					(0.20)			
3.00	ES			16.65	3.00	Complete at 3.00m		

Remarks
GL - 1.00m BGL - Recovery - 100%
1.00m BGL - 2.00m BGL - Recovery - 85%
2.00m BGL - 3.00m BGL - Recovery - 100%

Scale (approx)	Logged By
1:25	CB

Figure No. 10551-04-21.WS-01

Ground Investigations Ireland Ltd
www.gii.ie

Site St. Teresa's Gardens			**Number** WS-02
Machine : Tech 10 **Method :** Drive-in Windowless Sampler	**Dimensions** 88mm to 3.00m	**Ground Level (mOD)** 19.46	**Client** Aecom	**Job Number** 10551-04-21
	Location 714039.3 E 732918.7 N	**Dates** 23/06/2021	**Project Contractor** Ground Investigations Ireland	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-0.70	ES				(0.30)	MADE GROUND: Dark grey slightly sandy slightly clayey fine to course subangular Gravel with occasional subangular cobbles		
0.25	ES			19.16	0.30	MADE GROUND: Dark brown slightly sandy slightly gravelly Clay with occasional fragments of wood red brick and shells		
0.50	ES				(0.40)			
0.70-2.60	ES			18.76	0.70	Light brown mottled grey slightly silty slightly sandy slightly gravelly CLAY with occasional subangular to subrounded cobbles		
1.00	ES							
					(1.90)			
2.00	ES							
2.60-3.00	ES			16.86	2.60	Dark grey slightly silty slightly sandy slightly gravelly CLAY with occasional subangular to subrounded cobbles		
					(0.40)			
3.00	ES			16.46	3.00	Complete at 3.00m		

Remarks
GL - 1.00m BGL - Recovery - 95%
1.00m BGL - 2.00m BGL - Recovery - 90%
2.00m BGL - 3.00m BGL - Recovery - 100%

Scale (approx)	Logged By
1:25	CB

Figure No. 10551-04-21.WS-02

Ground Investigations Ireland Ltd
www.gii.ie

Site St. Teresa's Gardens			**Number** WS-03
Machine : Tech 10 **Method :** Drive-in Windowless Sampler	**Dimensions** 88mm to 2.00m 66mm to 3.00m	**Ground Level (mOD)** 19.61	**Client** Aecom	**Job Number** 10551-04-21
	Location 714064.8 E 732882.4 N	**Dates** 23/06/2021	**Project Contractor** Ground Investigations Ireland	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-1.00	ES					MADE GROUND: Dark grey, slightly silty slightly sandy slightly clayey Gravel with occasional subangular to subrounded cobbles		
0.25	ES				(0.50)			
0.50	ES			19.11	0.50	MADE GROUND: Dark brown, slightly sandy slightly gravelly Clay with occasional fragments of bricks, ceramics and terram		
1.00	ES				(0.60)			
1.00-1.60	ES			18.51	1.10	Light brown mottled grey slighly silty slightly gravelly sandy CLAY		
					(0.50)			
1.60-3.00	ES			18.01	1.60	Dark grey slightly sandy slightly gravelly silty CLAY with occasional subangular to subrounded cobbles		
				17.81	(0.20) 1.80	Dark grey slightly silty slightly sandy slightly gravelly CLAY		
2.00	ES							
					(0.90)			
				16.91	2.70	Dark grey sandy gravelly CLAY		
					(0.30)			
3.00	ES			16.61	3.00	Complete at 3.00m		

Remarks
GL - 1.00m BGL - Recovery - 100%
1.00m BGL - 2.00m BGL - Recovery - 75%
2.00m BGL - 3.00m BGL - Recovery - 65%

Scale (approx)	Logged By
1:25	CB

Figure No. 10551-04-21.WS-03

Ground Investigations Ireland Ltd
www.gii.ie

Site St. Teresa's Gardens			**Number** WS-04
Machine : Tech 10 **Method :** Drive-in Windowless Sampler	**Dimensions** 88mm to 3.00m	**Ground Level (mOD)** 19.39	**Client** Aecom	**Job Number** 10551-04-21
	Location 714100.5 E 732912.6 N	**Dates** 23/06/2021	**Project Contractor** Ground Investigations Ireland	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.45)	MADE GROUND: Dark grey slightly silty slightly sandy fine to coarse Gravel		
0.25	ES							
0.45-0.80	ES			18.94	0.45			
0.50	ES				(0.35)	MADE GROUND: Dark brown slightly sandy slightly gravelly Clay with occasional fragments of red brick, shells and terram		
0.80-2.10	ES			18.59	0.80			
1.00	ES					Light brown slightly sandy, gravelly CLAY with occasional subangular to subrounded cobbles		
					(1.30)			
2.00	ES							
2.10-3.00	ES			17.29	2.10			
						Dakr grey slightly silty slightly sandy slightly gravelly CLAY with occasional subangular to subrounded cobbles		
					(0.90)			
3.00	ES			16.39	3.00			
						Complete at 3.00m		

Remarks
GL - 1.00m BGL - Recovery - 85%
1.00m BGL - 2.00m BGL - Recovery - 100%
2.00m BGL - 3.00m BGL - Recovery - 40%

Scale (approx)	Logged By
1:25	CB

Figure No. 10551-04-21.WS-04

Ground Investigations Ireland Ltd
www.gii.ie

Site St. Teresa's Gardens			**Number** WS-05
Machine : Tech 10 **Method :** Drive-in Windowless Sampler	**Dimensions** 88mm to 3.00m	**Ground Level (mOD)** 19.25	**Client** Aecom	**Job Number** 10551-04-21
	Location 714125.1 E 732876.6 N	**Dates** 23/06/2021	**Project Contractor** Ground Investigations Ireland	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-1.00	ES				(0.20)	Dark brown TOPSOIL with occasional rootlets		
				19.05	0.20	MADE GROUND: Dark brown slightly sandy slightly gravelly Clay with occasional subangular to subrounded cobbles and occasional fragments of red brick, concrete, glass and ceramics		
0.25	ES							
0.50	ES				(0.80)			
				18.25	1.00			
1.00	ES					Light grey mottled brown slightly sandy slightly gravelly CLAY		
1.00-2.00	ES				(0.30)			
				17.95	1.30	Dark grey slightly silty slightly sandy slightly gravelly CLAY (Damp)		
2.00	ES				(1.40)			
2.70-2.90	ES			16.55	2.70			
					(0.20)	Dark grey slightly silty slightly sandy gravelly CLAY, Gravel is subangular to subrounded fine to coarse [Damp]		
				16.35	2.90			
					(0.10)	Grey slightly sandy slightly gravelly CLAY [Damp]		
3.00	ES			16.25	3.00	Complete at 3.00m		

Remarks
GL - 1.00m BGL - Recovery - 90%
1.00m BGL - 2.00m BGL - Recovery - 80%
2.00m BGL - 3.00m BGL - Recovery - 100%

Scale (approx)	Logged By
1:25	CB

Figure No. 10551-04-21.WS-05

Ground Investigations Ireland Ltd
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Site St. Teresa's Gardens			**Number** WS-06
Machine : Tech 10 **Method :** Drive-in Windowless Sampler	**Dimensions** 88mm to 2.00m 66mm to 3.00m	**Ground Level (mOD)** 19.17	**Client** Aecom	**Job Number** 10551-04-21
	Location 714143.8 E 732912.6 N	**Dates** 22/06/2021	**Project Contractor** Ground Investigations Ireland	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-1.00	ES			19.07	(0.10) 0.10	Dark brown TOPSOIL with occasional rootlets.		
0.25	ES					MADE GROUND: Dark brown slightly sandy slightly gravelly Clay with occasional subangular to subrounded cobbles and occasional fragments of red brick and concrete.		
0.50	ES				(0.90)			
1.00	ES			18.17	1.00	Firm dark brown slightly sandy slightly gravelly CLAY with occasional subangular to subrounded cobbles. (Damp)		
1.00-2.30	ES							
					(1.30)			
2.00	ES							
2.30-3.00	ES			16.87	2.30	Firm to stiff dark grey slightly silty slightly sandy slightly gravelly CLAY with occasional subangular to subrounded cobbles. (Damp)		
					(0.70)			
3.00	ES			16.17	3.00	Complete at 3.00m		

Remarks
GL - 1.00m BGL - Recovery - 100%
1.00m BGL - 2.00m BGL - Recovery - 100%
2.00m BGL - 3.00m BGL - Recovery - 85%

Scale (approx)	Logged By
1:25	PM

Figure No. 10551-04-21.WS-06

Ground Investigations Ireland Ltd
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Site St. Teresa's Gardens			**Number** WS-07
Machine : Tech 10 **Method :** Drive-in Windowless Sampler	**Dimensions** 88mm to 2.00m	**Ground Level (mOD)** 19.35	**Client** Aecom	**Job Number** 10551-04-21
	Location 714170.3 E 732861.7 N	**Dates** 23/06/2021	**Project Contractor** Ground Investigations Ireland	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-0.70	ES				(0.20)	Dark brown TOPSOIL with occasional rootlets		
				19.15	0.20	MADE GROUND: Dark brown slightly sandy slightly gravelly Clay with occasional fragments of shells and brick		
0.25	ES				(0.50)			
0.50	ES							
0.70-1.80	ES			18.65	0.70	Dark brown slightly sandy slightly gravelly CLAY with occasional subangular to subrounded cobbles		
1.00	ES				(0.80)			
				17.85	1.50	Dark brown very sandy slightly gravelly CLAY with occasional subangular to subrounded cobbles		
					(0.30)			
1.80-2.00	ES			17.55	1.80	Greyish brown slightly silty slightly sandy slightly gravelly CLAY		
					(0.20)			
2.00	ES			17.35	2.00	Complete at 2.00m		

Remarks
GL - 1.00m BGL - Recovery - 100%
1.00m BGL - 2.00m BGL - Recovery - 95%

Scale (approx)	Logged By
1:25	CB

Figure No. 10551-04-21.WS-07

Ground Investigations Ireland Ltd
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Site St. Teresa's Gardens			**Number** WS-08
Machine : Tech 10 **Method :** Drive-in Windowless Sampler	**Dimensions** 88mm to 2.00m 66mm to 4.00m	**Ground Level (mOD)** 19.44	**Client** Aecom	**Job Number** 10551-04-21
	Location 714127 E 732940.8 N	**Dates** 22/06/2021	**Project Contractor** Ground Investigations Ireland	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-1.00	ES				(0.20)	Dark brown TOPSOIL with occasional rootlets.		
0.25	ES			19.24	0.20	MADE GROUND: Dark brown slightly sandy slightly gravelly Clay with occasional subangular to subrounded cobbles and occasional fragments of red brick glass and plastic.		
0.50	ES				(0.80)			
1.00	ES			18.44	1.00	Firm light brown mottled grey slightly silty slightly sandy slightly gravelly CLAY.		
					(1.00)			
2.00	ES			17.44	2.00	Firm dark brown slightly sandy slightly gravelly CLAY with occasional subangular to subrounded cobbles.		
2.00-3.30	ES				(0.80)			
				16.64	2.80	Firm dark brown slightly sandy slightly gravelly CLAY with occasional subangular to subrounded cobbles.		
3.00	ES				(0.50)			
3.30-4.00	ES			16.14	3.30	Stiff dark grey slightly silty slightly sandy slightly gravelly CLAY with occasional subangular to subrounded cobbles.		
					(0.70)			
				15.44	4.00	Complete at 4.00m		

Remarks
GL - 1.00m BGL - Recovery - 100%
1.00m - 2.00m BGL - Recovery - 100%
2.00m - 3.00m BGL - Recovery - 85%
3.00 - 4.00m BGL - Recovery - 100%

Scale (approx)	Logged By
1:25	PM

Figure No. 10551-04-21.WS-08

Ground Investigations Ireland Ltd
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Site St. Teresa's Gardens			**Number** WS-09
Machine : Tech 10 **Method :** Drive-in Windowless Sampler	**Dimensions** 88mm to 0.85m	**Ground Level (mOD)** 19.43	**Client** Aecom	**Job Number** 10551-04-21
	Location 714136.9 E 732963.2 N	**Dates** 22/06/2021	**Project Contractor** Ground Investigations Ireland	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.30)	Dark brown TOPSOIL with occasional rootlets.		
				19.13	0.30	MADE GROUND: Dark brown slightly sandy slightly gravelly Clay with occasional subangular to subrounded cobbles and occasional fragments of red brick and concrete.		
					(0.55)			
				18.58	0.85	Complete at 0.85m		

Remarks
GL - 0.85m BGL - Recovery - 100%
Refusal at 0.85m BGL due to obstruction

Scale (approx)	Logged By
1:25	PM

Figure No. 10551-04-21.WS-09

Ground Investigations Ireland Ltd
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Site St. Teresa's Gardens			**Number** WS-09A
Machine : Tech 10 **Method :** Drive-in Windowless Sampler	**Dimensions** 88mm to 0.85m	**Ground Level (mOD)** 19.43	**Client** Aecom	**Job Number** 10551-04-21
	Location 714140.8 E 732960.2 N	**Dates** 22/06/2021	**Project Contractor** Ground Investigations Ireland	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-0.85	ES				(0.30)	Dark brown TOPSOIL with occasional rootlets.		
0.25	ES			19.13	0.30	MADE GROUND: Dark brown slightly sandy slightly gravelly Clay with occasional subangular to subrounded cobbles and occasional fragments of red brick and concrete.		
0.50	ES				(0.55)			
0.85	ES			18.58	0.85	Complete at 0.85m		

Remarks
GL - 0.85m BGL - Recovery - 100%
Refusal at 0.85m BGL due to obstruction

Scale (approx)	Logged By
1:25	PM

Figure No. 10551-04-21.WS-09A

Ground Investigations Ireland Ltd
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Site St. Teresa's Gardens			**Number** WS-10
Machine : Tech 10 **Method :** Drive-in Windowless Sampler	**Dimensions** 88mm to 2.00m 66mm to 3.00m	**Ground Level (mOD)** 19.21	**Client** Aecom	**Job Number** 10551-04-21
	Location 714125.4 E 732988.1 N	**Dates** 22/06/2021	**Project Contractor** Ground Investigations Ireland	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-2.30	ES					MADE GROUND: Dark brown slightly sandy slightly gravelly Clay with occasional subangular to subrounded cobbles and occasional fragments of red brick and glass.		
0.25	ES							
0.50	ES				(1.00)			
1.00	ES			18.21	1.00	MADE GROUND: Light grey slightly sandy slightly gravelly silty Clay with occasional subangular to subrounded cobbles and occasional fragments of plastic timber and red brick.		
					(1.30)			
2.00	ES							
2.30-3.00	ES			16.91	2.30	Firm light brown slightly sandy slightly gravelly CLAY with occasional subangular to subrounded cobbles.		
					(0.70)			
3.00	ES			16.21	3.00	Complete at 3.00m		

Remarks
1.00 - 2.00m BGL - Recovery - 95%
2.00 - 3.00m BGL - Recovery - 100%
Refusal at 3.00m BGL due to obstruction
GL - 1.00m BGL - Recovery - 100%

Scale (approx)	Logged By
1:25	PM

Figure No. 10551-04-21.WS-10

APPENDIX 5 – Cable Percussion and Rotary Coring Borehole Records

Ground Investigations Ireland Ltd
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Site St. Teresa's Gardens			**Borehole Number** BH01
Machine : Dando 2000 & Beretta T47S **Method :** Cable Percussion & Rotary Cored	**Casing Diameter** 200mm cased to 4.70m 147mm cased to 12.70m	**Ground Level (mOD)** 19.10	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location 714121.9 E 733011.2 N	**Dates** 22/06/2021-01/07/2021	**Engineer** AECOM	**Sheet** 1/2

Depth (m)	Sample / Tests	TCR	SCR	Casing Depth (m)	RQD	Water Depth (m)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
0.25	B										MADE GROUND: Dark brown slightly sandy slightly gravelly Clay with occasional subangular to sub rounded cobbles and boulders and occasional pieces of red brick, metal and concrete.			
0.25	ES													
0.50	B													
0.50	ES									(1.60)				
1.00-1.45	SPT(C) N=14							2,3/4,4,3,3						
1.00	B													
1.00	ES													
									17.50	1.60				
2.00	B										Firm to stiff grey slightly sandy slightly gravelly silty CLAY with occasional cobbles.			
2.00	ES													
2.00-2.50	UT 50%							17 blows		(1.40)				
									16.10	3.00				
3.00-3.45	SPT(C) N=21							2,3/3,4,5,9			Stiff grey slightly sandy slightly gravelly silty CLAY.			
3.00	B									(0.40)				
3.00	ES								15.70	3.40				
											Stiff dark grey slightly sandy gravelly CLAY with occasional subangular to sub rounded cobbles			
										(0.60)				
4.00-4.45	SPT(C) N=40							25/50	15.10	4.00			▼1	
4.00	B							7,7/8,8,10,14			Very stiff dark grey slightly sandy gravelly CLAY with occasional subangular to sub rounded cobbles			
		TCR	SCR	RQD		FI		50/0						
4.50								SPT(C) 25*/70					▽1	
4.70-4.77		100						Water strike(1) at 4.70m, rose to 4.00m in 20 mins.						
4.70								B						
5.20-5.65								5,6/9,9,10,11		(2.25)				
5.20								SPT(C) N=39						
		73	20	49										
6.25						NI			12.85	6.25	Strong thinly laminated dark grey fine grained argillaceous LIMESTONE interbedded with medium strong to strong thinly laminated dark grey fine grained calcareous MUDSTONE with occasional calcite veins			
6.70						NI								
7.15		100	60	37		7								
7.90											F1: 6.25m BGL to 12.70m BGL: Closely spaced, 0 to 15 degrees, smooth to rough, planar to undulose with clay smear			
8.20		100	83	63							F2: 6.25m BGL to 12.70m BGL: Medium spacing, 75 to 90 degrees, smooth to rough, planar to undulose with clay smear			
										(6.45)				
9.70														

Remarks
Hand dug inspection pit.
Groundwater encountered at 4.70m BGL.
Rotary follow on from 4.70m BGL
Standpipe installed upon completion: 60mm slotted standpipe with pea gravel surround from 12.70m BGL to 6.70m BGL, 60mm plain standpipe from 6.70m BGL to GL with bentonite seal, finished with a raised cover
Complete at 12.70m BGL
Chiselling from 4.70m to 4.70m for 1 hour.

Scale (approx)	Logged By
1:50	MB & SG

Figure No. 10551-04-21.BH01

Ground Investigations Ireland Ltd
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Site St. Teresa's Gardens			**Borehole Number** BH01
Machine : Dando 2000 & Beretta T47S **Flush :** Water **Core Dia :** 102 mm **Method :** Cable Percussion & Rotary Cored	**Casing Diameter** 200mm cased to 4.70m 147mm cased to 12.70m	**Ground Level (mOD)** 19.10	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location 714121.9 E 733011.2 N	**Dates** 22/06/2021-01/07/2021	**Engineer** AECOM	**Sheet** 2/2

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
	93	81	60	6							
11.20	100	95	87								
						6.40	12.70	Complete at 12.70m			
12.70											

Remarks

Scale (approx)	Logged By
1:50	MB & SG

Figure No. 10551-04-21.BH01

Ground Investigations Ireland Ltd
www.gii.ie

Site St. Teresa's Gardens			**Borehole Number** BH02
Machine : Dando 2000 & Beretta T47S **Method :** Cable Percussion	**Casing Diameter** 200mm cased to 4.90m 147mm cased to 11.20m	**Ground Level (mOD)** 19.17	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location 714100.9 E 732986.6 N	**Dates** 22/06/2021-02/07/2021	**Engineer** AECOM	**Sheet** 1/2

Depth (m)	Sample / Tests	TCR	SCR	RQD	FI	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.25	B										MADE GROUND: Dark brown/black slightly sandy slightly gravelly Clay occasional subangular to subrounded cobbles and occasional pieces of red brick timber and concrete boulders .		
0.25	ES												
0.50	B												
0.50	ES									(1.40)			
1.00-1.45	SPT(C) N=17							1,3/3,4,5,5					
1.00	B												
1.00	ES								17.77	1.40			
											Stiff brown slightly sandy slightly silty gravelly CLAY with occasional subangular to subrounded cobble.		
2.00	B												
2.00	ES												
2.00-2.50	UT 40%									(2.20)			
3.00-3.45	SPT(C) N=20							2,4/4,4,5,7					
3.00	B												
3.00	ES												
									15.57	3.60			
											Very stiff dark grey slightly sandy slightly gravelly CLAY with occasional subangular to subrounded cobbles		
4.00-4.40	SPT(C) 50/245							25/50					
4.00	B							8,9/10,14,14,12					
4.90								50/0					
4.90-4.95								SPT(C) 25*/50					
4.60		100						B					
								Water strike(1) at 4.70m, rose to 3.30m in 20 mins.		(2.00)			
5.20-5.65								8,11/13,13,15,9					
5.20								SPT(C) N=50					
5.60					0				13.57	5.60	Medium strong to strong thinly laminated dark grey fine grained calcareous MUDSTONE with occasional clay bands, euhedral pyrite mineralisation parallel to F1, and calcite mineralisation parallel to F1 and F2		
6.00		95	67	64	20								
6.40											F1: 5.60m BGL to 11.20m BGL: Closely spaced, 0 to 15 degrees, smooth to rough, planar to undulose, with clay smear, clay infill and occasional euhedral pyrite mineralisation		
6.70					13								
		73	48	100									
7.90											F2: 5.60m BGL to 11.20m BGL: Close to medium spacing, 70 to 90 degrees, smooth to rough, planar to undulose with clay smear and calcite mineralisation		
8.20										(5.60)			
		73	64	89									
					8								
9.70													

Remarks
Hand dug inspection pit.
Groundwater encountered at 4.70m BGL.
Rotary follow on from 4.90m BGL
Borehole backfilled upon completion
Complete at 11.20m BGL
Chiselling from 4.90m to 4.90m for 1 hour.

Scale (approx)	Logged By
1:50	MB & SG

Figure No. 10551-04-21.BH02

Ground Investigations Ireland Ltd
www.gii.ie

Site St. Teresa's Gardens			**Borehole Number** BH02
Machine : Dando 2000 & Beretta T47S **Flush :** Water **Core Dia :** 102 mm **Method :** Cable Percussion	**Casing Diameter** 200mm cased to 4.90m 147mm cased to 11.20m	**Ground Level (mOD)** 19.17	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location 714100.9 E 732986.6 N	**Dates** 22/06/2021-02/07/2021	**Engineer** AECOM	**Sheet** 2/2

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
	77	51	95							
11.20						7.97	11.20	Complete at 11.20m		

Remarks

Scale (approx)	Logged By
1:50	MB & SG

Figure No. 10551-04-21.BH02

Ground Investigations Ireland Ltd
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Site St. Teresa's Gardens			**Borehole Number** BH03
Machine : Dando 2000 & Beretta T47S **Method :** Cable Percussion	**Casing Diameter** 200mm cased to 4.70m 146mm cased to 11.20m	**Ground Level (mOD)** 19.30	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location 714143.8 E 732978 N	**Dates** 24/06/2021-05/07/2021	**Engineer** AECOM	**Sheet** 1/2

Depth (m)	Sample / Tests	TCR	SCR	RQD	FI	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.25	B										MADE GROUND; Black slightly sandy slightly gravelly Clay with occasional subangular to subrounded cobbles with occasional pieces of red brick and concrete.		
0.25	ES												
0.50	B												
0.50	ES												
										(1.70)			
1.00-1.45	SPT(C) N=7							2,1/1,2,2,2					
1.00	B												
1.00	ES												
									17.60	1.70			
2.00-2.45	SPT(C) N=14							3,4/4,2,4,4			Firm to stiff brown grey slightly silty slightly sandy gravelly CLAY with occasional subangular to subrounded cobbles.		
2.00	B												
2.00	ES												
										(1.50)			
3.00-3.45	SPT(C) N=32							3,2/5,9,9,9					
3.00	B								16.10	3.20			
										(0.80)	Very stiff brown grey slightly silty slightly sandy gravelly CLAY with occasional subangular to subrounded cobbles.		
4.00-4.45	SPT(C) N=47							25/50 9,9/11,11,11,14	15.30	4.00			
4.00	B							50/0			Very stiff dark grey/brown slightly sandy slightly gravelly CLAY with occasional subangular to subrounded cobble.		
4.40								SPT(C) 25*/60					
4.70-4.76		33						Water strike(1) at 4.70m, rose to 4.50m in 20 mins.					
4.70								B					
5.20-5.65								19,6/50					
5.20								SPT(C) N=50					
										(1.60)			
5.60		100	59	41	12				13.70	5.60	Medium strong to strong thinly laminated dark grey fine grained calcareous MUDSTONE interbedded with strong dark grey fine grained argillaceous LIMESTONE with occasional clay bands, calcite veins parallel to F1 and F2 and euhedral pyrite mineralisation parallel to F1		
6.70					3						F1: 5.60m BGL to 11.20m BGL: Closely spaced, 0 to 20 degrees, smooth to rough, planar to undulose with clay smear, occasional clay fill, calcite mineralisation and euhedral pyrite mineralisation		
		100	100	89									
7.50					20								
7.75					6						F2: 5.60m BGL to 11.20m BGL: Medium spacing, 45 to 65 degrees, smooth to rough, planar to undulose with clay smear and calcite mineralisation		
8.20													
8.30										(5.60)			
		100	87	65	12								
9.70													

Remarks
Hand dug inspection pit.
Groundwater encountered at 4.70m BGL.
Rotary follow on from 4.70m BGL
Borehole backfilled upon completion
Complete at 11.20m BGL
Chiselling from 4.70m to 4.70m for 1 hour.

Scale (approx)	Logged By
1:50	MB & SG

Figure No. 10551-04-21.BH03

Ground Investigations Ireland Ltd
www.gii.ie

Site St. Teresa's Gardens			**Borehole Number** BH03
Machine : Dando 2000 & Beretta T47S **Flush :** Water **Core Dia :** 102 mm **Method :** Cable Percussion	**Casing Diameter** 200mm cased to 4.70m 146mm cased to 11.20m	**Ground Level (mOD)** 19.30	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location 714143.8 E 732978 N	**Dates** 24/06/2021-05/07/2021	**Engineer** AECOM	**Sheet** 2/2

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
	87	84	66	4						
11.20						8.10	11.20	Complete at 11.20m		

Remarks

Scale (approx)	Logged By
1:50	MB & SG

Figure No. 10551-04-21.BH03

Ground Investigations Ireland Ltd
www.gii.ie

Site St. Teresa's Gardens			**Borehole Number** BH04
Machine : Dando 2000 **Method :** Cable Percussion	**Casing Diameter** 200mm cased to 4.80m 146mm cased to 11.20m	**Ground Level (mOD)** 19.23	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location 714116.1 E 732960.7 N	**Dates** 23/06/2021-06/07/2021	**Engineer** AECOM	**Sheet** 1/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.25	B						MADE GROUND: Black/Brown slightly sandy slightly gravelly Clay with occasional sub angular to sub rounded cobble and occasional red brick .		
0.25	ES								
0.50	B					(1.10)			
0.50	ES								
1.00-1.45	SPT(C) N=7			2,2/1,2,2,2	18.13	1.10			
1.00	B					(0.30)	Soft dark brown slightly sandy slightly gravelly CLAY with occasional sub angular to sub rounded cobbles.		
1.00	ES				17.83	1.40			
							Firm grey slightly silty slightly sandy slightly gravelly CLAY with occasional sub angular to sub rounded cobbles.		
						(1.10)			
2.00-2.45	SPT(C) N=10			1,3/3,2,2,3					
2.00	B								
2.00	ES				16.73	2.50			
							Stiff dark grey slightly sandy slightly gravelly CLAY with occasional sub angular to sub rounded cobbles.		
3.00-3.45	SPT(C) N=26			4,3/4,6,7,9					
3.00	B					(1.40)			
					15.33	3.90			
4.00-4.41	SPT(C) 50/255			7,11/13,13,14,10			Very stiff dark grey slightly sandy slightly gravelly CLAY with occasional sub angular to sub rounded cobbles.		1
4.00	B			25/50					
4.90				50/0		(0.90)			
4.90-4.96	**TCR** / **SCR** / **RQD**		**FI**	B					
4.60				SPT(C) 25*/60					
4.80	100 / 33 / 50		NI	Water strike(1) at 4.90m, rose to 4.00m in 20 mins.	14.43	4.80	Medium strong to strong thinly laminated dark grey fine grained calcareous MUDSTONE with occasional clay bands, calcite mineralisation parallel to F1 and F2 and euhedral pyrite mineralisation parallel to F1		1
5.00									
5.20			2						
5.65			NI						
5.90	100 / 93 / 74						F1: 4.80m BGL to 11.20m BGL: Close to medium spacing, 5 to 20 degrees, smooth to rough, planar to undulose, with occasional clay infill, clay smear, calcite mineralisation and euhedral pyrite mineralisation		
			8						
6.70									
6.90			20						
7.15	100 / 84 / 65						F2: 4.80m BGL to 11.20m BGL: Medium to wide spacing, 75 tto 90 degrees, smooth to rough, planar to undulose with calcite mineralisation and clay smear		
						(6.40)			
8.20									
	100 / 80 / 57		6						
9.70									

Remarks
Hand dug inspection pit.
Groundwater encountered at 4.70m BGL.
Rotary follow on from 4.80m BGL
Borehole backfilled upon completion
Complete at 11.20m BGL
Chiselling from 4.90m to 4.90m for 1 hour.

Scale (approx)	Logged By
1:50	MB & SG

Figure No. 10551-04-21.BH04

Ground Investigations Ireland Ltd
www.gii.ie

Site St. Teresa's Gardens			**Borehole Number** BH04
Machine : Dando 2000 **Flush :** Water **Core Dia :** 102 mm **Method :** Cable Percussion	**Casing Diameter** 200mm cased to 4.80m 146mm cased to 11.20m	**Ground Level (mOD)** 19.23	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location 714116.1 E 732960.7 N	**Dates** 23/06/2021-06/07/2021	**Engineer** AECOM	**Sheet** 2/2

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
	100	90	87							
11.20						8.03	11.20	Complete at 11.20m		

Remarks

Scale (approx)	Logged By
1:50	MB & SG

Figure No. 10551-04-21.BH04

Ground Investigations Ireland Ltd
www.gii.ie

Site St. Teresa's Gardens			**Borehole Number** BH05
Machine : Dando 2000 & Beretta T47S **Method :** Cable Percussion & Rotary Cored	**Casing Diameter** 200mm cased to 4.40m 146mm cased to 12.70m	**Ground Level (mOD)** 19.19	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location 714156.3 E 732929.3 N	**Dates** 25/06/2021-07/07/2021	**Engineer** AECOM	**Sheet** 1/2

Depth (m)	Sample / Tests	TCR	SCR	Casing Depth (m)	RQD	Water Depth (m)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
									18.99	(0.20) 0.20	MADE GROUND: Brown gravelly Clay with occasional cobbles			
0.25	B										MADE GROUND: Black brown slightly sandy slightly gravelly Clay with occasional crushed brick and occasional subangular to subrounded cobbles.			
0.25	ES													
0.50	B													
0.50	ES													
										(1.40)				
1.00-1.15	SPT(C) 50/0							19,4/50						
1.00	B													
1.00	ES													
									17.59	1.60	Firm to stiff grey slightly sandy slightly gravelly CLAY.			
2.00-2.45	SPT(C) N=14							3,5/3,3,3,5						
2.00	B													
2.00	ES													
										(1.90)				
3.00-3.45	SPT(C) N=13							2,3/3,3,3,4						
3.00	B													
4.00								12,21/23,27	15.69	3.50				
4.00-4.27	B							SPT(C) 50/115			Very stiff dark grey slightly sandy slightly gravelly CLAY with occasional subangular to subrounded cobbles			
3.70													F1	
								Water strike(1) at 4.20m, rose to 3.90m in 20 mins.					▽1	
4.40	60							B						
										(3.10)				
5.20-5.65								7,15/15,14,21						
5.20		93	7		7			SPT(C) N=50						
6.60									12.59	6.60				
6.70		100	77		57		9				Medium strong to strong thinly laminated dark grey fine grained calcareous MUDSTONE with occasional clay bands, calcite mineralisation parallel to F1 and F2 and euhedral pyrite mineralisation parallel to F1			
											F1: 6.60m BGL to 12.70m BGL: Very close to close spacing, 0 to 15 degrees, smooth to rough, planar to undulose with clay smear, occasional clay infill, calcite mineralisation and euhedral pyrite mineralisation			
8.20		100	83		43						F2:6.60m BGL to 12.70m BGL: Medium spacing, 65 to 85 degrees, smooth to rough, planar to undulose with clay smear and calcite mineralisation			
										(6.10)				
9.60														
9.70														

Remarks
Hand dug inspection pit.
Groundwater encountered at 4.2m BGL.
Rotary follow on from 4.40m BGL
Standpipe installed: 60mm slotted standpipe with pea gravel surround from 12.70m BGL to 6.70m BGL, plain standpipe from 6.70m BGL to GL with bentonite seal, finished with a raised cover
Complete at 12.70m BGL
Chiselling from 4.40m to 4.40m for 1 hour.

Scale (approx)	Logged By
1:50	MB & SG

Figure No. 10551-04-21.BH05

Ground Investigations Ireland Ltd
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Site St. Teresa's Gardens			**Borehole Number** BH05
Machine : Dando 2000 & Beretta T47S **Flush :** Water **Core Dia :** 102 mm **Method :** Cable Percussion & Rotary Cored	**Casing Diameter** 200mm cased to 4.40m 146mm cased to 12.70m	**Ground Level (mOD)** 19.19	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location 714156.3 E 732929.3 N	**Dates** 25/06/2021-07/07/2021	**Engineer** AECOM	**Sheet** 2/2

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
	100	95	88	4							
11.20	100	100	97								
						6.49	12.70	Complete at 12.70m			
12.70											

Remarks

Scale (approx)	Logged By
1:50	MB & SG

Figure No. 10551-04-21.BH05

Ground Investigations Ireland Ltd
www.gii.ie

Site St. Teresa's Gardens				**Borehole Number** BH06
Machine : Beretta T47S **Flush :** Water **Core Dia :** 102 mm **Method :** Rotary Cored	**Casing Diameter** 146mm cased to 12.70m	**Ground Level (mOD)** 19.32	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location (dGPS) 714017.2 E 732936.6 N	**Dates** 23/07/2021	**Engineer** AECOM	**Sheet** 1/2

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
	0	0					(2.80)	NO RECOVERY: Driller notes: Hardcore/Fill			
2.20 2.20-2.65	33				2,3/3,3,4,4 SPT(C) N=14	16.52	2.80	Very stiff dark grey slightly sandy slightly gravelly CLAY with occasional subangular to subrounded cobbles			
3.70 3.70-4.15	96				6,8/11,12,12,15 SPT(C) N=50		(3.40)				
5.20 5.20-5.65	93	23	20		8,8/13,17,20 SPT(C) N=50						
6.20						13.12	6.20	Strong thinly laminated dark grey fine grained argillaceouys LIMESTONE with calcite patrallel to F1 and F2, and occasional mudstone interbeds			
6.70				4			(1.00)				
7.20	93	60	53			12.12	7.20	Medium strong to strong thinly laminated dark grey fine grained calcareous MUDSTONE with occasional limestone interbeds, calcite mineralisation parallel to F1 and F2, euhedral pyrite mineralisation parallel to F1 and occasional clay bands			
8.20	93	66	43	10			(2.40)				
9.60						9.72	9.60	Strong thinly laminated dark grey fine grained argillaceous LIMESTONE with calcite mineralisation parallel to F2 and euhedral pyrite			
9.70				4			(0.55)				

Remarks
No groundwater encountered
Borehole backfilled upon completion
Complete at 12.70m BGL

Scale (approx)	Logged By
1:50	JS

Figure No. 10551-04-21.BH06

Ground Investigations Ireland Ltd
www.gii.ie

Site St. Teresa's Gardens			**Borehole Number** BH06
Machine : Beretta T47S **Flush :** Water **Core Dia :** 102 mm **Method :** Rotary Cored	**Casing Diameter** 146mm cased to 12.70m	**Ground Level (mOD)** 19.32	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location (dGPS) 714017.2 E 732936.6 N	**Dates** 23/07/2021	**Engineer** AECOM	**Sheet** 2/2

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
10.15	96	93	86	6		9.17	10.15 (0.55)	mineralisation parallel to F1 Medium strong to strong thinly laminated dark grey fine grained calcareous MUDSTONE with calcite parallel to F1			
10.70						8.62	10.70	Strong thinly laminated dark grey fine grained argillaceous LIMESTONE interbedded with medium strong to strong thinly laminated dark grey fine grained calcareous MUDSTONE with calcite mineralisation parallel to F1 and F2 F1: 6.2m BGL to 12.7m BGL: Very close to medium spacing, 10 to 30 degrees, smooth to rough, planar to undulose with clay smear, occasional clay fill, calcite mineralisation and occasional euhdral pyrite mineralisation F2: 6.2m BGL to 12.7m BGL: Medium to wide spacing, 60 to 80 degrees, smooth to rough, planar to undulose, with clay smear and calcite mineralisation			
11.20	93	73	66	7			(2.00)				
12.70						6.62	12.70	Complete at 12.70m			

Remarks

Scale (approx)	Logged By
1:50	JS

Figure No. 10551-04-21.BH06

Ground Investigations Ireland Ltd
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Site St. Teresa's Gardens			**Borehole Number** BH07
Machine : Dando 2000 & Beretta T47S **Method :** Cable Percussion & Rotary Cored	**Casing Diameter** 200mm cased to 4.30m 146mm cased to 10.40m	**Ground Level (mOD)** 19.32	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location 714017.2 E 732936.6 N	**Dates** 05/07/2021-16/07/2021	**Engineer** AECOM	**Sheet** 1/2

Depth (m)	Sample / Tests	TCR	SCR	RQD	FI	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
											MADE GROUND: Grey slightly sandy gravelly Clay with occasional cobbles		
0.25	B									(0.60)			
0.25	ES												
0.50	B								18.72	0.60			
0.50	ES										Possible MADE GROUND: Very soft brown slightly sandy slightly gravelly Clay		
1.00	B							Water strike(1) at 1.00m, rose to 0.70m in 20 mins, sealed at YESm.					
1.00	ES												
1.00-1.45	SPT(C) N=5							1,2/2,1,1,1					
										(2.40)			
2.00-2.45	SPT(C) N=2							1,1/0,0,1,1					
2.00	B												
2.00	ES												
									16.32	3.00			
3.00-3.45	SPT(C) N=39							6,7/9,9,11,10			Very stiff dark grey slightly sandy slightly gravelly CLAY with occasional subangular to subrounded cobbles.		
3.00	B												
4.00								16,20/50					
4.00-4.22								B					
3.70								SPT(C) 50/70		(1.30)			
4.20		80	53	29	10				15.02	4.30	Strong thinly laminated dark grey fine grained argillaceous LIMESTONE interbedded with medium strong to strong thinly laminated dark grey fine grained calcareous MUDSTONE with calcite mineralisation parallel to F1 and F2 and euhedral pyrite mineralisation parallel to F1 and F2		
4.90					27								
5.20													
5.25		83	63	60	5								
6.15					8								
6.50					21								
6.70													
6.75		100	60	43	6					(5.20)			
7.45													
8.20		100	73	73	4						F1: 4.2m BGL to 10.4m BGL: Very close to medium, 10 to 30 degrees, smooth to rough, planar to undulose with clay smear, occasional clay fill, calcite mineralisation and euhedral pyrite mineralisation F2: 4.2m BGL to 10.4m BGL: Medium to wide, 60 to 80 degrees, smooth to rough, planar to undulose, with clay smear, calcite mineralisation and pyrite mineralisation		
									9.82	9.50	Strong thinly laminated dark grey fine grained argillaceous LIMESTONE with calcite mineralisation parallel to F1 and F2		
9.70													

Remarks
Hand dug inspection pit.
Groundwater encountered at 1m BGL.
Rotary follow on from 4.30m BGL
Borehole backfilled upon completion
Complete at 10.40m BGL
Chiselling from 4.30m to 4.30m for 1 hour.

Scale (approx)	Logged By
1:50	MB & JS

Figure No. 10551-04-21.BH07

Ground Investigations Ireland Ltd
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Site St. Teresa's Gardens			**Borehole Number** BH07
Machine : Dando 2000 & Beretta T47S **Flush :** Water **Core Dia :** 102 mm **Method :** Cable Percussion & Rotary Cored	**Casing Diameter** 200mm cased to 4.30m 146mm cased to 10.40m	**Ground Level (mOD)** 19.32	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location 714017.2 E 732936.6 N	**Dates** 05/07/2021-16/07/2021	**Engineer** AECOM	**Sheet** 2/2

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
	100	85	71				(0.90)			
10.40						8.92	10.40	Complete at 10.40m		

Remarks

Scale (approx)	Logged By
1:50	MB & JS

Figure No. 10551-04-21.BH07

Ground Investigations Ireland Ltd
www.gii.ie

Site St. Teresa's Gardens				**Borehole Number** BH08
Machine : Dando 2000 & Beretta T47S **Method :** Cable Percussion & Rotary Cored	**Casing Diameter** 200mm cased to 4.20m 146mm cased to 11.10m	**Ground Level (mOD)** 19.81	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location 714006.3 E 732890.3 N	**Dates** 02/07/2021-20/07/2021	**Engineer** AECOM	**Sheet** 1/2

Depth (m)	Sample / Tests	TCR	SCR	RQD	Casing Depth (m)	Water Depth (m)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
										(0.40)	MADE GROUND: Grey slightly clayey angular fine to coarse Gravel.		
0.25	B								19.41	0.40			
0.25	ES										MADE GROUND: Black brown slightly sandy slightly gravelly CLAY with occasional cobbles.		
0.50	B									(0.80)			
0.50	ES												
1.00	B							Water strike(1) at 1.00m, rose to 0.90m in 20 mins.	18.61	1.20			
1.00	ES							2,1/4,4,1,2			Firm grey brown slightly sandy gravelly Clay with occasional cobbles and boulders		
1.00-1.45	SPT(C) N=11												
2.00	B									(1.80)			
2.00	ES												
								19,6/50					
3.00	B							Water strike(2) at 3.00m, rose to 2.30m in 20 mins.	16.81	3.00	Very stiff dark grey slightly sandy slightly gravelly CLAY with occasional subangular to subrounded cobbles and boulders		
3.00-3.45	SPT(C) N=45							3,7/9,11,12,13					
4.00		TCR	SCR	RQD			FI	B					
4.00-4.20								SPT(C) 25*/120 50/80					
3.70		73	6	6						(1.90)			
4.90									14.91	4.90	Strong thinly laminated dark grey fine grained argilaceous LIMESTONE with occasional mudstone interbeds, occasional clay bands, calcite mineralisation parallel to F1 and F2 and euhedral pyrite growth parallel to F1 and F2		
5.20		100	83	76							F1: 4.9m BGL to 11.1m BGL: Close to medium spacing, 10 to 30 degrees, smooth to rough, planar to undulose with clay smear, occasional clay fill, calcite mineralisation and euhedral pyrite mineralisation		
6.70		96	60	53			8			(6.20)	F2: 4.9m BGL to 11.1m BGL: Medium to wide spacing, 60 to 80 degrees, smooth to rough, planar to undulose with clay smear and calcite/euhedral pyrite co-mineralisation		
8.20		100	80	60									
9.70													

Remarks
Hand dug inspection pit.
Groundwater encountered at 1m BGL.
Obstruction at 2m for SPT
Rotary follow on from 4.20m BGL
Borehole backfilled upon completion
Complete at 11.10m BGL
Chiselling from 4.20m to 4.20m for 1 hour.

Scale (approx)	Logged By
1:50	MB & JS

Figure No. 10551-04-21.BH08

Ground Investigations Ireland Ltd
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Site St. Teresa's Gardens			**Borehole Number** BH08
Machine : Dando 2000 & Beretta T47S **Flush :** Water **Core Dia :** 102 mm **Method :** Cable Percussion & Rotary Cored	**Casing Diameter** 200mm cased to 4.20m 146mm cased to 11.10m	**Ground Level (mOD)** 19.81	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location 714006.3 E 732890.3 N	**Dates** 02/07/2021-20/07/2021	**Engineer** AECOM	**Sheet** 2/2

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
	93	89	82							
11.10						8.71	11.10	Complete at 11.10m		

Remarks

Scale (approx)	Logged By
1:50	MB & JS

Figure No. 10551-04-21.BH08

Ground Investigations Ireland Ltd
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Site St. Teresa's Gardens			**Borehole Number** BH09
Machine : Dando 2000 & Beretta T47S **Method :** Cable Percussion & Rotary Cored	**Casing Diameter** 200mm cased to 4.70m 146mm cased to 10.70m	**Ground Level (mOD)** 19.55	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location 714044.8 E 732888.5 N	**Dates** 01/07/2021-23/07/2021	**Engineer** AECOM	**Sheet** 1/2

Depth (m)	Sample / Tests	TCR	SCR	RQD	FI	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
									19.35	(0.20) 0.20	MADE GROUND: Grey angular fine to coarse Gravel		
0.25	B										MADE GROUND: Grey slightly sandy slightly gravelly Clay with occasional red brick		
0.25	ES												
0.50	B									(0.70)			
0.50	ES								18.65	0.90			
1.00-1.22	SPT(C) 50/70							18,41/50			Firm brown/black slightly sandy slightly gravelly CLAY with occasional subangular to subrounded cobbles.		
1.00	B									(0.60)			
1.00	ES								18.05	1.50			
1.50-2.00	UT 0%										Firm brown slightly sandy slightly gravelly CLAY.		
													1
2.00-2.45	SPT(C) N=11							1,3/2,3,3,3					
2.00	B									(1.50)			
2.00	ES												
									16.55	3.00	Stiff brown slightly sandy slightly gravelly CLAY		
3.00-3.45	SPT(C) N=17							4,5/4,4,3,6		(0.40)			
3.00	B								16.15	3.40	Stiff dark grey slightly sandy slightly gravelly CLAY with occasional subangular to subrounded cobbles.		
								8,11/12,14,14,10					
4.00-4.40								SPT(C) 50/250					
4.00								B		(1.30)			1
4.10								Water strike(1) at 4.20m, rose to 1.90m in 20 mins.					
								25/50					
4.70-4.74		90	41	32				SPT(C) 25*/40	14.85	4.70	Medium strong to strong thinly laminated dark grey fine grained calcareous MUDSTONE with calcite mineralisation parallel to F1 and F2		
4.70								50/0					
4.70					15			B		(0.80)			
5.20									14.05	5.50	Strong thinly laminated dark grey fine grained argillaceous LIMESTONE with calcite mineralisation parallel to F2 and euhedral pyrite mineralisation parallel to F1		
5.50					5					(0.70)			
		93	55	46					13.35	6.20	Medium strong to strong thinly laminated dark grey fine grained calcareous MUDSTONE		
6.20					18					(0.60)			
6.70									12.75	6.80	Strong thinly laminated dark grey fine grained argillaceous LIMESTONE with occasional mudstone interbeds, calcite mineralisation parallel to F1 and F2, and euhedral pyrite mineralisation parallel to F1		
6.80													
		96	63	60							F1: 4.70m BGL to 10.70m BGL: Very close to wide spacing, 10 to 30 degrees, smooth to rough, planar to undulose, with clay smear, occasional clay infill, calcite mineralisation and occasional eeuhedral pyrite mineralisation		
8.20					8					(2.90)			
		96	73	73							F2: 4.70m BGL to 10.70m BGL: Medium to wide spacing, 60 to 80 degrees, smooth to rough, planar to undulose, with clay smear, and calcite mineralisation		
9.70									9.85	9.70	Medium strong to strong thinly laminated dark grey fine grained calcareous MUDSTONE with calcite mineralisation		

Remarks
Hand dug inspection pit.
Groundwater encountered at 1m BGL.
Obstruction at 1m for SPT
Rotary follow on from 4.70m BGL
Borehole backfilled upon completion
Complete at 10.70m BGL
Chiselling from 4.70m to 4.70m for 1 hour.

Scale (approx)	Logged By
1:50	MB & JS

Figure No. 10551-04-21.BH09

Ground Investigations Ireland Ltd
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Site St. Teresa's Gardens			**Borehole Number** BH09
Machine : Dando 2000 & Beretta T47S **Flush :** Water **Core Dia :** 102 mm **Method :** Cable Percussion & Rotary Cored	**Casing Diameter** 200mm cased to 4.70m 146mm cased to 10.70m	**Ground Level (mOD)** 19.55	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location 714044.8 E 732888.5 N	**Dates** 01/07/2021-23/07/2021	**Engineer** AECOM	**Sheet** 2/2

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
	80	65	55	9			(1.00)	parallel to F1 and euhedral pyrite mineralisation parallel to f1		
10.70						8.85	10.70	Complete at 10.70m		

Remarks

Scale (approx)	Logged By
1:50	MB & JS

Figure No. 10551-04-21.BH09

Ground Investigations Ireland Ltd
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Site St. Teresa's Gardens			**Borehole Number** BH10
Machine : Dando 2000 & Beretta T47S **Method :** Cable Percussion & Rotary Cored	**Casing Diameter** 200mm cased to 4.40m 146mm cased to 12.70m	**Ground Level (mOD)** 19.35	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location 714058.7 E 732930.4 N	**Dates** 01/07/2021-22/07/2021	**Engineer** AECOM	**Sheet** 1/2

Depth (m)	Sample / Tests	TCR	SCR	Casing Depth (m)	RQD	Water Depth (m)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.25	B								19.15	(0.20) 0.20	MADE GROUND: Grey slightly clayey angular fine to coarse Gravel.		
0.25	ES												
0.50	B									(0.80)	MADE GROUND: Black slightly sandy slightly gravelly Clayey gravel with occasional red brick.		
0.50	ES												
1.00-1.45	SPT(C) N=8							2,4/2,2,2,2	18.35	1.00	Soft brown black slightly sandy slightly gravelly CLAY.		
1.00	B												
1.00	ES									(1.70)			
2.00-2.45	SPT(C) N=4							0,1/1,1,0,2					
2.00	B												
2.00	ES								16.65	2.70	Very stiff dark grey slightly sandy slightly gravelly CLAY occasional subangular to subrounded cobbles		
								Water strike(1) at 2.70m, rose to 2.00m in 20 mins.					
3.00	B							9,7/10,10,12,12					
3.00-3.45	SPT(C) N=44												
4.00		TCR	SCR	RQD		FI		17,22/21,29					
4.00-4.26								B					
3.70								SPT(C) 50/110					
		16								(3.90)			
5.20													
		73											
6.60									12.75	6.60	Strong thinly laminated dark grey fine grained argillaceous LIMESTONE with euhedral pyrite mineralisation parallel to F1		
6.70						12				(0.30)			
6.90									12.45	6.90	Medium strong to strong thinly laminated dark grey fine grained calcareous MUDSTONE with occasional clay bands		
		96	73	55		15				(0.80)			
7.70						6			11.65	7.70	Strong thinly laminated dark grey fine grained argillaceous LIMESTONE with calcite mineralisation paralell to F1 and F2 and co-mineralisation of euhdreal pyrite and possible arsenopyrite with calcite in F2		
										(0.55)			
8.20									11.10	8.25	Medium strong thinly laminated dark grey fine grained calcareous MUDSTONE with euhedral pyrite mineralisation parallel to F1 and occasional clay bands		
8.25		100	46	21		19							
										(1.55)	F1: 6.60m BGL to 12.70m BGL: Very close to medium, 15 to 30 degrees, smooth to rough and occasionally stepped, planar to undulose, with clay smear, occcasional clay infill, calcite mineralisation and euhedral pyrite mineralisation F2: 6.60m BGL to 12.70m BGL: Medium to wide, 60 to 75 degrees, smooth to rough, planar to undulose with clay smear, calcite mineralisation and occasional		
9.70													
9.80													

Remarks
Hand dug inspection pit.
Groundwater encountered at 2.70m BGL.
Rotary follow on from 4.40m BGL
Borehole backfilled upon completion
Complete at 12.70m BGL
Chiselling from 4.70m to 4.70m for 1 hour.

Scale (approx)	Logged By
1:50	MB & JS

Figure No. 10551-04-21.BH10

Ground Investigations Ireland Ltd
www.gii.ie

Site St. Teresa's Gardens			**Borehole Number** BH10
Machine : Dando 2000 & Beretta T47S **Flush :** Water **Core Dia :** 102 mm **Method :** Cable Percussion & Rotary Cored	**Casing Diameter** 200mm cased to 4.40m 146mm cased to 12.70m	**Ground Level (mOD)** 19.35	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location 714058.7 E 732930.4 N	**Dates** 01/07/2021-22/07/2021	**Engineer** AECOM	**Sheet** 2/2

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
	100	78	65	10		9.55	9.80 (1.90)	co-mineralisation of euhedral pyrite with calcite Strong thinly laminated dark grey fine grained argillaceous LIMESTONE with occasional clay bands in F1, calcite mineralisation in F1 and F2, and co-mineralisation of euhedral pyrite with calcite in F2		
11.20 11.70	93	59	31	15		7.65	11.70 (1.00)	Medium strong to strong thinly laminated dark grey fine grained calcareous MUDSTONE with clay bands and calcite mineralisation parallel to F1 and F2		
12.70						6.65	12.70	Complete at 12.70m		

Remarks

Scale (approx)	Logged By
1:50	MB & JS

Figure No. 10551-04-21.BH10

Ground Investigations Ireland Ltd
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Site St. Teresa's Gardens			**Borehole Number** BH11
Machine : Dando 2000 & Beretta T47S **Method :** Cable Percussion & rotary Cored	**Casing Diameter** 200mm cased to 4.50m 146mm cased to 12.70m	**Ground Level (mOD)** 19.39	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location 714082.3 E 732895.8 N	**Dates** 25/06/2021-08/07/2021	**Engineer** AECOM	**Sheet** 1/2

Depth (m)	Sample / Tests	TCR	SCR	RQD	FI	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.25	B									(0.70)	MADE GROUND: Grey slightly sandy gravelly Clay with occasional red brick, glass and ceramic.		
0.25	ES								18.69	0.70			
0.50	B										Possible MADE GROUND: Very soft grey brown slightly sandy gravelly silty CLAY		
0.50	ES												
1.00-1.45	SPT(C) N=3							1,2/0,1,1,1					
1.00	B												
1.00	ES									(2.00)			
2.00-2.45	SPT(C) N=5							1,2/1,2,1,1					
2.00	B												
2.00	ES								16.69	2.70			
											Stiff greyish brown slightly sandy gravelly CLAY.		
3.00-3.45	SPT(C) N=24							5,4/6,6,6,6		(0.70)			
3.00	B								15.99	3.40			
											Stiff dark grey slightly sandy slightly gravelly CLAY with occasional subangular to subrounded cobbles		
4.00	B									(0.60)			
4.00-4.45								7,8/8,9,9,10 SPT(C) N=36	15.39	4.00			
4.50											Very stiff dark grey slightly sandy slightly gravelly CLAY with occasional subangular to subrounded cobbles		
4.20		100						B Water strike(1) at 4.50m, rose to 3.50m in 20 mins.					
5.20		47	17	100						(2.45)			
6.45									12.94	6.45			
6.70		87	73	33	12						Strong thinly laminated dark grey fine grained argillaceous LIMESTONE interbedded with medium strong to strong thinly laminated dark grey fine grained calcareous MUDSTONE with calcite mineralisation parallel to F1 and F2		
8.20		100	96	93							F1: 6.45m BGL to 12.70m BGL: Close to medium spacing, 0 to 20 degrees, smooth to rough, planar to undulose with clay smear and calcite mineralisation		
										(6.25)	F2: 6.45m BGL to 12.70m BGL: Medium spacing, 80 to 90 degrees, smooth to rough, planar to undulose with clay smear and calcite mineralisation		
9.70													

Remarks
Hand dug inspection pit.
Groundwater encountered at 4.5m BGL.
Rotary follow on from 4.5m BGL
Borehole backfilled upon completion
Complete at 12.70m BGL
Chiselling from 4.50m to 4.50m for 1 hour.

Scale (approx)	Logged By
1:50	MB & SG

Figure No. 10551-04-21.BH11

Ground Investigations Ireland Ltd
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Site St. Teresa's Gardens			**Borehole Number** BH11
Machine : Dando 2000 & Beretta T47S **Flush :** Water **Core Dia :** 102 mm **Method :** Cable Percussion & rotary Cored	**Casing Diameter** 200mm cased to 4.50m 146mm cased to 12.70m	**Ground Level (mOD)** 19.39	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location 714082.3 E 732895.8 N	**Dates** 25/06/2021-08/07/2021	**Engineer** AECOM	**Sheet** 2/2

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
	97	93	90	5						
11.20	97	88	74							
						6.69	12.70			
12.70								Complete at 12.70m		

Remarks

Scale (approx)	Logged By
1:50	MB & SG

Figure No. 10551-04-21.BH11

Ground Investigations Ireland Ltd
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Site St. Teresa's Gardens			**Borehole Number** BH12
Machine : Dando 2000 & Beretta T47S **Method :** Cable Percussion & Rotary Cored	**Casing Diameter** 200mm cased to 4.50m 146mm cased to 10.00m	**Ground Level (mOD)** 19.02	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location 714124.3 E 732921.9 N	**Dates** 28/06/2021-04/07/2021	**Engineer** AECOM	**Sheet** 1/1

Depth (m)	Sample / Tests	TCR	SCR	RQD	Casing Depth (m)	Water Depth (m)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
									18.94	0.08	TARMACADAM		
0.25	B									(0.62)	MADE GROUND: Grey clayey angular fine to coarse Gravel.		
0.25	ES								18.32	0.70			
0.50	B									(0.30)	MADE GROUND: Grey/brown slightly sandy gravelly Clay with occasional red brick and glass.		
0.50	ES								18.02	1.00			
1.00-1.45	SPT(C) N=8							0,4/2,2,2,2			Soft to firm greyish brown slightly sandy gravelly CLAY with occasional subangular to subrounded cobbles		
1.00	B												
1.00	ES												
1.50-2.00	UT 0%									(1.50)			
2.00-2.45	SPT(C) N=6							1,3/3,1,1,1					
2.00	B												
2.00	ES								16.52	2.50			
										(0.50)	Stiff dark grey slightly sandy gravelly CLAY with occasional subangular to subrounded cobbles		
3.00-3.45	SPT(C) N=37							4,9/11,7,11,8	16.02	3.00			
3.00	B							25,2/50			Very stiff dark grey grey slightly sandy slightly gravelly CLAY with occasional subangular to subrounded cobbles		
								50/0					
								SPT(C) 27*/140 Water strike(1) at 4.00m, rose to 3.60m in 20 mins.		(1.20)			
3.70								B					
4.00-4.14													
4.00													
4.00		100	70	65					14.82	4.20	Medium strong to strong thinly laminated dark grey fine grained calcareous MUDSTONE with calcite mineralisation parallel to F1 and F2 and euhedral pyrite mineralisation parallel to F1		
5.20		100	76	63							F1: 4.00m BGL to 10.00m BGL: Close to medium spacing, 0 to 10 degrees, smooth to rough, planar to undulose with clay smear, occasional pyrite mineralisation, and calcite mineralisation		
6.70		100	87	67			5			(5.80)			
8.20		100	76	55							F2: 4.00m BGL to 10.00m BGL: Medium to wide spacing, 60 to 90 degrees, smooth to rough, planar to undulose with clay smear and calcite mineralisation		
9.70		100	100	100									
10.00									9.02	10.00			

Remarks
Hand dug inspection pit.
Groundwater encountered at 4m BGL.
Rotary follow on from 4.50m BGL
Borehole backfilled upon completion
Complete at 10.00m BGL
Chiselling from 4.20m to 4.20m for 1 hour.

Scale (approx)	Logged By
1:50	MB & SG

Figure No. 10551-04-21.BH12

Ground Investigations Ireland Ltd
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Site St. Teresa's Gardens			**Borehole Number** BH13
Machine : Dando 2000 & Beretta T44 **Method :** Cable Percussion & Rotary Cored	**Casing Diameter** 200mm cased to 4.50m 146mm cased to 10.10m	**Ground Level (mOD)** 19.08	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location 714123.4 E 732891.6 N	**Dates** 28/06/2021-20/07/2021	**Engineer** AECOM	**Sheet** 1/2

Depth (m)	Sample / Tests	TCR	SCR	Casing Depth (m)	RQD	Water Depth (m)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
										(0.30)	TOPSOIL		
0.25	B								18.78	0.30			
0.25	ES									(0.40)	MADE GROUND: Black/brown slightly sandy slightly gravelly Clay with occasional subangular to subrounded cobbles and occasional fragments of red brick and concrete.		
0.50	B								18.38	0.70			
0.50	ES										Soft to firm brown/grey slightly sandy slightly gravelly CLAY.		
1.00-1.45	SPT(C) N=8							0,4/2,2,2,2					
1.00	B												
1.00	ES												
1.50	UT O%									(2.00)			
2.00-2.45	SPT(C) N=6							1,3/3,1,1,1					
2.00	B												
2.00	ES												
									16.38	2.70	Very stiff dark grey slightly sandy slightly gravelly CLAY with occasional subangular to subrounded cobbles		
3.00-3.45	SPT(C) N=37							4,9/11,7,11,7,11,8					
3.00	B							25/50					
3.60								50/0 SPT(C) 25*/60 Water strike(1) at 4.00m, rose to 3.60m in 20 mins.					1
4.00-4.06										(2.40)			1
4.00	B							B					
4.20		80						B					
5.10		100	70		49		17		13.98	5.10	Strong thinly laminated dark grey fine grained argillaceous LIMESTONE interbedded with medum strong to strong thinly laminated dark grey fine grained calcareous MUDSTONE with occasional clay bands, calcite mineralisation parallel to F2 and euhedral pyrite mineralisation paralel to F1		
6.60		96	69		63						F1: 5.10m BGL to 10.10m BGL: Very close to medium spacing, 10 to 20 degrees, smooth to rough, planar to undulose, with clay smear, clay fill, calcite mineralisation and euhedral pyrite mineralisation		
										(5.00)	F2: 5.10m BGL to 10.10m BGL: Wide spacing, 80 to 90 degrees, smooth to rough, planar to undulose, with clay smear and calcite mineralisation		
8.10		93	93		90		5						
9.60		100	100		90		12						

Remarks
Hand dug inspection pit.
Groundwater encountered at 4m BGL.
Rotary follow on from 4.50m BGL
Borehole backfilled upon completion
Complete at 10.10m BGL
Chiselling from 4.20m to 4.20m for 1 hour.

Scale (approx)	Logged By
1:50	MB & JS

Figure No. 10551-04-21.BH13

Ground Investigations Ireland Ltd
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Site St. Teresa's Gardens			**Borehole Number** BH13
Machine : Dando 2000 & Beretta T44 **Flush :** Water **Core Dia :** 102 mm **Method :** Cable Percussion & Rotary Cored	**Casing Diameter** 200mm cased to 4.50m 146mm cased to 10.10m	**Ground Level (mOD)** 19.08	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location 714123.4 E 732891.6 N	**Dates** 28/06/2021-20/07/2021	**Engineer** AECOM	**Sheet** 2/2

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
10.10						8.98	10.10	Complete at 10.10m		

Remarks

Scale (approx)	Logged By
1:50	MB & JS

Figure No. 10551-04-21.BH13

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Site St. Teresa's Gardens			**Borehole Number** BH14
Machine : Dando 2000 & Beretta T44 **Method :** Cable Percussion & Rotary Cored	**Casing Diameter** 200mm cased to 4.00m 146mm cased to 11.10m	**Ground Level (mOD)** 19.17	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location 714158.3 E 732877.4 N	**Dates** 29/06/2021-21/07/2021	**Engineer** AECOM	**Sheet** 1/2

Depth (m)	Sample / Tests	TCR	SCR	RQD	Casing Depth (m)	Water Depth (m)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
										(0.30)	TOPSOIL			
0.25	B								18.87	0.30				
0.25	ES										MADE GROUND: Brown/blackslightly sandy slightly gravelly Clay with occasional ceramics and red brick.			
0.50	B									(0.60)				
0.50	ES								18.27	0.90				
1.00-1.45	SPT(C) N=10							1,2/2,2,3,3			Very soft grey brown slightly gravelly slightly sandy silty CLAY			
1.00	B													
1.00	ES									(1.80)				
2.00-2.45	SPT(C) N=3							0,1/0,1,1,1						
2.00	B													
2.00	ES													
2.50-3.00	UT 0%								16.47	2.70				
3.00-3.45	SPT(C) N=24							1,3/4,6,6,8			Stiff dark grey slightly sandy slightly gravelly CLAY with occasional subangular to subrounded cobbles			
3.00	B							25/50						
								SPT(C) 25*/80						
3.60								Water strike(1) at 3.80m, rose to 3.20m in 20 mins.						
4.00-4.08								50/0						
4.00		93	20	9				B		(2.10)				
4.80									14.37	4.80				
5.10							18				Medium strong to strong thinly laminated dark grey fine grained calcareous MUDSTONE with occasional clay bands, calcite mineralisation parallel to F2 and euhedral pyrite mineralisation parallel to F1			
5.70		100	23	23					13.47	5.70				
6.60		90	73	56			8			(3.00)	Strong thinly laminated dark grey fine grained argillaceous LIMESTONE interbedded with medium strong to strong thinly laminated dark grey calcareous MUDSTONE with occasional clay bands, calcite mineralisation parallel to F2 and euhedral pyrite mineralisation parallel to F1 F1: 4.80m BGL to 11.10m BGL: Very close to medium, 5 to 20 degrees, smooth to rough, planar to undulose with clay smear, clay infill and euhedral pyrite mineralisation F2: 4.80m BGL to 11.10m BGL: Medium to wide, 60 to 80 degrees, smooth to rough, planar to undulose with clay smear and calcite mineralisation			
8.10														
8.70		100	80	73					10.47	8.70	Medium strong to strong thinly laminated dark grey fine grained calcareous MUDSTONE interbedded with strong thinlyt laminated dark grey fine grained argillaceous LIMESTONE with calcite mineralisation parallel to F2 and euhedral pyrite mineralisation parallel to F1			
9.60							7							

Remarks
Hand dug inspection pit.
Groundwater encountered at 3.8m BGL.
Rotary follow on from 4.00m BGL
Standpipe installed: 60mm slotted standpipe with pea gravel surround from 11.10m BGL to 4.80m BGL, plain standpipe from 4.80m BGL to GL with bentonite seal, finished with a raised cover
Complete at 11.10m BGL
Chiselling from 4.00m to 4.00m for 1 hour.

Scale (approx)	Logged By
1:50	MB & JS

Figure No. 10551-04-21.BH14

Ground Investigations Ireland Ltd
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Site St. Teresa's Gardens			**Borehole Number** BH14
Machine : Dando 2000 & Beretta T44 **Flush :** Water **Core Dia :** 102 mm **Method :** Cable Percussion & Rotary Cored	**Casing Diameter** 200mm cased to 4.00m 146mm cased to 11.10m	**Ground Level (mOD)** 19.17	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location 714158.3 E 732877.4 N	**Dates** 29/06/2021-21/07/2021	**Engineer** AECOM	**Sheet** 2/2

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
	100	96	90				(2.40)				
11.10						8.07	11.10	Complete at 11.10m			

Remarks

Scale (approx)	Logged By
1:50	MB & JS

Figure No. 10551-04-21.BH14

Ground Investigations Ireland Ltd
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Site St. Teresa's Gardens				**Borehole Number** BH15
Machine : Dando 2000 & Beretta T44 **Method :** Cable Percussion & Rotary Cored	**Casing Diameter** 200mm cased to 3.60m 146mm cased to 11.10m	**Ground Level (mOD)** 19.30	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location 714189.4 E 732881.9 N	**Dates** 30/06/2021-27/07/2021	**Engineer** AECOM	**Sheet** 1/2

Depth (m)	Sample / Tests	TCR	SCR	RQD	Casing Depth (m)	Water Depth (m)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
										(0.30)	TOPSOIL.		
0.25	B								19.00	0.30	MADE GROUND: Black slightly sandy slightly gravelly Clay with occasional fragments of red brick, mortar and ceramics.		
0.25	ES									(0.50)			
0.50	B								18.50	0.80	Firm grey/brown slightly gravelly slightly silty CLAY with occasional subangular to subrounded cobbles		
0.50	ES												
1.00-1.45	SPT(C) N=11							1,2/2,3,3,3					
1.00	B									(1.10)			
1.00	ES												
									17.40	1.90	Firm to stiff dark grey slightly sandy slightly gravelly CLAY with occasional subangular to subrounded cobbles		
2.00-2.45	SPT(C) N=14							3,5/4,4,4,2					
2.00	B									(1.10)			
2.00	ES												
									16.30	3.00	Very stiff dark grey slightly sandy slightly gravelly CLAY with subangular to subrounded cobbles		
3.00-3.45	SPT(C) N=47							8,8/10,10,10,17					
3.00	B												
		TCR	SCR	RQD			FI	Water strike(1) at 3.60m, rose to 3.20m in 20 mins. B					
3.60										(1.50)			
3.60		73	0	0									
4.50									14.80	4.50	Strong thinly laminated dark grey fine grained argillaceous LIMESTONE interbedded with medium strong to strong thinly laminated dark grey fine grained calcareous MUDSTONE with occasional clay bands, calcite mineralisation parallel to F1 and F2 and euhedral pyrite mineralisation parallel to F1 and F2		
5.10		96	66	43							F1: 4.50m BGL to 11.10m BGL: Very close to medium spacing, 10 to 20 degrees, smooth to rough, planar to undulose with clay smear, occasional clay bands, calcite mineralisation and euhedral pyrite mineralisation		
6.60		96	36	30			12			(6.60)	F2: 4.50m BGL to 11.10m BGL: Medium to wide spacing, 70 to 85 degrees, smooth to rough, planar to undulose with clay smear, calcite mineralisation and euhedral pyrite mineralisation		
8.10		100	66	53									
9.60													

Remarks
Hand dug inspection pit.
Groundwater encountered at 3.6m BGL.
Rotary follow on from 3.60m BGL
Borehole backfilled upon completion
Complete at 11.10m BGL
Chiselling from 3.60m to 3.60m for 1 hour.

Scale (approx)	Logged By
1:50	MB & JS

Figure No. 10551-04-21.BH15

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Site St. Teresa's Gardens			**Borehole Number** BH15
Machine : Dando 2000 & Beretta T44 **Flush :** Water **Core Dia :** 102 mm **Method :** Cable Percussion & Rotary Cored	**Casing Diameter** 200mm cased to 3.60m 146mm cased to 11.10m	**Ground Level (mOD)** 19.30	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location 714189.4 E 732881.9 N	**Dates** 30/06/2021-27/07/2021	**Engineer** AECOM	**Sheet** 2/2

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
	93	30	23							
11.10						8.20	11.10	Complete at 11.10m		

Remarks

Scale (approx)	Logged By
1:50	MB & JS

Figure No. 10551-04-21.BH15

Ground Investigations Ireland Ltd
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Site St. Teresa's Gardens				**Borehole Number** BH16
Machine : Dando 2000 & Beretta T44 **Method :** Cable Percussion & Rotary Cored	**Casing Diameter** 200mm cased to 4.00m 146mm cased to 11.10m	**Ground Level (mOD)** 19.56	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location 714120.5 E 732849.5 N	**Dates** 30/06/2021-26/07/2021	**Engineer** AECOM	**Sheet** 1/2

Depth (m)	Sample / Tests	TCR	SCR	RQD	Casing Depth (m)	Water Depth (m)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
										(0.30)	TOPSOIL		
0.25	B								19.26	0.30			
0.25	ES									(0.50)	MADE GROUND: Dark brown slightly sandy slightly gravelly Clay with occasional fragments of red brick and concrete.		
0.50	B								18.76	0.80			
0.50	ES										Soft to firm brownish grey slightly sandy slightly gravelly silty CLAY		
1.00-1.45	SPT(C) N=7							0,0/2,2,1,2					
1.00	B									(1.20)			
1.00	ES												
1.50-2.00	UT 0%								17.56	2.00			
2.00-2.45	SPT(C) N=18							3,3/5,4,5,4			Stiff dark grey slightly sandy slighlty gravelly CLAY with occasional subangular to subrounded cobbles		
2.00	B									(1.00)			
2.00	ES												1
3.00-3.45	SPT(C) N=31							9,5/5,8,9,9	16.56	3.00			
3.00	B							25/50			Very stiff dark grey slightly sandy slighlty gravelly CLAY with occasional subangular to subrounded cobbles		
		TCR	SCR	RQD			FI	50/0					
3.60								SPT(C) 25*/70		(1.30)			
4.00-4.07								Water strike(1) at 4.00m, rose to 2.80m in 20 mins.					1
4.00								B					
4.30		86	22	0					15.26	4.30	Medium strong thinly laminated dark grey fine grained calcareous MUDSTONE with calcite mineralisation parallel to F2		
5.10													
		86	40	0			22			(3.10)			
6.60													
		96	80	50					12.16	7.40	Strong thinly laminated dark grey fine grained argillaceous LIMESTONE with calcite mineralisation parallel to F2		
7.40							2			(0.70)			
8.10									11.46	8.10	Strong thinly laminated dark grey fine grained argillaceous LIMESTONE interbedded with medium strong to strong thinly laminated dark grey fine grained calcareous MUDSTONE with euhedral pyrite mineralisation parallel to F1 and co-mineralisation of pyrite with calcite parallel to F2 F1: 4.30m BGL to 11.10m BGL: Very close to medium spacing, 10 to 30 degrees, smooth to rough, planar to undulose with clay smear, clay infill and euhedral pyrite mineralisation		
		93	56	50			13			(3.00)			
9.60													

Remarks
Hand dug inspection pit.
Groundwater encountered at 4.00m BGL.
Rotary follow on from 4.00m BGL
Borehole backfilled upon completion
Complete at 11.10m BGL
Chiselling from 4.00m to 4.00m for 1 hour.

Scale (approx)	Logged By
1:50	MB & JS

Figure No. 10551-04-21.BH16

Ground Investigations Ireland Ltd
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Site St. Teresa's Gardens			**Borehole Number** BH16
Machine : Dando 2000 & Beretta T44 **Flush :** Water **Core Dia :** 102 mm **Method :** Cable Percussion & Rotary Cored	**Casing Diameter** 200mm cased to 4.00m 146mm cased to 11.10m	**Ground Level (mOD)** 19.56	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location 714120.5 E 732849.5 N	**Dates** 30/06/2021-26/07/2021	**Engineer** AECOM	**Sheet** 2/2

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
	96	43	29					F2: 4.30m BGL to 11.10m BGL: Medium to wide spacing, 60 to 80 degrees, smooth to rough, planar to undulose with clay smear, calcite mineralisation and co-mineralisation of euhedral pyrite with calcite		
11.10						8.46	11.10	Complete at 11.10m		

Remarks

Scale (approx)	Logged By
1:50	MB & JS

Figure No. 10551-04-21.BH16

Ground Investigations Ireland Ltd
www.gii.ie

Site St. Teresa's Gardens			**Borehole Number** BH17
Machine : Dando 2000 & Beretta T44 **Method :** Cable Percussion & Rotary Cored	**Casing Diameter** 200mm cased to 4.20m 146mm cased to 12.60m	**Ground Level (mOD)** 19.41	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location 714148.1 E 732848.3 N	**Dates** 29/06/2021-23/07/2021	**Engineer** AECOM	**Sheet** 1/2

Depth (m)	Sample / Tests	TCR	SCR	RQD	FI	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
									19.33	0.08	TARMACADAM			
0.25	B									(0.52)	MADE GROUND: Grey slightly clayey angular fine to coarse Gravel			
0.25	ES								18.81	0.60				
0.50	B									(0.20)	MADE GROUND: Black/brown slightly sandy slightly gravelly Clay with subangular to subrounded occasional cobbles			
0.50	ES								18.61	0.80				
1.00-1.45	SPT(C) N=10							3,2/1,3,3,3			Firm grey/brown slightly gravelly slightly silty CLAY with occasional subangular to subrounded cobbles			
1.00	B									(1.40)				
1.00	ES													
2.00-2.45	SPT(C) N=29							4,3/5,7,9,8	17.21	2.20	Stiff to very stiff dark brownish grey slightly sandy slightly gravelly CLAY with occasional subangular to subrounded cobbles			
2.00	B									(0.80)				
2.00	ES													
3.00-3.45	SPT(C) N=49							9,9/9,9,14,17	16.41	3.00	Very stiff dark grey slightly sandy slightly gravelly CLAY occasional subangular to subrounded cobbles			
3.00	B													
4.00								B						
3.60								20,27/50						
4.00-4.22								SPT(C) 50/70						
		73						Water strike(1) at 4.20m, rose to 3.00m in 20 mins.		(2.40)				
5.10														
5.40									14.01	5.40	Strong thinly laminated dark grey fine grained argillaceous LIMESTONE with occasional mudstone interbeds, calcite mineralisation parallel to F2 and euhedral pyrite mineralisation parallel to F1			
		36	21	16	12					(1.90)				
6.60														
7.30		100	55	26					12.11	7.30	Medium strong to strong thinly laminated dark grey fine grained calcareous MUDSTONE with occasional clay bands and limestone interbeds			
8.10					20					(1.90)				
		96	63	19										
9.20					2				10.21	9.20	Strong thinly laminated dark grey fine grained argillaceous LIMESTONE			
9.60										(0.80)				
10.00														

Remarks
Hand dug inspection pit.
Groundwater encountered at 4.2m BGL.
Rotary follow on from 4.20m BGL
Standpipe Installed: 60mm slotted standpipe with pea gravel surround from 11.10m BGL to 5.40m BGL, plain standpipe from 5.40m BGL to GL with bentonite seal, finished with a raised cover
Complete at 12.60m BGL
Chiselling from 4.20m to 4.20m for 1 hour.

Scale (approx)	Logged By
1:50	MB & JS

Figure No. 10551-04-21.BH17

Ground Investigations Ireland Ltd
www.gii.ie

Site St. Teresa's Gardens			**Borehole Number** BH17
Machine : Dando 2000 & Beretta T44 **Flush :** Water **Core Dia :** 102 mm **Method :** Cable Percussion & Rotary Cored	**Casing Diameter** 200mm cased to 4.20m 146mm cased to 12.60m	**Ground Level (mOD)** 19.41	**Client** Dublin City Council	**Job Number** 10551-04-21
	Location 714148.1 E 732848.3 N	**Dates** 29/06/2021-23/07/2021	**Engineer** AECOM	**Sheet** 2/2

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
	96	83	66	26		9.41	10.00 (0.50)	Medium strong thinly laminated dark grey fine grained calcareous MUDSTONE with occasional clay bands			
10.50						8.91	10.50 (2.10)	Strong thinly laminated dark grey fine grained argillaceous LIMESTONE interbedded with thinly laminated dark grey fine grained calcareous MUDSTONE with occasional clay bands, calcite mineralisation parallel to F2 and euhedral pyrite mineralisation parallel to F1 F1: 5.40m BGL to 12.60m BGL: Very close to medium spacing, 10 to 30 degrees, smooth to rough, planar to undulose with clay smear, clay fill, calcite mineralisation and euhedral pyrite mineralisation F2: 5.40m BGL to 12.60m BGL: Wide spacing, 60 to 80 degrees, smooth to rough, planar to undulose, with clay smear and calcite mineralisation			
11.10	100	60	26	11							
12.60						6.81	12.60	Complete at 12.60m			

Remarks

Scale (approx)	Logged By
1:50	MB & JS

Figure No. 10551-04-21.BH17

APPENDIX 6 – Laboratory Testing

Element Materials Technology
Unit 3 Deeside Point
Zone 3
Deeside Industrial Park
Deeside
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Ground Investigations Ireland
Catherinestown House
Hazelhatch Road
Newcastle
Co. Dublin
Ireland

Attention :	Barry Sexton
Date :	13th October, 2021
Your reference :	10551-04-21
Our reference :	Test Report 21/15238 Batch 1
Location :	St Teresas Gardens
Date samples received :	29th September, 2021
Status :	Final Report
Issue :	1

Twenty nine samples were received for analysis on 29th September, 2021 of which twenty nine were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Authorised By:

Bruce Leslie
Project Manager

Element Materials Technology Environmental UK Limited
Registered in England and Wales
Registered Office: 10 Lower Grosvenor Place, London, SW1W 0EN
Company Registration No: 11371415

Element Materials Technology

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton
EMT Job No: 21/15238

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27	28-30	LOD/LOR	Units	Method No.
Sample ID	WS01	WS01	WS01	WS02	WS02	WS02	WS03	WS03	WS03	WS04			
Depth	0.00-1.00	1.00-2.00	2.00-3.00	0.00-0.70	0.70-2.60	2.60-3.00	0.00-1.00	1.00-1.60	1.60-3.00	0.00-0.80			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021			
Antimony	2	<1	1	3	2	2	2	3	1	3	<1	mg/kg	TM30/PM15
Arsenic #	17.3	5.7	8.7	25.5	9.8	11.5	23.5	15.8	18.0	25.9	<0.5	mg/kg	TM30/PM15
Barium #	417	53	53	252	77	51	203	671	71	169	<1	mg/kg	TM30/PM15
Cadmium #	4.0	2.0	1.9	2.6	2.4	2.1	1.5	1.9	1.5	2.3	<0.1	mg/kg	TM30/PM15
Chromium #	59.4	38.0	39.5	45.6	35.3	43.8	54.7	50.6	54.2	63.3	<0.5	mg/kg	TM30/PM15
Copper #	68	21	27	89	34	31	231	33	29	73	<1	mg/kg	TM30/PM15
Lead #	80	14	19	418	15	23	220	17	12	213	<5	mg/kg	TM30/PM15
Mercury #	<0.1	<0.1	<0.1	0.6	<0.1	<0.1	0.6	<0.1	<0.1	0.5	<0.1	mg/kg	TM30/PM15
Molybdenum #	8.2	2.6	4.0	6.4	4.4	4.3	4.7	8.9	5.3	5.3	<0.1	mg/kg	TM30/PM15
Nickel #	42.7	26.5	33.2	53.2	41.9	38.0	75.4	47.2	34.2	51.6	<0.7	mg/kg	TM30/PM15
Selenium #	3	<1	7	2	1	8	1	2	3	2	<1	mg/kg	TM30/PM15
Zinc #	126	69	89	179	91	91	209	84	80	275	<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene #	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.04	<0.03	<0.03	<0.03	<0.03	mg/kg	TM4/PM8
Acenaphthene #	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	TM4/PM8
Fluorene #	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Phenanthrene #	<0.03	<0.03	<0.03	0.12	<0.03	<0.03	0.33	<0.03	<0.03	0.30	<0.03	mg/kg	TM4/PM8
Anthracene #	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.08	<0.04	<0.04	0.05	<0.04	mg/kg	TM4/PM8
Fluoranthene #	<0.03	<0.03	<0.03	0.12	<0.03	<0.03	0.51	<0.03	<0.03	0.30	<0.03	mg/kg	TM4/PM8
Pyrene #	<0.03	<0.03	<0.03	0.12	<0.03	<0.03	0.47	<0.03	<0.03	0.29	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	<0.06	<0.06	<0.06	0.10	<0.06	<0.06	0.31	<0.06	<0.06	0.22	<0.06	mg/kg	TM4/PM8
Chrysene #	<0.02	<0.02	<0.02	0.09	<0.02	<0.02	0.35	<0.02	<0.02	0.27	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #	<0.07	<0.07	<0.07	0.14	<0.07	<0.07	0.58	<0.07	<0.07	0.43	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	<0.04	<0.04	<0.04	0.08	<0.04	<0.04	0.30	<0.04	<0.04	0.26	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #	<0.04	<0.04	<0.04	0.05	<0.04	<0.04	0.18	<0.04	<0.04	0.15	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	<0.04	<0.04	<0.04	0.06	<0.04	<0.04	0.20	<0.04	<0.04	0.19	<0.04	mg/kg	TM4/PM8
Coronene	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
PAH 6 Total #	<0.22	<0.22	<0.22	0.45	<0.22	<0.22	1.77	<0.22	<0.22	1.33	<0.22	mg/kg	TM4/PM8
PAH 17 Total	<0.64	<0.64	<0.64	0.88	<0.64	<0.64	3.35	<0.64	<0.64	2.46	<0.64	mg/kg	TM4/PM8
Benzo(b)fluoranthene	<0.05	<0.05	<0.05	0.10	<0.05	<0.05	0.42	<0.05	<0.05	0.31	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	<0.02	<0.02	<0.02	0.04	<0.02	<0.02	0.16	<0.02	<0.02	0.12	<0.02	mg/kg	TM4/PM8
Benzo(j)fluoranthene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	mg/kg	TM4/PM8
PAH Surrogate % Recovery	99	93	88	98	85	85	96	95	90	99	<0	%	TM4/PM8
Mineral Oil (C10-C40) (EH_CU_1D_AL)	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	mg/kg	TM5/PM8/PM16

Please see attached notes for all abbreviations and acronyms

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton
EMT Job No: 21/15238

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27	28-30	LOD/LOR	Units	Method No.
Sample ID	WS01	WS01	WS01	WS02	WS02	WS02	WS03	WS03	WS03	WS04			
Depth	0.00-1.00	1.00-2.00	2.00-3.00	0.00-0.70	0.70-2.60	2.60-3.00	0.00-1.00	1.00-1.60	1.60-3.00	0.00-0.80			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021			
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL)#	<0.1	<0.1	<0.1 SV	<0.1 SV	<0.1	<0.1 SV	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL)#	<0.1	<0.1	<0.1 SV	<0.1 SV	<0.1	<0.1 SV	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	<0.1	<0.1	<0.1 SV	<0.1 SV	<0.1	<0.1 SV	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL)#	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL)#	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL)#	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL)#	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>C35-C40 (EH_1D_AL)	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-40 (EH+HS_1D_AL)	<26	<26	<26	<26	<26	<26	<26	<26	<26	<26	<26	mg/kg	TM5/TM36/PM8/PM12/PM16
>C6-C10 (HS_1D_AL)	<0.1	<0.1	<0.1 SV	<0.1 SV	<0.1	<0.1 SV	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	mg/kg	TM36/PM12
>C10-C25 (EH_1D_AL)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	mg/kg	TM5/PM8/PM16
>C25-C35 (EH_1D_AL)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	mg/kg	TM5/PM8/PM16
Aromatics													
>C5-EC7 (HS_1D_AR)#	<0.1	<0.1	<0.1 SV	<0.1 SV	<0.1	<0.1 SV	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR)#	<0.1	<0.1	<0.1 SV	<0.1 SV	<0.1	<0.1 SV	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR)#	<0.1	<0.1	<0.1 SV	<0.1 SV	<0.1	<0.1 SV	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR)#	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR)#	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR)#	<7	<7	<7	<7	<7	<7	11	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR)#	<7	<7	<7	<7	<7	<7	18	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>EC35-EC40 (EH_1D_AR)	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-40 (EH+HS_1D_AR)	<26	<26	<26	<26	<26	<26	29	<26	<26	<26	<26	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-40) (EH+HS_CU_1D_Total)	<52	<52	<52	<52	<52	<52	<52	<52	<52	<52	<52	mg/kg	TM5/TM36/PM8/PM12/PM16
>EC6-EC10 (HS_1D_AR)#	<0.1	<0.1	<0.1 SV	<0.1 SV	<0.1	<0.1 SV	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	mg/kg	TM36/PM12
>EC10-EC25 (EH_1D_AR)	<10	<10	<10	<10	<10	<10	23	<10	<10	<10	<10	mg/kg	TM5/PM8/PM16
>EC25-EC35 (EH_1D_AR)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	mg/kg	TM5/PM8/PM16
MTBE#	<5	<5	<5 SV	<5 SV	<5	<5 SV	<5 SV	<5	<5	<5 SV	<5	ug/kg	TM36/PM12
Benzene#	<5	<5	<5 SV	<5 SV	<5	<5 SV	<5 SV	<5	<5	<5 SV	<5	ug/kg	TM36/PM12
Toluene#	<5	<5	<5 SV	<5 SV	<5	<5 SV	<5 SV	<5	<5	<5 SV	<5	ug/kg	TM36/PM12
Ethylbenzene#	<5	<5	<5 SV	<5 SV	<5	<5 SV	<5 SV	<5	<5	<5 SV	<5	ug/kg	TM36/PM12
m/p-Xylene#	<5	<5	<5 SV	<5 SV	<5	<5 SV	<5 SV	<5	<5	<5 SV	<5	ug/kg	TM36/PM12
o-Xylene#	<5	<5	<5 SV	<5 SV	<5	<5 SV	<5 SV	<5	<5	<5 SV	<5	ug/kg	TM36/PM12
PCB 28#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 52#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 101#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 118#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 138#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 153#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 180#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
Total 7 PCBs#	<35	<35	<35	<35	<35	<35	<35	<35	<35	<35	<35	ug/kg	TM17/PM8

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton
EMT Job No: 21/15238

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27	28-30	LOD/LOR	Units	Method No.
Sample ID	WS01	WS01	WS01	WS02	WS02	WS02	WS03	WS03	WS03	WS04			
Depth	0.00-1.00	1.00-2.00	2.00-3.00	0.00-0.70	0.70-2.60	2.60-3.00	0.00-1.00	1.00-1.60	1.60-3.00	0.00-0.80			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021			
Natural Moisture Content	30.6	16.5	11.2	28.8	12.7	12.6	41.6	19.4	10.7	16.3	<0.1	%	PM4/PM0
Moisture Content (% Wet Weight)	23.5	14.2	10.1	22.3	11.3	11.2	29.4	16.2	9.7	14.1	<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	mg/kg	TM38/PM20
Chromium III	59.4	38.0	39.5	45.6	35.3	43.8	54.7	50.6	54.2	63.3	<0.5	mg/kg	NONE/NONE
Total Organic Carbon #	1.27	0.34	0.48	5.94	0.44	0.66	7.68	0.35	0.61	4.68	<0.02	%	TM21/PM24
pH #	8.33	8.83	8.88	8.33	8.94	8.86	8.28	8.80	8.90	8.42	<0.01	pH units	TM73/PM11
Mass of raw test portion	0.1193	0.1029	0.0988	0.1111	0.1026	0.0968	0.1239	0.1041	0.097	0.1282		kg	NONE/PM17
Mass of dried test portion	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09		kg	NONE/PM17

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton
EMT Job No: 21/15238

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	31-33	34-36	37-39	40-42	43-45	46-48	49-51	52-54	55-57	58-60	LOD/LOR	Units	Method No.
Sample ID	WS04	WS04	WS05	WS05	WS05	WS05	WS06	WS06	WS06	WS07			
Depth	0.80-2.80	2.80-3.00	0.00-1.00	1.00-1.30	1.30-2.70	2.70-3.00	0.00-1.00	1.00-2.30	2.30-3.00	0.00-0.70			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021			
Antimony	2	2	4	3	<1	2	3	<1	2	3	<1	mg/kg	TM30/PM15
Arsenic #	10.8	10.6	32.8	14.9	4.2	9.3	9.2	6.6	10.2	26.1	<0.5	mg/kg	TM30/PM15
Barium #	83	54	187	492	49	59	73	53	104	134	<1	mg/kg	TM30/PM15
Cadmium #	1.9	2.0	1.4	1.7	1.5	1.9	1.6	1.3	1.9	2.5	<0.1	mg/kg	TM30/PM15
Chromium #	57.8	39.5	51.7	57.7	61.1	41.9	33.8	44.1	43.2	54.6	<0.5	mg/kg	TM30/PM15
Copper #	25	32	107	20	27	28	33	19	32	70	<1	mg/kg	TM30/PM15
Lead #	21	21	317	19	9	18	41	11	25	164	<5	mg/kg	TM30/PM15
Mercury #	<0.1	<0.1	0.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.3	<0.1	mg/kg	TM30/PM15
Molybdenum #	4.4	4.1	5.3	7.5	4.3	4.5	3.6	3.9	4.6	5.1	<0.1	mg/kg	TM30/PM15
Nickel #	44.5	38.2	46.6	40.0	22.3	33.9	32.1	21.0	38.9	53.2	<0.7	mg/kg	TM30/PM15
Selenium #	1	5	2	2	<1	5	<1	<1	2	2	<1	mg/kg	TM30/PM15
Zinc #	108	87	275	93	60	75	89	51	90	200	<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene #	<0.04	<0.04	0.11	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03	0.11	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	TM4/PM8
Acenaphthene #	<0.05	<0.05	0.15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	TM4/PM8
Fluorene #	<0.04	<0.04	0.13	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Phenanthrene #	<0.03	<0.03	1.90	<0.03	<0.03	<0.03	0.54	<0.03	<0.03	0.19	<0.03	mg/kg	TM4/PM8
Anthracene #	<0.04	<0.04	0.43	<0.04	<0.04	<0.04	0.14	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Fluoranthene #	<0.03	<0.03	3.60	<0.03	<0.03	<0.03	1.03	<0.03	<0.03	0.24	<0.03	mg/kg	TM4/PM8
Pyrene #	<0.03	<0.03	3.17	<0.03	<0.03	<0.03	0.89	<0.03	<0.03	0.24	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	<0.06	<0.06	1.90	<0.06	<0.06	<0.06	0.56	<0.06	<0.06	0.20	<0.06	mg/kg	TM4/PM8
Chrysene #	<0.02	<0.02	2.26	<0.02	<0.02	<0.02	0.66	<0.02	<0.02	0.18	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #	<0.07	<0.07	3.62	<0.07	<0.07	<0.07	0.97	<0.07	<0.07	0.23	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	<0.04	<0.04	2.05	<0.04	<0.04	<0.04	0.54	<0.04	<0.04	0.14	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #	<0.04	<0.04	1.29	<0.04	<0.04	<0.04	0.35	<0.04	<0.04	0.09	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.04	<0.04	0.25	<0.04	<0.04	<0.04	0.07	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	<0.04	<0.04	1.30	<0.04	<0.04	<0.04	0.36	<0.04	<0.04	0.10	<0.04	mg/kg	TM4/PM8
Coronene	<0.04	<0.04	0.25	<0.04	<0.04	<0.04	0.07	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
PAH 6 Total #	<0.22	<0.22	11.86	<0.22	<0.22	<0.22	3.25	<0.22	<0.22	0.80	<0.22	mg/kg	TM4/PM8
PAH 17 Total	<0.64	<0.64	22.52	<0.64	<0.64	<0.64	6.18	<0.64	<0.64	1.61	<0.64	mg/kg	TM4/PM8
Benzo(b)fluoranthene	<0.05	<0.05	2.61	<0.05	<0.05	<0.05	0.70	<0.05	<0.05	0.17	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	<0.02	<0.02	1.01	<0.02	<0.02	<0.02	0.27	<0.02	<0.02	0.06	<0.02	mg/kg	TM4/PM8
Benzo(j)fluoranthene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	mg/kg	TM4/PM8
PAH Surrogate % Recovery	100	79	97	88	93	78	95	99	101	95	<0	%	TM4/PM8
Mineral Oil (C10-C40) (EH_CU_1D_AL)	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	mg/kg	TM5/PM8/PM16

Please see attached notes for all abbreviations and acronyms

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton
EMT Job No: 21/15238

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	31-33	34-36	37-39	40-42	43-45	46-48	49-51	52-54	55-57	58-60	LOD/LOR	Units	Method No.
Sample ID	WS04	WS04	WS05	WS05	WS05	WS05	WS06	WS06	WS06	WS07			
Depth	0.80-2.80	2.80-3.00	0.00-1.00	1.00-1.30	1.30-2.70	2.70-3.00	0.00-1.00	1.00-2.30	2.30-3.00	0.00-0.70			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021			
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL)#	<0.1	<0.1 SV	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL)#	<0.1	<0.1 SV	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	<0.1	<0.1 SV	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL)#	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL)#	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL)#	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL)#	<7	<7	<7	<7	<7	9	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>C35-C40 (EH_1D_AL)	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-40 (EH+HS_1D_AL)	<26	<26	<26	<26	<26	<26	<26	<26	<26	<26	<26	mg/kg	TM5/TM36/PM8/PM12/PM16
>C6-C10 (HS_1D_AL)	<0.1	<0.1 SV	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>C10-C25 (EH_1D_AL)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	mg/kg	TM5/PM8/PM16
>C25-C35 (EH_1D_AL)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	mg/kg	TM5/PM8/PM16
Aromatics													
>C5-EC7 (HS_1D_AR)#	<0.1	<0.1 SV	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR)#	<0.1	<0.1 SV	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR)#	<0.1	<0.1 SV	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR)#	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR)#	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR)#	<7	<7	40	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR)#	<7	<7	141	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>EC35-EC40 (EH_1D_AR)	<7	<7	9	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-40 (EH+HS_1D_AR)	<26	<26	190	<26	<26	<26	<26	<26	<26	<26	<26	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-40) (EH+HS_CU_1D_Total)	<52	<52	190	<52	<52	<52	<52	<52	<52	<52	<52	mg/kg	TM5/TM36/PM8/PM12/PM16
>EC6-EC10 (HS_1D_AR)#	<0.1	<0.1 SV	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>EC10-EC25 (EH_1D_AR)	<10	<10	27	<10	<10	<10	<10	<10	<10	<10	<10	mg/kg	TM5/PM8/PM16
>EC25-EC35 (EH_1D_AR)	<10	<10	102	<10	<10	<10	<10	<10	<10	<10	<10	mg/kg	TM5/PM8/PM16
MTBE#	<5	<5 SV	<5 SV	<5	<5	<5 SV	<5	<5	<5 SV	<5	<5	ug/kg	TM36/PM12
Benzene#	<5	<5 SV	<5 SV	<5	<5	<5 SV	<5	<5	<5 SV	<5	<5	ug/kg	TM36/PM12
Toluene#	<5	<5 SV	<5 SV	<5	<5	<5 SV	<5	<5	<5 SV	<5	<5	ug/kg	TM36/PM12
Ethylbenzene#	<5	<5 SV	<5 SV	<5	<5	<5 SV	<5	<5	<5 SV	<5	<5	ug/kg	TM36/PM12
m/p-Xylene#	<5	<5 SV	<5 SV	<5	<5	<5 SV	<5	<5	<5 SV	<5	<5	ug/kg	TM36/PM12
o-Xylene#	<5	<5 SV	<5 SV	<5	<5	<5 SV	<5	<5	<5 SV	<5	<5	ug/kg	TM36/PM12
PCB 28#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 52#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 101#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 118#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 138#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 153#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 180#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
Total 7 PCBs#	<35	<35	<35	<35	<35	<35	<35	<35	<35	<35	<35	ug/kg	TM17/PM8

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton
EMT Job No: 21/15238

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	31-33	34-36	37-39	40-42	43-45	46-48	49-51	52-54	55-57	58-60	LOD/LOR	Units	Method No.
Sample ID	WS04	WS04	WS05	WS05	WS05	WS05	WS06	WS06	WS06	WS07			
Depth	0.80-2.80	2.80-3.00	0.00-1.00	1.00-1.30	1.30-2.70	2.70-3.00	0.00-1.00	1.00-2.30	2.30-3.00	0.00-0.70			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021			
Natural Moisture Content	17.1	12.4	33.9	21.5	12.5	12.4	17.3	11.8	11.9	26.8	<0.1	%	PM4/PM0
Moisture Content (% Wet Weight)	14.6	11.0	25.3	17.7	11.1	11.0	14.8	10.6	10.6	21.1	<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	mg/kg	TM38/PM20
Chromium III	57.8	39.5	51.7	57.7	61.1	41.9	33.8	44.1	43.2	54.6	<0.5	mg/kg	NONE/NONE
Total Organic Carbon #	0.50	0.65	8.38	0.39	0.46	0.68	0.86	0.28	0.65	2.82	<0.02	%	TM21/PM24
pH #	8.53	8.72	8.21	8.74	8.77	8.66	8.49	8.87	8.84	8.45	<0.01	pH units	TM73/PM11
Mass of raw test portion	0.1024	0.0982	0.1055	0.1073	0.0962	0.095	0.0986	0.0938	0.0983	0.1078		kg	NONE/PM17
Mass of dried test portion	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09		kg	NONE/PM17

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton
EMT Job No: 21/15238

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	61-63	64-66	67-69	70-72	73-75	76-78	79-81	82-84	85-87		LOD/LOR	Units	Method No.
Sample ID	WS07	WS07	WS08	WS08	WS08	WS08	WS09A	WS10	WS10				
Depth	0.70-1.80	1.80-2.00	0.00-1.00	1.00-2.00	2.00-3.30	3.30-4.00	0.00-0.85	0.00-2.30	2.30-3.00				
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T				
Sample Date	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021				
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil				
Batch Number	1	1	1	1	1	1	1	1	1				
Date of Receipt	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021				
Antimony	2	1	3	2	2	1	1	2	1		<1	mg/kg	TM30/PM15
Arsenic #	17.8	9.6	16.2	12.3	10.4	10.9	8.7	26.8	7.9		<0.5	mg/kg	TM30/PM15
Barium #	124	75	154	94	181	76	108	133	56		<1	mg/kg	TM30/PM15
Cadmium #	2.3	2.0	2.6	1.8	2.6	1.4	0.7	0.9	1.5		<0.1	mg/kg	TM30/PM15
Chromium #	53.5	40.3	49.5	76.9	37.8	35.8	47.4	65.4	40.1		<0.5	mg/kg	TM30/PM15
Copper #	42	27	66	20	35	27	24	46	22		<1	mg/kg	TM30/PM15
Lead #	34	16	96	18	15	23	87	23	23		<5	mg/kg	TM30/PM15
Mercury #	<0.1	<0.1	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1	mg/kg	TM30/PM15
Molybdenum #	5.3	4.1	6.3	5.1	6.4	4.0	2.5	4.0	3.6		<0.1	mg/kg	TM30/PM15
Nickel #	45.8	37.5	52.8	42.8	51.0	35.3	21.4	57.4	37.6		<0.7	mg/kg	TM30/PM15
Selenium #	<1	<1	4	1	2	3	<1	5	2		<1	mg/kg	TM30/PM15
Zinc #	142	82	249	76	105	84	94	105	81		<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene #	<0.04	<0.04	0.05	<0.04	<0.04	<0.04	0.08	<0.04	<0.04		<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03	0.07	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03		<0.03	mg/kg	TM4/PM8
Acenaphthene #	<0.05	<0.05	0.09	<0.05	<0.05	<0.05	0.07	<0.05	<0.05		<0.05	mg/kg	TM4/PM8
Fluorene #	<0.04	<0.04	0.09	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04		<0.04	mg/kg	TM4/PM8
Phenanthrene #	<0.03	<0.03	1.35	<0.03	<0.03	<0.03	0.50	<0.03	<0.03		<0.03	mg/kg	TM4/PM8
Anthracene #	<0.04	<0.04	0.34	<0.04	<0.04	<0.04	0.19	<0.04	<0.04		<0.04	mg/kg	TM4/PM8
Fluoranthene #	<0.03	<0.03	2.54	<0.03	<0.03	<0.03	1.19	0.04	<0.03		<0.03	mg/kg	TM4/PM8
Pyrene #	<0.03	<0.03	2.17	<0.03	<0.03	<0.03	1.58	0.04	<0.03		<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	<0.06	<0.06	1.35	<0.06	<0.06	<0.06	0.96	<0.06	<0.06		<0.06	mg/kg	TM4/PM8
Chrysene #	<0.02	<0.02	1.64	<0.02	<0.02	<0.02	1.00	<0.02	<0.02		<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #	<0.07	<0.07	2.36	<0.07	<0.07	<0.07	1.72	<0.07	<0.07		<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	<0.04	<0.04	1.32	<0.04	<0.04	<0.04	0.92	<0.04	<0.04		<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #	<0.04	<0.04	0.81	<0.04	<0.04	<0.04	0.60	<0.04	<0.04		<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.04	<0.04	0.17	<0.04	<0.04	<0.04	0.09	<0.04	<0.04		<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	<0.04	<0.04	0.81	<0.04	<0.04	<0.04	0.59	<0.04	<0.04		<0.04	mg/kg	TM4/PM8
Coronene	<0.04	<0.04	0.13	<0.04	<0.04	<0.04	0.11	<0.04	<0.04		<0.04	mg/kg	TM4/PM8
PAH 6 Total #	<0.22	<0.22	7.84	<0.22	<0.22	<0.22	5.02	<0.22	<0.22		<0.22	mg/kg	TM4/PM8
PAH 17 Total	<0.64	<0.64	15.29	<0.64	<0.64	<0.64	9.60	<0.64	<0.64		<0.64	mg/kg	TM4/PM8
Benzo(b)fluoranthene	<0.05	<0.05	1.70	<0.05	<0.05	<0.05	1.24	<0.05	<0.05		<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	<0.02	<0.02	0.66	<0.02	<0.02	<0.02	0.48	<0.02	<0.02		<0.02	mg/kg	TM4/PM8
Benzo(j)fluoranthene	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	mg/kg	TM4/PM8
PAH Surrogate % Recovery	93	96	91	81	80	91	99	93	83		<0	%	TM4/PM8
Mineral Oil (C10-C40) (EH_CU_1D_AL)	<30	<30	42	<30	<30	<30	204	<30	<30		<30	mg/kg	TM5/PM8/PM16

Please see attached notes for all abbreviations and acronyms

All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton
EMT Job No: 21/15238

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	61-63	64-66	67-69	70-72	73-75	76-78	79-81	82-84	85-87		LOD/LOR	Units	Method No.
Sample ID	WS07	WS07	WS08	WS08	WS08	WS08	WS09A	WS10	WS10				
Depth	0.70-1.80	1.80-2.00	0.00-1.00	1.00-2.00	2.00-3.30	3.30-4.00	0.00-0.85	0.00-2.30	2.30-3.00				
COC No / misc										Please see attached notes for all abbreviations and acronyms			
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T				
Sample Date	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021				
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil				
Batch Number	1	1	1	1	1	1	1	1	1				
Date of Receipt	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021				
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL)#	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1		<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL)#	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1		<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1		<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL)#	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2		<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL)#	<4	<4	<4	<4	<4	<4	6	<4	<4		<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL)#	<7	<7	<7	<7	<7	<7	30	<7	<7		<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL)#	<7	<7	42	<7	<7	<7	157	<7	<7		<7	mg/kg	TM5/PM8/PM16
>C35-C40 (EH_1D_AL)	<7	<7	<7	<7	<7	<7	11	<7	<7		<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-40 (EH+HS_1D_AL)	<26	<26	42	<26	<26	<26	204	<26	<26		<26	mg/kg	TM5/TM36/PM8/PM12/PM16
>C6-C10 (HS_1D_AL)	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1		<0.1	mg/kg	TM36/PM12
>C10-C25 (EH_1D_AL)	<10	<10	14	<10	<10	<10	65	<10	<10		<10	mg/kg	TM5/PM8/PM16
>C25-C35 (EH_1D_AL)	<10	<10	29	<10	<10	<10	114	<10	<10		<10	mg/kg	TM5/PM8/PM16
Aromatics													
>C5-EC7 (HS_1D_AR)#	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1		<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR)#	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1		<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR)#	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1		<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR)#	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2		<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR)#	<4	<4	<4	<4	<4	<4	<4	<4	<4		<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR)#	<7	<7	47	<7	<7	<7	97	<7	<7		<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR)#	<7	<7	193	<7	<7	<7	331	<7	<7		<7	mg/kg	TM5/PM8/PM16
>EC35-EC40 (EH_1D_AR)	<7	<7	12	<7	<7	<7	28	<7	<7		<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-40 (EH+HS_1D_AR)	<26	<26	252	<26	<26	<26	456	<26	<26		<26	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-40) (EH+HS_CU_1D_Total)	<52	<52	294	<52	<52	<52	660	<52	<52		<52	mg/kg	TM5/TM36/PM8/PM12/PM16
>EC6-EC10 (HS_1D_AR)#	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1		<0.1	mg/kg	TM36/PM12
>EC10-EC25 (EH_1D_AR)	<10	<10	23	<10	<10	<10	89	<10	<10		<10	mg/kg	TM5/PM8/PM16
>EC25-EC35 (EH_1D_AR)	<10	<10	132	<10	<10	<10	354	<10	<10		<10	mg/kg	TM5/PM8/PM16
MTBE#	<5	<5	<5 SV	<5	<5	<5 SV	<5	<5	<5		<5	ug/kg	TM36/PM12
Benzene#	<5	<5	<5 SV	<5	<5	<5 SV	<5	<5	<5		<5	ug/kg	TM36/PM12
Toluene#	<5	<5	<5 SV	<5	<5	<5 SV	<5	<5	<5		<5	ug/kg	TM36/PM12
Ethylbenzene#	<5	<5	<5 SV	<5	<5	<5 SV	<5	<5	<5		<5	ug/kg	TM36/PM12
m/p-Xylene#	<5	<5	<5 SV	<5	<5	<5 SV	<5	<5	<5		<5	ug/kg	TM36/PM12
o-Xylene#	<5	<5	<5 SV	<5	<5	<5 SV	<5	<5	<5		<5	ug/kg	TM36/PM12
PCB 28#	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	ug/kg	TM17/PM8
PCB 52#	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	ug/kg	TM17/PM8
PCB 101#	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	ug/kg	TM17/PM8
PCB 118#	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	ug/kg	TM17/PM8
PCB 138#	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	ug/kg	TM17/PM8
PCB 153#	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	ug/kg	TM17/PM8
PCB 180#	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	ug/kg	TM17/PM8
Total 7 PCBs#	<35	<35	<35	<35	<35	<35	<35	<35	<35		<35	ug/kg	TM17/PM8

Element Materials Technology

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton
EMT Job No: 21/15238

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	61-63	64-66	67-69	70-72	73-75	76-78	79-81	82-84	85-87		LOD/LOR	Units	Method No.
Sample ID	WS07	WS07	WS08	WS08	WS08	WS08	WS09A	WS10	WS10				
Depth	0.70-1.80	1.80-2.00	0.00-1.00	1.00-2.00	2.00-3.30	3.30-4.00	0.00-0.85	0.00-2.30	2.30-3.00				
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T				
Sample Date	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021				
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil				
Batch Number	1	1	1	1	1	1	1	1	1				
Date of Receipt	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021				
Natural Moisture Content	26.1	9.5	30.2	25.2	12.2	8.2	13.7	32.3	11.6		<0.1	%	PM4/PM0
Moisture Content (% Wet Weight)	20.7	8.7	23.2	20.1	10.9	7.6	12.0	24.4	10.4		<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3		<0.3	mg/kg	TM38/PM20
Chromium III	53.5	40.3	49.5	76.9	37.8	35.8	47.4	65.4	40.1		<0.5	mg/kg	NONE/NONE
Total Organic Carbon #	1.26	0.38	2.64	0.30	0.42	0.61	1.21	0.91	0.30		<0.02	%	TM21/PM24
pH #	8.60	8.92	7.91	8.48	8.81	8.23	11.28	8.10	8.71		<0.01	pH units	TM73/PM11
Mass of raw test portion	0.1146	0.0947	0.102	0.1085	0.0975	0.0966	0.1008	0.1194	0.101			kg	NONE/PM17
Mass of dried test portion	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09			kg	NONE/PM17

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton
EMT Job No: 21/15238

Report : CEN 10:1 1 Batch

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27	28-30	LOD/LOR	Units	Method No.
Sample ID	WS01	WS01	WS01	WS02	WS02	WS02	WS03	WS03	WS03	WS04			
Depth	0.00-1.00	1.00-2.00	2.00-3.00	0.00-0.70	0.70-2.60	2.60-3.00	0.00-1.00	1.00-1.60	1.60-3.00	0.00-0.80			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021			
Dissolved Antimony #	<0.002	<0.002	<0.002	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.004	<0.002	mg/l	TM30/PM17
Dissolved Antimony (A10) #	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.04	<0.02	mg/kg	TM30/PM17
Dissolved Arsenic #	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.0032	<0.0025	<0.0025	0.0037	<0.0025	mg/l	TM30/PM17
Dissolved Arsenic (A10) #	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.032	<0.025	<0.025	0.037	<0.025	mg/kg	TM30/PM17
Dissolved Barium #	<0.003	<0.003	0.021	<0.003	<0.003	0.011	0.008	<0.003	0.016	0.018	<0.003	mg/l	TM30/PM17
Dissolved Barium (A10) #	<0.03	<0.03	0.21	<0.03	<0.03	0.11	0.08	<0.03	0.16	0.18	<0.03	mg/kg	TM30/PM17
Dissolved Cadmium #	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	mg/l	TM30/PM17
Dissolved Cadmium (A10) #	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	mg/kg	TM30/PM17
Dissolved Chromium #	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	mg/l	TM30/PM17
Dissolved Chromium (A10) #	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	mg/kg	TM30/PM17
Dissolved Copper #	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	mg/l	TM30/PM17
Dissolved Copper (A10) #	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	mg/kg	TM30/PM17
Dissolved Lead #	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	mg/l	TM30/PM17
Dissolved Lead (A10) #	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	TM30/PM17
Dissolved Molybdenum #	0.010	0.010	0.010	0.007	0.014	0.013	0.004	0.009	0.014	0.004	<0.002	mg/l	TM30/PM17
Dissolved Molybdenum (A10) #	0.10	0.10	0.10	0.07	0.14	0.13	0.04	0.09	0.14	0.04	<0.02	mg/kg	TM30/PM17
Dissolved Nickel #	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	mg/l	TM30/PM17
Dissolved Nickel (A10) #	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	mg/kg	TM30/PM17
Dissolved Selenium #	0.005	0.006	0.040	0.005	<0.003	0.030	0.005	<0.003	0.035	<0.003	<0.003	mg/l	TM30/PM17
Dissolved Selenium (A10) #	0.05	0.06	0.40	0.05	<0.03	0.30	0.05	<0.03	0.35	<0.03	<0.03	mg/kg	TM30/PM17
Dissolved Zinc #	<0.003	<0.003	<0.003	<0.003	<0.003	0.042	<0.003	<0.003	<0.003	<0.003	<0.003	mg/l	TM30/PM17
Dissolved Zinc (A10) #	<0.03	<0.03	<0.03	<0.03	<0.03	0.42	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	TM30/PM17
Mercury Dissolved by CVAF #	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	mg/l	TM61/PM0
Mercury Dissolved by CVAF #	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	mg/kg	TM61/PM0
Phenol	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/l	TM26/PM0
Phenol	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM26/PM0
Fluoride	0.4	0.4	<0.3	<0.3	0.3	<0.3	0.5	0.3	<0.3	<0.3	<0.3	mg/l	TM173/PM0
Fluoride	4	4	<3	<3	<3	<3	5	3	<3	<3	<3	mg/kg	TM173/PM0
Sulphate as SO4 #	5.6	3.8	4.0	5.2	1.9	5.2	9.8	2.5	7.1	25.7	<0.5	mg/l	TM38/PM0
Sulphate as SO4 #	56	38	40	52	19	52	98	25	71	257	<5	mg/kg	TM38/PM0
Chloride #	0.8	0.3	0.3	0.6	<0.3	0.3	1.2	0.4	0.4	18.3	<0.3	mg/l	TM38/PM0
Chloride #	8	3	3	6	<3	3	12	4	4	183	<3	mg/kg	TM38/PM0
Dissolved Organic Carbon	3	<2	<2	<2	<2	<2	3	<2	<2	4	<2	mg/l	TM60/PM0
Dissolved Organic Carbon	30	<20	<20	<20	<20	<20	30	<20	<20	40	<20	mg/kg	TM60/PM0
pH	8.47	8.26	8.19	8.19	7.96	7.81	8.20	7.99	7.90	8.28	<0.01	pH units	TM73/PM0
Total Dissolved Solids #	81	58	53	84	52	43	120	58	52	254	<35	mg/l	TM20/PM0
Total Dissolved Solids #	810	580	530	840	520	430	1200	580	520	2540	<350	mg/kg	TM20/PM0

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton
EMT Job No: 21/15238

Report : CEN 10:1 1 Batch

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	31-33	34-36	37-39	40-42	43-45	46-48	49-51	52-54	55-57	58-60	LOD/LOR	Units	Method No.
Sample ID	WS04	WS04	WS05	WS05	WS05	WS05	WS06	WS06	WS06	WS07			
Depth	0.80-2.80	2.80-3.00	0.00-1.00	1.00-1.30	1.30-2.70	2.70-3.00	0.00-1.00	1.00-2.30	2.30-3.00	0.00-0.70			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021			
Dissolved Antimony #	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	mg/l	TM30/PM17
Dissolved Antimony (A10) #	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	mg/kg	TM30/PM17
Dissolved Arsenic #	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.0070	<0.0025	mg/l	TM30/PM17
Dissolved Arsenic (A10) #	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.070	<0.025	mg/kg	TM30/PM17
Dissolved Barium #	<0.003	<0.003	0.004	<0.003	0.021	0.025	0.007	<0.003	0.008	0.004	<0.003	mg/l	TM30/PM17
Dissolved Barium (A10) #	<0.03	<0.03	0.04	<0.03	0.21	0.25	0.07	<0.03	0.08	0.04	<0.03	mg/kg	TM30/PM17
Dissolved Cadmium #	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	mg/l	TM30/PM17
Dissolved Cadmium (A10) #	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	mg/kg	TM30/PM17
Dissolved Chromium #	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	mg/l	TM30/PM17
Dissolved Chromium (A10) #	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	mg/kg	TM30/PM17
Dissolved Copper #	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	mg/l	TM30/PM17
Dissolved Copper (A10) #	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	mg/kg	TM30/PM17
Dissolved Lead #	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	mg/l	TM30/PM17
Dissolved Lead (A10) #	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	TM30/PM17
Dissolved Molybdenum #	0.010	0.008	0.011	0.007	0.010	0.011	0.023	0.015	0.027	0.008	<0.002	mg/l	TM30/PM17
Dissolved Molybdenum (A10) #	0.10	0.08	0.11	0.07	0.10	0.11	0.23	0.15	0.27	0.08	<0.02	mg/kg	TM30/PM17
Dissolved Nickel #	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	mg/l	TM30/PM17
Dissolved Nickel (A10) #	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	mg/kg	TM30/PM17
Dissolved Selenium #	0.004	0.006	<0.003	<0.003	0.006	0.016	0.003	0.004	<0.003	<0.003	<0.003	mg/l	TM30/PM17
Dissolved Selenium (A10) #	0.04	0.06	<0.03	<0.03	0.06	0.16	<0.03	0.04	<0.03	<0.03	<0.03	mg/kg	TM30/PM17
Dissolved Zinc #	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	mg/l	TM30/PM17
Dissolved Zinc (A10) #	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	TM30/PM17
Mercury Dissolved by CVAF #	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	mg/l	TM61/PM0
Mercury Dissolved by CVAF #	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	mg/kg	TM61/PM0
Phenol	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/l	TM26/PM0
Phenol	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM26/PM0
Fluoride	0.4	<0.3	0.3	0.4	0.3	0.3	0.4	<0.3	0.4	0.4	<0.3	mg/l	TM173/PM0
Fluoride	4	<3	<3	4	<3	3	4	<3	4	4	<3	mg/kg	TM173/PM0
Sulphate as SO4 #	2.9	4.1	3.9	3.7	6.4	6.8	9.5	1.8	3.0	1.1	<0.5	mg/l	TM38/PM0
Sulphate as SO4 #	29	41	39	37	64	68	95	18	30	11	<5	mg/kg	TM38/PM0
Chloride #	<0.3	<0.3	0.4	0.4	0.5	0.4	0.3	0.3	0.3	0.4	<0.3	mg/l	TM38/PM0
Chloride #	<3	<3	4	4	5	4	<3	3	3	4	<3	mg/kg	TM38/PM0
Dissolved Organic Carbon	<2	<2	2	<2	<2	<2	<2	<2	<2	3	<2	mg/l	TM60/PM0
Dissolved Organic Carbon	<20	<20	<20	<20	<20	<20	<20	<20	<20	30	<20	mg/kg	TM60/PM0
pH	8.04	7.93	8.12	8.03	7.20	7.62	7.95	7.99	7.97	8.11	<0.01	pH units	TM73/PM0
Total Dissolved Solids #	44	46	79	52	42	47	74	<35	<35	92	<35	mg/l	TM20/PM0
Total Dissolved Solids #	440	460	790	520	420	470	740	<350	<350	920	<350	mg/kg	TM20/PM0

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton
EMT Job No: 21/15238

Report : CEN 10:1 1 Batch

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	61-63	64-66	67-69	70-72	73-75	76-78	79-81	82-84	85-87		LOD/LOR	Units	Method No.
Sample ID	WS07	WS07	WS08	WS08	WS08	WS08	WS09A	WS10	WS10				
Depth	0.70-1.80	1.80-2.00	0.00-1.00	1.00-2.00	2.00-3.30	3.30-4.00	0.00-0.85	0.00-2.30	2.30-3.00				
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T				
Sample Date	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021				
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil				
Batch Number	1	1	1	1	1	1	1	1	1				
Date of Receipt	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021				
Dissolved Antimony #	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.003	0.002	<0.002		<0.002	mg/l	TM30/PM17
Dissolved Antimony (A10) #	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.03	<0.02	<0.02		<0.02	mg/kg	TM30/PM17
Dissolved Arsenic #	0.0030	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.0035	<0.0025		<0.0025	mg/l	TM30/PM17
Dissolved Arsenic (A10) #	0.030	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.035	<0.025		<0.025	mg/kg	TM30/PM17
Dissolved Barium #	0.003	<0.003	0.034	<0.003	<0.003	0.020	0.013	0.017	0.036		<0.003	mg/l	TM30/PM17
Dissolved Barium (A10) #	0.03	<0.03	0.34	<0.03	<0.03	0.20	0.13	0.17	0.36		<0.03	mg/kg	TM30/PM17
Dissolved Cadmium #	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005	mg/l	TM30/PM17
Dissolved Cadmium (A10) #	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	mg/kg	TM30/PM17
Dissolved Chromium #	<0.0015	<0.0015	0.0019	<0.0015	<0.0015	<0.0015	0.0124	<0.0015	<0.0015		<0.0015	mg/l	TM30/PM17
Dissolved Chromium (A10) #	<0.015	<0.015	0.019	<0.015	<0.015	<0.015	0.124	<0.015	<0.015		<0.015	mg/kg	TM30/PM17
Dissolved Copper #	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007		<0.007	mg/l	TM30/PM17
Dissolved Copper (A10) #	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07		<0.07	mg/kg	TM30/PM17
Dissolved Lead #	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	mg/l	TM30/PM17
Dissolved Lead (A10) #	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	mg/kg	TM30/PM17
Dissolved Molybdenum #	0.022	0.014	0.020	<0.002	0.014	0.020	0.002	0.006	0.022		<0.002	mg/l	TM30/PM17
Dissolved Molybdenum (A10) #	0.22	0.14	0.20	<0.02	0.14	0.20	0.02	0.06	0.22		<0.02	mg/kg	TM30/PM17
Dissolved Nickel #	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	mg/l	TM30/PM17
Dissolved Nickel (A10) #	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02		<0.02	mg/kg	TM30/PM17
Dissolved Selenium #	<0.003	0.004	0.014	<0.003	<0.003	0.018	<0.003	<0.003	<0.003		<0.003	mg/l	TM30/PM17
Dissolved Selenium (A10) #	<0.03	0.04	0.14	<0.03	<0.03	0.18	<0.03	<0.03	<0.03		<0.03	mg/kg	TM30/PM17
Dissolved Zinc #	<0.003	<0.003	0.007	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003		<0.003	mg/l	TM30/PM17
Dissolved Zinc (A10) #	<0.03	<0.03	0.07	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03		<0.03	mg/kg	TM30/PM17
Mercury Dissolved by CVAF #	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	mg/l	TM61/PM0
Mercury Dissolved by CVAF #	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	mg/kg	TM61/PM0
Phenol	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	mg/l	TM26/PM0
Phenol	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1	mg/kg	TM26/PM0
Fluoride	<0.3	0.7	<0.3	0.4	<0.3	<0.3	<0.3	0.3	0.4		<0.3	mg/l	TM173/PM0
Fluoride	<3	7	<3	4	<3	<3	<3	<3	4		<3	mg/kg	TM173/PM0
Sulphate as SO4 #	4.2	1.6	419.5	35.6	4.4	20.1	47.7	23.7	2.9		<0.5	mg/l	TM38/PM0
Sulphate as SO4 #	42	16	4194	356	44	201	477	237	29		<5	mg/kg	TM38/PM0
Chloride #	0.7	0.5	0.5	<0.3	0.3	0.5	1.2	1.6	0.4		<0.3	mg/l	TM38/PM0
Chloride #	7	5	5	<3	<3	5	12	16	4		<3	mg/kg	TM38/PM0
Dissolved Organic Carbon	3	<2	<2	<2	<2	<2	2	<2	<2		<2	mg/l	TM60/PM0
Dissolved Organic Carbon	30	<20	<20	<20	<20	<20	20	<20	<20		<20	mg/kg	TM60/PM0
pH	8.25	8.00	7.72	8.52	8.15	7.90	10.57	8.36	8.34		<0.01	pH units	TM73/PM0
Total Dissolved Solids #	82	47	740	107	50	94	199	137	52		<35	mg/l	TM20/PM0
Total Dissolved Solids #	820	470	7398	1070	500	940	1990	1370	520		<350	mg/kg	TM20/PM0

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton
EMT Job No: 21/15238

Report : EN12457_2

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27	28-30						
Sample ID	WS01	WS01	WS01	WS02	WS02	WS02	WS03	WS03	WS03	WS04						
Depth	0.00-1.00	1.00-2.00	2.00-3.00	0.00-0.70	0.70-2.60	2.60-3.00	0.00-1.00	1.00-1.60	1.60-3.00	0.00-0.80						
COC No / misc																
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T						
Sample Date	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021						
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil						
Batch Number	1	1	1	1	1	1	1	1	1	1						
Date of Receipt	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	Inert	Stable Non-reactive	Hazardous	LOD LOR	Units	Method No.
Solid Waste Analysis																
Total Organic Carbon #	1.27	0.34	0.48	5.94	0.44	0.66	7.68	0.35	0.61	4.68	3	5	6	<0.02	%	TM21/PM24
Sum of BTEX	<0.025	<0.025	<0.025 SV	<0.025 SV	<0.025	<0.025 SV	<0.025 SV	<0.025	<0.025	<0.025 SV	6	-	-	<0.025	mg/kg	TM36/PM12
Sum of 7 PCBs #	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	1	-	-	<0.035	mg/kg	TM17/PM8
Mineral Oil	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	500	-	-	<30	mg/kg	TM5/PM8/PM16
PAH Sum of 6 #	<0.22	<0.22	<0.22	0.45	<0.22	<0.22	1.77	<0.22	<0.22	1.33	-	-	-	<0.22	mg/kg	TM4/PM8
PAH Sum of 17	<0.64	<0.64	<0.64	0.88	<0.64	<0.64	3.35	<0.64	<0.64	2.46	100	-	-	<0.64	mg/kg	TM4/PM8
CEN 10:1 Leachate																
Arsenic #	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.032	<0.025	<0.025	0.037	0.5	2	25	<0.025	mg/kg	TM30/PM17
Barium #	<0.03	<0.03	0.21	<0.03	<0.03	0.11	0.08	<0.03	0.16	0.18	20	100	300	<0.03	mg/kg	TM30/PM17
Cadmium #	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.04	1	5	<0.005	mg/kg	TM30/PM17
Chromium #	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	0.5	10	70	<0.015	mg/kg	TM30/PM17
Copper #	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	2	50	100	<0.07	mg/kg	TM30/PM17
Mercury #	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.01	0.2	2	<0.0001	mg/kg	TM61/PM0
Molybdenum #	0.10	0.10	0.10	0.07	0.14	0.13	0.04	0.09	0.14	0.04	0.5	10	30	<0.02	mg/kg	TM30/PM17
Nickel #	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.4	10	40	<0.02	mg/kg	TM30/PM17
Lead #	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.5	10	50	<0.05	mg/kg	TM30/PM17
Antimony #	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.04	0.06	0.7	5	<0.02	mg/kg	TM30/PM17
Selenium #	0.05	0.06	0.40	0.05	<0.03	0.30	0.05	<0.03	0.35	<0.03	0.1	0.5	7	<0.03	mg/kg	TM30/PM17
Zinc #	<0.03	<0.03	<0.03	<0.03	<0.03	0.42	<0.03	<0.03	<0.03	<0.03	4	50	200	<0.03	mg/kg	TM30/PM17
Total Dissolved Solids #	810	580	530	840	520	430	1200	580	520	2540	4000	60000	100000	<350	mg/kg	TM20/PM0
Dissolved Organic Carbon	30	<20	<20	<20	<20	<20	30	<20	<20	40	500	800	1000	<20	mg/kg	TM60/PM0
Dry Matter Content Ratio	75.6	87.9	90.8	81.4	87.6	92.6	72.7	86.4	92.3	70.3	-	-	-	<0.1	%	NONE/PM4
pH #	8.33	8.83	8.88	8.33	8.94	8.86	8.28	8.80	8.90	8.42	-	-	-	<0.01	pH units	TM73/PM11
Phenol	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1	-	-	<0.1	mg/kg	TM26/PM0
Fluoride	4	4	<3	<3	<3	<3	5	3	<3	<3	-	-	-	<3	mg/kg	TM173/PM0
Sulphate as SO4 #	56	38	40	52	19	52	98	25	71	257	1000	20000	50000	<5	mg/kg	TM38/PM0
Chloride #	8	3	3	6	<3	3	12	4	4	183	800	15000	25000	<3	mg/kg	TM38/PM0

All solid results are expressed on a dry weight basis unless stated otherwise.

Element Materials Technology

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton
EMT Job No: 21/15238

Report : EN12457_2

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	31-33	34-36	37-39	40-42	43-45	46-48	49-51	52-54	55-57	58-60						
Sample ID	WS04	WS04	WS05	WS05	WS05	WS05	WS06	WS06	WS06	WS07						
Depth	0.80-2.80	2.80-3.00	0.00-1.00	1.00-1.30	1.30-2.70	2.70-3.00	0.00-1.00	1.00-2.30	2.30-3.00	0.00-0.70						
COC No / misc																
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T						
Sample Date	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021						
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil						
Batch Number	1	1	1	1	1	1	1	1	1	1						
Date of Receipt	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	Inert	Stable Non-reactive	Hazardous	LOD LOR	Units	Method No.
Solid Waste Analysis																
Total Organic Carbon #	0.50	0.65	8.38	0.39	0.46	0.68	0.86	0.28	0.65	2.82	3	5	6	<0.02	%	TM21/PM24
Sum of BTEX	<0.025	<0.025 SV	<0.025 SV	<0.025	<0.025	<0.025 SV	<0.025	<0.025	<0.025 SV	<0.025	6	-	-	<0.025	mg/kg	TM36/PM12
Sum of 7 PCBs #	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	1	-	-	<0.035	mg/kg	TM17/PM8
Mineral Oil	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	500	-	-	<30	mg/kg	TM5/PM8/PM16
PAH Sum of 6 #	<0.22	<0.22	11.86	<0.22	<0.22	<0.22	3.25	<0.22	<0.22	0.80	-	-	-	<0.22	mg/kg	TM4/PM8
PAH Sum of 17	<0.64	<0.64	22.52	<0.64	<0.64	<0.64	6.18	<0.64	<0.64	1.61	100	-	-	<0.64	mg/kg	TM4/PM8
CEN 10:1 Leachate																
Arsenic #	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.070	0.5	2	25	<0.025	mg/kg	TM30/PM17
Barium #	<0.03	<0.03	0.04	<0.03	0.21	0.25	0.07	<0.03	0.08	0.04	20	100	300	<0.03	mg/kg	TM30/PM17
Cadmium #	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.04	1	5	<0.005	mg/kg	TM30/PM17
Chromium #	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	0.5	10	70	<0.015	mg/kg	TM30/PM17
Copper #	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	2	50	100	<0.07	mg/kg	TM30/PM17
Mercury #	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.01	0.2	2	<0.0001	mg/kg	TM61/PM0
Molybdenum #	0.10	0.08	0.11	0.07	0.10	0.11	0.23	0.15	0.27	0.08	0.5	10	30	<0.02	mg/kg	TM30/PM17
Nickel #	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.4	10	40	<0.02	mg/kg	TM30/PM17
Lead #	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.5	10	50	<0.05	mg/kg	TM30/PM17
Antimony #	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.06	0.7	5	<0.02	mg/kg	TM30/PM17
Selenium #	0.04	0.06	<0.03	<0.03	0.06	0.16	<0.03	0.04	<0.03	<0.03	0.1	0.5	7	<0.03	mg/kg	TM30/PM17
Zinc #	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	4	50	200	<0.03	mg/kg	TM30/PM17
Total Dissolved Solids #	440	460	790	520	420	470	740	<350	<350	920	4000	60000	100000	<350	mg/kg	TM20/PM0
Dissolved Organic Carbon	<20	<20	<20	<20	<20	<20	<20	<20	<20	30	500	800	1000	<20	mg/kg	TM60/PM0
Dry Matter Content Ratio	88.0	92.1	84.9	84.2	93.8	94.4	91.1	95.5	91.6	83.2	-	-	-	<0.1	%	NONE/PM4
pH #	8.53	8.72	8.21	8.74	8.77	8.66	8.49	8.87	8.84	8.45	-	-	-	<0.01	pH units	TM73/PM11
Phenol	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1	-	-	<0.1	mg/kg	TM26/PM0
Fluoride	4	<3	<3	4	<3	3	4	<3	4	4	-	-	-	<3	mg/kg	TM173/PM0
Sulphate as SO4 #	29	41	39	37	64	68	95	18	30	11	1000	20000	50000	<5	mg/kg	TM38/PM0
Chloride #	<3	<3	4	4	5	4	<3	3	3	4	800	15000	25000	<3	mg/kg	TM38/PM0

All solid results are expressed on a dry weight basis unless stated otherwise.

Element Materials Technology

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton
EMT Job No: 21/15238

Report : EN12457_2

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	61-63	64-66	67-69	70-72	73-75	76-78	79-81	82-84	85-87		Inert	Stable Non-reactive	Hazardous	LOD LOR	Units	Method No.
Sample ID	WS07	WS07	WS08	WS08	WS08	WS08	WS09A	WS10	WS10							
Depth	0.70-1.80	1.80-2.00	0.00-1.00	1.00-2.00	2.00-3.30	3.30-4.00	0.00-0.85	0.00-2.30	2.30-3.00							
COC No / misc																
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T							
Sample Date	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021							
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil							
Batch Number	1	1	1	1	1	1	1	1	1							
Date of Receipt	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021							
Solid Waste Analysis																
Total Organic Carbon #	1.26	0.38	2.64	0.30	0.42	0.61	1.21	0.91	0.30		3	5	6	<0.02	%	TM21/PM24
Sum of BTEX	<0.025	<0.025	<0.025 SV	<0.025	<0.025	<0.025 SV	<0.025	<0.025	<0.025		6	-	-	<0.025	mg/kg	TM36/PM12
Sum of 7 PCBs #	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035		1	-	-	<0.035	mg/kg	TM17/PM8
Mineral Oil	<30	<30	42	<30	<30	<30	204	<30	<30		500	-	-	<30	mg/kg	TM5/PM8/PM16
PAH Sum of 6 #	<0.22	<0.22	7.84	<0.22	<0.22	<0.22	5.02	<0.22	<0.22		-	-	-	<0.22	mg/kg	TM4/PM8
PAH Sum of 17	<0.64	<0.64	15.29	<0.64	<0.64	<0.64	9.60	<0.64	<0.64		100	-	-	<0.64	mg/kg	TM4/PM8
CEN 10:1 Leachate																
Arsenic #	0.030	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.035	<0.025		0.5	2	25	<0.025	mg/kg	TM30/PM17
Barium #	0.03	<0.03	0.34	<0.03	<0.03	0.20	0.13	0.17	0.36		20	100	300	<0.03	mg/kg	TM30/PM17
Cadmium #	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		0.04	1	5	<0.005	mg/kg	TM30/PM17
Chromium #	<0.015	<0.015	0.019	<0.015	<0.015	<0.015	0.124	<0.015	<0.015		0.5	10	70	<0.015	mg/kg	TM30/PM17
Copper #	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07		2	50	100	<0.07	mg/kg	TM30/PM17
Mercury #	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		0.01	0.2	2	<0.0001	mg/kg	TM61/PM0
Molybdenum #	0.22	0.14	0.20	<0.02	0.14	0.20	0.02	0.06	0.22		0.5	10	30	<0.02	mg/kg	TM30/PM17
Nickel #	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02		0.4	10	40	<0.02	mg/kg	TM30/PM17
Lead #	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		0.5	10	50	<0.05	mg/kg	TM30/PM17
Antimony #	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.03	<0.02	<0.02		0.06	0.7	5	<0.02	mg/kg	TM30/PM17
Selenium #	<0.03	0.04	0.14	<0.03	<0.03	0.18	<0.03	<0.03	<0.03		0.1	0.5	7	<0.03	mg/kg	TM30/PM17
Zinc #	<0.03	<0.03	0.07	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03		4	50	200	<0.03	mg/kg	TM30/PM17
Total Dissolved Solids #	820	470	7398	1070	500	940	1990	1370	520		4000	60000	100000	<350	mg/kg	TM20/PM0
Dissolved Organic Carbon	30	<20	<20	<20	<20	<20	20	<20	<20		500	800	1000	<20	mg/kg	TM60/PM0
Dry Matter Content Ratio	78.9	95.1	88.4	83.1	92.3	93.5	89.0	75.1	89.4		-	-	-	<0.1	%	NONE/PM4
pH #	8.60	8.92	7.91	8.48	8.81	8.23	11.28	8.10	8.71		-	-	-	<0.01	pH units	TM73/PM11
Phenol	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		1	-	-	<0.1	mg/kg	TM26/PM0
Fluoride	<3	7	<3	4	<3	<3	<3	<3	4		-	-	-	<3	mg/kg	TM173/PM0
Sulphate as SO4 #	42	16	4194	356	44	201	477	237	29		1000	20000	50000	<5	mg/kg	TM38/PM0
Chloride #	7	5	5	<3	<3	5	12	16	4		800	15000	25000	<3	mg/kg	TM38/PM0

Client Name: Ground Investigations Ireland

Reference: 10551-04-21

Location: St Teresas Gardens

Contact: Barry Sexton

Matrix : Solid

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	EPH Interpretation
21/15238	1	WS01	0.00-1.00	1-3	No interpretation possible
21/15238	1	WS01	1.00-2.00	4-6	No interpretation possible
21/15238	1	WS01	2.00-3.00	7-9	No interpretation possible
21/15238	1	WS02	0.00-0.70	10-12	No interpretation possible
21/15238	1	WS02	0.70-2.60	13-15	No interpretation possible
21/15238	1	WS02	2.60-3.00	16-18	No interpretation possible
21/15238	1	WS03	0.00-1.00	19-21	Possible trace PAHs
21/15238	1	WS03	1.00-1.60	22-24	No interpretation possible
21/15238	1	WS03	1.60-3.00	25-27	No interpretation possible
21/15238	1	WS04	0.00-0.80	28-30	No interpretation possible
21/15238	1	WS04	0.80-2.80	31-33	No interpretation possible
21/15238	1	WS04	2.80-3.00	34-36	No interpretation possible
21/15238	1	WS05	0.00-1.00	37-39	PAHs and naturally occurring compounds
21/15238	1	WS05	1.00-1.30	40-42	No interpretation possible
21/15238	1	WS05	1.30-2.70	43-45	No interpretation possible
21/15238	1	WS05	2.70-3.00	46-48	No interpretation possible
21/15238	1	WS06	0.00-1.00	49-51	No interpretation possible
21/15238	1	WS06	1.00-2.30	52-54	No interpretation possible
21/15238	1	WS06	2.30-3.00	55-57	No interpretation possible
21/15238	1	WS07	0.00-0.70	58-60	No interpretation possible
21/15238	1	WS07	0.70-1.80	61-63	No interpretation possible
21/15238	1	WS07	1.80-2.00	64-66	No interpretation possible
21/15238	1	WS08	0.00-1.00	67-69	PAHs, possible trace lubricating oil and naturally occurring compounds
21/15238	1	WS08	1.00-2.00	70-72	No interpretation possible
21/15238	1	WS08	2.00-3.30	73-75	No interpretation possible
21/15238	1	WS08	3.30-4.00	76-78	No interpretation possible
21/15238	1	WS09A	0.00-0.85	79-81	PAHs, possible trace degraded Diesel and Lubricating oil
21/15238	1	WS10	0.00-2.30	82-84	No interpretation possible
21/15238	1	WS10	2.30-3.00	85-87	No interpretation possible

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton

Note:

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level less than 0.1%, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
21/15238	1	WS01	0.00-1.00	2	30/09/2021	**General Description (Bulk Analysis)**	soil/stones
					30/09/2021	**Asbestos Fibres**	NAD
					30/09/2021	**Asbestos ACM**	NAD
					30/09/2021	**Asbestos Type**	NAD
					30/09/2021	**Asbestos Level Screen**	NAD
21/15238	1	WS01	1.00-2.00	5	30/09/2021	**General Description (Bulk Analysis)**	soil/stones
					30/09/2021	**Asbestos Fibres**	NAD
					30/09/2021	**Asbestos ACM**	NAD
					30/09/2021	**Asbestos Type**	NAD
					30/09/2021	**Asbestos Level Screen**	NAD
21/15238	1	WS01	2.00-3.00	8	30/09/2021	**General Description (Bulk Analysis)**	soil/stones
					30/09/2021	**Asbestos Fibres**	NAD
					30/09/2021	**Asbestos ACM**	NAD
					30/09/2021	**Asbestos Type**	NAD
					30/09/2021	**Asbestos Level Screen**	NAD
21/15238	1	WS02	0.00-0.70	11	30/09/2021	**General Description (Bulk Analysis)**	soil
					30/09/2021	**Asbestos Fibres**	NAD
					30/09/2021	**Asbestos ACM**	NAD
					30/09/2021	**Asbestos Type**	NAD
					30/09/2021	**Asbestos Level Screen**	NAD
21/15238	1	WS02	0.70-2.60	14	30/09/2021	**General Description (Bulk Analysis)**	soil
					30/09/2021	**Asbestos Fibres**	NAD
					30/09/2021	**Asbestos ACM**	NAD
					30/09/2021	**Asbestos Type**	NAD
					30/09/2021	**Asbestos Level Screen**	NAD
21/15238	1	WS02	2.60-3.00	17	30/09/2021	**General Description (Bulk Analysis)**	soil
					30/09/2021	**Asbestos Fibres**	NAD
					30/09/2021	**Asbestos ACM**	NAD
					30/09/2021	**Asbestos Type**	NAD
					30/09/2021	**Asbestos Level Screen**	NAD
21/15238	1	WS03	0.00-1.00	20	30/09/2021	**General Description (Bulk Analysis)**	Soil
					30/09/2021	**Asbestos Fibres**	NAD
					30/09/2021	**Asbestos ACM**	NAD

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
21/15238	1	WS03	0.00-1.00	20	30/09/2021	**Asbestos Type**	NAD
					30/09/2021	**Asbestos Level Screen**	NAD
21/15238	1	WS03	1.00-1.60	23	30/09/2021	**General Description (Bulk Analysis)**	Soil
					30/09/2021	**Asbestos Fibres**	NAD
					30/09/2021	**Asbestos ACM**	NAD
					30/09/2021	**Asbestos Type**	NAD
					30/09/2021	**Asbestos Level Screen**	NAD
21/15238	1	WS03	1.60-3.00	26	30/09/2021	**General Description (Bulk Analysis)**	Soil
					30/09/2021	**Asbestos Fibres**	NAD
					30/09/2021	**Asbestos ACM**	NAD
					30/09/2021	**Asbestos Type**	NAD
					30/09/2021	**Asbestos Level Screen**	NAD
21/15238	1	WS04	0.00-0.80	29	30/09/2021	**General Description (Bulk Analysis)**	Soil
					30/09/2021	**Asbestos Fibres**	NAD
					30/09/2021	**Asbestos ACM**	NAD
					30/09/2021	**Asbestos Type**	NAD
					30/09/2021	**Asbestos Level Screen**	NAD
21/15238	1	WS04	0.80-2.80	32	30/09/2021	**General Description (Bulk Analysis)**	soil
					30/09/2021	**Asbestos Fibres**	NAD
					30/09/2021	**Asbestos ACM**	NAD
					30/09/2021	**Asbestos Type**	NAD
					30/09/2021	**Asbestos Level Screen**	NAD
21/15238	1	WS04	2.80-3.00	35	30/09/2021	**General Description (Bulk Analysis)**	soil
					30/09/2021	**Asbestos Fibres**	NAD
					30/09/2021	**Asbestos ACM**	NAD
					30/09/2021	**Asbestos Type**	NAD
					30/09/2021	**Asbestos Level Screen**	NAD
21/15238	1	WS05	0.00-1.00	38	30/09/2021	**General Description (Bulk Analysis)**	soil/stones
					30/09/2021	**Asbestos Fibres**	NAD
					30/09/2021	**Asbestos ACM**	NAD
					30/09/2021	**Asbestos Type**	NAD
					30/09/2021	**Asbestos Level Screen**	NAD
21/15238	1	WS05	1.00-1.30	41	30/09/2021	**General Description (Bulk Analysis)**	soil
					30/09/2021	**Asbestos Fibres**	NAD
					30/09/2021	**Asbestos ACM**	NAD
					30/09/2021	**Asbestos Type**	NAD
					30/09/2021	**Asbestos Level Screen**	NAD
21/15238	1	WS05	1.30-2.70	44	30/09/2021	**General Description (Bulk Analysis)**	soil/stones
					30/09/2021	**Asbestos Fibres**	NAD
					30/09/2021	**Asbestos ACM**	NAD
					30/09/2021	**Asbestos Type**	NAD
					30/09/2021	**Asbestos Level Screen**	NAD
21/15238	1	WS05	2.70-3.00	47	30/09/2021	**General Description (Bulk Analysis)**	Soil
					30/09/2021	**Asbestos Fibres**	NAD

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
21/15238	1	WS05	2.70-3.00	47	30/09/2021	**Asbestos ACM**	NAD
					30/09/2021	**Asbestos Type**	NAD
					30/09/2021	**Asbestos Level Screen**	NAD
21/15238	1	WS06	0.00-1.00	50	30/09/2021	**General Description (Bulk Analysis)**	Soil
					30/09/2021	**Asbestos Fibres**	NAD
					30/09/2021	**Asbestos ACM**	NAD
					30/09/2021	**Asbestos Type**	NAD
					30/09/2021	**Asbestos Level Screen**	NAD
21/15238	1	WS06	1.00-2.30	53	30/09/2021	**General Description (Bulk Analysis)**	soil/stones
					30/09/2021	**Asbestos Fibres**	NAD
					30/09/2021	**Asbestos ACM**	NAD
					30/09/2021	**Asbestos Type**	NAD
					30/09/2021	**Asbestos Level Screen**	NAD
21/15238	1	WS06	2.30-3.00	56	30/09/2021	**General Description (Bulk Analysis)**	soil/stones
					30/09/2021	**Asbestos Fibres**	NAD
					30/09/2021	**Asbestos ACM**	NAD
					30/09/2021	**Asbestos Type**	NAD
					30/09/2021	**Asbestos Level Screen**	NAD
21/15238	1	WS07	0.00-0.70	59	30/09/2021	**General Description (Bulk Analysis)**	soil/stones
					30/09/2021	**Asbestos Fibres**	NAD
					30/09/2021	**Asbestos ACM**	NAD
					30/09/2021	**Asbestos Type**	NAD
					30/09/2021	**Asbestos Level Screen**	NAD
21/15238	1	WS07	0.70-1.80	62	30/09/2021	**General Description (Bulk Analysis)**	Soil
					30/09/2021	**Asbestos Fibres**	NAD
					30/09/2021	**Asbestos ACM**	NAD
					30/09/2021	**Asbestos Type**	NAD
					30/09/2021	**Asbestos Level Screen**	NAD
21/15238	1	WS07	1.80-2.00	65	30/09/2021	**General Description (Bulk Analysis)**	Soil
					30/09/2021	**Asbestos Fibres**	NAD
					30/09/2021	**Asbestos ACM**	NAD
					30/09/2021	**Asbestos Type**	NAD
					30/09/2021	**Asbestos Level Screen**	NAD
21/15238	1	WS08	0.00-1.00	68	30/09/2021	**General Description (Bulk Analysis)**	Soil
					30/09/2021	**Asbestos Fibres**	NAD
					30/09/2021	**Asbestos ACM**	NAD
					30/09/2021	**Asbestos Type**	NAD
					30/09/2021	**Asbestos Level Screen**	NAD
21/15238	1	WS08	1.00-2.00	71	30/09/2021	**General Description (Bulk Analysis)**	soil
					30/09/2021	**Asbestos Fibres**	NAD
					30/09/2021	**Asbestos ACM**	NAD
					30/09/2021	**Asbestos Type**	NAD
					30/09/2021	**Asbestos Level Screen**	NAD

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
21/15238	1	WS08	2.00-3.30	74	30/09/2021	**General Description (Bulk Analysis)**	soil
					30/09/2021	**Asbestos Fibres**	NAD
					30/09/2021	**Asbestos ACM**	NAD
					30/09/2021	**Asbestos Type**	NAD
					30/09/2021	**Asbestos Level Screen**	NAD
21/15238	1	WS08	3.30-4.00	77	30/09/2021	**General Description (Bulk Analysis)**	soil
					30/09/2021	**Asbestos Fibres**	NAD
					30/09/2021	**Asbestos ACM**	NAD
					30/09/2021	**Asbestos Type**	NAD
					30/09/2021	**Asbestos Level Screen**	NAD
21/15238	1	WS09A	0.00-0.85	80	30/09/2021	**General Description (Bulk Analysis)**	soil/stones
					30/09/2021	**Asbestos Fibres**	NAD
					30/09/2021	**Asbestos Fibres (2)**	NAD
					30/09/2021	**Asbestos ACM**	NAD
					30/09/2021	**Asbestos ACM (2)**	NAD
					30/09/2021	**Asbestos Type**	NAD
					30/09/2021	**Asbestos Type (2)**	NAD
					30/09/2021	**Asbestos Level Screen**	NAD
21/15238	1	WS10	0.00-2.30	83	30/09/2021	**General Description (Bulk Analysis)**	soil/stones
					30/09/2021	**Asbestos Fibres**	NAD
					30/09/2021	**Asbestos Fibres (2)**	NAD
					30/09/2021	**Asbestos ACM**	NAD
					30/09/2021	**Asbestos ACM (2)**	NAD
					30/09/2021	**Asbestos Type**	NAD
					30/09/2021	**Asbestos Type (2)**	NAD
					30/09/2021	**Asbestos Level Screen**	NAD
21/15238	1	WS10	2.30-3.00	86	30/09/2021	**General Description (Bulk Analysis)**	Soil/Stones
					30/09/2021	**Asbestos Fibres**	NAD
					30/09/2021	**Asbestos ACM**	NAD
					30/09/2021	**Asbestos Type**	NAD
					30/09/2021	**Asbestos Level Screen**	NAD

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 21/15238						

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.
Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 21/15238

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overesitimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

HWOL ACRONYMS AND OPERATORS USED

HS	Headspace Analysis.
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent.
CU	Clean-up - e.g. by florisil, silica gel.
1D	GC - Single coil gas chromatography.
Total	Aliphatics & Aromatics.
AL	Aliphatics only.
AR	Aromatics only.
2D	GC-GC - Double coil gas chromatography.
#1	EH_Total but with humics mathematically subtracted
#2	EU_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +).
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry.

EMT Job No: 21/15238

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8/PM16	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required/Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8/PM16	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required/Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5/TM36	please refer to TM5 and TM36 for method details	PM8/PM12/PM16	please refer to PM8/PM16 and PM12 for method details			AR	Yes
TM17	Modified US EPA method 8270D v5:2014. Determination of specific Polychlorinated Biphenyl congeners by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM20	Modified BS 1377-3:1990/USEPA 160.1/3 (TDS/TS: 1971) Gravimetric determination of Total Dissolved Solids/Total Solids	PM0	No preparation is required.	Yes		AR	Yes
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes

EMT Job No: 21/15238

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM0	No preparation is required.			AR	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes		AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM17	Modified method BS EN12457-2:2002 As received solid samples are leached with water in a 10:1 water to soil ratio for 24 hours, the moisture content of the sample is included in the ratio.	Yes		AR	Yes
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013I	PM0	No preparation is required.	Yes		AR	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013I	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AR	Yes
TM60	TC/TOC analysis of Waters by High Temperature Combustion followed by NDIR detection. Based on the following modified standard methods: USEPA 9060A (2002), APHA SMEWW 5310B:1999 22nd Edition, ASTM D 7573, and USEPA 415.1.	PM0	No preparation is required.			AR	Yes
TM61	Determination of Mercury by Cold Vapour Atomic Fluorescence - WATERS: Modified USEPA Method 245.7, Rev 2, Feb 2005. SOILS: Modified USEPA Method 7471B, Rev.2, Feb 2007	PM0	No preparation is required.	Yes		AR	Yes

EMT Job No: 21/15238

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM65	Asbestos Bulk Identification method based on HSG 248 First edition (2006)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM73	Modified US EPA methods 150.1 (1982) and 9045D Rev. 4 - 2004) and BS1377-3:1990. Determination of pH by Metrohm automated probe analyser.	PM0	No preparation is required.			AR	Yes
TM73	Modified US EPA methods 150.1 (1982) and 9045D Rev. 4 - 2004) and BS1377-3:1990. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes		AR	No
TM173	Analysis of fluoride by ISE (Ion Selective Electrode) using modified ISE method 9214 - 340.2 (EPA 1998)	PM0	No preparation is required.			AR	Yes
NONE	No Method Code	NONE	No Method Code			AD	Yes
NONE	No Method Code	PM17	Modified method BS EN12457-2:2002 As received solid samples are leached with water in a 10:1 water to soil ratio for 24 hours, the moisture content of the sample is included in the ratio.			AR	
NONE	No Method Code	PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.			AR	

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Ground Investigations Ireland
Catherinestown House
Hazelhatch Road
Newcastle
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Ireland

Attention :	Barry Sexton
Date :	20th October, 2021
Your reference :	10551-04-21
Our reference :	Test Report 21/15238 Batch 2
Location :	St Teresas Gardens
Date samples received :	30th September, 2021
Status :	Final Report
Issue :	1

Thirty eight samples were received for analysis on 30th September, 2021 of which thirty eight were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Authorised By:

Bruce Leslie
Project Manager

Element Materials Technology Environmental UK Limited
Registered in England and Wales
Registered Office: 10 Lower Grosvenor Place, London, SW1W 0EN
Company Registration No: 11371415

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton
EMT Job No: 21/15238

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	88-90	91-93	94-96	97-99	100-102	103-105	106-108	109-111	112-114	115-117	LOD/LOR	Units	Method No.
Sample ID	BH01	BH01	BH02	BH02	BH03	BH03	BH04	BH04	BH05	BH05			
Depth	0.00-1.60	3.00-3.40	0.00-1.40	1.40-2.00	0.00-1.70	1.70-2.00	0.00-1.10	2.50-3.00	0.20-1.60	1.60-2.00			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	2	2	2	2	2	2	2	2	2	2			
Date of Receipt	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021			
Antimony	1	2	2	2	2	1	2	2	2	1	<1	mg/kg	TM30/PM15
Arsenic #	29.6	7.9	32.5	9.8	12.8	8.6	10.1	10.7	11.7	6.9	<0.5	mg/kg	TM30/PM15
Barium #	95	74	238	207	105	250	78	94	107	133	<1	mg/kg	TM30/PM15
Cadmium #	0.7	1.9	2.5	2.6	1.9	2.4	1.9	2.0	1.5	1.6	<0.1	mg/kg	TM30/PM15
Chromium #	32.7	39.5	64.2	64.2	39.3	33.1	48.6	80.5	34.2	21.1	<0.5	mg/kg	TM30/PM15
Copper #	29	28	67	46	51	27	33	35	59	20	<1	mg/kg	TM30/PM15
Lead #	54	27	84	36	55	25	21	26	46	15	<5	mg/kg	TM30/PM15
Mercury #	0.1	<0.1	0.4	0.4	0.3	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	mg/kg	TM30/PM15
Molybdenum #	1.4	3.0	2.7	2.5	4.2	3.4	4.7	6.7	3.3	2.4	<0.1	mg/kg	TM30/PM15
Nickel #	28.9	36.3	53.3	49.0	40.2	32.1	40.1	50.5	34.8	24.9	<0.7	mg/kg	TM30/PM15
Selenium #	<1	1	2	2	3	2	4	2	2	<1	<1	mg/kg	TM30/PM15
Sulphur as S	0.08	-	-	-	-	0.08	-	-	-	0.06	<0.01	%	TM30/PM15
Total Sulphate as SO4 BRE	0.09	-	-	-	-	0.09	-	-	-	0.06	<0.01	%	TM50/PM29
Zinc #	105	90	192	160	104	63	122	95	90	52	<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene #	0.06	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.14	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	TM4/PM8
Acenaphthene #	0.18	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	TM4/PM8
Fluorene #	0.11	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.05	<0.04	mg/kg	TM4/PM8
Phenanthrene #	2.01	<0.03	0.05	<0.03	0.21	0.23	0.05	<0.03	0.20	0.49	<0.03	mg/kg	TM4/PM8
Anthracene #	0.49	<0.04	<0.04	<0.04	0.05	0.08	<0.04	<0.04	0.06	0.15	<0.04	mg/kg	TM4/PM8
Fluoranthene #	3.01	<0.03	0.09	0.07	0.23	0.36	<0.03	0.06	0.27	0.73	<0.03	mg/kg	TM4/PM8
Pyrene #	2.90	<0.03	0.08	0.06	0.22	0.32	<0.03	0.06	0.26	0.61	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	1.53	<0.06	0.09	<0.06	0.14	0.21	<0.06	<0.06	0.17	0.39	<0.06	mg/kg	TM4/PM8
Chrysene #	1.69	<0.02	0.06	0.06	0.16	0.21	0.03	0.05	0.19	0.33	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #	3.59	<0.07	0.12	<0.07	0.22	0.32	<0.07	<0.07	0.26	0.47	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	2.02	<0.04	0.08	<0.04	0.10	0.16	<0.04	<0.04	0.14	0.24	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #	1.37	<0.04	<0.04	<0.04	0.05	0.09	<0.04	<0.04	0.07	0.14	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	0.28	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	1.44	<0.04	<0.04	<0.04	0.07	0.11	<0.04	<0.04	0.10	0.15	<0.04	mg/kg	TM4/PM8
Coronene	0.23	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
PAH 6 Total #	11.43	<0.22	0.29	<0.22	0.67	1.04	<0.22	<0.22	0.84	1.73	<0.22	mg/kg	TM4/PM8
PAH 17 Total	21.05	<0.64	<0.64	<0.64	1.45	2.09	<0.64	<0.64	1.72	3.75	<0.64	mg/kg	TM4/PM8
Benzo(b)fluoranthene	2.58	<0.05	0.09	<0.05	0.16	0.23	<0.05	<0.05	0.19	0.34	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	1.01	<0.02	0.03	<0.02	0.06	0.09	<0.02	<0.02	0.07	0.13	<0.02	mg/kg	TM4/PM8
Benzo(j)fluoranthene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	mg/kg	TM4/PM8
PAH Surrogate % Recovery	94	95	132	123	131	121	116	106	115	109	<0	%	TM4/PM8
Mineral Oil (C10-C40) (EH_CU_1D_AL)	53	<30	77	<30	<30	<30	<30	<30	<30	<30	<30	mg/kg	TM5/PM8/PM16

Please see attached notes for all abbreviations and acronyms

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton
EMT Job No: 21/15238

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	88-90	91-93	94-96	97-99	100-102	103-105	106-108	109-111	112-114	115-117	LOD/LOR	Units	Method No.
Sample ID	BH01	BH01	BH02	BH02	BH03	BH03	BH04	BH04	BH05	BH05			
Depth	0.00-1.60	3.00-3.40	0.00-1.40	1.40-2.00	0.00-1.70	1.70-2.00	0.00-1.10	2.50-3.00	0.20-1.60	1.60-2.00			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	2	2	2	2	2	2	2	2	2	2			
Date of Receipt	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021			
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL)#	<0.1	<0.1	<0.1	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL)#	<0.1	<0.1	<0.1	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	<0.1	<0.1	<0.1	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL)#	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL)#	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL)#	9	<7	23	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL)#	44	<7	54	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>C35-C40 (EH_1D_AL)	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-40 (EH+HS_1D_AL)	53	<26	77	<26	<26	<26	<26	<26	<26	<26	<26	mg/kg	TM5/TM36/PM8/PM12/PM16
>C6-C10 (HS_1D_AL)	<0.1	<0.1	<0.1	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>C10-C25 (EH_1D_AL)	14	<10	30	<10	<10	<10	<10	<10	<10	<10	<10	mg/kg	TM5/PM8/PM16
>C25-C35 (EH_1D_AL)	31	<10	33	<10	<10	<10	<10	<10	<10	<10	<10	mg/kg	TM5/PM8/PM16
Aromatics													
>C5-EC7 (HS_1D_AR)#	<0.1	<0.1	<0.1	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR)#	<0.1	<0.1	<0.1	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR)#	<0.1	<0.1	<0.1	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR)#	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR)#	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR)#	38	<7	63	<7	<7	<7	<7	<7	31	<7	<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR)#	181	<7	296	<7	<7	<7	<7	<7	126	<7	<7	mg/kg	TM5/PM8/PM16
>EC35-EC40 (EH_1D_AR)	14	<7	20	<7	<7	<7	<7	<7	14	<7	<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-40 (EH+HS_1D_AR)	233	<26	379	<26	<26	<26	<26	<26	171	<26	<26	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-40) (EH+HS_CU_1D_Total)	286	<52	456	<52	<52	<52	<52	<52	171	<52	<52	mg/kg	TM5/TM36/PM8/PM12/PM16
>EC6-EC10 (HS_1D_AR)#	<0.1	<0.1	<0.1	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>EC10-EC25 (EH_1D_AR)	<10	<10	<10	<10	<10	<10	<10	<10	46	<10	<10	mg/kg	TM5/PM8/PM16
>EC25-EC35 (EH_1D_AR)	120	<10	194	<10	<10	<10	<10	<10	85	<10	<10	mg/kg	TM5/PM8/PM16
MTBE#	<5	<5	<5	<5	<5 SV	<5	<5 SV	<5	<5 SV	<5	<5	ug/kg	TM36/PM12
Benzene#	<5	<5	<5	<5	<5 SV	<5	<5 SV	<5	<5 SV	<5	<5	ug/kg	TM36/PM12
Toluene#	<5	<5	<5	<5	<5 SV	<5	<5 SV	<5	<5 SV	<5	<5	ug/kg	TM36/PM12
Ethylbenzene#	<5	<5	<5	<5	<5 SV	<5	<5 SV	<5	<5 SV	<5	<5	ug/kg	TM36/PM12
m/p-Xylene#	<5	<5	<5	<5	<5 SV	<5	<5 SV	<5	<5 SV	<5	<5	ug/kg	TM36/PM12
o-Xylene#	<5	<5	<5	<5	<5 SV	<5	<5 SV	<5	<5 SV	<5	<5	ug/kg	TM36/PM12
PCB 28#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 52#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 101#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 118#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 138#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 153#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 180#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
Total 7 PCBs#	<35	<35	<35	<35	<35	<35	<35	<35	<35	<35	<35	ug/kg	TM17/PM8

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton
EMT Job No: 21/15238

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	88-90	91-93	94-96	97-99	100-102	103-105	106-108	109-111	112-114	115-117	LOD/LOR	Units	Method No.
Sample ID	BH01	BH01	BH02	BH02	BH03	BH03	BH04	BH04	BH05	BH05			
Depth	0.00-1.60	3.00-3.40	0.00-1.40	1.40-2.00	0.00-1.70	1.70-2.00	0.00-1.10	2.50-3.00	0.20-1.60	1.60-2.00			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	2	2	2	2	2	2	2	2	2	2			
Date of Receipt	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021			
Natural Moisture Content	23.3	10.4	50.1	39.0	22.8	16.8	14.2	15.2	23.6	14.2	<0.1	%	PM4/PM0
Moisture Content (% Wet Weight)	18.9	9.5	33.4	28.1	18.6	14.4	12.4	13.2	19.1	12.4	<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #	0.0944	-	-	-	-	0.1970	-	-	-	0.0971	<0.0015	g/l	TM38/PM20
Chromium III	32.7	39.5	64.2	64.2	39.3	33.1	48.6	80.5	34.2	21.1	<0.5	mg/kg	NONE/NONE
Total Organic Carbon #	1.06	0.33	3.08	1.97	1.96	0.77	0.62	0.53	1.70	1.63	<0.02	%	TM21/PM24
Alkali Reserve	-	-	-	-	-	-	-	-	-	-	<0.000	gNaOH/100g	TM160/PM110
pH #	8.56	8.36	7.81	8.04	7.80	8.09	7.93	8.31	7.93	8.08	<0.01	pH units	TM73/PM11
Mass of raw test portion	0.1054	0.1008	0.1235	0.1123	0.1141	0.0987	0.1001	0.1029	0.1104	0.1018		kg	NONE/PM17
Mass of dried test portion	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09		kg	NONE/PM17

Please see attached notes for all abbreviations and acronyms

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton
EMT Job No: 21/15238

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	118-120	121-123	124-126	127-129	130-132	133-135	136-138	139-141	142-144	145-147	LOD/LOR	Units	Method No.
Sample ID	BH07	BH07	BH08	BH08	BH09	BH09	BH10	BH10	BH11	BH11			
Depth	0.60-1.00	1.00-2.00	0.40-1.20	2.00-3.00	0.20-0.90	2.00-3.00	0.20-1.00	1.00-2.00	0.00-0.70	1.70-2.70			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	2	2	2	2	2	2	2	2	2	2			
Date of Receipt	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021			
Antimony	2	2	2	2	3	1	<1	2	6	3	<1	mg/kg	TM30/PM15
Arsenic #	9.7	9.5	23.7	7.6	16.3	6.8	6.0	9.4	30.2	22.3	<0.5	mg/kg	TM30/PM15
Barium #	89	49	159	126	195	55	157	72	229	114	<1	mg/kg	TM30/PM15
Cadmium #	2.2	1.7	1.6	1.7	0.9	1.8	0.3	1.9	2.7	1.6	<0.1	mg/kg	TM30/PM15
Chromium #	41.3	37.2	34.2	56.9	36.1	33.1	26.0	49.4	58.7	53.0	<0.5	mg/kg	TM30/PM15
Copper #	28	30	87	20	82	23	21	31	120	98	<1	mg/kg	TM30/PM15
Lead #	19	15	271	15	147	12	24	19	273	127	<5	mg/kg	TM30/PM15
Mercury #	<0.1	0.2	1.5	<0.1	0.6	0.2	0.3	0.2	0.8	0.5	<0.1	mg/kg	TM30/PM15
Molybdenum #	3.5	2.5	3.2	4.7	1.9	4.2	1.6	4.3	6.4	5.6	<0.1	mg/kg	TM30/PM15
Nickel #	37.1	37.2	47.8	30.8	21.1	25.0	21.0	33.4	57.2	51.9	<0.7	mg/kg	TM30/PM15
Selenium #	1	1	1	<1	<1	<1	<1	1	2	2	<1	mg/kg	TM30/PM15
Sulphur as S	-	0.05	0.09	-	-	-	-	-	-	-	<0.01	%	TM30/PM15
Total Sulphate as SO4 BRE	-	0.03	0.12	-	-	-	-	-	-	-	<0.01	%	TM50/PM29
Zinc #	83	66	189	61	165	60	43	86	299	140	<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene #	<0.04	<0.04	0.07	<0.04	<0.04	<0.04	<0.04	<0.04	0.07	<0.04	<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03	0.07	<0.03	0.04	<0.03	<0.03	<0.03	0.06	<0.03	<0.03	mg/kg	TM4/PM8
Acenaphthene #	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	TM4/PM8
Fluorene #	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Phenanthrene #	<0.03	<0.03	0.70	<0.03	0.58	<0.03	0.15	<0.03	0.54	0.22	<0.03	mg/kg	TM4/PM8
Anthracene #	<0.04	<0.04	0.15	<0.04	0.13	<0.04	<0.04	<0.04	0.13	<0.04	<0.04	mg/kg	TM4/PM8
Fluoranthene #	<0.03	<0.03	0.93	<0.03	0.83	<0.03	0.25	<0.03	0.90	0.25	<0.03	mg/kg	TM4/PM8
Pyrene #	<0.03	<0.03	0.86	<0.03	0.78	<0.03	0.22	<0.03	0.79	0.25	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	<0.06	<0.06	0.64	<0.06	0.39	<0.06	0.16	<0.06	0.43	0.17	<0.06	mg/kg	TM4/PM8
Chrysene #	<0.02	<0.02	0.58	<0.02	0.44	<0.02	0.15	<0.02	0.84	0.16	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #	<0.07	<0.07	0.95	<0.07	0.71	<0.07	0.24	<0.07	0.78	0.22	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	<0.04	<0.04	0.49	<0.04	0.39	<0.04	0.13	<0.04	0.47	0.14	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #	<0.04	<0.04	0.26	<0.04	0.24	<0.04	0.08	<0.04	0.25	0.07	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.04	<0.04	0.05	<0.04	0.06	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	<0.04	<0.04	0.30	<0.04	0.27	<0.04	0.09	<0.04	0.28	0.09	<0.04	mg/kg	TM4/PM8
Coronene	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
PAH 6 Total #	<0.22	<0.22	2.93	<0.22	2.44	<0.22	0.79	<0.22	2.68	0.77	<0.22	mg/kg	TM4/PM8
PAH 17 Total	<0.64	<0.64	6.05	<0.64	4.86	<0.64	1.47	<0.64	5.54	1.57	<0.64	mg/kg	TM4/PM8
Benzo(b)fluoranthene	<0.05	<0.05	0.68	<0.05	0.51	<0.05	0.17	<0.05	0.56	0.16	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	<0.02	<0.02	0.27	<0.02	0.20	<0.02	0.07	<0.02	0.22	0.06	<0.02	mg/kg	TM4/PM8
Benzo(j)fluoranthene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	mg/kg	TM4/PM8
PAH Surrogate % Recovery	122	120	123	94	96	125	129	128	127	114	<0	%	TM4/PM8
Mineral Oil (C10-C40) (EH_CU_1D_AL)	<30	<30	<30	<30	30	<30	<30	<30	<30	<30	<30	mg/kg	TM5/PM8/PM16

Please see attached notes for all abbreviations and acronyms

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton
EMT Job No: 21/15238

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	118-120	121-123	124-126	127-129	130-132	133-135	136-138	139-141	142-144	145-147	LOD/LOR	Units	Method No.
Sample ID	BH07	BH07	BH08	BH08	BH09	BH09	BH10	BH10	BH11	BH11			
Depth	0.60-1.00	1.00-2.00	0.40-1.20	2.00-3.00	0.20-0.90	2.00-3.00	0.20-1.00	1.00-2.00	0.00-0.70	1.70-2.70			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	2	2	2	2	2	2	2	2	2	2			
Date of Receipt	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021			
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL)#	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL)#	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL)#	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL)#	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL)#	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL)#	<7	<7	<7	<7	30	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>C35-C40 (EH_1D_AL)	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-40 (EH+HS_1D_AL)	<26	<26	<26	<26	30	<26	<26	<26	<26	<26	<26	mg/kg	TM5/TM36/PM8/PM12/PM16
>C6-C10 (HS_1D_AL)	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>C10-C25 (EH_1D_AL)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	mg/kg	TM5/PM8/PM16
>C25-C35 (EH_1D_AL)	<10	<10	<10	<10	28	<10	<10	<10	<10	<10	<10	mg/kg	TM5/PM8/PM16
Aromatics													
>C5-EC7 (HS_1D_AR)#	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR)#	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR)#	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR)#	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR)#	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR)#	<7	<7	10	<7	14	<7	<7	<7	26	<7	<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR)#	<7	<7	11	<7	61	<7	<7	<7	106	<7	<7	mg/kg	TM5/PM8/PM16
>EC35-EC40 (EH_1D_AR)	<7	<7	<7	<7	<7	<7	<7	<7	12	<7	<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-40 (EH+HS_1D_AR)	<26	<26	<26	<26	75	<26	<26	<26	144	<26	<26	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-40) (EH+HS_CU_1D_Total)	<52	<52	<52	<52	105	<52	<52	<52	144	<52	<52	mg/kg	TM5/TM36/PM8/PM12/PM16
>EC6-EC10 (HS_1D_AR)#	<0.1	<0.1	<0.1 SV	<0.1	<0.1	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>EC10-EC25 (EH_1D_AR)	<10	<10	<10	<10	20	<10	<10	<10	43	<10	<10	mg/kg	TM5/PM8/PM16
>EC25-EC35 (EH_1D_AR)	<10	<10	<10	<10	47	<10	<10	<10	72	<10	<10	mg/kg	TM5/PM8/PM16
MTBE#	<5	<5	<5 SV	<5	<5	<5	<5 SV	<5	<5 SV	<5	<5	ug/kg	TM36/PM12
Benzene#	<5	<5	<5 SV	<5	<5	<5	<5 SV	<5	<5 SV	<5	<5	ug/kg	TM36/PM12
Toluene#	<5	<5	<5 SV	<5	14	<5	<5 SV	<5	<5 SV	<5	<5	ug/kg	TM36/PM12
Ethylbenzene#	<5	<5	<5 SV	<5	<5	<5	<5 SV	<5	<5 SV	<5	<5	ug/kg	TM36/PM12
m/p-Xylene#	<5	<5	7 SV	<5	8	<5	<5 SV	<5	<5 SV	<5	<5	ug/kg	TM36/PM12
o-Xylene#	<5	<5	<5 SV	<5	<5	<5	<5 SV	<5	<5 SV	<5	<5	ug/kg	TM36/PM12
PCB 28#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 52#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 101#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 118#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 138#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 153#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 180#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
Total 7 PCBs#	<35	<35	<35	<35	<35	<35	<35	<35	<35	<35	<35	ug/kg	TM17/PM8

Please see attached notes for all abbreviations and acronyms

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton
EMT Job No: 21/15238

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	118-120	121-123	124-126	127-129	130-132	133-135	136-138	139-141	142-144	145-147	LOD/LOR	Units	Method No.
Sample ID	BH07	BH07	BH08	BH08	BH09	BH09	BH10	BH10	BH11	BH11			
Depth	0.60-1.00	1.00-2.00	0.40-1.20	2.00-3.00	0.20-0.90	2.00-3.00	0.20-1.00	1.00-2.00	0.00-0.70	1.70-2.70			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	2	2	2	2	2	2	2	2	2	2			
Date of Receipt	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021			
Natural Moisture Content	13.4	11.4	37.0	11.7	26.3	14.0	12.1	16.1	47.1	23.3	<0.1	%	PM4/PM0
Moisture Content (% Wet Weight)	11.8	10.3	27.0	10.4	20.8	12.3	10.8	13.9	32.0	18.9	<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #	-	0.0313	0.1685	-	-	-	-	-	-	-	<0.0015	g/l	TM38/PM20
Chromium III	41.3	37.2	34.2	56.9	36.1	33.1	26.0	49.4	58.7	53.0	<0.5	mg/kg	NONE/NONE
Total Organic Carbon #	0.33	0.39	9.13	0.37	1.93	0.34	0.81	0.57	8.29	6.49	<0.02	%	TM21/PM24
Alkali Reserve	-	-	-	-	0.002	-	-	-	-	-	<0.000	gNaOH/100g	TM160/PM110
pH #	8.57	8.66	7.81	8.44	11.86	8.57	8.13	8.59	7.93	8.41	<0.01	pH units	TM73/PM11
Mass of raw test portion	0.0806	0.0966	0.1192	0.0987	0.1059	0.1072	0.0966	0.1093	0.1305	0.104		kg	NONE/PM17
Mass of dried test portion	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09		kg	NONE/PM17

Please see attached notes for all abbreviations and acronyms

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton
EMT Job No: 21/15238

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	148-150	151-153	154-156	157-159	160-162	163-165	166-168	169-171	172-174	175-177	LOD/LOR	Units	Method No.
Sample ID	BH12	BH12	BH13	BH13	BH14	BH14	BH15	BH15	BH16	BH16			
Depth	0.00-0.70	1.00-2.50	0.30-0.70	1.00-2.00	0.30-0.90	0.90-2.00	0.30-0.80	1.90-3.00	0.30-0.80	1.00-2.00			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	2	2	2	2	2	2	2	2	2	2			
Date of Receipt	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021			
Antimony	<1	2	2	2	3	2	4	1	3	1	<1	mg/kg	TM30/PM15
Arsenic #	7.1	10.8	11.8	10.5	25.8	9.8	36.8	9.4	27.7	9.1	<0.5	mg/kg	TM30/PM15
Barium #	195	66	140	144	303	117	176	282	192	317	<1	mg/kg	TM30/PM15
Cadmium #	1.3	2.6	1.8	2.1	1.6	1.8	1.4	1.5	1.1	2.2	<0.1	mg/kg	TM30/PM15
Chromium #	20.3	38.7	46.8	45.9	44.0	30.9	33.2	25.2	48.9	26.5	<0.5	mg/kg	TM30/PM15
Copper #	16	34	18	31	111	31	128	25	111	23	<1	mg/kg	TM30/PM15
Lead #	17	14	19	17	325	24	413	32	306	34	<5	mg/kg	TM30/PM15
Mercury #	0.1	<0.1	<0.1	<0.1	0.8	<0.1	1.1	<0.1	0.9	<0.1	<0.1	mg/kg	TM30/PM15
Molybdenum #	3.0	5.5	5.3	4.8	3.7	4.0	4.5	3.1	4.7	3.6	<0.1	mg/kg	TM30/PM15
Nickel #	15.3	45.4	31.0	37.6	36.2	34.2	61.7	25.0	49.2	39.5	<0.7	mg/kg	TM30/PM15
Selenium #	<1	1	<1	2	1	1	2	1	1	2	<1	mg/kg	TM30/PM15
Sulphur as S	0.09	-	-	-	-	0.03	0.10	0.03	-	0.03	<0.01	%	TM30/PM15
Total Sulphate as SO4 BRE	0.06	-	-	-	-	0.03	0.14	0.04	-	0.04	<0.01	%	TM50/PM29
Zinc #	49	89	81	90	234	80	248	75	220	85	<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene #	<0.04	<0.04	<0.04	<0.04	0.13	<0.04	0.11	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03	<0.03	<0.03	0.14	<0.03	0.09	<0.03	0.10	<0.03	<0.03	mg/kg	TM4/PM8
Acenaphthene #	<0.05	<0.05	<0.05	<0.05	0.09	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	TM4/PM8
Fluorene #	<0.04	<0.04	<0.04	<0.04	0.09	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Phenanthrene #	0.06	<0.03	<0.03	<0.03	1.48	<0.03	0.74	0.09	0.94	0.07	<0.03	mg/kg	TM4/PM8
Anthracene #	<0.04	<0.04	<0.04	<0.04	0.35	<0.04	0.17	<0.04	0.27	<0.04	<0.04	mg/kg	TM4/PM8
Fluoranthene #	<0.03	<0.03	<0.03	<0.03	2.60	<0.03	1.09	0.16	1.47	0.11	<0.03	mg/kg	TM4/PM8
Pyrene #	<0.03	<0.03	<0.03	<0.03	2.43	<0.03	1.05	0.14	1.31	0.11	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	<0.06	<0.06	<0.06	<0.06	1.29	<0.06	0.61	0.12	0.70	0.07	<0.06	mg/kg	TM4/PM8
Chrysene #	<0.02	<0.02	<0.02	<0.02	1.58	<0.02	0.70	0.11	0.78	0.07	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #	<0.07	<0.07	<0.07	<0.07	2.42	<0.07	1.17	0.14	1.16	0.11	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	<0.04	<0.04	<0.04	<0.04	1.40	<0.04	0.69	0.09	0.72	0.06	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #	<0.04	<0.04	<0.04	<0.04	0.75	<0.04	0.42	<0.04	0.38	<0.04	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.04	<0.04	<0.04	<0.04	0.19	<0.04	0.11	<0.04	0.10	<0.04	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	<0.04	<0.04	<0.04	<0.04	0.86	<0.04	0.46	0.05	0.43	<0.04	<0.04	mg/kg	TM4/PM8
Coronene	<0.04	<0.04	<0.04	<0.04	0.14	<0.04	0.08	<0.04	0.07	<0.04	<0.04	mg/kg	TM4/PM8
PAH 6 Total #	<0.22	<0.22	<0.22	<0.22	8.03	<0.22	3.83	0.44	4.16	0.28	<0.22	mg/kg	TM4/PM8
PAH 17 Total	<0.64	<0.64	<0.64	<0.64	15.94	<0.64	7.49	0.90	8.43	<0.64	<0.64	mg/kg	TM4/PM8
Benzo(b)fluoranthene	<0.05	<0.05	<0.05	<0.05	1.74	<0.05	0.84	0.10	0.84	0.08	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	<0.02	<0.02	<0.02	<0.02	0.68	<0.02	0.33	0.04	0.32	0.03	<0.02	mg/kg	TM4/PM8
Benzo(j)fluoranthene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	mg/kg	TM4/PM8
PAH Surrogate % Recovery	119	115	123	117	126	117	116	114	118	118	<0	%	TM4/PM8
Mineral Oil (C10-C40) (EH_CU_1D_AL)	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	mg/kg	TM5/PM8/PM16

Please see attached notes for all abbreviations and acronyms

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton
EMT Job No: 21/15238

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	148-150	151-153	154-156	157-159	160-162	163-165	166-168	169-171	172-174	175-177	LOD/LOR	Units	Method No.
Sample ID	BH12	BH12	BH13	BH13	BH14	BH14	BH15	BH15	BH16	BH16			
Depth	0.00-0.70	1.00-2.50	0.30-0.70	1.00-2.00	0.30-0.90	0.90-2.00	0.30-0.80	1.90-3.00	0.30-0.80	1.00-2.00			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	2	2	2	2	2	2	2	2	2	2			
Date of Receipt	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021			
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL)#	<0.1	<0.1	<0.1	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL)#	<0.1	<0.1	<0.1	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	<0.1	<0.1	<0.1	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL)#	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL)#	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL)#	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL)#	<7	<7	<7	<7	<7	<7	24	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>C35-C40 (EH_1D_AL)	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-40 (EH+HS_1D_AL)	<26	<26	<26	<26	<26	<26	<26	<26	<26	<26	<26	mg/kg	TM5/TM36/PM8/PM12/PM16
>C6-C10 (HS_1D_AL)	<0.1	<0.1	<0.1	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>C10-C25 (EH_1D_AL)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	mg/kg	TM5/PM8/PM16
>C25-C35 (EH_1D_AL)	<10	<10	<10	<10	<10	<10	19	<10	<10	<10	<10	mg/kg	TM5/PM8/PM16
Aromatics													
>C5-EC7 (HS_1D_AR)#	<0.1	<0.1	<0.1	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR)#	<0.1	<0.1	<0.1	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR)#	<0.1	<0.1	<0.1	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR)#	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR)#	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR)#	<7	<7	<7	<7	18	<7	16	<7	31	<7	<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR)#	<7	<7	<7	<7	78	<7	93	<7	140	<7	<7	mg/kg	TM5/PM8/PM16
>EC35-EC40 (EH_1D_AR)	<7	<7	<7	<7	<7	<7	11	<7	19	<7	<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-40 (EH+HS_1D_AR)	<26	<26	<26	<26	96	<26	120	<26	190	<26	<26	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-40) (EH+HS_CU_1D_Total)	<52	<52	<52	<52	96	<52	120	<52	190	<52	<52	mg/kg	TM5/TM36/PM8/PM12/PM16
>EC6-EC10 (HS_1D_AR)#	<0.1	<0.1	<0.1	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>EC10-EC25 (EH_1D_AR)	<10	<10	<10	<10	31	<10	28	<10	53	<10	<10	mg/kg	TM5/PM8/PM16
>EC25-EC35 (EH_1D_AR)	<10	<10	<10	<10	53	<10	66	<10	97	<10	<10	mg/kg	TM5/PM8/PM16
MTBE#	<5	<5	<5	<5	<5 SV	<5	<5 SV	<5	<5 SV	<5	<5	ug/kg	TM36/PM12
Benzene#	<5	<5	<5	<5	<5 SV	<5	<5 SV	<5	<5 SV	<5	<5	ug/kg	TM36/PM12
Toluene#	<5	<5	<5	<5	<5 SV	<5	<5 SV	<5	<5 SV	<5	<5	ug/kg	TM36/PM12
Ethylbenzene#	<5	<5	<5	<5	<5 SV	<5	<5 SV	<5	<5 SV	<5	<5	ug/kg	TM36/PM12
m/p-Xylene#	<5	<5	<5	<5	<5 SV	<5	<5 SV	<5	<5 SV	<5	<5	ug/kg	TM36/PM12
o-Xylene#	<5	<5	<5	<5	<5 SV	<5	<5 SV	<5	<5 SV	<5	<5	ug/kg	TM36/PM12
PCB 28#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 52#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 101#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 118#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 138#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 153#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 180#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
Total 7 PCBs#	<35	<35	<35	<35	<35	<35	<35	<35	<35	<35	<35	ug/kg	TM17/PM8

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton
EMT Job No: 21/15238

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	148-150	151-153	154-156	157-159	160-162	163-165	166-168	169-171	172-174	175-177	LOD/LOR	Units	Method No.
Sample ID	BH12	BH12	BH13	BH13	BH14	BH14	BH15	BH15	BH16	BH16			
Depth	0.00-0.70	1.00-2.50	0.30-0.70	1.00-2.00	0.30-0.90	0.90-2.00	0.30-0.80	1.90-3.00	0.30-0.80	1.00-2.00			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	2	2	2	2	2	2	2	2	2	2			
Date of Receipt	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021			
Natural Moisture Content	18.2	12.1	17.4	13.7	28.5	13.2	34.5	17.0	70.5	17.0	<0.1	%	PM4/PM0
Moisture Content (% Wet Weight)	15.4	10.8	14.8	12.0	22.2	11.6	25.7	14.5	41.4	14.5	<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #	0.0301	-	-	-	-	0.0185	0.0338	0.0201	-	0.0250	<0.0015	g/l	TM38/PM20
Chromium III	20.3	38.7	46.8	45.9	44.0	30.9	33.2	25.2	48.9	26.5	<0.5	mg/kg	NONE/NONE
Total Organic Carbon #	0.72	0.46	0.59	0.50	8.92	0.53	11.51	1.33	14.67	1.01	<0.02	%	TM21/PM24
Alkali Reserve	-	-	-	-	-	-	-	-	-	-	<0.000	gNaOH/100g	TM160/PM110
pH #	8.56	8.76	8.79	8.70	8.23	8.56	8.21	8.66	8.20	8.65	<0.01	pH units	TM73/PM11
Mass of raw test portion	0.1091	0.098	0.1094	0.1029	0.1121	0.1032	0.1164	0.1059	0.132	0.0989		kg	NONE/PM17
Mass of dried test portion	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09		kg	NONE/PM17

Please see attached notes for all abbreviations and acronyms

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton
EMT Job No: 21/15238

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	178-180	181-183	184	185	186	187	188	189			LOD/LOR	Units	Method No.
Sample ID	BH17	BH17	BH01	BH01	BH02	BH09	BH11	BH17					
Depth	0.00-0.60	1.00-2.00	1.60-2.00	3.40-4.00	2.00-3.00	3.40-4.00	0.70-1.70	2.20-3.00					
COC No / misc													
Containers	V J T	V J T	T	T	T	T	T	T					
Sample Date	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021					
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil					
Batch Number	2	2	2	2	2	2	2	2					
Date of Receipt	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021					
Antimony	<1	1	-	-	-	-	-	-			<1	mg/kg	TM30/PM15
Arsenic #	9.3	12.1	-	-	-	-	-	-			<0.5	mg/kg	TM30/PM15
Barium #	24	250	-	-	-	-	-	-			<1	mg/kg	TM30/PM15
Cadmium #	<0.1	1.5	-	-	-	-	-	-			<0.1	mg/kg	TM30/PM15
Chromium #	52.2	54.2	-	-	-	-	-	-			<0.5	mg/kg	TM30/PM15
Copper #	21	18	-	-	-	-	-	-			<1	mg/kg	TM30/PM15
Lead #	10	32	-	-	-	-	-	-			<5	mg/kg	TM30/PM15
Mercury #	0.2	<0.1	-	-	-	-	-	-			<0.1	mg/kg	TM30/PM15
Molybdenum #	1.2	4.9	-	-	-	-	-	-			<0.1	mg/kg	TM30/PM15
Nickel #	16.8	34.1	-	-	-	-	-	-			<0.7	mg/kg	TM30/PM15
Selenium #	<1	1	-	-	-	-	-	-			<1	mg/kg	TM30/PM15
Sulphur as S	-	-	0.05	0.30	0.05	0.09	0.06	0.32			<0.01	%	TM30/PM15
Total Sulphate as SO4 BRE	-	-	0.06	0.16	0.03	0.05	0.08	0.16			<0.01	%	TM50/PM29
Zinc #	69	118	-	-	-	-	-	-			<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene #	<0.04	<0.04	-	-	-	-	-	-			<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03	-	-	-	-	-	-			<0.03	mg/kg	TM4/PM8
Acenaphthene #	<0.05	<0.05	-	-	-	-	-	-			<0.05	mg/kg	TM4/PM8
Fluorene #	<0.04	<0.04	-	-	-	-	-	-			<0.04	mg/kg	TM4/PM8
Phenanthrene #	0.06	0.04	-	-	-	-	-	-			<0.03	mg/kg	TM4/PM8
Anthracene #	<0.04	<0.04	-	-	-	-	-	-			<0.04	mg/kg	TM4/PM8
Fluoranthene #	0.10	0.06	-	-	-	-	-	-			<0.03	mg/kg	TM4/PM8
Pyrene #	0.10	0.05	-	-	-	-	-	-			<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	0.08	<0.06	-	-	-	-	-	-			<0.06	mg/kg	TM4/PM8
Chrysene #	0.09	0.05	-	-	-	-	-	-			<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #	0.11	<0.07	-	-	-	-	-	-			<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	0.07	<0.04	-	-	-	-	-	-			<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #	<0.04	<0.04	-	-	-	-	-	-			<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.04	<0.04	-	-	-	-	-	-			<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	0.06	<0.04	-	-	-	-	-	-			<0.04	mg/kg	TM4/PM8
Coronene	<0.04	<0.04	-	-	-	-	-	-			<0.04	mg/kg	TM4/PM8
PAH 6 Total #	0.34	<0.22	-	-	-	-	-	-			<0.22	mg/kg	TM4/PM8
PAH 17 Total	0.67	<0.64	-	-	-	-	-	-			<0.64	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.08	<0.05	-	-	-	-	-	-			<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.03	<0.02	-	-	-	-	-	-			<0.02	mg/kg	TM4/PM8
Benzo(j)fluoranthene	<1	<1	-	-	-	-	-	-			<1	mg/kg	TM4/PM8
PAH Surrogate % Recovery	115	121	-	-	-	-	-	-			<0	%	TM4/PM8
Mineral Oil (C10-C40) (EH_CU_1D_AL)	44	<30	-	-	-	-	-	-			<30	mg/kg	TM5/PM8/PM16

Please see attached notes for all abbreviations and acronyms

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton
EMT Job No: 21/15238

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	178-180	181-183	184	185	186	187	188	189			LOD/LOR	Units	Method No.
Sample ID	BH17	BH17	BH01	BH01	BH02	BH09	BH11	BH17					
Depth	0.00-0.60	1.00-2.00	1.60-2.00	3.40-4.00	2.00-3.00	3.40-4.00	0.70-1.70	2.20-3.00					
COC No / misc													
Containers	V J T	V J T	T	T	T	T	T	T					
Sample Date	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021					
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil					
Batch Number	2	2	2	2	2	2	2	2					
Date of Receipt	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021					
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL)#	<0.1	<0.1	-	-	-	-	-	-			<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL)#	<0.1	<0.1	-	-	-	-	-	-			<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	<0.1	<0.1	-	-	-	-	-	-			<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL)#	<0.2	<0.2	-	-	-	-	-	-			<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL)#	<4	<4	-	-	-	-	-	-			<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL)#	<7	<7	-	-	-	-	-	-			<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL)#	44	<7	-	-	-	-	-	-			<7	mg/kg	TM5/PM8/PM16
>C35-C40 (EH_1D_AL)	<7	<7	-	-	-	-	-	-			<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-40 (EH+HS_1D_AL)	44	<26	-	-	-	-	-	-			<26	mg/kg	TM5/TM36/PM8/PM12/PM16
>C6-C10 (HS_1D_AL)	<0.1	<0.1	-	-	-	-	-	-			<0.1	mg/kg	TM36/PM12
>C10-C25 (EH_1D_AL)	<10	<10	-	-	-	-	-	-			<10	mg/kg	TM5/PM8/PM16
>C25-C35 (EH_1D_AL)	39	<10	-	-	-	-	-	-			<10	mg/kg	TM5/PM8/PM16
Aromatics													
>C5-EC7 (HS_1D_AR)#	<0.1	<0.1	-	-	-	-	-	-			<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR)#	<0.1	<0.1	-	-	-	-	-	-			<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR)#	<0.1	<0.1	-	-	-	-	-	-			<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR)#	<0.2	<0.2	-	-	-	-	-	-			<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR)#	<4	<4	-	-	-	-	-	-			<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR)#	<7	<7	-	-	-	-	-	-			<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR)#	135	<7	-	-	-	-	-	-			<7	mg/kg	TM5/PM8/PM16
>EC35-EC40 (EH_1D_AR)	29	<7	-	-	-	-	-	-			<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-40 (EH+HS_1D_AR)	164	<26	-	-	-	-	-	-			<26	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-40) (EH+HS_CU_1D_Total)	208	<52	-	-	-	-	-	-			<52	mg/kg	TM5/TM36/PM8/PM12/PM16
>EC6-EC10 (HS_1D_AR)#	<0.1	<0.1	-	-	-	-	-	-			<0.1	mg/kg	TM36/PM12
>EC10-EC25 (EH_1D_AR)	14	<10	-	-	-	-	-	-			<10	mg/kg	TM5/PM8/PM16
>EC25-EC35 (EH_1D_AR)	110	<10	-	-	-	-	-	-			<10	mg/kg	TM5/PM8/PM16
MTBE#	<5	<5	-	-	-	-	-	-			<5	ug/kg	TM36/PM12
Benzene#	<5	<5	-	-	-	-	-	-			<5	ug/kg	TM36/PM12
Toluene#	<5	<5	-	-	-	-	-	-			<5	ug/kg	TM36/PM12
Ethylbenzene#	<5	<5	-	-	-	-	-	-			<5	ug/kg	TM36/PM12
m/p-Xylene#	<5	<5	-	-	-	-	-	-			<5	ug/kg	TM36/PM12
o-Xylene#	<5	<5	-	-	-	-	-	-			<5	ug/kg	TM36/PM12
PCB 28#	<5	<5	-	-	-	-	-	-			<5	ug/kg	TM17/PM8
PCB 52#	<5	<5	-	-	-	-	-	-			<5	ug/kg	TM17/PM8
PCB 101#	<5	<5	-	-	-	-	-	-			<5	ug/kg	TM17/PM8
PCB 118#	<5	<5	-	-	-	-	-	-			<5	ug/kg	TM17/PM8
PCB 138#	<5	<5	-	-	-	-	-	-			<5	ug/kg	TM17/PM8
PCB 153#	<5	<5	-	-	-	-	-	-			<5	ug/kg	TM17/PM8
PCB 180#	<5	<5	-	-	-	-	-	-			<5	ug/kg	TM17/PM8
Total 7 PCBs#	<35	<35	-	-	-	-	-	-			<35	ug/kg	TM17/PM8

Element Materials Technology

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton
EMT Job No: 21/15238

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	178-180	181-183	184	185	186	187	188	189			LOD/LOR	Units	Method No.
Sample ID	BH17	BH17	BH01	BH01	BH02	BH09	BH11	BH17					
Depth	0.00-0.60	1.00-2.00	1.60-2.00	3.40-4.00	2.00-3.00	3.40-4.00	0.70-1.70	2.20-3.00					
COC No / misc													
Containers	V J T	V J T	T	T	T	T	T	T					
Sample Date	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021					
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil					
Batch Number	2	2	2	2	2	2	2	2					
Date of Receipt	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021					
Natural Moisture Content	13.4	21.8	-	-	-	-	-	-			<0.1	%	PM4/PM0
Moisture Content (% Wet Weight)	11.8	17.9	-	-	-	-	-	-			<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	-	-	-	-	-	-			<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #	-	-	0.1153	0.2831	0.0176	0.0324	0.0208	0.2339			<0.0015	g/l	TM38/PM20
Chromium III	52.2	54.2	-	-	-	-	-	-			<0.5	mg/kg	NONE/NONE
Total Organic Carbon #	0.19	0.67	-	-	-	-	-	-			<0.02	%	TM21/PM24
Alkali Reserve	-	-	-	-	-	-	-	-			<0.000	gNaOH/100g	TM160/PM110
pH #	8.58	8.68	8.16	8.14	8.40	8.76	8.52	8.52			<0.01	pH units	TM73/PM11
Mass of raw test portion	0.0951	0.1071	-	-	-	-	-	-				kg	NONE/PM17
Mass of dried test portion	0.09	0.09	-	-	-	-	-	-				kg	NONE/PM17

Please see attached notes for all abbreviations and acronyms

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton
EMT Job No: 21/15238

Report : CEN 10:1 1 Batch

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	88-90	91-93	94-96	97-99	100-102	103-105	106-108	109-111	112-114	115-117	LOD/LOR	Units	Method No.
Sample ID	BH01	BH01	BH02	BH02	BH03	BH03	BH04	BH04	BH05	BH05			
Depth	0.00-1.60	3.00-3.40	0.00-1.40	1.40-2.00	0.00-1.70	1.70-2.00	0.00-1.10	2.50-3.00	0.20-1.60	1.60-2.00			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	2	2	2	2	2	2	2	2	2	2			
Date of Receipt	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021			
Dissolved Antimony #	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	mg/l	TM30/PM17
Dissolved Antimony (A10) #	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	mg/kg	TM30/PM17
Dissolved Arsenic #	0.0136	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	mg/l	TM30/PM17
Dissolved Arsenic (A10) #	0.136	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	mg/kg	TM30/PM17
Dissolved Barium #	<0.003	0.027	0.020	0.014	0.048	0.055	0.009	0.007	0.025	0.047	<0.003	mg/l	TM30/PM17
Dissolved Barium (A10) #	<0.03	0.27	0.20	0.14	0.48	0.55	0.09	0.07	0.25	0.47	<0.03	mg/kg	TM30/PM17
Dissolved Cadmium #	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	mg/l	TM30/PM17
Dissolved Cadmium (A10) #	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	mg/kg	TM30/PM17
Dissolved Chromium #	0.0023	<0.0015	0.0021	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	mg/l	TM30/PM17
Dissolved Chromium (A10) #	0.023	<0.015	0.021	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	mg/kg	TM30/PM17
Dissolved Copper #	<0.007	<0.007	0.013	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	mg/l	TM30/PM17
Dissolved Copper (A10) #	<0.07	<0.07	0.13	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	mg/kg	TM30/PM17
Dissolved Lead #	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	mg/l	TM30/PM17
Dissolved Lead (A10) #	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	TM30/PM17
Dissolved Molybdenum #	0.004	0.013	0.013	0.010	0.012	0.023	0.031	0.019	0.023	0.025	<0.002	mg/l	TM30/PM17
Dissolved Molybdenum (A10) #	0.04	0.13	0.13	0.10	0.12	0.23	0.31	0.19	0.23	0.25	<0.02	mg/kg	TM30/PM17
Dissolved Nickel #	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.002	<0.002	mg/l	TM30/PM17
Dissolved Nickel (A10) #	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	<0.02	mg/kg	TM30/PM17
Dissolved Selenium #	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.005	<0.003	<0.003	mg/l	TM30/PM17
Dissolved Selenium (A10) #	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.05	<0.03	<0.03	mg/kg	TM30/PM17
Dissolved Zinc #	<0.003	<0.003	0.011	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	mg/l	TM30/PM17
Dissolved Zinc (A10) #	<0.03	<0.03	0.11	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	TM30/PM17
Mercury Dissolved by CVAF #	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00003	<0.00001	mg/l	TM61/PM0
Mercury Dissolved by CVAF #	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0003	<0.0001	mg/kg	TM61/PM0
Phenol	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/l	TM26/PM0
Phenol	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM26/PM0
Fluoride	<0.3	<0.3	0.8	0.3	0.5	0.3	0.3	0.3	0.4	<0.3	<0.3	mg/l	TM173/PM0
Fluoride	<3	<3	8	<3	5	3	<3	<3	4	<3	<3	mg/kg	TM173/PM0
Sulphate as SO4 #	44.0	8.6	56.0	34.3	89.3	72.4	94.9	11.6	54.6	21.0	<0.5	mg/l	TM38/PM0
Sulphate as SO4 #	440	86	560	343	893	724	949	116	546	210	<5	mg/kg	TM38/PM0
Chloride #	1.9	0.7	1.9	0.6	0.7	0.4	0.3	0.4	0.7	0.7	<0.3	mg/l	TM38/PM0
Chloride #	19	7	19	6	7	4	<3	4	7	7	<3	mg/kg	TM38/PM0
Dissolved Organic Carbon	6	3	6	5	5	3	<2	3	3	3	<2	mg/l	TM60/PM0
Dissolved Organic Carbon	60	30	60	50	50	30	<20	30	30	30	<20	mg/kg	TM60/PM0
pH	9.75	8.40	8.06	8.75	8.20	8.10	7.94	8.08	8.02	8.22	<0.01	pH units	TM73/PM0
Total Dissolved Solids #	175	61	171	138	279	171	215	67	181	87	<35	mg/l	TM20/PM0
Total Dissolved Solids #	1750	610	1711	1380	2789	1711	2149	670	1810	870	<350	mg/kg	TM20/PM0

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton
EMT Job No: 21/15238

Report : CEN 10:1 1 Batch

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	118-120	121-123	124-126	127-129	130-132	133-135	136-138	139-141	142-144	145-147	LOD/LOR	Units	Method No.
Sample ID	BH07	BH07	BH08	BH08	BH09	BH09	BH10	BH10	BH11	BH11			
Depth	0.60-1.00	1.00-2.00	0.40-1.20	2.00-3.00	0.20-0.90	2.00-3.00	0.20-1.00	1.00-2.00	0.00-0.70	1.70-2.70			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	2	2	2	2	2	2	2	2	2	2			
Date of Receipt	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021			
Dissolved Antimony #	<0.002	<0.002	0.004	<0.002	0.004	<0.002	<0.002	<0.002	0.003	<0.002	<0.002	mg/l	TM30/PM17
Dissolved Antimony (A10) #	<0.02	<0.02	0.04	<0.02	0.04	<0.02	<0.02	<0.02	0.03	<0.02	<0.02	mg/kg	TM30/PM17
Dissolved Arsenic #	<0.0025	<0.0025	0.0035	<0.0025	<0.0025	<0.0025	0.0096	<0.0025	0.0102	<0.0025	<0.0025	mg/l	TM30/PM17
Dissolved Arsenic (A10) #	<0.025	<0.025	0.035	<0.025	<0.025	<0.025	0.096	<0.025	0.102	<0.025	<0.025	mg/kg	TM30/PM17
Dissolved Barium #	<0.003	<0.003	0.005	<0.003	0.069	<0.003	0.010	<0.003	0.006	<0.003	<0.003	mg/l	TM30/PM17
Dissolved Barium (A10) #	<0.03	<0.03	0.05	<0.03	0.69	<0.03	0.10	<0.03	0.06	<0.03	<0.03	mg/kg	TM30/PM17
Dissolved Cadmium #	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	mg/l	TM30/PM17
Dissolved Cadmium (A10) #	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	mg/kg	TM30/PM17
Dissolved Chromium #	<0.0015	<0.0015	<0.0015	<0.0015	0.0210	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	mg/l	TM30/PM17
Dissolved Chromium (A10) #	<0.015	<0.015	<0.015	<0.015	0.210	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	mg/kg	TM30/PM17
Dissolved Copper #	<0.007	<0.007	0.007	<0.007	0.219	<0.007	<0.007	<0.007	0.009	<0.007	<0.007	mg/l	TM30/PM17
Dissolved Copper (A10) #	<0.07	<0.07	<0.07	<0.07	2.19	<0.07	<0.07	<0.07	0.09	<0.07	<0.07	mg/kg	TM30/PM17
Dissolved Lead #	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	mg/l	TM30/PM17
Dissolved Lead (A10) #	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	TM30/PM17
Dissolved Molybdenum #	0.012	0.016	0.004	0.012	0.010	0.017	0.005	0.015	0.008	0.020	<0.002	mg/l	TM30/PM17
Dissolved Molybdenum (A10) #	0.12	0.16	0.04	0.12	0.10	0.17	0.05	0.15	0.08	0.20	<0.02	mg/kg	TM30/PM17
Dissolved Nickel #	<0.002	<0.002	<0.002	<0.002	0.020	<0.002	<0.002	<0.002	0.002	<0.002	<0.002	mg/l	TM30/PM17
Dissolved Nickel (A10) #	<0.02	<0.02	<0.02	<0.02	0.20	<0.02	<0.02	<0.02	0.02	<0.02	<0.02	mg/kg	TM30/PM17
Dissolved Selenium #	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	mg/l	TM30/PM17
Dissolved Selenium (A10) #	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	TM30/PM17
Dissolved Zinc #	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.003	0.005	<0.003	<0.003	mg/l	TM30/PM17
Dissolved Zinc (A10) #	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.05	<0.03	<0.03	mg/kg	TM30/PM17
Mercury Dissolved by CVAF #	<0.00001	<0.00001	<0.00001	<0.00001	0.00002	<0.00001	<0.00001	<0.00001	0.00001	<0.00001	<0.00001	mg/l	TM61/PM0
Mercury Dissolved by CVAF #	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	mg/kg	TM61/PM0
Phenol	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/l	TM26/PM0
Phenol	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM26/PM0
Fluoride	<0.3	<0.3	0.6	0.3	<0.3	<0.3	<0.3	0.4	0.4	0.4	<0.3	mg/l	TM173/PM0
Fluoride	<3	<3	6	3	<3	<3	<3	4	4	4	<3	mg/kg	TM173/PM0
Sulphate as SO4 #	4.8	7.9	25.1	1.9	9.4	0.7	60.6	4.2	<0.5	4.8	<0.5	mg/l	TM38/PM0
Sulphate as SO4 #	48	79	251	19	94	7	606	42	<5	48	<5	mg/kg	TM38/PM0
Chloride #	0.4	0.4	0.6	<0.3	2.3	<0.3	0.3	<0.3	0.7	0.5	<0.3	mg/l	TM38/PM0
Chloride #	4	4	6	<3	23	<3	3	<3	7	5	<3	mg/kg	TM38/PM0
Dissolved Organic Carbon	<2	<2	3	<2	13	<2	4	<2	7	<2	<2	mg/l	TM60/PM0
Dissolved Organic Carbon	<20	<20	30	<20	130	<20	40	<20	70	<20	<20	mg/kg	TM60/PM0
pH	8.23	8.24	8.13	8.15	11.94	8.67	8.21	8.31	8.21	8.20	<0.01	pH units	TM73/PM0
Total Dissolved Solids #	56	54	124	40	400	59	149	52	101	58	<35	mg/l	TM20/PM0
Total Dissolved Solids #	560	540	1240	400	3999	590	1490	520	1010	580	<350	mg/kg	TM20/PM0

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton
EMT Job No: 21/15238

Report : CEN 10:1 1 Batch

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	148-150	151-153	154-156	157-159	160-162	163-165	166-168	169-171	172-174	175-177	LOD/LOR	Units	Method No.
Sample ID	BH12	BH12	BH13	BH13	BH14	BH14	BH15	BH15	BH16	BH16			
Depth	0.00-0.70	1.00-2.50	0.30-0.70	1.00-2.00	0.30-0.90	0.90-2.00	0.30-0.80	1.90-3.00	0.30-0.80	1.00-2.00			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	2	2	2	2	2	2	2	2	2	2			
Date of Receipt	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021			
Dissolved Antimony #	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	mg/l	TM30/PM17
Dissolved Antimony (A10) #	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	mg/kg	TM30/PM17
Dissolved Arsenic #	<0.0025	<0.0025	<0.0025	<0.0025	0.0079	<0.0025	0.0070	<0.0025	0.0040	<0.0025	<0.0025	mg/l	TM30/PM17
Dissolved Arsenic (A10) #	<0.025	<0.025	<0.025	<0.025	0.079	<0.025	0.070	<0.025	0.040	<0.025	<0.025	mg/kg	TM30/PM17
Dissolved Barium #	<0.003	<0.003	<0.003	0.010	0.007	0.007	0.005	0.003	0.004	<0.003	<0.003	mg/l	TM30/PM17
Dissolved Barium (A10) #	<0.03	<0.03	<0.03	0.10	0.07	0.07	0.05	0.03	0.04	<0.03	<0.03	mg/kg	TM30/PM17
Dissolved Cadmium #	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	mg/l	TM30/PM17
Dissolved Cadmium (A10) #	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	mg/kg	TM30/PM17
Dissolved Chromium #	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	mg/l	TM30/PM17
Dissolved Chromium (A10) #	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	mg/kg	TM30/PM17
Dissolved Copper #	<0.007	<0.007	<0.007	<0.007	0.008	<0.007	0.011	<0.007	<0.007	<0.007	<0.007	mg/l	TM30/PM17
Dissolved Copper (A10) #	<0.07	<0.07	<0.07	<0.07	0.08	<0.07	0.11	<0.07	<0.07	<0.07	<0.07	mg/kg	TM30/PM17
Dissolved Lead #	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	mg/l	TM30/PM17
Dissolved Lead (A10) #	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	TM30/PM17
Dissolved Molybdenum #	0.007	0.017	0.018	0.019	0.005	0.020	0.005	0.012	0.005	0.015	<0.002	mg/l	TM30/PM17
Dissolved Molybdenum (A10) #	0.07	0.17	0.18	0.19	0.05	0.20	0.05	0.12	0.05	0.15	<0.02	mg/kg	TM30/PM17
Dissolved Nickel #	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	mg/l	TM30/PM17
Dissolved Nickel (A10) #	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	mg/kg	TM30/PM17
Dissolved Selenium #	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	mg/l	TM30/PM17
Dissolved Selenium (A10) #	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	TM30/PM17
Dissolved Zinc #	0.005	<0.003	<0.003	<0.003	0.004	<0.003	0.004	<0.003	<0.003	<0.003	<0.003	mg/l	TM30/PM17
Dissolved Zinc (A10) #	0.05	<0.03	<0.03	<0.03	0.04	<0.03	0.04	<0.03	<0.03	<0.03	<0.03	mg/kg	TM30/PM17
Mercury Dissolved by CVAF #	<0.00001	<0.00001	<0.00001	<0.00001	0.00002	<0.00001	0.00001	<0.00001	0.00001	<0.00001	<0.00001	mg/l	TM61/PM0
Mercury Dissolved by CVAF #	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	mg/kg	TM61/PM0
Phenol	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/l	TM26/PM0
Phenol	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM26/PM0
Fluoride	0.3	<0.3	0.4	<0.3	0.4	0.3	0.6	0.3	0.6	<0.3	<0.3	mg/l	TM173/PM0
Fluoride	<3	<3	4	<3	4	<3	6	3	6	<3	<3	mg/kg	TM173/PM0
Sulphate as SO4 #	5.7	1.6	5.4	2.7	<0.5	3.3	5.6	3.2	0.8	3.1	<0.5	mg/l	TM38/PM0
Sulphate as SO4 #	57	16	54	27	<5	33	56	32	8	31	<5	mg/kg	TM38/PM0
Chloride #	0.5	<0.3	0.5	0.4	1.0	<0.3	0.6	<0.3	<0.3	<0.3	<0.3	mg/l	TM38/PM0
Chloride #	5	<3	5	4	10	<3	6	<3	<3	<3	<3	mg/kg	TM38/PM0
Dissolved Organic Carbon	5	<2	2	<2	5	<2	5	<2	4	<2	<2	mg/l	TM60/PM0
Dissolved Organic Carbon	50	<20	<20	<20	50	<20	50	<20	40	<20	<20	mg/kg	TM60/PM0
pH	8.19	8.14	8.33	8.15	8.14	7.98	8.12	8.10	8.13	7.93	<0.01	pH units	TM73/PM0
Total Dissolved Solids #	64	39	63	39	104	55	108	76	83	60	<35	mg/l	TM20/PM0
Total Dissolved Solids #	640	390	630	390	1040	550	1080	760	830	600	<350	mg/kg	TM20/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton
EMT Job No: 21/15238

Report : CEN 10:1 1 Batch

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	178-180	181-183									LOD/LOR	Units	Method No.
Sample ID	BH17	BH17											
Depth	0.00-0.60	1.00-2.00											
COC No / misc													
Containers	V J T	V J T											
Sample Date	29/09/2021	29/09/2021											
Sample Type	Soil	Soil											
Batch Number	2	2											
Date of Receipt	30/09/2021	30/09/2021											
Dissolved Antimony #	<0.002	<0.002									<0.002	mg/l	TM30/PM17
Dissolved Antimony (A10) #	<0.02	<0.02									<0.02	mg/kg	TM30/PM17
Dissolved Arsenic #	0.0033	<0.0025									<0.0025	mg/l	TM30/PM17
Dissolved Arsenic (A10) #	0.033	<0.025									<0.025	mg/kg	TM30/PM17
Dissolved Barium #	<0.003	<0.003									<0.003	mg/l	TM30/PM17
Dissolved Barium (A10) #	<0.03	<0.03									<0.03	mg/kg	TM30/PM17
Dissolved Cadmium #	<0.0005	<0.0005									<0.0005	mg/l	TM30/PM17
Dissolved Cadmium (A10) #	<0.005	<0.005									<0.005	mg/kg	TM30/PM17
Dissolved Chromium #	<0.0015	<0.0015									<0.0015	mg/l	TM30/PM17
Dissolved Chromium (A10) #	<0.015	<0.015									<0.015	mg/kg	TM30/PM17
Dissolved Copper #	<0.007	<0.007									<0.007	mg/l	TM30/PM17
Dissolved Copper (A10) #	<0.07	<0.07									<0.07	mg/kg	TM30/PM17
Dissolved Lead #	<0.005	<0.005									<0.005	mg/l	TM30/PM17
Dissolved Lead (A10) #	<0.05	<0.05									<0.05	mg/kg	TM30/PM17
Dissolved Molybdenum #	0.005	0.012									<0.002	mg/l	TM30/PM17
Dissolved Molybdenum (A10) #	0.05	0.12									<0.02	mg/kg	TM30/PM17
Dissolved Nickel #	<0.002	<0.002									<0.002	mg/l	TM30/PM17
Dissolved Nickel (A10) #	<0.02	<0.02									<0.02	mg/kg	TM30/PM17
Dissolved Selenium #	<0.003	<0.003									<0.003	mg/l	TM30/PM17
Dissolved Selenium (A10) #	<0.03	<0.03									<0.03	mg/kg	TM30/PM17
Dissolved Zinc #	<0.003	<0.003									<0.003	mg/l	TM30/PM17
Dissolved Zinc (A10) #	<0.03	<0.03									<0.03	mg/kg	TM30/PM17
Mercury Dissolved by CVAF #	<0.00001	<0.00001									<0.00001	mg/l	TM61/PM0
Mercury Dissolved by CVAF #	<0.0001	<0.0001									<0.0001	mg/kg	TM61/PM0
Phenol	<0.01	<0.01									<0.01	mg/l	TM26/PM0
Phenol	<0.1	<0.1									<0.1	mg/kg	TM26/PM0
Fluoride	<0.3	0.6									<0.3	mg/l	TM173/PM0
Fluoride	<3	6									<3	mg/kg	TM173/PM0
Sulphate as SO4 #	3.2	3.1									<0.5	mg/l	TM38/PM0
Sulphate as SO4 #	32	31									<5	mg/kg	TM38/PM0
Chloride #	<0.3	<0.3									<0.3	mg/l	TM38/PM0
Chloride #	<3	<3									<3	mg/kg	TM38/PM0
Dissolved Organic Carbon	<2	<2									<2	mg/l	TM60/PM0
Dissolved Organic Carbon	<20	<20									<20	mg/kg	TM60/PM0
pH	8.35	7.92									<0.01	pH units	TM73/PM0
Total Dissolved Solids #	63	<35									<35	mg/l	TM20/PM0
Total Dissolved Solids #	630	<350									<350	mg/kg	TM20/PM0

Element Materials Technology

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton
EMT Job No: 21/15238

Report : EN12457_2

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	88-90	91-93	94-96	97-99	100-102	103-105	106-108	109-111	112-114	115-117						
Sample ID	BH01	BH01	BH02	BH02	BH03	BH03	BH04	BH04	BH05	BH05						
Depth	0.00-1.60	3.00-3.40	0.00-1.40	1.40-2.00	0.00-1.70	1.70-2.00	0.00-1.10	2.50-3.00	0.20-1.60	1.60-2.00						
COC No / misc																
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T						
Sample Date	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021						
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil						
Batch Number	2	2	2	2	2	2	2	2	2	2						
Date of Receipt	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	Inert	Stable Non-reactive	Hazardous	LOD LOR	Units	Method No.
Solid Waste Analysis																
Total Organic Carbon #	1.06	0.33	3.08	1.97	1.96	0.77	0.62	0.53	1.70	1.63	3	5	6	<0.02	%	TM21/PM24
Sum of BTEX	<0.025	<0.025	<0.025	<0.025	<0.025 SV	<0.025	<0.025 SV	<0.025	<0.025 SV	<0.025	6	-	-	<0.025	mg/kg	TM36/PM12
Sum of 7 PCBs #	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	1	-	-	<0.035	mg/kg	TM17/PM8
Mineral Oil	53	<30	77	<30	<30	<30	<30	<30	<30	<30	500	-	-	<30	mg/kg	TM5/PM8/PM16
PAH Sum of 6 #	11.43	<0.22	0.29	<0.22	0.67	1.04	<0.22	<0.22	0.84	1.73	-	-	-	<0.22	mg/kg	TM4/PM8
PAH Sum of 17	21.05	<0.64	<0.64	<0.64	1.45	2.09	<0.64	<0.64	1.72	3.75	100	-	-	<0.64	mg/kg	TM4/PM8
CEN 10:1 Leachate																
Arsenic #	0.136	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.5	2	25	<0.025	mg/kg	TM30/PM17
Barium #	<0.03	0.27	0.20	0.14	0.48	0.55	0.09	0.07	0.25	0.47	20	100	300	<0.03	mg/kg	TM30/PM17
Cadmium #	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.04	1	5	<0.005	mg/kg	TM30/PM17
Chromium #	0.023	<0.015	0.021	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	0.5	10	70	<0.015	mg/kg	TM30/PM17
Copper #	<0.07	<0.07	0.13	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	2	50	100	<0.07	mg/kg	TM30/PM17
Mercury #	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0003	0.01	0.2	2	<0.0001	mg/kg	TM61/PM0
Molybdenum #	0.04	0.13	0.13	0.10	0.12	0.23	0.31	0.19	0.23	0.25	0.5	10	30	<0.02	mg/kg	TM30/PM17
Nickel #	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	0.4	10	40	<0.02	mg/kg	TM30/PM17
Lead #	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.5	10	50	<0.05	mg/kg	TM30/PM17
Antimony #	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.06	0.7	5	<0.02	mg/kg	TM30/PM17
Selenium #	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.05	<0.03	0.1	0.5	7	<0.03	mg/kg	TM30/PM17
Zinc #	<0.03	<0.03	0.11	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	4	50	200	<0.03	mg/kg	TM30/PM17
Total Dissolved Solids #	1750	610	1711	1380	2789	1711	2149	670	1810	870	4000	60000	100000	<350	mg/kg	TM20/PM0
Dissolved Organic Carbon	60	30	60	50	50	30	<20	30	30	30	500	800	1000	<20	mg/kg	TM60/PM0
Dry Matter Content Ratio	85.8	89.7	73.0	80.4	79.2	91.4	90.4	87.4	81.9	88.8	-	-	-	<0.1	%	NONE/PM4
pH #	8.56	8.36	7.81	8.04	7.80	8.09	7.93	8.31	7.93	8.08	-	-	-	<0.01	pH units	TM73/PM11
Phenol	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1	-	-	<0.1	mg/kg	TM26/PM0
Fluoride	<3	<3	8	<3	5	3	<3	<3	4	<3	-	-	-	<3	mg/kg	TM173/PM0
Sulphate as SO4 #	440	86	560	343	893	724	949	116	546	210	1000	20000	50000	<5	mg/kg	TM38/PM0
Chloride #	19	7	19	6	7	4	<3	4	7	7	800	15000	25000	<3	mg/kg	TM38/PM0

All solid results are expressed on a dry weight basis unless stated otherwise.

Element Materials Technology

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton
EMT Job No: 21/15238

Report : EN12457_2

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	118-120	121-123	124-126	127-129	130-132	133-135	136-138	139-141	142-144	145-147	Inert	Stable Non-reactive	Hazardous	LOD LOR	Units	Method No.
Sample ID	BH07	BH07	BH08	BH08	BH09	BH09	BH10	BH10	BH11	BH11						
Depth	0.60-1.00	1.00-2.00	0.40-1.20	2.00-3.00	0.20-0.90	2.00-3.00	0.20-1.00	1.00-2.00	0.00-0.70	1.70-2.70						
COC No / misc																
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T						
Sample Date	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021						
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil						
Batch Number	2	2	2	2	2	2	2	2	2	2						
Date of Receipt	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021						
Solid Waste Analysis																
Total Organic Carbon #	0.33	0.39	9.13	0.37	1.93	0.34	0.81	0.57	8.29	6.49	3	5	6	<0.02	%	TM21/PM24
Sum of BTEX	<0.025	<0.025	<0.025 SV	<0.025	<0.025	<0.025	<0.025 SV	<0.025	<0.025 SV	<0.025	6	-	-	<0.025	mg/kg	TM36/PM12
Sum of 7 PCBs #	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	1	-	-	<0.035	mg/kg	TM17/PM8
Mineral Oil	<30	<30	<30	<30	30	<30	<30	<30	<30	<30	500	-	-	<30	mg/kg	TM5/PM8/PM16
PAH Sum of 6 #	<0.22	<0.22	2.93	<0.22	2.44	<0.22	0.79	<0.22	2.68	0.77	-	-	-	<0.22	mg/kg	TM4/PM8
PAH Sum of 17	<0.64	<0.64	6.05	<0.64	4.86	<0.64	1.47	<0.64	5.54	1.57	100	-	-	<0.64	mg/kg	TM4/PM8
CEN 10:1 Leachate																
Arsenic #	<0.025	<0.025	0.035	<0.025	<0.025	<0.025	0.096	<0.025	0.102	<0.025	0.5	2	25	<0.025	mg/kg	TM30/PM17
Barium #	<0.03	<0.03	0.05	<0.03	0.69	<0.03	0.10	<0.03	0.06	<0.03	20	100	300	<0.03	mg/kg	TM30/PM17
Cadmium #	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.04	1	5	<0.005	mg/kg	TM30/PM17
Chromium #	<0.015	<0.015	<0.015	<0.015	0.210	<0.015	<0.015	<0.015	<0.015	<0.015	0.5	10	70	<0.015	mg/kg	TM30/PM17
Copper #	<0.07	<0.07	<0.07	<0.07	2.19	<0.07	<0.07	<0.07	0.09	<0.07	2	50	100	<0.07	mg/kg	TM30/PM17
Mercury #	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	0.01	0.2	2	<0.0001	mg/kg	TM61/PM0
Molybdenum #	0.12	0.16	0.04	0.12	0.10	0.17	0.05	0.15	0.08	0.20	0.5	10	30	<0.02	mg/kg	TM30/PM17
Nickel #	<0.02	<0.02	<0.02	<0.02	0.20	<0.02	<0.02	<0.02	0.02	<0.02	0.4	10	40	<0.02	mg/kg	TM30/PM17
Lead #	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.5	10	50	<0.05	mg/kg	TM30/PM17
Antimony #	<0.02	<0.02	0.04	<0.02	0.04	<0.02	<0.02	<0.02	0.03	<0.02	0.06	0.7	5	<0.02	mg/kg	TM30/PM17
Selenium #	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.1	0.5	7	<0.03	mg/kg	TM30/PM17
Zinc #	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.05	<0.03	4	50	200	<0.03	mg/kg	TM30/PM17
Total Dissolved Solids #	560	540	1240	400	3999	590	1490	520	1010	580	4000	60000	100000	<350	mg/kg	TM20/PM0
Dissolved Organic Carbon	<20	<20	30	<20	130	<20	40	<20	70	<20	500	800	1000	<20	mg/kg	TM60/PM0
Dry Matter Content Ratio	112.4	93.5	75.8	91.5	85.0	84.2	92.7	82.2	69.2	86.7	-	-	-	<0.1	%	NONE/PM4
pH #	8.57	8.66	7.81	8.44	11.86	8.57	8.13	8.59	7.93	8.41	-	-	-	<0.01	pH units	TM73/PM11
Phenol	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1	-	-	<0.1	mg/kg	TM26/PM0
Fluoride	<3	<3	6	3	<3	<3	<3	4	4	4	-	-	-	<3	mg/kg	TM173/PM0
Sulphate as SO4 #	48	79	251	19	94	7	606	42	<5	48	1000	20000	50000	<5	mg/kg	TM38/PM0
Chloride #	4	4	6	<3	23	<3	3	<3	7	5	800	15000	25000	<3	mg/kg	TM38/PM0

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Element Materials Technology

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton
EMT Job No: 21/15238

Report : EN12457_2

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	148-150	151-153	154-156	157-159	160-162	163-165	166-168	169-171	172-174	175-177	Inert	Stable Non-reactive	Hazardous	LOD LOR	Units	Method No.
Sample ID	BH12	BH12	BH13	BH13	BH14	BH14	BH15	BH15	BH16	BH16						
Depth	0.00-0.70	1.00-2.50	0.30-0.70	1.00-2.00	0.30-0.90	0.90-2.00	0.30-0.80	1.90-3.00	0.30-0.80	1.00-2.00						
COC No / misc																
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T						
Sample Date	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021						
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil						
Batch Number	2	2	2	2	2	2	2	2	2	2						
Date of Receipt	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021						
Solid Waste Analysis																
Total Organic Carbon #	0.72	0.46	0.59	0.50	8.92	0.53	11.51	1.33	14.67	1.01	3	5	6	<0.02	%	TM21/PM24
Sum of BTEX	<0.025	<0.025	<0.025	<0.025	<0.025 SV	<0.025	<0.025 SV	<0.025	<0.025 SV	<0.025	6	-	-	<0.025	mg/kg	TM36/PM12
Sum of 7 PCBs #	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	1	-	-	<0.035	mg/kg	TM17/PM8
Mineral Oil	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	500	-	-	<30	mg/kg	TM5/PM8/PM16
PAH Sum of 6 #	<0.22	<0.22	<0.22	<0.22	8.03	<0.22	3.83	0.44	4.16	0.28	-	-	-	<0.22	mg/kg	TM4/PM8
PAH Sum of 17	<0.64	<0.64	<0.64	<0.64	15.94	<0.64	7.49	0.90	8.43	<0.64	100	-	-	<0.64	mg/kg	TM4/PM8
CEN 10:1 Leachate																
Arsenic #	<0.025	<0.025	<0.025	<0.025	0.079	<0.025	0.070	<0.025	0.040	<0.025	0.5	2	25	<0.025	mg/kg	TM30/PM17
Barium #	<0.03	<0.03	<0.03	0.10	0.07	0.07	0.05	0.03	0.04	<0.03	20	100	300	<0.03	mg/kg	TM30/PM17
Cadmium #	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.04	1	5	<0.005	mg/kg	TM30/PM17
Chromium #	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	0.5	10	70	<0.015	mg/kg	TM30/PM17
Copper #	<0.07	<0.07	<0.07	<0.07	0.08	<0.07	0.11	<0.07	<0.07	<0.07	2	50	100	<0.07	mg/kg	TM30/PM17
Mercury #	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.01	0.2	2	<0.0001	mg/kg	TM61/PM0
Molybdenum #	0.07	0.17	0.18	0.19	0.05	0.20	0.05	0.12	0.05	0.15	0.5	10	30	<0.02	mg/kg	TM30/PM17
Nickel #	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.4	10	40	<0.02	mg/kg	TM30/PM17
Lead #	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.5	10	50	<0.05	mg/kg	TM30/PM17
Antimony #	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.06	0.7	5	<0.02	mg/kg	TM30/PM17
Selenium #	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.1	0.5	7	<0.03	mg/kg	TM30/PM17
Zinc #	0.05	<0.03	<0.03	<0.03	0.04	<0.03	0.04	<0.03	<0.03	<0.03	4	50	200	<0.03	mg/kg	TM30/PM17
Total Dissolved Solids #	640	390	630	390	1040	550	1080	760	830	600	4000	60000	100000	<350	mg/kg	TM20/PM0
Dissolved Organic Carbon	50	<20	<20	<20	50	<20	50	<20	40	<20	500	800	1000	<20	mg/kg	TM60/PM0
Dry Matter Content Ratio	82.6	91.7	82.0	87.6	80.1	87.6	77.1	85.4	68.2	90.5	-	-	-	<0.1	%	NONE/PM4
pH #	8.56	8.76	8.79	8.70	8.23	8.56	8.21	8.66	8.20	8.65	-	-	-	<0.01	pH units	TM73/PM11
Phenol	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1	-	-	<0.1	mg/kg	TM26/PM0
Fluoride	<3	<3	4	<3	4	<3	6	3	6	<3	-	-	-	<3	mg/kg	TM173/PM0
Sulphate as SO4 #	57	16	54	27	<5	33	56	32	8	31	1000	20000	50000	<5	mg/kg	TM38/PM0
Chloride #	5	<3	5	4	10	<3	6	<3	<3	<3	800	15000	25000	<3	mg/kg	TM38/PM0

All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton
EMT Job No: 21/15238

Report : EN12457_2

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	178-180	181-183									Inert	Stable Non-reactive	Hazardous	LOD LOR	Units	Method No.
Sample ID	BH17	BH17														
Depth	0.00-0.60	1.00-2.00														
COC No / misc																
Containers	V J T	V J T														
Sample Date	29/09/2021	29/09/2021														
Sample Type	Soil	Soil														
Batch Number	2	2														
Date of Receipt	30/09/2021	30/09/2021														
Solid Waste Analysis																
Total Organic Carbon #	0.19	0.67									3	5	6	<0.02	%	TM21/PM24
Sum of BTEX	<0.025	<0.025									6	-	-	<0.025	mg/kg	TM36/PM12
Sum of 7 PCBs #	<0.035	<0.035									1	-	-	<0.035	mg/kg	TM17/PM8
Mineral Oil	44	<30									500	-	-	<30	mg/kg	TM5/PM8/PM16
PAH Sum of 6 #	0.34	<0.22									-	-	-	<0.22	mg/kg	TM4/PM8
PAH Sum of 17	0.67	<0.64									100	-	-	<0.64	mg/kg	TM4/PM8
CEN 10:1 Leachate																
Arsenic #	0.033	<0.025									0.5	2	25	<0.025	mg/kg	TM30/PM17
Barium #	<0.03	<0.03									20	100	300	<0.03	mg/kg	TM30/PM17
Cadmium #	<0.005	<0.005									0.04	1	5	<0.005	mg/kg	TM30/PM17
Chromium #	<0.015	<0.015									0.5	10	70	<0.015	mg/kg	TM30/PM17
Copper #	<0.07	<0.07									2	50	100	<0.07	mg/kg	TM30/PM17
Mercury #	<0.0001	<0.0001									0.01	0.2	2	<0.0001	mg/kg	TM61/PM0
Molybdenum #	0.05	0.12									0.5	10	30	<0.02	mg/kg	TM30/PM17
Nickel #	<0.02	<0.02									0.4	10	40	<0.02	mg/kg	TM30/PM17
Lead #	<0.05	<0.05									0.5	10	50	<0.05	mg/kg	TM30/PM17
Antimony #	<0.02	<0.02									0.06	0.7	5	<0.02	mg/kg	TM30/PM17
Selenium #	<0.03	<0.03									0.1	0.5	7	<0.03	mg/kg	TM30/PM17
Zinc #	<0.03	<0.03									4	50	200	<0.03	mg/kg	TM30/PM17
Total Dissolved Solids #	630	<350									4000	60000	100000	<350	mg/kg	TM20/PM0
Dissolved Organic Carbon	<20	<20									500	800	1000	<20	mg/kg	TM60/PM0
Dry Matter Content Ratio	94.3	84.4									-	-	-	<0.1	%	NONE/PM4
pH #	8.58	8.68									-	-	-	<0.01	pH units	TM73/PM11
Phenol	<0.1	<0.1									1	-	-	<0.1	mg/kg	TM26/PM0
Fluoride	<3	6									-	-	-	<3	mg/kg	TM173/PM0
Sulphate as SO4 #	32	31									1000	20000	50000	<5	mg/kg	TM38/PM0
Chloride #	<3	<3									800	15000	25000	<3	mg/kg	TM38/PM0

Client Name: Ground Investigations Ireland

Reference: 10551-04-21

Location: St Teresas Gardens

Contact: Barry Sexton

Matrix : Solid

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	EPH Interpretation
21/15238	2	BH01	0.00-1.60	88-90	PAHs & Possible lubricating oil
21/15238	2	BH01	3.00-3.40	91-93	No interpretation possible
21/15238	2	BH02	0.00-1.40	94-96	PAHs & Possible lubricating oil
21/15238	2	BH02	1.40-2.00	97-99	No interpretation possible
21/15238	2	BH03	0.00-1.70	100-102	No interpretation possible
21/15238	2	BH03	1.70-2.00	103-105	No interpretation possible
21/15238	2	BH04	0.00-1.10	106-108	No interpretation possible
21/15238	2	BH04	2.50-3.00	109-111	No interpretation possible
21/15238	2	BH05	0.20-1.60	112-114	PAHs & Possible lubricating oil
21/15238	2	BH05	1.60-2.00	115-117	No interpretation possible
21/15238	2	BH07	0.60-1.00	118-120	No interpretation possible
21/15238	2	BH07	1.00-2.00	121-123	No interpretation possible
21/15238	2	BH08	0.40-1.20	124-126	No interpretation possible
21/15238	2	BH08	2.00-3.00	127-129	No interpretation possible
21/15238	2	BH09	0.20-0.90	130-132	PAHs, possible trace lubricating oil and possible naturally occurring compounds
21/15238	2	BH09	2.00-3.00	133-135	No interpretation possible
21/15238	2	BH10	0.20-1.00	136-138	No interpretation possible
21/15238	2	BH10	1.00-2.00	139-141	No interpretation possible
21/15238	2	BH11	0.00-0.70	142-144	PAHs & Naturally occurring compounds
21/15238	2	BH11	1.70-2.70	145-147	No interpretation possible
21/15238	2	BH12	0.00-0.70	148-150	No interpretation possible
21/15238	2	BH12	1.00-2.50	151-153	No interpretation possible
21/15238	2	BH13	0.30-0.70	154-156	No interpretation possible
21/15238	2	BH13	1.00-2.00	157-159	No interpretation possible
21/15238	2	BH14	0.30-0.90	160-162	PAHs & Naturally occurring compounds
21/15238	2	BH14	0.90-2.00	163-165	No interpretation possible
21/15238	2	BH15	0.30-0.80	166-168	PAHs & Naturally occurring compounds
21/15238	2	BH15	1.90-3.00	169-171	No interpretation possible
21/15238	2	BH16	0.30-0.80	172-174	PAHs & Naturally occurring compounds
21/15238	2	BH16	1.00-2.00	175-177	No interpretation possible
21/15238	2	BH17	0.00-0.60	178-180	Tarmac/bitumen
21/15238	2	BH17	1.00-2.00	181-183	No interpretation possible

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton

Note:

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level less than 0.1%, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
21/15238	2	BH01	0.00-1.60	89	05/10/2021	**General Description (Bulk Analysis)**	soil/stones
					05/10/2021	**Asbestos Fibres**	NAD
					05/10/2021	**Asbestos ACM**	NAD
					05/10/2021	**Asbestos Type**	NAD
					05/10/2021	**Asbestos Level Screen**	NAD
21/15238	2	BH01	3.00-3.40	92	05/10/2021	**General Description (Bulk Analysis)**	soil/stones
					05/10/2021	**Asbestos Fibres**	NAD
					05/10/2021	**Asbestos ACM**	NAD
					05/10/2021	**Asbestos Type**	NAD
					05/10/2021	**Asbestos Level Screen**	NAD
21/15238	2	BH02	0.00-1.40	95	05/10/2021	**General Description (Bulk Analysis)**	Soil
					05/10/2021	**Asbestos Fibres**	NAD
					05/10/2021	**Asbestos ACM**	NAD
					05/10/2021	**Asbestos Type**	NAD
					05/10/2021	**Asbestos Level Screen**	NAD
21/15238	2	BH02	1.40-2.00	98	05/10/2021	**General Description (Bulk Analysis)**	Soil
					05/10/2021	**Asbestos Fibres**	NAD
					05/10/2021	**Asbestos ACM**	NAD
					05/10/2021	**Asbestos Type**	NAD
					05/10/2021	**Asbestos Level Screen**	NAD
21/15238	2	BH03	0.00-1.70	101	05/10/2021	**General Description (Bulk Analysis)**	Soil
					05/10/2021	**Asbestos Fibres**	NAD
					05/10/2021	**Asbestos ACM**	NAD
					05/10/2021	**Asbestos Type**	NAD
					05/10/2021	**Asbestos Level Screen**	NAD
21/15238	2	BH03	1.70-2.00	104	05/10/2021	**General Description (Bulk Analysis)**	soil/stones
					05/10/2021	**Asbestos Fibres**	NAD
					05/10/2021	**Asbestos ACM**	NAD
					05/10/2021	**Asbestos Type**	NAD
					05/10/2021	**Asbestos Level Screen**	NAD
21/15238	2	BH04	0.00-1.10	107	05/10/2021	**General Description (Bulk Analysis)**	soil/stones
					05/10/2021	**Asbestos Fibres**	NAD
					05/10/2021	**Asbestos ACM**	NAD

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
21/15238	2	BH04	0.00-1.10	107	05/10/2021	**Asbestos Type**	NAD
					05/10/2021	**Asbestos Level Screen**	NAD
21/15238	2	BH04	2.50-3.00	110	05/10/2021	**General Description (Bulk Analysis)**	soil/stones
					05/10/2021	**Asbestos Fibres**	NAD
					05/10/2021	**Asbestos ACM**	NAD
					05/10/2021	**Asbestos Type**	NAD
					05/10/2021	**Asbestos Level Screen**	NAD
21/15238	2	BH05	0.20-1.60	113	05/10/2021	**General Description (Bulk Analysis)**	Soil/Stone
					05/10/2021	**Asbestos Fibres**	NAD
					05/10/2021	**Asbestos ACM**	NAD
					05/10/2021	**Asbestos Type**	NAD
					05/10/2021	**Asbestos Level Screen**	NAD
21/15238	2	BH05	1.60-2.00	116	05/10/2021	**General Description (Bulk Analysis)**	soil
					05/10/2021	**Asbestos Fibres**	NAD
					05/10/2021	**Asbestos ACM**	NAD
					05/10/2021	**Asbestos Type**	NAD
					05/10/2021	**Asbestos Level Screen**	NAD
21/15238	2	BH07	0.60-1.00	119	05/10/2021	**General Description (Bulk Analysis)**	soil
					05/10/2021	**Asbestos Fibres**	NAD
					05/10/2021	**Asbestos ACM**	NAD
					05/10/2021	**Asbestos Type**	NAD
					05/10/2021	**Asbestos Level Screen**	NAD
21/15238	2	BH07	1.00-2.00	122	05/10/2021	**General Description (Bulk Analysis)**	Soil/Stone
					05/10/2021	**Asbestos Fibres**	NAD
					05/10/2021	**Asbestos ACM**	NAD
					05/10/2021	**Asbestos Type**	NAD
					05/10/2021	**Asbestos Level Screen**	NAD
21/15238	2	BH08	0.40-1.20	125	05/10/2021	**General Description (Bulk Analysis)**	Soil/Stone
					05/10/2021	**Asbestos Fibres**	NAD
					05/10/2021	**Asbestos ACM**	NAD
					05/10/2021	**Asbestos Type**	NAD
					05/10/2021	**Asbestos Level Screen**	NAD
21/15238	2	BH08	2.00-3.00	128	05/10/2021	**General Description (Bulk Analysis)**	Soil/Stone
					05/10/2021	**Asbestos Fibres**	NAD
					05/10/2021	**Asbestos ACM**	NAD
					05/10/2021	**Asbestos Type**	NAD
					05/10/2021	**Asbestos Level Screen**	NAD
21/15238	2	BH09	0.20-0.90	131	05/10/2021	**General Description (Bulk Analysis)**	soil
					05/10/2021	**Asbestos Fibres**	NAD
					05/10/2021	**Asbestos ACM**	NAD
					05/10/2021	**Asbestos Type**	NAD
					05/10/2021	**Asbestos Level Screen**	NAD
21/15238	2	BH09	2.00-3.00	134	05/10/2021	**General Description (Bulk Analysis)**	soil
					05/10/2021	**Asbestos Fibres**	NAD

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
21/15238	2	BH09	2.00-3.00	134	05/10/2021	**Asbestos ACM**	NAD
					05/10/2021	**Asbestos Type**	NAD
					05/10/2021	**Asbestos Level Screen**	NAD
21/15238	2	BH10	0.20-1.00	137	05/10/2021	**General Description (Bulk Analysis)**	Soil
					05/10/2021	**Asbestos Fibres**	NAD
					05/10/2021	**Asbestos ACM**	NAD
					05/10/2021	**Asbestos Type**	NAD
					05/10/2021	**Asbestos Level Screen**	NAD
21/15238	2	BH10	1.00-2.00	140	05/10/2021	**General Description (Bulk Analysis)**	Soil
					05/10/2021	**Asbestos Fibres**	NAD
					05/10/2021	**Asbestos ACM**	NAD
					05/10/2021	**Asbestos Type**	NAD
					05/10/2021	**Asbestos Level Screen**	NAD
21/15238	2	BH11	0.00-0.70	143	05/10/2021	**General Description (Bulk Analysis)**	Soil
					05/10/2021	**Asbestos Fibres**	NAD
					05/10/2021	**Asbestos ACM**	NAD
					05/10/2021	**Asbestos Type**	NAD
					05/10/2021	**Asbestos Level Screen**	NAD
21/15238	2	BH11	1.70-2.70	146	05/10/2021	**General Description (Bulk Analysis)**	Soil/Stone
					05/10/2021	**Asbestos Fibres**	NAD
					05/10/2021	**Asbestos ACM**	NAD
					05/10/2021	**Asbestos Type**	NAD
					05/10/2021	**Asbestos Level Screen**	NAD
21/15238	2	BH12	0.00-0.70	149	05/10/2021	**General Description (Bulk Analysis)**	soil
					05/10/2021	**Asbestos Fibres**	NAD
					05/10/2021	**Asbestos ACM**	NAD
					05/10/2021	**Asbestos Type**	NAD
					05/10/2021	**Asbestos Level Screen**	NAD
21/15238	2	BH12	1.00-2.50	152	06/10/2021	**General Description (Bulk Analysis)**	soil/stones
					06/10/2021	**Asbestos Fibres**	NAD
					06/10/2021	**Asbestos ACM**	NAD
					06/10/2021	**Asbestos Type**	NAD
					06/10/2021	**Asbestos Level Screen**	NAD
21/15238	2	BH13	0.30-0.70	155	06/10/2021	**General Description (Bulk Analysis)**	soil/stones
					06/10/2021	**Asbestos Fibres**	NAD
					06/10/2021	**Asbestos ACM**	NAD
					06/10/2021	**Asbestos Type**	NAD
					06/10/2021	**Asbestos Level Screen**	NAD
21/15238	2	BH13	1.00-2.00	158	05/10/2021	**General Description (Bulk Analysis)**	Soil
					05/10/2021	**Asbestos Fibres**	NAD
					05/10/2021	**Asbestos ACM**	NAD
					05/10/2021	**Asbestos Type**	NAD
					05/10/2021	**Asbestos Level Screen**	NAD

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
21/15238	2	BH14	0.30-0.90	161	05/10/2021	**General Description (Bulk Analysis)**	Soil
					05/10/2021	**Asbestos Fibres**	NAD
					05/10/2021	**Asbestos ACM**	NAD
					05/10/2021	**Asbestos Type**	NAD
					05/10/2021	**Asbestos Level Screen**	NAD
21/15238	2	BH14	0.90-2.00	164	05/10/2021	**General Description (Bulk Analysis)**	soil
					05/10/2021	**Asbestos Fibres**	NAD
					05/10/2021	**Asbestos ACM**	NAD
					05/10/2021	**Asbestos Type**	NAD
					05/10/2021	**Asbestos Level Screen**	NAD
21/15238	2	BH15	0.30-0.80	167	05/10/2021	**General Description (Bulk Analysis)**	Soil
					05/10/2021	**Asbestos Fibres**	NAD
					05/10/2021	**Asbestos ACM**	NAD
					05/10/2021	**Asbestos Type**	NAD
					05/10/2021	**Asbestos Level Screen**	NAD
21/15238	2	BH15	1.90-3.00	170	05/10/2021	**General Description (Bulk Analysis)**	Soil
					05/10/2021	**Asbestos Fibres**	NAD
					05/10/2021	**Asbestos ACM**	NAD
					05/10/2021	**Asbestos Type**	NAD
					05/10/2021	**Asbestos Level Screen**	NAD
21/15238	2	BH16	0.30-0.80	173	05/10/2021	**General Description (Bulk Analysis)**	Soil
					05/10/2021	**Asbestos Fibres**	NAD
					05/10/2021	**Asbestos ACM**	NAD
					05/10/2021	**Asbestos Type**	NAD
					05/10/2021	**Asbestos Level Screen**	NAD
21/15238	2	BH16	1.00-2.00	176	06/10/2021	**General Description (Bulk Analysis)**	soil
					06/10/2021	**Asbestos Fibres**	NAD
					06/10/2021	**Asbestos ACM**	NAD
					06/10/2021	**Asbestos Type**	NAD
					06/10/2021	**Asbestos Level Screen**	NAD
21/15238	2	BH17	0.00-0.60	179	06/10/2021	**General Description (Bulk Analysis)**	soil
					06/10/2021	**Asbestos Fibres**	NAD
					06/10/2021	**Asbestos ACM**	NAD
					06/10/2021	**Asbestos Type**	NAD
					06/10/2021	**Asbestos Level Screen**	NAD
21/15238	2	BH17	1.00-2.00	182	06/10/2021	**General Description (Bulk Analysis)**	soil
					06/10/2021	**Asbestos Fibres**	NAD
					06/10/2021	**Asbestos ACM**	NAD
					06/10/2021	**Asbestos Type**	NAD
					06/10/2021	**Asbestos Level Screen**	NAD

Client Name: Ground Investigations Ireland
Reference: 10551-04-21
Location: St Teresas Gardens
Contact: Barry Sexton

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 21/15238						

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.
Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 21/15238

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overesitimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

HWOL ACRONYMS AND OPERATORS USED

HS	Headspace Analysis.
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent.
CU	Clean-up - e.g. by florisil, silica gel.
1D	GC - Single coil gas chromatography.
Total	Aliphatics & Aromatics.
AL	Aliphatics only.
AR	Aromatics only.
2D	GC-GC - Double coil gas chromatography.
#1	EH_Total but with humics mathematically subtracted
#2	EU_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +).
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry.

EMT Job No: 21/15238

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8/PM16	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required/Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8/PM16	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required/Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5/TM36	please refer to TM5 and TM36 for method details	PM8/PM12/PM16	please refer to PM8/PM16 and PM12 for method details			AR	Yes
TM17	Modified US EPA method 8270D v5:2014. Determination of specific Polychlorinated Biphenyl congeners by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM20	Modified BS 1377-3:1990/USEPA 160.1/3 (TDS/TS: 1971) Gravimetric determination of Total Dissolved Solids/Total Solids	PM0	No preparation is required.	Yes		AR	Yes
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes

EMT Job No: 21/15238

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM0	No preparation is required.			AR	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes		AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM17	Modified method BS EN12457-2:2002 As received solid samples are leached with water in a 10:1 water to soil ratio for 24 hours, the moisture content of the sample is included in the ratio.	Yes		AR	Yes
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013I	PM0	No preparation is required.	Yes		AR	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013I	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AD	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013I	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AR	Yes
TM50	Acid soluble sulphate (Total Sulphate) analysed by ICP-OES	PM29	A hot hydrochloric acid digest is performed on a dried and ground sample, and the resulting liquor is analysed.			AD	Yes

EMT Job No: 21/15238

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM60	TC/TOC analysis of Waters by High Temperature Combustion followed by NDIR detection. Based on the following modified standard methods: USEPA 9060A (2002), APHA SMEWW 5310B:1999 22nd Edition, ASTM D 7573, and USEPA 415.1.	PM0	No preparation is required.			AR	Yes
TM61	Determination of Mercury by Cold Vapour Atomic Fluorescence - WATERS: Modified USEPA Method 245.7, Rev 2, Feb 2005. SOILS: Modified USEPA Method 7471B, Rev.2, Feb 2007	PM0	No preparation is required.	Yes		AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248 First edition (2006)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM73	Modified US EPA methods 150.1 (1982) and 9045D Rev. 4 - 2004) and BS1377-3:1990. Determination of pH by Metrohm automated probe analyser.	PM0	No preparation is required.			AR	Yes
TM73	Modified US EPA methods 150.1 (1982) and 9045D Rev. 4 - 2004) and BS1377-3:1990. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes		AR	No
TM160	Titrimetric determination of acid reserve to pH 4.0 or alkali reserve to pH 10.0 based on method C14.2 Canadian Government (2013).	PM110	Preparation of a 10% (w/w) aqueous solution of soil in distilled water			AR	No
TM173	Analysis of fluoride by ISE (Ion Selective Electrode) using modified ISE method 9214 - 340.2 (EPA 1998)	PM0	No preparation is required.			AR	Yes
NONE	No Method Code	NONE	No Method Code			AD	Yes
NONE	No Method Code	PM17	Modified method BS EN12457-2:2002 As received solid samples are leached with water in a 10:1 water to soil ratio for 24 hours, the moisture content of the sample is included in the ratio.			AR	
NONE	No Method Code	PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.			AR	

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Ireland

Attention :	James Cashen
Date :	20th October, 2021
Your reference :	10511-04-21
Our reference :	Test Report 21/16253 Batch 1
Location :	St Teresa's Garden
Date samples received :	15th October, 2021
Status :	Final Report
Issue :	1

Five samples were received for analysis on 15th October, 2021 of which five were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Authorised By:

Bruce Leslie
Project Manager

Element Materials Technology Environmental UK Limited
Registered in England and Wales
Registered Office: 10 Lower Grosvenor Place, London, SW1W 0EN
Company Registration No: 11371415

Client Name: Ground Investigations Ireland
Reference: 10511-04-21
Location: St Teresa's Garden
Contact: James Cashen
EMT Job No: 21/16253

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
$H=H_2SO_4$, Z=ZnAc, N=NaOH, $HN=HN0_3$

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	1-5	6-10	11-15	16-20	21-25						LOD/LOR	Units	Method No.
Sample ID	BH01	BH05	BH06	BH14	BH17								
Depth													
COC No / misc													
Containers	V H P G	V H P G	V H P G	V H P G	V H P G								
Sample Date	13/10/2021 10:25	13/10/2021 11:15	13/10/2021 15:10	13/10/2021 13:00	13/10/2021 11:50								
Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water								
Batch Number	1	1	1	1	1								
Date of Receipt	15/10/2021	15/10/2021	15/10/2021	15/10/2021	15/10/2021								
Dissolved Arsenic #	<2.5	3.0	3.9	<2.5	<2.5						<2.5	ug/l	TM30/PM14
Dissolved Barium #	52	113	18	52	70						<3	ug/l	TM30/PM14
Dissolved Beryllium	<0.5	<0.5	<0.5	<0.5	<0.5						<0.5	ug/l	TM30/PM14
Dissolved Boron	54	95	44	49	68						<12	ug/l	TM30/PM14
Dissolved Cadmium #	<0.5	<0.5	<0.5	<0.5	<0.5						<0.5	ug/l	TM30/PM14
Total Dissolved Chromium #	<1.5	<1.5	<1.5	<1.5	<1.5						<1.5	ug/l	TM30/PM14
Dissolved Copper #	<7	<7	<7	<7	<7						<7	ug/l	TM30/PM14
Dissolved Lead #	<5	<5	<5	<5	<5						<5	ug/l	TM30/PM14
Dissolved Mercury #	<1	<1	<1	<1	<1						<1	ug/l	TM30/PM14
Dissolved Nickel #	2	13	<2	4	8						<2	ug/l	TM30/PM14
Dissolved Selenium #	<3	<3	<3	<3	<3						<3	ug/l	TM30/PM14
Dissolved Vanadium #	<1.5	<1.5	3.5	<1.5	<1.5						<1.5	ug/l	TM30/PM14
Dissolved Zinc #	<3	<3	20	4	7						<3	ug/l	TM30/PM14
PAH MS													
Naphthalene #	<0.1	<0.1	<0.1	<0.1	<0.1						<0.1	ug/l	TM4/PM30
Acenaphthylene #	<0.013	<0.013	<0.013	<0.013	<0.013						<0.013	ug/l	TM4/PM30
Acenaphthene #	<0.013	0.031	<0.013	<0.013	<0.013						<0.013	ug/l	TM4/PM30
Fluorene #	<0.014	0.127	<0.014	<0.014	<0.014						<0.014	ug/l	TM4/PM30
Phenanthrene #	<0.011	0.497	<0.011	<0.011	0.025						<0.011	ug/l	TM4/PM30
Anthracene #	<0.013	0.030	<0.013	<0.013	<0.013						<0.013	ug/l	TM4/PM30
Fluoranthene #	0.022	0.214	<0.012	<0.012	0.016						<0.012	ug/l	TM4/PM30
Pyrene #	0.024	0.256	<0.013	<0.013	0.018						<0.013	ug/l	TM4/PM30
Benzo(a)anthracene #	<0.015	0.056	<0.015	<0.015	<0.015						<0.015	ug/l	TM4/PM30
Chrysene #	0.012	0.067	<0.011	<0.011	<0.011						<0.011	ug/l	TM4/PM30
Benzo(bk)fluoranthene #	<0.018	0.066	<0.018	<0.018	<0.018						<0.018	ug/l	TM4/PM30
Benzo(a)pyrene #	<0.016	0.025	<0.016	<0.016	<0.016						<0.016	ug/l	TM4/PM30
Indeno(123cd)pyrene #	<0.011	<0.011	<0.011	<0.011	<0.011						<0.011	ug/l	TM4/PM30
Dibenzo(ah)anthracene #	<0.01	<0.01	<0.01	<0.01	<0.01						<0.01	ug/l	TM4/PM30
Benzo(ghi)perylene #	<0.011	0.011	<0.011	<0.011	<0.011						<0.011	ug/l	TM4/PM30
Coronene	<0.1	<0.1	<0.1	<0.1	<0.1						<0.1	ug/l	TM4/PM30
PAH 6 Total #	<0.068	0.316	<0.068	<0.068	<0.068						<0.068	ug/l	TM4/PM30
PAH 17 Total	<0.295	1.380	<0.295	<0.295	<0.295						<0.295	ug/l	TM4/PM30
Benzo(b)fluoranthene	<0.01	0.05	<0.01	<0.01	<0.01						<0.01	ug/l	TM4/PM30
Benzo(k)fluoranthene	<0.01	0.02	<0.01	<0.01	<0.01						<0.01	ug/l	TM4/PM30
B(ghi)Perylene + I(123cd)Pyrene	<0.022	<0.022	<0.022	<0.022	<0.022						<0.022	ug/l	TM4/PM30
Sum of 4DW PAHs	<0.04	0.08	<0.04	<0.04	<0.04						<0.04	ug/l	TM4/PM30
PAH Surrogate % Recovery	80	74	75	77	81						<0	%	TM4/PM30
Methyl Tertiary Butyl Ether #	<0.1	<0.1	<0.1	<0.1	<0.1						<0.1	ug/l	TM15/PM10
Benzene #	<0.5	<0.5	<0.5	<0.5	<0.5						<0.5	ug/l	TM15/PM10
Toluene #	<5	<5	<5	<5	<5						<5	ug/l	TM15/PM10
Ethylbenzene #	<1	<1	<1	<1	<1						<1	ug/l	TM15/PM10
m/p-Xylene #	<2	<2	<2	<2	<2						<2	ug/l	TM15/PM10

Client Name: Ground Investigations Ireland
Reference: 10511-04-21
Location: St Teresa's Garden
Contact: James Cashen
EMT Job No: 21/16253

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
$H=H_2SO_4$, Z=ZnAc, N=NaOH, $HN=HN0_3$

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	1-5	6-10	11-15	16-20	21-25						LOD/LOR	Units	Method No.
Sample ID	BH01	BH05	BH06	BH14	BH17								
Depth													
COC No / misc													
Containers	V H P G	V H P G	V H P G	V H P G	V H P G								
Sample Date	13/10/2021 10:25	13/10/2021 11:15	13/10/2021 15:10	13/10/2021 13:00	13/10/2021 11:50								
Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water								
Batch Number	1	1	1	1	1								
Date of Receipt	15/10/2021	15/10/2021	15/10/2021	15/10/2021	15/10/2021								
o-Xylene #	<1	<1	<1	<1	<1						<1	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	88	96	99	97	99						<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	106	106	105	99	99						<0	%	TM15/PM10
Mineral Oil (C10-C40)	1630	660	<10	1989	400						<10	ug/l	TM5/PM16/PM30
TPH CWG													
Aliphatics													
>C5-C6 #	<10	<10	<10	<10	<10						<10	ug/l	TM36/PM12
>C6-C8 #	<10	<10	<10	<10	<10						<10	ug/l	TM36/PM12
>C8-C10 #	<10	<10	<10	<10	<10						<10	ug/l	TM36/PM12
>C10-C12 #	<5	<5	<5	139	<5						<5	ug/l	TM5/PM16/PM30
>C12-C16 #	<10	60	<10	610	<10						<10	ug/l	TM5/PM16/PM30
>C16-C21 #	<10	410	<10	1230	<10						<10	ug/l	TM5/PM16/PM30
>C21-C35 #	1540	190	<10	10	400						<10	ug/l	TM5/PM16/PM30
Total aliphatics C5-35 #	1540	660	<10	1989	400						<10	ug/l	TM5/TM36/PM12/PM16/PM30
Aromatics													
>C5-EC7 #	<10	<10	<10	<10	<10						<10	ug/l	TM36/PM12
>EC7-EC8 #	<10	<10	<10	<10	<10						<10	ug/l	TM36/PM12
>EC8-EC10 #	<10	<10	<10	<10	<10						<10	ug/l	TM36/PM12
>EC10-EC12 #	<5	<5	<5	<5	<5						<5	ug/l	TM5/PM16/PM30
>EC12-EC16 #	<10	70	<10	<10	<10						<10	ug/l	TM5/PM16/PM30
>EC16-EC21 #	<10	100	<10	<10	<10						<10	ug/l	TM5/PM16/PM30
>EC21-EC35 #	750	<10	<10	<10	<10						<10	ug/l	TM5/PM16/PM30
Total aromatics C5-35 #	750	170	<10	<10	<10						<10	ug/l	TM5/TM36/PM12/PM16/PM30
Total aliphatics and aromatics(C5-35) #	2290	830	<10	1989	400						<10	ug/l	TM5/TM36/PM12/PM16/PM30
Total Phenols HPLC	<0.15	<0.15	<0.15	<0.15	<0.15						<0.15	mg/l	TM26/PM0
Sulphate as SO4 #	60.9	88.2	43.7	66.4	61.8						<0.5	mg/l	TM38/PM0
Chloride #	34.9	37.7	18.0	25.8	38.6						<0.3	mg/l	TM38/PM0
Ortho Phosphate as P #	<0.03	<0.03	<0.03	<0.03	<0.03						<0.03	mg/l	TM38/PM0
Hexavalent Chromium	<0.006	<0.006	<0.006	<0.006	<0.006						<0.006	mg/l	TM38/PM0
Total Ammonia as N #	0.41	0.28	0.03	0.08	0.12						<0.03	mg/l	TM38/PM0
Total Dissolved Chromium III	<6	<6	<6	<6	<6						<6	ug/l	TM0/PM0
Sulphide	<0.01	<0.01	<0.01	<0.01	<0.01						<0.01	mg/l	TM107/PM0
Anionic Surfactants	<0.2	<0.2	<0.2	<0.2	<0.2						<0.2	mg/l	TM33/PM0
BOD (Settled) #	<1	1	<1	7	<1						<1	mg/l	TM58/PM0
COD (Settled) #	40	23	<7	70	20						<7	mg/l	TM57/PM0
Fats Oils and Grease	<4	<4	<4	<4	<4						<4	mg/l	TM187/PM30
Free/Residual Chlorine	<0.02	<0.02	<0.02	0.06	<0.02						<0.02	mg/l	TM66/PM0

Element Materials Technology

Client Name: Ground Investigations Ireland
Reference: 10511-04-21
Location: St Teresa's Garden
Contact: James Cashen
EMT Job No: 21/16253

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
$H=H_2SO_4$, Z=ZnAc, N=NaOH, $HN=HN0_3$

EMT Sample No.	1-5	6-10	11-15	16-20	21-25							
Sample ID	BH01	BH05	BH06	BH14	BH17							
Depth												
COC No / misc												
Containers	V H P G	V H P G	V H P G	V H P G	V H P G							
Sample Date	13/10/2021 10:25	13/10/2021 11:15	13/10/2021 15:10	13/10/2021 13:00	13/10/2021 11:50							
Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water							
Batch Number	1	1	1	1	1							
Date of Receipt	15/10/2021	15/10/2021	15/10/2021	15/10/2021	15/10/2021							

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
Total Nitrogen	68.6	10.5	1.2	5.1	2.7						<0.5	mg/l	TM38/TM125/PM0
Total Suspended Solids #	45509	7031	189	64	1592						<10	mg/l	TM37/PM0

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Ground Investigations Ireland
Reference: 10511-04-21
Location: St Teresa's Garden
Contact: James Cashen
EMT Job No: 21/16253

SVOC Report : **Liquid**

EMT Sample No.	1-5	6-10	11-15	16-20	21-25						LOD/LOR	Units	Method No.
Sample ID	BH01	BH05	BH06	BH14	BH17								
Depth													
COC No / misc													
Containers	V H P G	V H P G	V H P G	V H P G	V H P G								
Sample Date	13/10/2021 10:25	13/10/2021 11:15	13/10/2021 15:10	13/10/2021 13:00	13/10/2021 11:50								
Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water								
Batch Number	1	1	1	1	1								
Date of Receipt	15/10/2021	15/10/2021	15/10/2021	15/10/2021	15/10/2021								
SVOC MS													
Phenols													
2-Chlorophenol #	<3 AA	<3 AA	<3 AA	<3 AA	<3 AA						<1	ug/l	TM16/PM30
2-Methylphenol #	<1.5 AA	<1.5 AA	<1.5 AA	<1.5 AA	<1.5 AA						<0.5	ug/l	TM16/PM30
2-Nitrophenol	<1.5 AA	<1.5 AA	<1.5 AA	<1.5 AA	<1.5 AA						<0.5	ug/l	TM16/PM30
2,4-Dichlorophenol #	<1.5 AA	<1.5 AA	<1.5 AA	<1.5 AA	<1.5 AA						<0.5	ug/l	TM16/PM30
2,4-Dimethylphenol	<3 AA	<3 AA	<3 AA	<3 AA	<3 AA						<1	ug/l	TM16/PM30
2,4,5-Trichlorophenol #	<1.5 AA	<1.5 AA	<1.5 AA	<1.5 AA	<1.5 AA						<0.5	ug/l	TM16/PM30
2,4,6-Trichlorophenol	<3 AA	<3 AA	<3 AA	<3 AA	<3 AA						<1	ug/l	TM16/PM30
4-Chloro-3-methylphenol #	<1.5 AA	<1.5 AA	<1.5 AA	<1.5 AA	<1.5 AA						<0.5	ug/l	TM16/PM30
4-Methylphenol	<3 AA	<3 AA	<3 AA	<3 AA	<3 AA						<1	ug/l	TM16/PM30
4-Nitrophenol	<30 AA	<30 AA	<30 AA	<30 AA	<30 AA						<10	ug/l	TM16/PM30
Pentachlorophenol	<3 AA	<3 AA	<3 AA	<3 AA	<3 AA						<1	ug/l	TM16/PM30
Phenol	<3 AA	<3 AA	<3 AA	<3 AA	<3 AA						<1	ug/l	TM16/PM30
PAHs													
2-Chloronaphthalene #	<3 AA	<3 AA	<3 AA	<3 AA	<3 AA						<1	ug/l	TM16/PM30
2-Methylnaphthalene #	<3 AA	<3 AA	<3 AA	<3 AA	<3 AA						<1	ug/l	TM16/PM30
Phthalates													
Bis(2-ethylhexyl) phthalate	<15 AA	<15 AA	<15 AA	<15 AA	<15 AA						<5	ug/l	TM16/PM30
Butylbenzyl phthalate	<3 AA	<3 AA	<3 AA	<3 AA	<3 AA						<1	ug/l	TM16/PM30
Di-n-butyl phthalate #	<4.5 AA	<4.5 AA	<4.5 AA	<4.5 AA	<4.5 AA						<1.5	ug/l	TM16/PM30
Di-n-Octyl phthalate	<3 AA	<3 AA	<3 AA	<3 AA	<3 AA						<1	ug/l	TM16/PM30
Diethyl phthalate #	<3 AA	<3 AA	<3 AA	<3 AA	<3 AA						<1	ug/l	TM16/PM30
Dimethyl phthalate	<3 AA	<3 AA	<3 AA	<3 AA	<3 AA						<1	ug/l	TM16/PM30
Other SVOCs													
1,2-Dichlorobenzene #	<3 AA	<3 AA	<3 AA	<3 AA	<3 AA						<1	ug/l	TM16/PM30
1,2,4-Trichlorobenzene #	<3 AA	<3 AA	<3 AA	<3 AA	<3 AA						<1	ug/l	TM16/PM30
1,3-Dichlorobenzene #	<3 AA	<3 AA	<3 AA	<3 AA	<3 AA						<1	ug/l	TM16/PM30
1,4-Dichlorobenzene #	<3 AA	<3 AA	<3 AA	<3 AA	<3 AA						<1	ug/l	TM16/PM30
2-Nitroaniline	<3 AA	<3 AA	<3 AA	<3 AA	<3 AA						<1	ug/l	TM16/PM30
2,4-Dinitrotoluene #	<1.5 AA	<1.5 AA	<1.5 AA	<1.5 AA	<1.5 AA						<0.5	ug/l	TM16/PM30
2,6-Dinitrotoluene	<3 AA	<3 AA	<3 AA	<3 AA	<3 AA						<1	ug/l	TM16/PM30
3-Nitroaniline	<3 AA	<3 AA	<3 AA	<3 AA	<3 AA						<1	ug/l	TM16/PM30
4-Bromophenylphenylether #	<3 AA	<3 AA	<3 AA	<3 AA	<3 AA						<1	ug/l	TM16/PM30
4-Chloroaniline	<3 AA	<3 AA	<3 AA	<3 AA	<3 AA						<1	ug/l	TM16/PM30
4-Chlorophenylphenylether #	<3 AA	<3 AA	<3 AA	<3 AA	<3 AA						<1	ug/l	TM16/PM30
4-Nitroaniline	<1.5 AA	<1.5 AA	<1.5 AA	<1.5 AA	<1.5 AA						<0.5	ug/l	TM16/PM30
Azobenzene #	<1.5 AA	<1.5 AA	<1.5 AA	<1.5 AA	<1.5 AA						<0.5	ug/l	TM16/PM30
Bis(2-chloroethoxy)methane #	<1.5 AA	<1.5 AA	<1.5 AA	<1.5 AA	<1.5 AA						<0.5	ug/l	TM16/PM30
Bis(2-chloroethyl)ether #	<3 AA	<3 AA	<3 AA	<3 AA	<3 AA						<1	ug/l	TM16/PM30
Carbazole #	<1.5 AA	<1.5 AA	<1.5 AA	<1.5 AA	<1.5 AA						<0.5	ug/l	TM16/PM30
Dibenzofuran #	<1.5 AA	<1.5 AA	<1.5 AA	<1.5 AA	<1.5 AA						<0.5	ug/l	TM16/PM30
Hexachlorobenzene #	<3 AA	<3 AA	<3 AA	<3 AA	<3 AA						<1	ug/l	TM16/PM30
Hexachlorobutadiene #	<3 AA	<3 AA	<3 AA	<3 AA	<3 AA						<1	ug/l	TM16/PM30
Hexachlorocyclopentadiene	<3 AA	<3 AA	<3 AA	<3 AA	<3 AA						<1	ug/l	TM16/PM30
Hexachloroethane #	<3 AA	<3 AA	<3 AA	<3 AA	<3 AA						<1	ug/l	TM16/PM30
Isophorone #	<1.5 AA	<1.5 AA	<1.5 AA	<1.5 AA	<1.5 AA						<0.5	ug/l	TM16/PM30
N-nitrosodi-n-propylamine #	<1.5 AA	<1.5 AA	<1.5 AA	<1.5 AA	<1.5 AA						<0.5	ug/l	TM16/PM30
Nitrobenzene #	<3 AA	<3 AA	<3 AA	<3 AA	<3 AA						<1	ug/l	TM16/PM30
Surrogate Recovery 2-Fluorobiphenyl	80 AA	54 SV AA	76 AA	79 AA	78 AA						<0	%	TM16/PM30
Surrogate Recovery p-Terphenyl-d14	85 AA	55 SV AA	81 AA	85 AA	82 AA						<0	%	TM16/PM30

Please see attached notes for all abbreviations and acronyms

Client Name: Ground Investigations Ireland
Reference: 10511-04-21
Location: St Teresa's Garden
Contact: James Cashen
EMT Job No: 21/16253

VOC Report : **Liquid**

EMT Sample No.	1-5	6-10	11-15	16-20	21-25							
Sample ID	BH01	BH05	BH06	BH14	BH17							
Depth												
COC No / misc												
Containers	V H P G	V H P G	V H P G	V H P G	V H P G							
Sample Date	13/10/2021 10:25	13/10/2021 11:15	13/10/2021 15:10	13/10/2021 13:00	13/10/2021 11:50							
Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water							
Batch Number	1	1	1	1	1							
Date of Receipt	15/10/2021	15/10/2021	15/10/2021	15/10/2021	15/10/2021							

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2	<2	<2	<2	<2						<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether #	<0.1	<0.1	<0.1	<0.1	<0.1						<0.1	ug/l	TM15/PM10
Chloromethane #	<3	<3	<3	<3	<3						<3	ug/l	TM15/PM10
Vinyl Chloride #	<0.1	<0.1	<0.1	<0.1	<0.1						<0.1	ug/l	TM15/PM10
Bromomethane	<1	<1	<1	<1	<1						<1	ug/l	TM15/PM10
Chloroethane #	<3	<3	<3	<3	<3						<3	ug/l	TM15/PM10
Trichlorofluoromethane #	<3	<3	<3	<3	<3						<3	ug/l	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<3	<3	<3	<3	<3						<3	ug/l	TM15/PM10
Dichloromethane (DCM) #	<3	<3	<3	<3	<3						<3	ug/l	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3	<3	<3	<3						<3	ug/l	TM15/PM10
1,1-Dichloroethane #	<3	<3	<3	<3	<3						<3	ug/l	TM15/PM10
cis-1-2-Dichloroethene #	<3	<3	<3	<3	<3						<3	ug/l	TM15/PM10
2,2-Dichloropropane	<1	<1	<1	<1	<1						<1	ug/l	TM15/PM10
Bromochloromethane #	<2	<2	<2	<2	<2						<2	ug/l	TM15/PM10
Chloroform #	<2	<2	<2	<2	<2						<2	ug/l	TM15/PM10
1,1,1-Trichloroethane #	<2	<2	<2	<2	<2						<2	ug/l	TM15/PM10
1,1-Dichloropropene #	<3	<3	<3	<3	<3						<3	ug/l	TM15/PM10
Carbon tetrachloride #	<2	<2	<2	<2	<2						<2	ug/l	TM15/PM10
1,2-Dichloroethane #	<2	<2	<2	<2	<2						<2	ug/l	TM15/PM10
Benzene #	<0.5	<0.5	<0.5	<0.5	<0.5						<0.5	ug/l	TM15/PM10
Trichloroethene (TCE) #	<3	<3	<3	<3	<3						<3	ug/l	TM15/PM10
1,2-Dichloropropane #	<2	<2	<2	<2	<2						<2	ug/l	TM15/PM10
Dibromomethane #	<3	<3	<3	<3	<3						<3	ug/l	TM15/PM10
Bromodichloromethane #	<2	<2	<2	<2	<2						<2	ug/l	TM15/PM10
cis-1-3-Dichloropropene	<2	<2	<2	<2	<2						<2	ug/l	TM15/PM10
Toluene #	<5	<5	<5	<5	<5						<5	ug/l	TM15/PM10
trans-1-3-Dichloropropene	<2	<2	<2	<2	<2						<2	ug/l	TM15/PM10
1,1,2-Trichloroethane #	<2	<2	<2	<2	<2						<2	ug/l	TM15/PM10
Tetrachloroethene (PCE) #	<3	<3	<3	<3	<3						<3	ug/l	TM15/PM10
1,3-Dichloropropane #	<2	<2	<2	<2	<2						<2	ug/l	TM15/PM10
Dibromochloromethane #	<2	<2	<2	<2	<2						<2	ug/l	TM15/PM10
1,2-Dibromoethane #	<2	<2	<2	<2	<2						<2	ug/l	TM15/PM10
Chlorobenzene #	<2	<2	<2	<2	<2						<2	ug/l	TM15/PM10
1,1,1,2-Tetrachloroethane #	<2	<2	<2	<2	<2						<2	ug/l	TM15/PM10
Ethylbenzene #	<1	<1	<1	<1	<1						<1	ug/l	TM15/PM10
m/p-Xylene #	<2	<2	<2	<2	<2						<2	ug/l	TM15/PM10
o-Xylene #	<1	<1	<1	<1	<1						<1	ug/l	TM15/PM10
Styrene	<2	<2	<2	<2	<2						<2	ug/l	TM15/PM10
Bromoform #	<2	<2	<2	<2	<2						<2	ug/l	TM15/PM10
Isopropylbenzene #	<3	<3	<3	<3	<3						<3	ug/l	TM15/PM10
1,1,2,2-Tetrachloroethane	<4	<4	<4	<4	<4						<4	ug/l	TM15/PM10
Bromobenzene #	<2	<2	<2	<2	<2						<2	ug/l	TM15/PM10
1,2,3-Trichloropropane #	<3	<3	<3	<3	<3						<3	ug/l	TM15/PM10
Propylbenzene #	<3	<3	<3	<3	<3						<3	ug/l	TM15/PM10
2-Chlorotoluene #	<3	<3	<3	<3	<3						<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene #	<3	<3	<3	<3	<3						<3	ug/l	TM15/PM10
4-Chlorotoluene #	<3	<3	<3	<3	<3						<3	ug/l	TM15/PM10
tert-Butylbenzene #	<3	<3	<3	<3	<3						<3	ug/l	TM15/PM10
1,2,4-Trimethylbenzene #	<3	<3	<3	<3	<3						<3	ug/l	TM15/PM10
sec-Butylbenzene #	<3	<3	<3	<3	<3						<3	ug/l	TM15/PM10
4-Isopropyltoluene #	<3	<3	<3	<3	<3						<3	ug/l	TM15/PM10
1,3-Dichlorobenzene #	<3	<3	<3	<3	<3						<3	ug/l	TM15/PM10
1,4-Dichlorobenzene #	<3	<3	<3	<3	<3						<3	ug/l	TM15/PM10
n-Butylbenzene #	<3	<3	<3	<3	<3						<3	ug/l	TM15/PM10
1,2-Dichlorobenzene #	<3	<3	<3	<3	<3						<3	ug/l	TM15/PM10
1,2-Dibromo-3-chloropropane	<2	<2	<2	<2	<2						<2	ug/l	TM15/PM10
1,2,4-Trichlorobenzene	<3	<3	<3	<3	<3						<3	ug/l	TM15/PM10
Hexachlorobutadiene	<3	<3	<3	<3	<3						<3	ug/l	TM15/PM10
Naphthalene	<2	<2	<2	<2	<2						<2	ug/l	TM15/PM10
1,2,3-Trichlorobenzene	<3	<3	<3	<3	<3						<3	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	88	96	99	97	99						<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	106	106	105	99	99						<0	%	TM15/PM10

All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Ground Investigations Ireland
Reference: 10511-04-21
Location: St Teresa's Garden
Contact: James Cashen

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 21/16253						

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.
Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 21/16253

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overesitimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x3 Dilution

HWOL ACRONYMS AND OPERATORS USED

HS	Headspace Analysis.
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent.
CU	Clean-up - e.g. by florisil, silica gel.
1D	GC - Single coil gas chromatography.
Total	Aliphatics & Aromatics.
AL	Aliphatics only.
AR	Aromatics only.
2D	GC-GC - Double coil gas chromatography.
#1	EH_Total but with humics mathematically subtracted
#2	EU_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +).
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry.

EMT Job No: 21/16253

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM0	Not available	PM0	No preparation is required.				
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM16/PM30	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE/Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM16/PM30	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE/Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM5/TM36	please refer to TM5 and TM36 for method details	PM12/PM16/PM30	please refer to PM16/PM30 and PM12 for method details	Yes			
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.				
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes			
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			

EMT Job No: 21/16253

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM0	No preparation is required.				
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM14	Preparation of waters and leachates for metals by ICP OES/ICP MS. Samples are filtered for Dissolved metals, and remain unfiltered for Total metals then acidified				
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM14	Preparation of waters and leachates for metals by ICP OES/ICP MS. Samples are filtered for Dissolved metals, and remain unfiltered for Total metals then acidified	Yes			
TM33	Determination of Anionic surfactants by reaction with Methylene Blue to form complexes which are analysed spectrophotometrically. (MBAS)	PM0	No preparation is required.				
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes			
TM37	Modified methods - TSS: USEPA 160.2 (1985), EN872:2005 and APHA SMEWW 2540D:1999 22nd Edition; VSS: USEPA 1684 (Jan 2001), USEPA 160.4 (1971) and SMEWW 2540E:1999 22nd Edition. Gravimetric determination of Total Suspended Solids (TSS) and Volatile Suspended Solids (VSS). Sample is filtered through a 1.5um pore size glass fibre filter and the resulting residue is dried and weighed at 105°C for TSS and 550°C for VSS.	PM0	No preparation is required.	Yes			
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013I	PM0	No preparation is required.				
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013I	PM0	No preparation is required.	Yes			
TM38/TM125	Total Nitogen/Organic Nitrogen by calculation	PM0	No preparation is required.				
TM57	Modified US EPA Method 410.4. (Rev. 2.0 1993) Comparable with ISO 15705:2002. Chemical Oxygen Demand is determined by hot digestion with Potassium Dichromate and measured spectrophotometerically.	PM0	No preparation is required.	Yes			

EMT Job No: 21/16253

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM58	APHA SMEWW 5210B:1999 22nd Edition. Comparible with ISO 5815:1989. Measurement of Biochemical Oxygen Demand. When cBOD (Carbonaceous BOD) is requested a nitrification inhibitor is added which prevents the oxidation of reduced forms of nitrogen, such as am	PM0	No preparation is required.	Yes			
TM66	Determination of Free Chlorine which reacts with DPD (N,N-diethyl-p-phenylenediamine) reagent and measured spectrophotometrically.	PM0	No preparation is required.				
TM107	Determination of Sulphide/Thiocyanate by Skalar Continuous Flow Analyser	PM0	No preparation is required.				
TM187	Hexane extractable oil and grease in Waters is determined by IR detection at absorbance 2940cm-1 using calibrated InfraCal 2, ATR-SP	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				

APPENDIX 7 – HazWasteOnLine™ Report

GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental

HazWasteOnline™

Waste Classification Report

HazWasteOnline™ classifies waste as either **hazardous** or **non-hazardous** based on its chemical composition, related legislation and the rules and data defined in the current UK or EU technical guidance (Appendix C) (note that HP 9 Infectious is not assessed). It is the responsibility of the classifier named below to:

a) understand the origin of the waste
b) select the correct List of Waste code(s)
c) confirm that the list of determinands, results and sampling plan are fit for purpose
d) select and justify the chosen metal species (Appendix B)
e) correctly apply moisture correction and other available corrections
f) add the meta data for their user-defined substances (Appendix A)
g) check that the classification engine is suitable with respect to the national destination of the waste (Appendix C)

To aid the reviewer, the laboratory results, assumptions and justifications managed by the classifier are highlighted in pale yellow.

VL3KN-EZI76-BHD84

Job name

Saint Teresa's Gardens

Description/Comments

Project

10551-04-21

Site

Saint Teresa's Gardens

Classified by

Name:
Barry Sexton
Date:
21 Oct 2021 11:40 GMT
Telephone:
353 (01) 601 5175 / 5176

Company:
Ground Investigations Ireland Ltd
Catherinestown House, Hazelhatch Road, Newcastle, Co. Dublin.

HazWasteOnline™ provides a two day, hazardous waste classification course that covers the use of the software and both basic and advanced waste classification techniques. Certification has to be renewed every 3 years.

HazWasteOnline™ Certification: CERTIFIED

Course	Date
Hazardous Waste Classification	10 Apr 2019

Next 3 year Refresher due by Apr 2022

Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	WS01-28/09/2021-0.00-1.00m		Non Hazardous		3
2	WS01-28/09/2021-1.00-2.00m		Non Hazardous		5
3	WS01-28/09/2021-2.00-3.00m		Non Hazardous		7
4	WS02-28/09/2021-0.00-0.70m		Non Hazardous		9
5	WS02-28/09/2021-0.70-2.60m		Non Hazardous		11
6	WS02-28/09/2021-2.60-3.00m		Non Hazardous		13
7	WS03-28/09/2021-0.00-1.00m		Non Hazardous		15
8	WS03-28/09/2021-1.00-1.60m		Non Hazardous		17
9	WS03-28/09/2021-1.60-3.00m		Non Hazardous		19
10	WS04-28/09/2021-0.00-0.80m		Non Hazardous		21
11	WS04-28/09/2021-0.80-2.80m		Non Hazardous		23
12	WS04-28/09/2021-2.80-3.00m		Non Hazardous		25
13	WS05-28/09/2021-0.00-1.00m		Non Hazardous		27
14	WS05-28/09/2021-1.00-1.30m		Non Hazardous		30
15	WS05-28/09/2021-1.30-2.70m		Non Hazardous		32
16	WS05-28/09/2021-2.70-3.00m		Non Hazardous		34
17	WS06-28/09/2021-0.00-1.00m		Non Hazardous		36
18	WS06-28/09/2021-1.00-2.30m		Non Hazardous		38
19	WS06-28/09/2021-2.30-3.00m		Non Hazardous		40
20	WS07-28/09/2021-0.00-0.70m		Non Hazardous		42
21	WS07-28/09/2021-0.70-1.80m		Non Hazardous		44
22	WS07-28/09/2021-1.80-2.00m		Non Hazardous		46
23	WS08-28/09/2021-0.00-1.00m		Non Hazardous		48
24	WS08-28/09/2021-1.00-2.00m		Non Hazardous		51
25	WS08-28/09/2021-2.00-3.30m		Non Hazardous		53
26	WS08-28/09/2021-3.30-4.00m		Non Hazardous		55
27	WS09A-28/09/2021-0.00-0.85m		Non Hazardous		57
28	WS10-28/09/2021-0.00-2.30m		Non Hazardous		60
29	WS10-28/09/2021-2.30-3.00m		Non Hazardous		62

Related documents

#	Name	Description
1	Saint Teresa's Gardens Batch 1.HWOL[2]	.hwol[2] file used to create the Job
2	Saint Teresa's Gardens Batch-2-202110201008.HWOL	.hwol file used to create the Job
3	Example waste stream template for contaminated soils	waste stream template used to create this Job

Report

Created by: Barry Sexton

Created date: 21 Oct 2021 11:40 GMT

Classification of sample: WS01-28/09/2021-0.00-1.00m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
WS01-28/09/2021-0.00-1.00m
Moisture content:
23.5%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 23.5% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		2 mg/kg	1.197	1.832 mg/kg	0.000183 %	✓	
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		17.3 mg/kg	1.32	17.474 mg/kg	0.00175 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		4 mg/kg	1.142	3.496 mg/kg	0.00035 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		59.4 mg/kg	1.462	66.415 mg/kg	0.00664 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		68 mg/kg	1.126	58.569 mg/kg	0.00586 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	80 mg/kg	1.56	95.461 mg/kg	0.00612 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		8.2 mg/kg	1.5	9.411 mg/kg	0.000941 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		42.7 mg/kg	2.976	97.221 mg/kg	0.00972 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		3 mg/kg	2.554	5.861 mg/kg	0.000586 %	✓	
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		126 mg/kg	1.245	119.978 mg/kg	0.012 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				8.33	pH		8.33	pH	8.33 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22	●	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23	●	fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25	●	anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26	●	fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27	●	pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				417	mg/kg	1.117	356.171	mg/kg	0.0356 %	✓	
			215-127-9	1304-28-5									
38	●	coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0852 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS01-28/09/2021-1.00-2.00m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
WS01-28/09/2021-1.00-2.00m
Moisture content:
14.2%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 14.2% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		<1 mg/kg	1.197	<1.197 mg/kg	<0.00012 %		<**LOD**
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		5.7 mg/kg	1.32	6.457 mg/kg	0.000646 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		2 mg/kg	1.142	1.96 mg/kg	0.000196 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		38 mg/kg	1.462	47.653 mg/kg	0.00477 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<**LOD**
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		21 mg/kg	1.126	20.286 mg/kg	0.00203 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	14 mg/kg	1.56	18.736 mg/kg	0.0012 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<**LOD**
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		2.6 mg/kg	1.5	3.347 mg/kg	0.000335 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		26.5 mg/kg	2.976	67.671 mg/kg	0.00677 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<**LOD**
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		69 mg/kg	1.245	73.69 mg/kg	0.00737 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<**LOD**
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<**LOD**
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<**LOD**
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<**LOD**
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				8.83	pH		8.83	pH	8.83 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22	●	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23	●	fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25	●	anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26	●	fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27	●	pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				53	mg/kg	1.117	50.772	mg/kg	0.00508 %	✓	
			215-127-9	1304-28-5									
38	●	coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0342 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS01-28/09/2021-2.00-3.00m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
WS01-28/09/2021-2.00-3.00m
Moisture content:
10.1%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 10.1% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number / EC Number / CAS Number							
1	antimony { antimony trioxide } 051-005-00-X / 215-175-0 / 1309-64-4		1 mg/kg	1.197	1.076 mg/kg	0.000108 %	✓	
2	arsenic { arsenic trioxide } 033-003-00-0 / 215-481-4 / 1327-53-3		8.7 mg/kg	1.32	10.327 mg/kg	0.00103 %	✓	
3	cadmium { cadmium oxide } 048-002-00-0 / 215-146-2 / 1306-19-0		1.9 mg/kg	1.142	1.951 mg/kg	0.000195 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) } 215-160-9 / 1308-38-9		39.5 mg/kg	1.462	51.901 mg/kg	0.00519 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex } 024-017-00-8		<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide } 029-002-00-X / 215-270-7 / 1317-39-1		27 mg/kg	1.126	27.329 mg/kg	0.00273 %	✓	
7	lead { lead chromate } 082-004-00-2 / 231-846-0 / 7758-97-6	1	19 mg/kg	1.56	26.643 mg/kg	0.00171 %	✓	
8	mercury { mercury dichloride } 080-010-00-X / 231-299-8 / 7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
9	molybdenum { molybdenum(VI) oxide } 042-001-00-9 / 215-204-7 / 1313-27-5		4 mg/kg	1.5	5.395 mg/kg	0.000539 %	✓	
10	nickel { nickel chromate } 028-035-00-7 / 238-766-5 / 14721-18-7		33.2 mg/kg	2.976	88.832 mg/kg	0.00888 %	✓	
11	selenium { nickel selenate } 028-031-00-5 / 239-125-2 / 15060-62-5		7 mg/kg	2.554	16.071 mg/kg	0.00161 %	✓	
12	zinc { zinc oxide } 030-013-00-7 / 215-222-5 / 1314-13-2		89 mg/kg	1.245	99.591 mg/kg	0.00996 %	✓	
13	TPH (C6 to C40) petroleum group TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane 603-181-00-X / 216-653-1 / 1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene 601-020-00-8 / 200-753-7 / 71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene 601-021-00-3 / 203-625-9 / 108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene 601-023-00-4 / 202-849-4 / 100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				8.88	pH		8.88	pH	8.88 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22	●	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23	●	fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25	●	anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26	●	fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27	●	pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				53	mg/kg	1.117	53.198	mg/kg	0.00532 %	✓	
			215-127-9	1304-28-5									
38	●	coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0427 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS02-28/09/2021-0.00-0.70m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
WS02-28/09/2021-0.00-0.70m
Moisture content:
22.3%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 22.3% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		3 mg/kg	1.197	2.79 mg/kg	0.000279 %	✓	
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		25.5 mg/kg	1.32	26.16 mg/kg	0.00262 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		2.6 mg/kg	1.142	2.308 mg/kg	0.000231 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		45.6 mg/kg	1.462	51.785 mg/kg	0.00518 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		89 mg/kg	1.126	77.859 mg/kg	0.00779 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	418 mg/kg	1.56	506.606 mg/kg	0.0325 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.6 mg/kg	1.353	0.631 mg/kg	0.0000631 %	✓	
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		6.4 mg/kg	1.5	7.46 mg/kg	0.000746 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		53.2 mg/kg	2.976	123.028 mg/kg	0.0123 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		2 mg/kg	2.554	3.969 mg/kg	0.000397 %	✓	
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		179 mg/kg	1.245	173.119 mg/kg	0.0173 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				8.33	pH		8.33	pH	8.33 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22	●	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23	●	fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24	●	phenanthrene				0.12	mg/kg		0.0932	mg/kg	0.00000932 %	✓	
			201-581-5	85-01-8									
25	●	anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26	●	fluoranthene				0.12	mg/kg		0.0932	mg/kg	0.00000932 %	✓	
			205-912-4	206-44-0									
27	●	pyrene				0.12	mg/kg		0.0932	mg/kg	0.00000932 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				0.1	mg/kg		0.0777	mg/kg	0.00000777 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				0.09	mg/kg		0.0699	mg/kg	0.00000699 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				0.1	mg/kg		0.0777	mg/kg	0.00000777 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				0.04	mg/kg		0.0311	mg/kg	0.00000311 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				0.08	mg/kg		0.0622	mg/kg	0.00000622 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				0.05	mg/kg		0.0389	mg/kg	0.00000388 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				0.06	mg/kg		0.0466	mg/kg	0.00000466 %	✓	
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				252	mg/kg	1.117	218.616	mg/kg	0.0219 %	✓	
			215-127-9	1304-28-5									
38	●	coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.107 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS02-28/09/2021-0.70-2.60m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
WS02-28/09/2021-0.70-2.60m
Moisture content:
11.3%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 11.3% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		2 mg/kg	1.197	2.124 mg/kg	0.000212 %	✓	
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		9.8 mg/kg	1.32	11.477 mg/kg	0.00115 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		2.4 mg/kg	1.142	2.432 mg/kg	0.000243 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		35.3 mg/kg	1.462	45.763 mg/kg	0.00458 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		34 mg/kg	1.126	33.955 mg/kg	0.0034 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	15 mg/kg	1.56	20.753 mg/kg	0.00133 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		4.4 mg/kg	1.5	5.855 mg/kg	0.000585 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		41.9 mg/kg	2.976	110.614 mg/kg	0.0111 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		1 mg/kg	2.554	2.265 mg/kg	0.000227 %	✓	
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		91 mg/kg	1.245	100.47 mg/kg	0.01 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				8.94	pH		8.94	pH	8.94 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22	●	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23	●	fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25	●	anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26	●	fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27	●	pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				77	mg/kg	1.117	76.256	mg/kg	0.00763 %	✓	
			215-127-9	1304-28-5									
38	●	coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0459 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS02-28/09/2021-2.60-3.00m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
WS02-28/09/2021-2.60-3.00m
Moisture content:
11.2%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 11.2% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		2 mg/kg	1.197	2.126 mg/kg	0.000213 %	✓	
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		11.5 mg/kg	1.32	13.483 mg/kg	0.00135 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		2.1 mg/kg	1.142	2.13 mg/kg	0.000213 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		43.8 mg/kg	1.462	56.846 mg/kg	0.00568 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		31 mg/kg	1.126	30.993 mg/kg	0.0031 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	23 mg/kg	1.56	31.858 mg/kg	0.00204 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		4.3 mg/kg	1.5	5.728 mg/kg	0.000573 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		38 mg/kg	2.976	100.431 mg/kg	0.01 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		8 mg/kg	2.554	18.142 mg/kg	0.00181 %	✓	
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		91 mg/kg	1.245	100.583 mg/kg	0.0101 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				8.86	pH		8.86	pH	8.86 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22	●	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23	●	fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25	●	anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26	●	fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27	●	pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				51	mg/kg	1.117	50.564	mg/kg	0.00506 %	✓	
			215-127-9	1304-28-5									
38	●	coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0456 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS03-28/09/2021-0.00-1.00m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
WS03-28/09/2021-0.00-1.00m
Moisture content:
29.4%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 29.4% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number / EC Number / CAS Number							
1	antimony { antimony trioxide }		2 mg/kg	1.197	1.69 mg/kg	0.000169 %	✓	
	051-005-00-X / 215-175-0 / 1309-64-4							
2	arsenic { arsenic trioxide }		23.5 mg/kg	1.32	21.906 mg/kg	0.00219 %	✓	
	033-003-00-0 / 215-481-4 / 1327-53-3							
3	cadmium { cadmium oxide }		1.5 mg/kg	1.142	1.21 mg/kg	0.000121 %	✓	
	048-002-00-0 / 215-146-2 / 1306-19-0							
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		54.7 mg/kg	1.462	56.443 mg/kg	0.00564 %	✓	
	215-160-9 / 1308-38-9							
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }		<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
	024-017-00-8							
6	copper { dicopper oxide; copper (I) oxide }		231 mg/kg	1.126	183.617 mg/kg	0.0184 %	✓	
	029-002-00-X / 215-270-7 / 1317-39-1							
7	lead { lead chromate }	1	220 mg/kg	1.56	242.27 mg/kg	0.0155 %	✓	
	082-004-00-2 / 231-846-0 / 7758-97-6							
8	mercury { mercury dichloride }		0.6 mg/kg	1.353	0.573 mg/kg	0.0000573 %	✓	
	080-010-00-X / 231-299-8 / 7487-94-7							
9	molybdenum { molybdenum(VI) oxide }		4.7 mg/kg	1.5	4.978 mg/kg	0.000498 %	✓	
	042-001-00-9 / 215-204-7 / 1313-27-5							
10	nickel { nickel chromate }		75.4 mg/kg	2.976	158.434 mg/kg	0.0158 %	✓	
	028-035-00-7 / 238-766-5 / 14721-18-7							
11	selenium { nickel selenate }		1 mg/kg	2.554	1.803 mg/kg	0.00018 %	✓	
	028-031-00-5 / 239-125-2 / 15060-62-5							
12	zinc { zinc oxide }		209 mg/kg	1.245	183.663 mg/kg	0.0184 %	✓	
	030-013-00-7 / 215-222-5 / 1314-13-2							
13	TPH (C6 to C40) petroleum group		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
	TPH							
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	603-181-00-X / 216-653-1 / 1634-04-4							
15	benzene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-020-00-8 / 200-753-7 / 71-43-2							
16	toluene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-021-00-3 / 203-625-9 / 108-88-3							
17	ethylbenzene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-023-00-4 / 202-849-4 / 100-41-4							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				8.28	pH		8.28	pH	8.28 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				0.04	mg/kg		0.0282	mg/kg	0.00000282 %	✓	
			205-917-1	208-96-8									
22	●	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23	●	fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24	●	phenanthrene				0.33	mg/kg		0.233	mg/kg	0.0000233 %	✓	
			201-581-5	85-01-8									
25	●	anthracene				0.08	mg/kg		0.0565	mg/kg	0.00000565 %	✓	
			204-371-1	120-12-7									
26	●	fluoranthene				0.51	mg/kg		0.36	mg/kg	0.000036 %	✓	
			205-912-4	206-44-0									
27	●	pyrene				0.47	mg/kg		0.332	mg/kg	0.0000332 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				0.31	mg/kg		0.219	mg/kg	0.0000219 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				0.35	mg/kg		0.247	mg/kg	0.0000247 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				0.42	mg/kg		0.297	mg/kg	0.0000297 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				0.16	mg/kg		0.113	mg/kg	0.0000113 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				0.3	mg/kg		0.212	mg/kg	0.0000212 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				0.18	mg/kg		0.127	mg/kg	0.0000127 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				0.2	mg/kg		0.141	mg/kg	0.0000141 %	✓	
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				203	mg/kg	1.117	160.015	mg/kg	0.016 %	✓	
			215-127-9	1304-28-5									
38	●	coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0986 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS03-28/09/2021-1.00-1.60m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
WS03-28/09/2021-1.00-1.60m
Moisture content:
16.2%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 16.2% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		3 mg/kg	1.197	3.01 mg/kg	0.000301 %	✓	
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		15.8 mg/kg	1.32	17.482 mg/kg	0.00175 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		1.9 mg/kg	1.142	1.819 mg/kg	0.000182 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		50.6 mg/kg	1.462	61.974 mg/kg	0.0062 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		33 mg/kg	1.126	31.135 mg/kg	0.00311 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	17 mg/kg	1.56	22.221 mg/kg	0.00142 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		8.9 mg/kg	1.5	11.189 mg/kg	0.00112 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		47.2 mg/kg	2.976	117.722 mg/kg	0.0118 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		2 mg/kg	2.554	4.28 mg/kg	0.000428 %	✓	
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		84 mg/kg	1.245	87.618 mg/kg	0.00876 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				8.8	pH		8.8	pH	8.8 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22	●	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23	●	fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25	●	anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26	●	fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27	●	pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				671	mg/kg	1.117	627.809	mg/kg	0.0628 %	✓	
			215-127-9	1304-28-5									
38	●	coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.103 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS03-28/09/2021-1.60-3.00m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
WS03-28/09/2021-1.60-3.00m
Moisture content:
9.7%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 9.7% Wet Weight Moisture Correction applied (MC)

#		Determinand CLP index number / EC Number / CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1		antimony { antimony trioxide } 051-005-00-X / 215-175-0 / 1309-64-4		1 mg/kg	1.197	1.081 mg/kg	0.000108 %	✓	
2		arsenic { arsenic trioxide } 033-003-00-0 / 215-481-4 / 1327-53-3		18 mg/kg	1.32	21.461 mg/kg	0.00215 %	✓	
3		cadmium { cadmium oxide } 048-002-00-0 / 215-146-2 / 1306-19-0		1.5 mg/kg	1.142	1.547 mg/kg	0.000155 %	✓	
4		chromium in chromium(III) compounds { chromium(III) oxide (worst case) } 215-160-9 / 1308-38-9		54.2 mg/kg	1.462	71.532 mg/kg	0.00715 %	✓	
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex } 024-017-00-8		<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6		copper { dicopper oxide; copper (I) oxide } 029-002-00-X / 215-270-7 / 1317-39-1		29 mg/kg	1.126	29.484 mg/kg	0.00295 %	✓	
7		lead { lead chromate } 082-004-00-2 / 231-846-0 / 7758-97-6	1	12 mg/kg	1.56	16.902 mg/kg	0.00108 %	✓	
8		mercury { mercury dichloride } 080-010-00-X / 231-299-8 / 7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
9		molybdenum { molybdenum(VI) oxide } 042-001-00-9 / 215-204-7 / 1313-27-5		5.3 mg/kg	1.5	7.18 mg/kg	0.000718 %	✓	
10		nickel { nickel chromate } 028-035-00-7 / 238-766-5 / 14721-18-7		34.2 mg/kg	2.976	91.915 mg/kg	0.00919 %	✓	
11		selenium { nickel selenate } 028-031-00-5 / 239-125-2 / 15060-62-5		3 mg/kg	2.554	6.918 mg/kg	0.000692 %	✓	
12		zinc { zinc oxide } 030-013-00-7 / 215-222-5 / 1314-13-2		80 mg/kg	1.245	89.918 mg/kg	0.00899 %	✓	
13		TPH (C6 to C40) petroleum group TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane 603-181-00-X / 216-653-1 / 1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15		benzene 601-020-00-8 / 200-753-7 / 71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16		toluene 601-021-00-3 / 203-625-9 / 108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17		ethylbenzene 601-023-00-4 / 202-849-4 / 100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				8.9	pH		8.9	pH	8.9 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22	●	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23	●	fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25	●	anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26	●	fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27	●	pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				71	mg/kg	1.117	71.583	mg/kg	0.00716 %	✓	
			215-127-9	1304-28-5									
38	●	coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0458 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS04-28/09/2021-0.00-0.80m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
WS04-28/09/2021-0.00-0.80m
Moisture content:
14.1%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 14.1% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		3 mg/kg	1.197	3.085 mg/kg	0.000308 %	✓	
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		25.9 mg/kg	1.32	29.375 mg/kg	0.00294 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		2.3 mg/kg	1.142	2.257 mg/kg	0.000226 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		63.3 mg/kg	1.462	79.472 mg/kg	0.00795 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		73 mg/kg	1.126	70.601 mg/kg	0.00706 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	213 mg/kg	1.56	285.395 mg/kg	0.0183 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.5 mg/kg	1.353	0.581 mg/kg	0.0000581 %	✓	
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		5.3 mg/kg	1.5	6.83 mg/kg	0.000683 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		51.6 mg/kg	2.976	131.921 mg/kg	0.0132 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		2 mg/kg	2.554	4.387 mg/kg	0.000439 %	✓	
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		275 mg/kg	1.245	294.033 mg/kg	0.0294 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				8.42	pH		8.42	pH	8.42 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22	●	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23	●	fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24	●	phenanthrene				0.3	mg/kg		0.258	mg/kg	0.0000258 %	✓	
			201-581-5	85-01-8									
25	●	anthracene				0.05	mg/kg		0.043	mg/kg	0.0000043 %	✓	
			204-371-1	120-12-7									
26	●	fluoranthene				0.3	mg/kg		0.258	mg/kg	0.0000258 %	✓	
			205-912-4	206-44-0									
27	●	pyrene				0.29	mg/kg		0.249	mg/kg	0.0000249 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				0.22	mg/kg		0.189	mg/kg	0.0000189 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				0.27	mg/kg		0.232	mg/kg	0.0000232 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				0.31	mg/kg		0.266	mg/kg	0.0000266 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				0.12	mg/kg		0.103	mg/kg	0.0000103 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				0.26	mg/kg		0.223	mg/kg	0.0000223 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				0.15	mg/kg		0.129	mg/kg	0.0000129 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				0.19	mg/kg		0.163	mg/kg	0.0000163 %	✓	
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				169	mg/kg	1.117	162.084	mg/kg	0.0162 %	✓	
			215-127-9	1304-28-5									
38	●	coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.102 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS04-28/09/2021-0.80-2.80m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
WS04-28/09/2021-0.80-2.80m
Moisture content:
14.6%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 14.6% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		2 mg/kg	1.197	2.045 mg/kg	0.000204 %	✓	
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		10.8 mg/kg	1.32	12.178 mg/kg	0.00122 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		1.9 mg/kg	1.142	1.854 mg/kg	0.000185 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		57.8 mg/kg	1.462	72.144 mg/kg	0.00721 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		25 mg/kg	1.126	24.038 mg/kg	0.0024 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	21 mg/kg	1.56	27.974 mg/kg	0.00179 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		4.4 mg/kg	1.5	5.637 mg/kg	0.000564 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		44.5 mg/kg	2.976	113.107 mg/kg	0.0113 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		1 mg/kg	2.554	2.181 mg/kg	0.000218 %	✓	
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		108 mg/kg	1.245	114.802 mg/kg	0.0115 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				8.53	pH		8.53	pH	8.53 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22	●	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23	●	fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25	●	anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26	●	fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27	●	pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				83	mg/kg	1.117	79.14	mg/kg	0.00791 %	✓	
			215-127-9	1304-28-5									
38	●	coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.05 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS04-28/09/2021-2.80-3.00m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
WS04-28/09/2021-2.80-3.00m
Moisture content:
11%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 11% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		2 mg/kg	1.197	2.131 mg/kg	0.000213 %	✓	
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		10.6 mg/kg	1.32	12.456 mg/kg	0.00125 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		2 mg/kg	1.142	2.033 mg/kg	0.000203 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		39.5 mg/kg	1.462	51.381 mg/kg	0.00514 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		32 mg/kg	1.126	32.065 mg/kg	0.00321 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	21 mg/kg	1.56	29.153 mg/kg	0.00187 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		4.1 mg/kg	1.5	5.474 mg/kg	0.000547 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		38.2 mg/kg	2.976	101.187 mg/kg	0.0101 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		5 mg/kg	2.554	11.365 mg/kg	0.00114 %	✓	
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		87 mg/kg	1.245	96.378 mg/kg	0.00964 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				8.72	pH		8.72	pH	8.72 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22	●	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23	●	fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25	●	anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26	●	fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27	●	pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				54	mg/kg	1.117	53.659	mg/kg	0.00537 %	✓	
			215-127-9	1304-28-5									
38	●	coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0441 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS05-28/09/2021-0.00-1.00m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
WS05-28/09/2021-0.00-1.00m
Moisture content:
25.3%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 25.3% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number / EC Number / CAS Number							
1	antimony { antimony trioxide }		4 mg/kg	1.197	3.577 mg/kg	0.000358 %	✓	
	051-005-00-X / 215-175-0 / 1309-64-4							
2	arsenic { arsenic trioxide }		32.8 mg/kg	1.32	32.35 mg/kg	0.00324 %	✓	
	033-003-00-0 / 215-481-4 / 1327-53-3							
3	cadmium { cadmium oxide }		1.4 mg/kg	1.142	1.195 mg/kg	0.000119 %	✓	
	048-002-00-0 / 215-146-2 / 1306-19-0							
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		51.7 mg/kg	1.462	56.445 mg/kg	0.00564 %	✓	
	/ 215-160-9 / 1308-38-9							
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }		<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
	024-017-00-8 / /							
6	copper { dicopper oxide; copper (I) oxide }		107 mg/kg	1.126	89.991 mg/kg	0.009 %	✓	
	029-002-00-X / 215-270-7 / 1317-39-1							
7	lead { lead chromate }	1	317 mg/kg	1.56	369.363 mg/kg	0.0237 %	✓	
	082-004-00-2 / 231-846-0 / 7758-97-6							
8	mercury { mercury dichloride }		0.8 mg/kg	1.353	0.809 mg/kg	0.0000809 %	✓	
	080-010-00-X / 231-299-8 / 7487-94-7							
9	molybdenum { molybdenum(VI) oxide }		5.3 mg/kg	1.5	5.939 mg/kg	0.000594 %	✓	
	042-001-00-9 / 215-204-7 / 1313-27-5							
10	nickel { nickel chromate }		46.6 mg/kg	2.976	103.604 mg/kg	0.0104 %	✓	
	028-035-00-7 / 238-766-5 / 14721-18-7							
11	selenium { nickel selenate }		2 mg/kg	2.554	3.815 mg/kg	0.000382 %	✓	
	028-031-00-5 / 239-125-2 / 15060-62-5							
12	zinc { zinc oxide }		275 mg/kg	1.245	255.695 mg/kg	0.0256 %	✓	
	030-013-00-7 / 215-222-5 / 1314-13-2							
13	TPH (C6 to C40) petroleum group		190 mg/kg		141.93 mg/kg	0.0142 %	✓	
	/ / TPH							
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	603-181-00-X / 216-653-1 / 1634-04-4							
15	benzene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-020-00-8 / 200-753-7 / 71-43-2							
16	toluene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-021-00-3 / 203-625-9 / 108-88-3							
17	ethylbenzene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-023-00-4 / 202-849-4 / 100-41-4							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				8.21	pH		8.21	pH	8.21 pH		
				PH									
20		naphthalene				0.11	mg/kg		0.0822	mg/kg	0.00000822 %	✓	
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				0.11	mg/kg		0.0822	mg/kg	0.00000822 %	✓	
			205-917-1	208-96-8									
22	●	acenaphthene				0.15	mg/kg		0.112	mg/kg	0.0000112 %	✓	
			201-469-6	83-32-9									
23	●	fluorene				0.13	mg/kg		0.0971	mg/kg	0.00000971 %	✓	
			201-695-5	86-73-7									
24	●	phenanthrene				1.9	mg/kg		1.419	mg/kg	0.000142 %	✓	
			201-581-5	85-01-8									
25	●	anthracene				0.43	mg/kg		0.321	mg/kg	0.0000321 %	✓	
			204-371-1	120-12-7									
26	●	fluoranthene				3.6	mg/kg		2.689	mg/kg	0.000269 %	✓	
			205-912-4	206-44-0									
27	●	pyrene				3.17	mg/kg		2.368	mg/kg	0.000237 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				1.9	mg/kg		1.419	mg/kg	0.000142 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				2.26	mg/kg		1.688	mg/kg	0.000169 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				2.61	mg/kg		1.95	mg/kg	0.000195 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				1.01	mg/kg		0.754	mg/kg	0.0000754 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				2.05	mg/kg		1.531	mg/kg	0.000153 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				1.29	mg/kg		0.964	mg/kg	0.0000964 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				0.25	mg/kg		0.187	mg/kg	0.0000187 %	✓	
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				1.3	mg/kg		0.971	mg/kg	0.0000971 %	✓	
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				187	mg/kg	1.117	155.964	mg/kg	0.0156 %	✓	
			215-127-9	1304-28-5									
38	●	coronene				0.25	mg/kg		0.187	mg/kg	0.0000187 %	✓	
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.111 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Solid waste without liquid phase

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0142%)

Classification of sample: WS05-28/09/2021-1.00-1.30m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
WS05-28/09/2021-1.00-1.30m
Moisture content:
17.7%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 17.7% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		3 mg/kg	1.197	2.956 mg/kg	0.000296 %	✓	
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		14.9 mg/kg	1.32	16.191 mg/kg	0.00162 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		1.7 mg/kg	1.142	1.598 mg/kg	0.00016 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		57.7 mg/kg	1.462	69.405 mg/kg	0.00694 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		20 mg/kg	1.126	18.532 mg/kg	0.00185 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	19 mg/kg	1.56	24.391 mg/kg	0.00156 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		7.5 mg/kg	1.5	9.26 mg/kg	0.000926 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		40 mg/kg	2.976	97.979 mg/kg	0.0098 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		2 mg/kg	2.554	4.204 mg/kg	0.00042 %	✓	
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		93 mg/kg	1.245	95.269 mg/kg	0.00953 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				8.74	pH		8.74	pH	8.74 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25		anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium oxide }				492	mg/kg	1.117	452.091	mg/kg	0.0452 %	✓	
			215-127-9	1304-28-5									
38		coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0838 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS05-28/09/2021-1.30-2.70m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
WS05-28/09/2021-1.30-2.70m
Moisture content:
11.1%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 11.1% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number / EC Number / CAS Number							
1	antimony { antimony trioxide }		<1 mg/kg	1.197	<1.197 mg/kg	<0.00012 %		<LOD
	051-005-00-X / 215-175-0 / 1309-64-4							
2	arsenic { arsenic trioxide }		4.2 mg/kg	1.32	4.93 mg/kg	0.000493 %	✓	
	033-003-00-0 / 215-481-4 / 1327-53-3							
3	cadmium { cadmium oxide }		1.5 mg/kg	1.142	1.523 mg/kg	0.000152 %	✓	
	048-002-00-0 / 215-146-2 / 1306-19-0							
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		61.1 mg/kg	1.462	79.389 mg/kg	0.00794 %	✓	
	215-160-9 / 1308-38-9							
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }		<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
	024-017-00-8							
6	copper { dicopper oxide; copper (I) oxide }		27 mg/kg	1.126	27.025 mg/kg	0.0027 %	✓	
	029-002-00-X / 215-270-7 / 1317-39-1							
7	lead { lead chromate }	1	9 mg/kg	1.56	12.48 mg/kg	0.0008 %	✓	
	082-004-00-2 / 231-846-0 / 7758-97-6							
8	mercury { mercury dichloride }		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
	080-010-00-X / 231-299-8 / 7487-94-7							
9	molybdenum { molybdenum(VI) oxide }		4.3 mg/kg	1.5	5.735 mg/kg	0.000573 %	✓	
	042-001-00-9 / 215-204-7 / 1313-27-5							
10	nickel { nickel chromate }		22.3 mg/kg	2.976	59.004 mg/kg	0.0059 %	✓	
	028-035-00-7 / 238-766-5 / 14721-18-7							
11	selenium { nickel selenate }		<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	028-031-00-5 / 239-125-2 / 15060-62-5							
12	zinc { zinc oxide }		60 mg/kg	1.245	66.393 mg/kg	0.00664 %	✓	
	030-013-00-7 / 215-222-5 / 1314-13-2							
13	TPH (C6 to C40) petroleum group		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
	TPH							
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	603-181-00-X / 216-653-1 / 1634-04-4							
15	benzene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-020-00-8 / 200-753-7 / 71-43-2							
16	toluene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-021-00-3 / 203-625-9 / 108-88-3							
17	ethylbenzene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-023-00-4 / 202-849-4 / 100-41-4							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				8.77	pH		8.77	pH	8.77 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25		anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium oxide }				49	mg/kg	1.117	48.636	mg/kg	0.00486 %	✓	
			215-127-9	1304-28-5									
38		coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0359 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS05-28/09/2021-2.70-3.00m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
WS05-28/09/2021-2.70-3.00m
Moisture content:
11%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 11% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		2 mg/kg	1.197	2.131 mg/kg	0.000213 %	✓	
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		9.3 mg/kg	1.32	10.928 mg/kg	0.00109 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		1.9 mg/kg	1.142	1.932 mg/kg	0.000193 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		41.9 mg/kg	1.462	54.503 mg/kg	0.00545 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		28 mg/kg	1.126	28.057 mg/kg	0.00281 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	18 mg/kg	1.56	24.988 mg/kg	0.0016 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		4.5 mg/kg	1.5	6.008 mg/kg	0.000601 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		33.9 mg/kg	2.976	89.797 mg/kg	0.00898 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		5 mg/kg	2.554	11.365 mg/kg	0.00114 %	✓	
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		75 mg/kg	1.245	83.085 mg/kg	0.00831 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				8.66	pH		8.66	pH	8.66 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25		anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium oxide }				59	mg/kg	1.117	58.628	mg/kg	0.00586 %	✓	
			215-127-9	1304-28-5									
38		coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0417 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS06-28/09/2021-0.00-1.00m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
WS06-28/09/2021-0.00-1.00m
Moisture content:
14.8%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 14.8% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		3 mg/kg	1.197	3.06 mg/kg	0.000306 %	✓	
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		9.2 mg/kg	1.32	10.349 mg/kg	0.00103 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		1.6 mg/kg	1.142	1.557 mg/kg	0.000156 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		33.8 mg/kg	1.462	42.089 mg/kg	0.00421 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		33 mg/kg	1.126	31.655 mg/kg	0.00317 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	41 mg/kg	1.56	54.487 mg/kg	0.00349 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		3.6 mg/kg	1.5	4.601 mg/kg	0.00046 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		32.1 mg/kg	2.976	81.398 mg/kg	0.00814 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		89 mg/kg	1.245	94.384 mg/kg	0.00944 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				8.49	pH		8.49	pH	8.49 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-917-1	208-96-8									
22	●	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
			201-469-6	83-32-9									
23	●	fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
			201-695-5	86-73-7									
24	●	phenanthrene				0.54	mg/kg		0.46	mg/kg	0.000046 %	✓	
			201-581-5	85-01-8									
25	●	anthracene				0.14	mg/kg		0.119	mg/kg	0.0000119 %	✓	
			204-371-1	120-12-7									
26	●	fluoranthene				1.03	mg/kg		0.878	mg/kg	0.0000878 %	✓	
			205-912-4	206-44-0									
27	●	pyrene				0.89	mg/kg		0.758	mg/kg	0.0000758 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				0.56	mg/kg		0.477	mg/kg	0.0000477 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				0.66	mg/kg		0.562	mg/kg	0.0000562 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				0.7	mg/kg		0.596	mg/kg	0.0000596 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				0.27	mg/kg		0.23	mg/kg	0.000023 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				0.54	mg/kg		0.46	mg/kg	0.000046 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				0.35	mg/kg		0.298	mg/kg	0.0000298 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				0.07	mg/kg		0.0596	mg/kg	0.00000596 %	✓	
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				0.36	mg/kg		0.307	mg/kg	0.0000307 %	✓	
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<**LOD**
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				73	mg/kg	1.117	69.442	mg/kg	0.00694 %	✓	
			215-127-9	1304-28-5									
38	●	coronene				0.07	mg/kg		0.0596	mg/kg	0.00000596 %	✓	
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0435 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS06-28/09/2021-1.00-2.30m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
WS06-28/09/2021-1.00-2.30m
Moisture content:
10.6%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 10.6% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		<1 mg/kg	1.197	<1.197 mg/kg	<0.00012 %		<LOD
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		6.6 mg/kg	1.32	7.79 mg/kg	0.000779 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		1.3 mg/kg	1.142	1.328 mg/kg	0.000133 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		44.1 mg/kg	1.462	57.622 mg/kg	0.00576 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		19 mg/kg	1.126	19.124 mg/kg	0.00191 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	11 mg/kg	1.56	15.339 mg/kg	0.000983 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		3.9 mg/kg	1.5	5.231 mg/kg	0.000523 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		21 mg/kg	2.976	55.876 mg/kg	0.00559 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		51 mg/kg	1.245	56.751 mg/kg	0.00568 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				8.87	pH		8.87	pH	8.87 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25		anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium oxide }				53	mg/kg	1.117	52.902	mg/kg	0.00529 %	✓	
			215-127-9	1304-28-5									
38		coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0325 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS06-28/09/2021-2.30-3.00m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
WS06-28/09/2021-2.30-3.00m
Moisture content:
10.6%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 10.6% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		2 mg/kg	1.197	2.14 mg/kg	0.000214 %	✓	
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		10.2 mg/kg	1.32	12.04 mg/kg	0.0012 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		1.9 mg/kg	1.142	1.94 mg/kg	0.000194 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		43.2 mg/kg	1.462	56.446 mg/kg	0.00564 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		32 mg/kg	1.126	32.209 mg/kg	0.00322 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	25 mg/kg	1.56	34.862 mg/kg	0.00224 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		4.6 mg/kg	1.5	6.169 mg/kg	0.000617 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		38.9 mg/kg	2.976	103.504 mg/kg	0.0104 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		2 mg/kg	2.554	4.566 mg/kg	0.000457 %	✓	
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		90 mg/kg	1.245	100.15 mg/kg	0.01 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				8.84	pH		8.84	pH	8.84 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25		anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium oxide }				104	mg/kg	1.117	103.808	mg/kg	0.0104 %	✓	
			215-127-9	1304-28-5									
38		coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.05 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS07-28/09/2021-0.00-0.70m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
WS07-28/09/2021-0.00-0.70m
Moisture content:
21.1%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 21.1% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		3 mg/kg	1.197	2.834 mg/kg	0.000283 %	✓	
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		26.1 mg/kg	1.32	27.189 mg/kg	0.00272 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		2.5 mg/kg	1.142	2.253 mg/kg	0.000225 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		54.6 mg/kg	1.462	62.963 mg/kg	0.0063 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		70 mg/kg	1.126	62.183 mg/kg	0.00622 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	164 mg/kg	1.56	201.834 mg/kg	0.0129 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.3 mg/kg	1.353	0.32 mg/kg	0.000032 %	✓	
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		5.1 mg/kg	1.5	6.037 mg/kg	0.000604 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		53.2 mg/kg	2.976	124.928 mg/kg	0.0125 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		2 mg/kg	2.554	4.03 mg/kg	0.000403 %	✓	
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		200 mg/kg	1.245	196.416 mg/kg	0.0196 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene 601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
19	●	pH		PH		8.45	pH		8.45	pH	8.45 pH		
20		naphthalene 601-052-00-2	202-049-5	91-20-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
21	●	acenaphthylene	205-917-1	208-96-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
22	●	acenaphthene	201-469-6	83-32-9		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
23	●	fluorene	201-695-5	86-73-7		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
24	●	phenanthrene	201-581-5	85-01-8		0.19	mg/kg		0.15	mg/kg	0.000015 %	✓	
25	●	anthracene	204-371-1	120-12-7		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
26	●	fluoranthene	205-912-4	206-44-0		0.24	mg/kg		0.189	mg/kg	0.0000189 %	✓	
27	●	pyrene	204-927-3	129-00-0		0.24	mg/kg		0.189	mg/kg	0.0000189 %	✓	
28		benzo[a]anthracene 601-033-00-9	200-280-6	56-55-3		0.2	mg/kg		0.158	mg/kg	0.0000158 %	✓	
29		chrysene 601-048-00-0	205-923-4	218-01-9		0.18	mg/kg		0.142	mg/kg	0.0000142 %	✓	
30		benzo[b]fluoranthene 601-034-00-4	205-911-9	205-99-2		0.17	mg/kg		0.134	mg/kg	0.0000134 %	✓	
31		benzo[k]fluoranthene 601-036-00-5	205-916-6	207-08-9		0.06	mg/kg		0.0473	mg/kg	0.00000473 %	✓	
32		benzo[a]pyrene; benzo[def]chrysene 601-032-00-3	200-028-5	50-32-8		0.14	mg/kg		0.11	mg/kg	0.000011 %	✓	
33	●	indeno[123-cd]pyrene	205-893-2	193-39-5		0.09	mg/kg		0.071	mg/kg	0.0000071 %	✓	
34		dibenz[a,h]anthracene 601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
35	●	benzo[ghi]perylene	205-883-8	191-24-2		0.1	mg/kg		0.0789	mg/kg	0.00000789 %	✓	
36	●	polychlorobiphenyls; PCB 602-039-00-4	215-648-1	1336-36-3		<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<**LOD**
37		barium { ● barium oxide } 215-127-9		1304-28-5		134	mg/kg	1.117	118.044	mg/kg	0.0118 %	✓	
38	●	coronene	205-881-7	191-07-1		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
39		benzo[j]fluoranthene 601-035-00-X	205-910-3	205-82-3		<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
										Total:	0.0792 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS07-28/09/2021-0.70-1.80m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
WS07-28/09/2021-0.70-1.80m
Moisture content:
20.7%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 20.7% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number / EC Number / CAS Number							
1	antimony { antimony trioxide }		2 mg/kg	1.197	1.899 mg/kg	0.00019 %	✓	
	051-005-00-X / 215-175-0 / 1309-64-4							
2	arsenic { arsenic trioxide }		17.8 mg/kg	1.32	18.637 mg/kg	0.00186 %	✓	
	033-003-00-0 / 215-481-4 / 1327-53-3							
3	cadmium { cadmium oxide }		2.3 mg/kg	1.142	2.083 mg/kg	0.000208 %	✓	
	048-002-00-0 / 215-146-2 / 1306-19-0							
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		53.5 mg/kg	1.462	62.007 mg/kg	0.0062 %	✓	
	215-160-9 / 1308-38-9							
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }		<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
	024-017-00-8							
6	copper { dicopper oxide; copper (I) oxide }		42 mg/kg	1.126	37.499 mg/kg	0.00375 %	✓	
	029-002-00-X / 215-270-7 / 1317-39-1							
7	lead { lead chromate }	1	34 mg/kg	1.56	42.056 mg/kg	0.0027 %	✓	
	082-004-00-2 / 231-846-0 / 7758-97-6							
8	mercury { mercury dichloride }		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
	080-010-00-X / 231-299-8 / 7487-94-7							
9	molybdenum { molybdenum(VI) oxide }		5.3 mg/kg	1.5	6.305 mg/kg	0.000631 %	✓	
	042-001-00-9 / 215-204-7 / 1313-27-5							
10	nickel { nickel chromate }		45.8 mg/kg	2.976	108.096 mg/kg	0.0108 %	✓	
	028-035-00-7 / 238-766-5 / 14721-18-7							
11	selenium { nickel selenate }		<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	028-031-00-5 / 239-125-2 / 15060-62-5							
12	zinc { zinc oxide }		142 mg/kg	1.245	140.162 mg/kg	0.014 %	✓	
	030-013-00-7 / 215-222-5 / 1314-13-2							
13	TPH (C6 to C40) petroleum group		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
	TPH							
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	603-181-00-X / 216-653-1 / 1634-04-4							
15	benzene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-020-00-8 / 200-753-7 / 71-43-2							
16	toluene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-021-00-3 / 203-625-9 / 108-88-3							
17	ethylbenzene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-023-00-4 / 202-849-4 / 100-41-4							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				8.6	pH		8.6	pH	8.6 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25		anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium oxide }				124	mg/kg	1.117	109.788	mg/kg	0.011 %	✓	
			215-127-9	1304-28-5									
38		coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0571 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS07-28/09/2021-1.80-2.00m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
WS07-28/09/2021-1.80-2.00m
Moisture content:
8.7%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 8.7% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		1 mg/kg	1.197	1.093 mg/kg	0.000109 %	✓	
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		9.6 mg/kg	1.32	11.572 mg/kg	0.00116 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		2 mg/kg	1.142	2.086 mg/kg	0.000209 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		40.3 mg/kg	1.462	53.776 mg/kg	0.00538 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		27 mg/kg	1.126	27.754 mg/kg	0.00278 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	16 mg/kg	1.56	22.786 mg/kg	0.00146 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		4.1 mg/kg	1.5	5.616 mg/kg	0.000562 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		37.5 mg/kg	2.976	101.9 mg/kg	0.0102 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		82 mg/kg	1.245	93.187 mg/kg	0.00932 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				8.92	pH		8.92	pH	8.92 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25		anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium oxide }				75	mg/kg	1.117	76.453	mg/kg	0.00765 %	✓	
			215-127-9	1304-28-5									
38		coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0445 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS08-28/09/2021-0.00-1.00m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
WS08-28/09/2021-0.00-1.00m
Moisture content:
23.2%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 23.2% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		3 mg/kg	1.197	2.758 mg/kg	0.000276 %	✓	
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		16.2 mg/kg	1.32	16.427 mg/kg	0.00164 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		2.6 mg/kg	1.142	2.281 mg/kg	0.000228 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		49.5 mg/kg	1.462	55.563 mg/kg	0.00556 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<**LOD**
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		66 mg/kg	1.126	57.069 mg/kg	0.00571 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	96 mg/kg	1.56	115.002 mg/kg	0.00737 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.5 mg/kg	1.353	0.52 mg/kg	0.000052 %	✓	
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		6.3 mg/kg	1.5	7.259 mg/kg	0.000726 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		52.8 mg/kg	2.976	120.689 mg/kg	0.0121 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		4 mg/kg	2.554	7.845 mg/kg	0.000785 %	✓	
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		249 mg/kg	1.245	238.029 mg/kg	0.0238 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		294 mg/kg		225.792 mg/kg	0.0226 %	✓	
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<**LOD**
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<**LOD**
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<**LOD**
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				7.91	pH		7.91	pH	7.91 pH		
				PH									
20		naphthalene				0.05	mg/kg		0.0384	mg/kg	0.00000384 %	✓	
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				0.07	mg/kg		0.0538	mg/kg	0.00000538 %	✓	
			205-917-1	208-96-8									
22	●	acenaphthene				0.09	mg/kg		0.0691	mg/kg	0.00000691 %	✓	
			201-469-6	83-32-9									
23	●	fluorene				0.09	mg/kg		0.0691	mg/kg	0.00000691 %	✓	
			201-695-5	86-73-7									
24	●	phenanthrene				1.35	mg/kg		1.037	mg/kg	0.000104 %	✓	
			201-581-5	85-01-8									
25	●	anthracene				0.34	mg/kg		0.261	mg/kg	0.0000261 %	✓	
			204-371-1	120-12-7									
26	●	fluoranthene				2.54	mg/kg		1.951	mg/kg	0.000195 %	✓	
			205-912-4	206-44-0									
27	●	pyrene				2.17	mg/kg		1.667	mg/kg	0.000167 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				1.35	mg/kg		1.037	mg/kg	0.000104 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				1.64	mg/kg		1.26	mg/kg	0.000126 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				1.7	mg/kg		1.306	mg/kg	0.000131 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				0.66	mg/kg		0.507	mg/kg	0.0000507 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				1.32	mg/kg		1.014	mg/kg	0.000101 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				0.81	mg/kg		0.622	mg/kg	0.0000622 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				0.17	mg/kg		0.131	mg/kg	0.0000131 %	✓	
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				0.81	mg/kg		0.622	mg/kg	0.0000622 %	✓	
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<**LOD**
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				154	mg/kg	1.117	132.051	mg/kg	0.0132 %	✓	
			215-127-9	1304-28-5									
38	●	coronene				0.13	mg/kg		0.0998	mg/kg	0.00000998 %	✓	
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0953 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Solid waste without liquid phase

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0226%)

Classification of sample: WS08-28/09/2021-1.00-2.00m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
WS08-28/09/2021-1.00-2.00m
Moisture content:
20.1%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 20.1% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number / EC Number / CAS Number							
1	antimony { antimony trioxide } 051-005-00-X / 215-175-0 / 1309-64-4		2 mg/kg	1.197	1.913 mg/kg	0.000191 %	✓	
2	arsenic { arsenic trioxide } 033-003-00-0 / 215-481-4 / 1327-53-3		12.3 mg/kg	1.32	12.976 mg/kg	0.0013 %	✓	
3	cadmium { cadmium oxide } 048-002-00-0 / 215-146-2 / 1306-19-0		1.8 mg/kg	1.142	1.643 mg/kg	0.000164 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) } 215-160-9 / 1308-38-9		76.9 mg/kg	1.462	89.803 mg/kg	0.00898 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex } 024-017-00-8		<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide } 029-002-00-X / 215-270-7 / 1317-39-1		20 mg/kg	1.126	17.992 mg/kg	0.0018 %	✓	
7	lead { lead chromate } 082-004-00-2 / 231-846-0 / 7758-97-6	1	18 mg/kg	1.56	22.433 mg/kg	0.00144 %	✓	
8	mercury { mercury dichloride } 080-010-00-X / 231-299-8 / 7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
9	molybdenum { molybdenum(VI) oxide } 042-001-00-9 / 215-204-7 / 1313-27-5		5.1 mg/kg	1.5	6.113 mg/kg	0.000611 %	✓	
10	nickel { nickel chromate } 028-035-00-7 / 238-766-5 / 14721-18-7		42.8 mg/kg	2.976	101.78 mg/kg	0.0102 %	✓	
11	selenium { nickel selenate } 028-031-00-5 / 239-125-2 / 15060-62-5		1 mg/kg	2.554	2.041 mg/kg	0.000204 %	✓	
12	zinc { zinc oxide } 030-013-00-7 / 215-222-5 / 1314-13-2		76 mg/kg	1.245	75.584 mg/kg	0.00756 %	✓	
13	TPH (C6 to C40) petroleum group TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane 603-181-00-X / 216-653-1 / 1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene 601-020-00-8 / 200-753-7 / 71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene 601-021-00-3 / 203-625-9 / 108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene 601-023-00-4 / 202-849-4 / 100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				8.48	pH		8.48	pH	8.48 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22	●	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23	●	fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25	●	anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26	●	fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27	●	pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				94	mg/kg	1.117	83.856	mg/kg	0.00839 %	✓	
			215-127-9	1304-28-5									
38	●	coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0463 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS08-28/09/2021-2.00-3.30m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
WS08-28/09/2021-2.00-3.30m
Moisture content:
10.9%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 10.9% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number / EC Number / CAS Number							
1	antimony { antimony trioxide } 051-005-00-X / 215-175-0 / 1309-64-4		2 mg/kg	1.197	2.133 mg/kg	0.000213 %	✓	
2	arsenic { arsenic trioxide } 033-003-00-0 / 215-481-4 / 1327-53-3		10.4 mg/kg	1.32	12.235 mg/kg	0.00122 %	✓	
3	cadmium { cadmium oxide } 048-002-00-0 / 215-146-2 / 1306-19-0		2.6 mg/kg	1.142	2.646 mg/kg	0.000265 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) } 215-160-9 / 1308-38-9		37.8 mg/kg	1.462	49.225 mg/kg	0.00492 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex } 024-017-00-8		<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide } 029-002-00-X / 215-270-7 / 1317-39-1		35 mg/kg	1.126	35.111 mg/kg	0.00351 %	✓	
7	lead { lead chromate } 082-004-00-2 / 231-846-0 / 7758-97-6	1	15 mg/kg	1.56	20.847 mg/kg	0.00134 %	✓	
8	mercury { mercury dichloride } 080-010-00-X / 231-299-8 / 7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
9	molybdenum { molybdenum(VI) oxide } 042-001-00-9 / 215-204-7 / 1313-27-5		6.4 mg/kg	1.5	8.555 mg/kg	0.000855 %	✓	
10	nickel { nickel chromate } 028-035-00-7 / 238-766-5 / 14721-18-7		51 mg/kg	2.976	135.244 mg/kg	0.0135 %	✓	
11	selenium { nickel selenate } 028-031-00-5 / 239-125-2 / 15060-62-5		2 mg/kg	2.554	4.551 mg/kg	0.000455 %	✓	
12	zinc { zinc oxide } 030-013-00-7 / 215-222-5 / 1314-13-2		105 mg/kg	1.245	116.449 mg/kg	0.0116 %	✓	
13	TPH (C6 to C40) petroleum group TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane 603-181-00-X / 216-653-1 / 1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene 601-020-00-8 / 200-753-7 / 71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene 601-021-00-3 / 203-625-9 / 108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene 601-023-00-4 / 202-849-4 / 100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				8.81	pH		8.81	pH	8.81 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22	●	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23	●	fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25	●	anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26	●	fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27	●	pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				181	mg/kg	1.117	180.06	mg/kg	0.018 %	✓	
			215-127-9	1304-28-5									
38	●	coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0614 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS08-28/09/2021-3.30-4.00m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
WS08-28/09/2021-3.30-4.00m
Moisture content:
7.6%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 7.6% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number / EC Number / CAS Number							
1	antimony { antimony trioxide } 051-005-00-X / 215-175-0 / 1309-64-4		1 mg/kg	1.197	1.106 mg/kg	0.000111 %	✓	
2	arsenic { arsenic trioxide } 033-003-00-0 / 215-481-4 / 1327-53-3		10.9 mg/kg	1.32	13.298 mg/kg	0.00133 %	✓	
3	cadmium { cadmium oxide } 048-002-00-0 / 215-146-2 / 1306-19-0		1.4 mg/kg	1.142	1.478 mg/kg	0.000148 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) } 215-160-9 / 1308-38-9		35.8 mg/kg	1.462	48.347 mg/kg	0.00483 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex } 024-017-00-8		<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide } 029-002-00-X / 215-270-7 / 1317-39-1		27 mg/kg	1.126	28.089 mg/kg	0.00281 %	✓	
7	lead { lead chromate } 082-004-00-2 / 231-846-0 / 7758-97-6	1	23 mg/kg	1.56	33.149 mg/kg	0.00213 %	✓	
8	mercury { mercury dichloride } 080-010-00-X / 231-299-8 / 7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
9	molybdenum { molybdenum(VI) oxide } 042-001-00-9 / 215-204-7 / 1313-27-5		4 mg/kg	1.5	5.545 mg/kg	0.000554 %	✓	
10	nickel { nickel chromate } 028-035-00-7 / 238-766-5 / 14721-18-7		35.3 mg/kg	2.976	97.077 mg/kg	0.00971 %	✓	
11	selenium { nickel selenate } 028-031-00-5 / 239-125-2 / 15060-62-5		3 mg/kg	2.554	7.079 mg/kg	0.000708 %	✓	
12	zinc { zinc oxide } 030-013-00-7 / 215-222-5 / 1314-13-2		84 mg/kg	1.245	96.61 mg/kg	0.00966 %	✓	
13	TPH (C6 to C40) petroleum group TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane 603-181-00-X / 216-653-1 / 1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene 601-020-00-8 / 200-753-7 / 71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene 601-021-00-3 / 203-625-9 / 108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene 601-023-00-4 / 202-849-4 / 100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				8.23	pH		8.23	pH	8.23 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22	●	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23	●	fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25	●	anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26	●	fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27	●	pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				76	mg/kg	1.117	78.406	mg/kg	0.00784 %	✓	
			215-127-9	1304-28-5									
38	●	coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0453 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS09A-28/09/2021-0.00-0.85m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
WS09A-28/09/2021-0.00-0.85m
Moisture content:
12%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 12% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number / EC Number / CAS Number							
1	antimony { antimony trioxide }		1 mg/kg	1.197	1.053 mg/kg	0.000105 %	✓	
	051-005-00-X / 215-175-0 / 1309-64-4							
2	arsenic { arsenic trioxide }		8.7 mg/kg	1.32	10.108 mg/kg	0.00101 %	✓	
	033-003-00-0 / 215-481-4 / 1327-53-3							
3	cadmium { cadmium oxide }		0.7 mg/kg	1.142	0.704 mg/kg	0.0000704 %	✓	
	048-002-00-0 / 215-146-2 / 1306-19-0							
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		47.4 mg/kg	1.462	60.964 mg/kg	0.0061 %	✓	
	/ 215-160-9 / 1308-38-9							
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }		<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
	024-017-00-8 / /							
6	copper { dicopper oxide; copper (I) oxide }		24 mg/kg	1.126	23.779 mg/kg	0.00238 %	✓	
	029-002-00-X / 215-270-7 / 1317-39-1							
7	lead { lead chromate }	1	87 mg/kg	1.56	119.419 mg/kg	0.00766 %	✓	
	082-004-00-2 / 231-846-0 / 7758-97-6							
8	mercury { mercury dichloride }		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
	080-010-00-X / 231-299-8 / 7487-94-7							
9	molybdenum { molybdenum(VI) oxide }		2.5 mg/kg	1.5	3.3 mg/kg	0.00033 %	✓	
	042-001-00-9 / 215-204-7 / 1313-27-5							
10	nickel { nickel chromate }		21.4 mg/kg	2.976	56.049 mg/kg	0.0056 %	✓	
	028-035-00-7 / 238-766-5 / 14721-18-7							
11	selenium { nickel selenate }		<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	028-031-00-5 / 239-125-2 / 15060-62-5							
12	zinc { zinc oxide }		94 mg/kg	1.245	102.963 mg/kg	0.0103 %	✓	
	030-013-00-7 / 215-222-5 / 1314-13-2							
13	TPH (C6 to C40) petroleum group		660 mg/kg		580.8 mg/kg	0.0581 %	✓	
	/ / TPH							
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	603-181-00-X / 216-653-1 / 1634-04-4							
15	benzene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-020-00-8 / 200-753-7 / 71-43-2							
16	toluene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-021-00-3 / 203-625-9 / 108-88-3							
17	ethylbenzene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-023-00-4 / 202-849-4 / 100-41-4							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				11.28	pH		11.28	pH	11.28 pH		
				PH									
20		naphthalene				0.08	mg/kg		0.0704	mg/kg	0.00000704 %	✓	
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22	●	acenaphthene				0.07	mg/kg		0.0616	mg/kg	0.00000616 %	✓	
			201-469-6	83-32-9									
23	●	fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24	●	phenanthrene				0.5	mg/kg		0.44	mg/kg	0.000044 %	✓	
			201-581-5	85-01-8									
25	●	anthracene				0.19	mg/kg		0.167	mg/kg	0.0000167 %	✓	
			204-371-1	120-12-7									
26	●	fluoranthene				1.19	mg/kg		1.047	mg/kg	0.000105 %	✓	
			205-912-4	206-44-0									
27	●	pyrene				1.58	mg/kg		1.39	mg/kg	0.000139 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				0.96	mg/kg		0.845	mg/kg	0.0000845 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				1	mg/kg		0.88	mg/kg	0.000088 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				1.24	mg/kg		1.091	mg/kg	0.000109 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				0.48	mg/kg		0.422	mg/kg	0.0000422 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				0.92	mg/kg		0.81	mg/kg	0.000081 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				0.6	mg/kg		0.528	mg/kg	0.0000528 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				0.09	mg/kg		0.0792	mg/kg	0.00000792 %	✓	
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				0.59	mg/kg		0.519	mg/kg	0.0000519 %	✓	
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				108	mg/kg	1.117	106.113	mg/kg	0.0106 %	✓	
			215-127-9	1304-28-5									
38	●	coronene				0.11	mg/kg		0.0968	mg/kg	0.00000968 %	✓	
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.104 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Solid waste without liquid phase

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0581%)

Classification of sample: WS10-28/09/2021-0.00-2.30m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
WS10-28/09/2021-0.00-2.30m
Moisture content:
24.4%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 24.4% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		2 mg/kg	1.197	1.81 mg/kg	0.000181 %	✓	
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		26.8 mg/kg	1.32	26.751 mg/kg	0.00268 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.9 mg/kg	1.142	0.777 mg/kg	0.0000777 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		65.4 mg/kg	1.462	72.263 mg/kg	0.00723 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		46 mg/kg	1.126	39.154 mg/kg	0.00392 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	23 mg/kg	1.56	27.122 mg/kg	0.00174 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		4 mg/kg	1.5	4.537 mg/kg	0.000454 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		57.4 mg/kg	2.976	129.153 mg/kg	0.0129 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		5 mg/kg	2.554	9.654 mg/kg	0.000965 %	✓	
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		105 mg/kg	1.245	98.805 mg/kg	0.00988 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				8.1	pH		8.1	pH	8.1 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25		anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				0.04	mg/kg		0.0302	mg/kg	0.00000302 %	✓	
			205-912-4	206-44-0									
27		pyrene				0.04	mg/kg		0.0302	mg/kg	0.00000302 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium oxide }				133	mg/kg	1.117	112.262	mg/kg	0.0112 %	✓	
			215-127-9	1304-28-5									
38		coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0567 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS10-28/09/2021-2.30-3.00m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
WS10-28/09/2021-2.30-3.00m
Moisture content:
10.4%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 10.4% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number / EC Number / CAS Number							
1	antimony { antimony trioxide }		1 mg/kg	1.197	1.073 mg/kg	0.000107 %	✓	
	051-005-00-X / 215-175-0 / 1309-64-4							
2	arsenic { arsenic trioxide }		7.9 mg/kg	1.32	9.346 mg/kg	0.000935 %	✓	
	033-003-00-0 / 215-481-4 / 1327-53-3							
3	cadmium { cadmium oxide }		1.5 mg/kg	1.142	1.535 mg/kg	0.000154 %	✓	
	048-002-00-0 / 215-146-2 / 1306-19-0							
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		40.1 mg/kg	1.462	52.513 mg/kg	0.00525 %	✓	
	215-160-9 / 1308-38-9							
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }		<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
	024-017-00-8							
6	copper { dicopper oxide; copper (I) oxide }		22 mg/kg	1.126	22.194 mg/kg	0.00222 %	✓	
	029-002-00-X / 215-270-7 / 1317-39-1							
7	lead { lead chromate }	1	23 mg/kg	1.56	32.145 mg/kg	0.00206 %	✓	
	082-004-00-2 / 231-846-0 / 7758-97-6							
8	mercury { mercury dichloride }		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
	080-010-00-X / 231-299-8 / 7487-94-7							
9	molybdenum { molybdenum(VI) oxide }		3.6 mg/kg	1.5	4.839 mg/kg	0.000484 %	✓	
	042-001-00-9 / 215-204-7 / 1313-27-5							
10	nickel { nickel chromate }		37.6 mg/kg	2.976	100.269 mg/kg	0.01 %	✓	
	028-035-00-7 / 238-766-5 / 14721-18-7							
11	selenium { nickel selenate }		2 mg/kg	2.554	4.576 mg/kg	0.000458 %	✓	
	028-031-00-5 / 239-125-2 / 15060-62-5							
12	zinc { zinc oxide }		81 mg/kg	1.245	90.336 mg/kg	0.00903 %	✓	
	030-013-00-7 / 215-222-5 / 1314-13-2							
13	TPH (C6 to C40) petroleum group		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
	TPH							
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	603-181-00-X / 216-653-1 / 1634-04-4							
15	benzene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-020-00-8 / 200-753-7 / 71-43-2							
16	toluene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-021-00-3 / 203-625-9 / 108-88-3							
17	ethylbenzene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-023-00-4 / 202-849-4 / 100-41-4							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				8.71	pH		8.71	pH	8.71 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25		anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium oxide }				56	mg/kg	1.117	56.022	mg/kg	0.0056 %	✓	
			215-127-9	1304-28-5									
38		coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0418 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH01-29/09/2021-0.00-1.60m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH01-29/09/2021-0.00-1.60m
Moisture content:
18.9%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 18.9% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		1 mg/kg	1.197	0.971 mg/kg	0.0000971 %	✓	
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		29.6 mg/kg	1.32	31.695 mg/kg	0.00317 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.7 mg/kg	1.142	0.649 mg/kg	0.0000649 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		32.7 mg/kg	1.462	38.76 mg/kg	0.00388 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		29 mg/kg	1.126	26.48 mg/kg	0.00265 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	54 mg/kg	1.56	68.311 mg/kg	0.00438 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.1 mg/kg	1.353	0.11 mg/kg	0.000011 %	✓	
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		1.4 mg/kg	1.5	1.703 mg/kg	0.00017 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		28.9 mg/kg	2.976	69.757 mg/kg	0.00698 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		105 mg/kg	1.245	105.994 mg/kg	0.0106 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		286 mg/kg		231.946 mg/kg	0.0232 %	✓	
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene 601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		**<LOD**
19	●	pH		PH		8.56	pH		8.56	pH	8.56 pH		
20		naphthalene 601-052-00-2	202-049-5	91-20-3		0.06	mg/kg		0.0487	mg/kg	0.00000487 %	✓	
21	●	acenaphthylene	205-917-1	208-96-8		0.14	mg/kg		0.114	mg/kg	0.0000114 %	✓	
22	●	acenaphthene	201-469-6	83-32-9		0.18	mg/kg		0.146	mg/kg	0.0000146 %	✓	
23	●	fluorene	201-695-5	86-73-7		0.11	mg/kg		0.0892	mg/kg	0.00000892 %	✓	
24	●	phenanthrene	201-581-5	85-01-8		2.01	mg/kg		1.63	mg/kg	0.000163 %	✓	
25	●	anthracene	204-371-1	120-12-7		0.49	mg/kg		0.397	mg/kg	0.0000397 %	✓	
26	●	fluoranthene	205-912-4	206-44-0		3.01	mg/kg		2.441	mg/kg	0.000244 %	✓	
27	●	pyrene	204-927-3	129-00-0		2.9	mg/kg		2.352	mg/kg	0.000235 %	✓	
28		benzo[a]anthracene 601-033-00-9	200-280-6	56-55-3		1.53	mg/kg		1.241	mg/kg	0.000124 %	✓	
29		chrysene 601-048-00-0	205-923-4	218-01-9		1.69	mg/kg		1.371	mg/kg	0.000137 %	✓	
30		benzo[b]fluoranthene 601-034-00-4	205-911-9	205-99-2		2.58	mg/kg		2.092	mg/kg	0.000209 %	✓	
31		benzo[k]fluoranthene 601-036-00-5	205-916-6	207-08-9		1.01	mg/kg		0.819	mg/kg	0.0000819 %	✓	
32		benzo[a]pyrene; benzo[def]chrysene 601-032-00-3	200-028-5	50-32-8		2.02	mg/kg		1.638	mg/kg	0.000164 %	✓	
33	●	indeno[123-cd]pyrene	205-893-2	193-39-5		1.37	mg/kg		1.111	mg/kg	0.000111 %	✓	
34		dibenz[a,h]anthracene 601-041-00-2	200-181-8	53-70-3		0.28	mg/kg		0.227	mg/kg	0.0000227 %	✓	
35	●	benzo[ghi]perylene	205-883-8	191-24-2		1.44	mg/kg		1.168	mg/kg	0.000117 %	✓	
36	●	polychlorobiphenyls; PCB 602-039-00-4	215-648-1	1336-36-3		<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		**<LOD**
37		barium { ● barium oxide } 056-002-00-X	215-127-9	1304-28-5		95	mg/kg	1.117	86.021	mg/kg	0.0086 %	✓	
38		sulfur { sulfur } 016-094-00-1	231-722-6	7704-34-9		800	mg/kg		648.8	mg/kg	0.0649 %	✓	
39	●	coronene	205-881-7	191-07-1		0.23	mg/kg		0.187	mg/kg	0.0000187 %	✓	
40		benzo[j]fluoranthene 601-035-00-X	205-910-3	205-82-3		<1	mg/kg		<1	mg/kg	<0.0001 %		**<LOD**
										Total:	0.131 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Solid waste without liquid phase

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0232%)

Classification of sample: BH01-29/09/2021-3.00-3.40m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH01-29/09/2021-3.00-3.40m
Moisture content:
9.5%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 9.5% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number / EC Number / CAS Number							
1	antimony { antimony trioxide }		2 mg/kg	1.197	2.167 mg/kg	0.000217 %	✓	
	051-005-00-X / 215-175-0 / 1309-64-4							
2	arsenic { arsenic trioxide }		7.9 mg/kg	1.32	9.44 mg/kg	0.000944 %	✓	
	033-003-00-0 / 215-481-4 / 1327-53-3							
3	cadmium { cadmium oxide }		1.9 mg/kg	1.142	1.964 mg/kg	0.000196 %	✓	
	048-002-00-0 / 215-146-2 / 1306-19-0							
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		39.5 mg/kg	1.462	52.247 mg/kg	0.00522 %	✓	
	/ 215-160-9 / 1308-38-9							
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }		<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
	024-017-00-8 / /							
6	copper { dicopper oxide; copper (I) oxide }		28 mg/kg	1.126	28.53 mg/kg	0.00285 %	✓	
	029-002-00-X / 215-270-7 / 1317-39-1							
7	lead { lead chromate }	1	27 mg/kg	1.56	38.114 mg/kg	0.00244 %	✓	
	082-004-00-2 / 231-846-0 / 7758-97-6							
8	mercury { mercury dichloride }		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
	080-010-00-X / 231-299-8 / 7487-94-7							
9	molybdenum { molybdenum(VI) oxide }		3 mg/kg	1.5	4.073 mg/kg	0.000407 %	✓	
	042-001-00-9 / 215-204-7 / 1313-27-5							
10	nickel { nickel chromate }		36.3 mg/kg	2.976	97.775 mg/kg	0.00978 %	✓	
	028-035-00-7 / 238-766-5 / 14721-18-7							
11	selenium { nickel selenate }		1 mg/kg	2.554	2.311 mg/kg	0.000231 %	✓	
	028-031-00-5 / 239-125-2 / 15060-62-5							
12	zinc { zinc oxide }		90 mg/kg	1.245	101.382 mg/kg	0.0101 %	✓	
	030-013-00-7 / 215-222-5 / 1314-13-2							
13	TPH (C6 to C40) petroleum group		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
	/ / TPH							
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	603-181-00-X / 216-653-1 / 1634-04-4							
15	benzene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-020-00-8 / 200-753-7 / 71-43-2							
16	toluene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-021-00-3 / 203-625-9 / 108-88-3							
17	ethylbenzene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-023-00-4 / 202-849-4 / 100-41-4							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				8.36	pH		8.36	pH	8.36 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22	●	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23	●	fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25	●	anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26	●	fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27	●	pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				74	mg/kg	1.117	74.772	mg/kg	0.00748 %	✓	
			215-127-9	1304-28-5									
38	●	coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0454 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH02-29/09/2021-0.00-1.40m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH02-29/09/2021-0.00-1.40m
Moisture content:
33.4%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 33.4% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		2 mg/kg	1.197	1.595 mg/kg	0.000159 %	✓	
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		32.5 mg/kg	1.32	28.578 mg/kg	0.00286 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		2.5 mg/kg	1.142	1.902 mg/kg	0.00019 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		64.2 mg/kg	1.462	62.492 mg/kg	0.00625 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		67 mg/kg	1.126	50.239 mg/kg	0.00502 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	84 mg/kg	1.56	87.262 mg/kg	0.00559 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.4 mg/kg	1.353	0.361 mg/kg	0.0000361 %	✓	
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		2.7 mg/kg	1.5	2.698 mg/kg	0.00027 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		53.3 mg/kg	2.976	105.651 mg/kg	0.0106 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		2 mg/kg	2.554	3.402 mg/kg	0.00034 %	✓	
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		192 mg/kg	1.245	159.164 mg/kg	0.0159 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		456 mg/kg		303.696 mg/kg	0.0304 %	✓	
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				7.81	pH		7.81	pH	7.81 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22	●	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23	●	fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24	●	phenanthrene				0.05	mg/kg		0.0333	mg/kg	0.00000333 %	✓	
			201-581-5	85-01-8									
25	●	anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26	●	fluoranthene				0.09	mg/kg		0.0599	mg/kg	0.00000599 %	✓	
			205-912-4	206-44-0									
27	●	pyrene				0.08	mg/kg		0.0533	mg/kg	0.00000533 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				0.09	mg/kg		0.0599	mg/kg	0.00000599 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				0.06	mg/kg		0.04	mg/kg	0.000004 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				0.09	mg/kg		0.0599	mg/kg	0.00000599 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				0.03	mg/kg		0.02	mg/kg	0.000002 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				0.08	mg/kg		0.0533	mg/kg	0.00000533 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				238	mg/kg	1.117	176.975	mg/kg	0.0177 %	✓	
			215-127-9	1304-28-5									
38	●	coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0955 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Solid waste without liquid phase

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0304%)

Classification of sample: BH02-29/09/2021-1.40-2.00m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH02-29/09/2021-1.40-2.00m
Moisture content:
28.1%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 28.1% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		2	mg/kg	1.197	1.721	mg/kg	0.000172 %	✓	
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		9.8	mg/kg	1.32	9.303	mg/kg	0.00093 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		2.6	mg/kg	1.142	2.135	mg/kg	0.000214 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		64.2	mg/kg	1.462	67.465	mg/kg	0.00675 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3	mg/kg	2.27	<0.681	mg/kg	<0.0000681 %		<**LOD**
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		46	mg/kg	1.126	37.238	mg/kg	0.00372 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	36	mg/kg	1.56	40.374	mg/kg	0.00259 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.4	mg/kg	1.353	0.389	mg/kg	0.0000389 %	✓	
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		2.5	mg/kg	1.5	2.697	mg/kg	0.00027 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		49	mg/kg	2.976	104.857	mg/kg	0.0105 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		2	mg/kg	2.554	3.672	mg/kg	0.000367 %	✓	
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		160	mg/kg	1.245	143.192	mg/kg	0.0143 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52	mg/kg		<52	mg/kg	<0.0052 %		<**LOD**
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				8.04	pH		8.04	pH	8.04 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25		anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				0.07	mg/kg		0.0503	mg/kg	0.00000503 %	✓	
			205-912-4	206-44-0									
27		pyrene				0.06	mg/kg		0.0431	mg/kg	0.00000431 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				0.06	mg/kg		0.0431	mg/kg	0.00000431 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium oxide }				207	mg/kg	1.117	166.173	mg/kg	0.0166 %	✓	
			215-127-9	1304-28-5									
38		coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0619 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH03-29/09/2021-0.00-1.70m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH03-29/09/2021-0.00-1.70m
Moisture content:
18.6%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 18.6% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number / EC Number / CAS Number							
1	antimony { antimony trioxide }		2 mg/kg	1.197	1.949 mg/kg	0.000195 %	✓	
	051-005-00-X / 215-175-0 / 1309-64-4							
2	arsenic { arsenic trioxide }		12.8 mg/kg	1.32	13.757 mg/kg	0.00138 %	✓	
	033-003-00-0 / 215-481-4 / 1327-53-3							
3	cadmium { cadmium oxide }		1.9 mg/kg	1.142	1.767 mg/kg	0.000177 %	✓	
	048-002-00-0 / 215-146-2 / 1306-19-0							
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		39.3 mg/kg	1.462	46.755 mg/kg	0.00468 %	✓	
	215-160-9 / 1308-38-9							
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }		<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
	024-017-00-8							
6	copper { dicopper oxide; copper (I) oxide }		51 mg/kg	1.126	46.74 mg/kg	0.00467 %	✓	
	029-002-00-X / 215-270-7 / 1317-39-1							
7	lead { lead chromate }	1	55 mg/kg	1.56	69.833 mg/kg	0.00448 %	✓	
	082-004-00-2 / 231-846-0 / 7758-97-6							
8	mercury { mercury dichloride }		0.3 mg/kg	1.353	0.331 mg/kg	0.0000331 %	✓	
	080-010-00-X / 231-299-8 / 7487-94-7							
9	molybdenum { molybdenum(VI) oxide }		4.2 mg/kg	1.5	5.129 mg/kg	0.000513 %	✓	
	042-001-00-9 / 215-204-7 / 1313-27-5							
10	nickel { nickel chromate }		40.2 mg/kg	2.976	97.392 mg/kg	0.00974 %	✓	
	028-035-00-7 / 238-766-5 / 14721-18-7							
11	selenium { nickel selenate }		3 mg/kg	2.554	6.236 mg/kg	0.000624 %	✓	
	028-031-00-5 / 239-125-2 / 15060-62-5							
12	zinc { zinc oxide }		104 mg/kg	1.245	105.373 mg/kg	0.0105 %	✓	
	030-013-00-7 / 215-222-5 / 1314-13-2							
13	TPH (C6 to C40) petroleum group		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
	TPH							
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	603-181-00-X / 216-653-1 / 1634-04-4							
15	benzene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-020-00-8 / 200-753-7 / 71-43-2							
16	toluene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-021-00-3 / 203-625-9 / 108-88-3							
17	ethylbenzene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-023-00-4 / 202-849-4 / 100-41-4							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				7.8	pH		7.8	pH	7.8 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				0.21	mg/kg		0.171	mg/kg	0.0000171 %	✓	
			201-581-5	85-01-8									
25		anthracene				0.05	mg/kg		0.0407	mg/kg	0.00000407 %	✓	
			204-371-1	120-12-7									
26		fluoranthene				0.23	mg/kg		0.187	mg/kg	0.0000187 %	✓	
			205-912-4	206-44-0									
27		pyrene				0.22	mg/kg		0.179	mg/kg	0.0000179 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				0.14	mg/kg		0.114	mg/kg	0.0000114 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				0.16	mg/kg		0.13	mg/kg	0.000013 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				0.16	mg/kg		0.13	mg/kg	0.000013 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				0.06	mg/kg		0.0488	mg/kg	0.00000488 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				0.1	mg/kg		0.0814	mg/kg	0.00000814 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				0.05	mg/kg		0.0407	mg/kg	0.00000407 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				0.07	mg/kg		0.057	mg/kg	0.0000057 %	✓	
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium oxide }				105	mg/kg	1.117	95.428	mg/kg	0.00954 %	✓	
			215-127-9	1304-28-5									
38		coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0521 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH03-29/09/2021-1.70-2.00m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH03-29/09/2021-1.70-2.00m
Moisture content:
14.4%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 14.4% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		1 mg/kg	1.197	1.025 mg/kg	0.000102 %	✓	
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		8.6 mg/kg	1.32	9.72 mg/kg	0.000972 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		2.4 mg/kg	1.142	2.347 mg/kg	0.000235 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		33.1 mg/kg	1.462	41.411 mg/kg	0.00414 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		27 mg/kg	1.126	26.022 mg/kg	0.0026 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	25 mg/kg	1.56	33.38 mg/kg	0.00214 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		3.4 mg/kg	1.5	4.366 mg/kg	0.000437 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		32.1 mg/kg	2.976	81.781 mg/kg	0.00818 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		2 mg/kg	2.554	4.372 mg/kg	0.000437 %	✓	
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		63 mg/kg	1.245	67.125 mg/kg	0.00671 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				8.09	pH		8.09	pH	8.09 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				0.23	mg/kg		0.197	mg/kg	0.0000197 %	✓	
			201-581-5	85-01-8									
25		anthracene				0.08	mg/kg		0.0685	mg/kg	0.00000685 %	✓	
			204-371-1	120-12-7									
26		fluoranthene				0.36	mg/kg		0.308	mg/kg	0.0000308 %	✓	
			205-912-4	206-44-0									
27		pyrene				0.32	mg/kg		0.274	mg/kg	0.0000274 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				0.21	mg/kg		0.18	mg/kg	0.000018 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				0.21	mg/kg		0.18	mg/kg	0.000018 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				0.23	mg/kg		0.197	mg/kg	0.0000197 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				0.09	mg/kg		0.077	mg/kg	0.0000077 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				0.16	mg/kg		0.137	mg/kg	0.0000137 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				0.09	mg/kg		0.077	mg/kg	0.0000077 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				0.11	mg/kg		0.0942	mg/kg	0.00000942 %	✓	
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium oxide }				250	mg/kg	1.117	238.932	mg/kg	0.0239 %	✓	
			215-127-9	1304-28-5									
38		sulfur { sulfur }				800	mg/kg		684.8	mg/kg	0.0685 %	✓	
		016-094-00-1	231-722-6	7704-34-9									
39		coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
40		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.124 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH04-29/09/2021-0.00-1.10m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH04-29/09/2021-0.00-1.10m
Moisture content:
12.4%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 12.4% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		2 mg/kg	1.197	2.097 mg/kg	0.00021 %	✓	
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		10.1 mg/kg	1.32	11.682 mg/kg	0.00117 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		1.9 mg/kg	1.142	1.901 mg/kg	0.00019 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		48.6 mg/kg	1.462	62.224 mg/kg	0.00622 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		33 mg/kg	1.126	32.547 mg/kg	0.00325 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	21 mg/kg	1.56	28.694 mg/kg	0.00184 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		4.7 mg/kg	1.5	6.177 mg/kg	0.000618 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		40.1 mg/kg	2.976	104.549 mg/kg	0.0105 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		4 mg/kg	2.554	8.949 mg/kg	0.000895 %	✓	
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		122 mg/kg	1.245	133.025 mg/kg	0.0133 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				7.93	pH		7.93	pH	7.93 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				0.05	mg/kg		0.0438	mg/kg	0.00000438 %	✓	
			201-581-5	85-01-8									
25		anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				0.03	mg/kg		0.0263	mg/kg	0.00000263 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium oxide }				78	mg/kg	1.117	76.289	mg/kg	0.00763 %	✓	
			215-127-9	1304-28-5									
38		coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0512 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH04-29/09/2021-2.50-3.00m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH04-29/09/2021-2.50-3.00m
Moisture content:
13.2%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 13.2% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		2	mg/kg	1.197	2.078	mg/kg	0.000208 %	✓	
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		10.7	mg/kg	1.32	12.263	mg/kg	0.00123 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		2	mg/kg	1.142	1.983	mg/kg	0.000198 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		80.5	mg/kg	1.462	102.125	mg/kg	0.0102 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3	mg/kg	2.27	<0.681	mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		35	mg/kg	1.126	34.204	mg/kg	0.00342 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	26	mg/kg	1.56	35.202	mg/kg	0.00226 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<LOD
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		6.7	mg/kg	1.5	8.725	mg/kg	0.000872 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		50.5	mg/kg	2.976	130.462	mg/kg	0.013 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		2	mg/kg	2.554	4.433	mg/kg	0.000443 %	✓	
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		95	mg/kg	1.245	102.639	mg/kg	0.0103 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52	mg/kg		<52	mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				8.31	pH		8.31	pH	8.31 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25		anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				0.06	mg/kg		0.0521	mg/kg	0.00000521 %	✓	
			205-912-4	206-44-0									
27		pyrene				0.06	mg/kg		0.0521	mg/kg	0.00000521 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				0.05	mg/kg		0.0434	mg/kg	0.00000434 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium oxide }				94	mg/kg	1.117	91.098	mg/kg	0.00911 %	✓	
			215-127-9	1304-28-5									
38		coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0567 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH05-29/09/2021-0.20-1.60m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH05-29/09/2021-0.20-1.60m
Moisture content:
19.1%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 19.1% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number / EC Number / CAS Number							
1	antimony { antimony trioxide }		2 mg/kg	1.197	1.937 mg/kg	0.000194 %	✓	
	051-005-00-X / 215-175-0 / 1309-64-4							
2	arsenic { arsenic trioxide }		11.7 mg/kg	1.32	12.497 mg/kg	0.00125 %	✓	
	033-003-00-0 / 215-481-4 / 1327-53-3							
3	cadmium { cadmium oxide }		1.5 mg/kg	1.142	1.386 mg/kg	0.000139 %	✓	
	048-002-00-0 / 215-146-2 / 1306-19-0							
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		34.2 mg/kg	1.462	40.438 mg/kg	0.00404 %	✓	
	215-160-9 / 1308-38-9							
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }		<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<**LOD**
	024-017-00-8							
6	copper { dicopper oxide; copper (I) oxide }		59 mg/kg	1.126	53.74 mg/kg	0.00537 %	✓	
	029-002-00-X / 215-270-7 / 1317-39-1							
7	lead { lead chromate }	1	46 mg/kg	1.56	58.047 mg/kg	0.00372 %	✓	
	082-004-00-2 / 231-846-0 / 7758-97-6							
8	mercury { mercury dichloride }		0.2 mg/kg	1.353	0.219 mg/kg	0.0000219 %	✓	
	080-010-00-X / 231-299-8 / 7487-94-7							
9	molybdenum { molybdenum(VI) oxide }		3.3 mg/kg	1.5	4.005 mg/kg	0.000401 %	✓	
	042-001-00-9 / 215-204-7 / 1313-27-5							
10	nickel { nickel chromate }		34.8 mg/kg	2.976	83.791 mg/kg	0.00838 %	✓	
	028-035-00-7 / 238-766-5 / 14721-18-7							
11	selenium { nickel selenate }		2 mg/kg	2.554	4.132 mg/kg	0.000413 %	✓	
	028-031-00-5 / 239-125-2 / 15060-62-5							
12	zinc { zinc oxide }		90 mg/kg	1.245	90.628 mg/kg	0.00906 %	✓	
	030-013-00-7 / 215-222-5 / 1314-13-2							
13	TPH (C6 to C40) petroleum group		171 mg/kg		138.339 mg/kg	0.0138 %	✓	
	TPH							
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<**LOD**
	603-181-00-X / 216-653-1 / 1634-04-4							
15	benzene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<**LOD**
	601-020-00-8 / 200-753-7 / 71-43-2							
16	toluene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<**LOD**
	601-021-00-3 / 203-625-9 / 108-88-3							
17	ethylbenzene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<**LOD**
	601-023-00-4 / 202-849-4 / 100-41-4							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				7.93	pH		7.93	pH	7.93 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-917-1	208-96-8									
22	●	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
			201-469-6	83-32-9									
23	●	fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
			201-695-5	86-73-7									
24	●	phenanthrene				0.2	mg/kg		0.162	mg/kg	0.0000162 %	✓	
			201-581-5	85-01-8									
25	●	anthracene				0.06	mg/kg		0.0485	mg/kg	0.00000485 %	✓	
			204-371-1	120-12-7									
26	●	fluoranthene				0.27	mg/kg		0.218	mg/kg	0.0000218 %	✓	
			205-912-4	206-44-0									
27	●	pyrene				0.26	mg/kg		0.21	mg/kg	0.000021 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				0.17	mg/kg		0.138	mg/kg	0.0000138 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				0.19	mg/kg		0.154	mg/kg	0.0000154 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				0.19	mg/kg		0.154	mg/kg	0.0000154 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				0.07	mg/kg		0.0566	mg/kg	0.00000566 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				0.14	mg/kg		0.113	mg/kg	0.0000113 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				0.07	mg/kg		0.0566	mg/kg	0.00000566 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				0.1	mg/kg		0.0809	mg/kg	0.00000809 %	✓	
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<**LOD**
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				107	mg/kg	1.117	96.648	mg/kg	0.00966 %	✓	
			215-127-9	1304-28-5									
38	●	coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0568 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Solid waste without liquid phase

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0138%)

Classification of sample: BH05-29/09/2021-1.60-2.00m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH05-29/09/2021-1.60-2.00m
Moisture content:
12.4%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 12.4% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		1 mg/kg	1.197	1.049 mg/kg	0.000105 %	✓	
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		6.9 mg/kg	1.32	7.981 mg/kg	0.000798 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		1.6 mg/kg	1.142	1.601 mg/kg	0.00016 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		21.1 mg/kg	1.462	27.015 mg/kg	0.0027 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		20 mg/kg	1.126	19.726 mg/kg	0.00197 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	15 mg/kg	1.56	20.496 mg/kg	0.00131 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		2.4 mg/kg	1.5	3.154 mg/kg	0.000315 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		24.9 mg/kg	2.976	64.919 mg/kg	0.00649 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		52 mg/kg	1.245	56.699 mg/kg	0.00567 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				8.08	pH		8.08	pH	8.08 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22	●	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23	●	fluorene				0.05	mg/kg		0.0438	mg/kg	0.00000438 %	✓	
			201-695-5	86-73-7									
24	●	phenanthrene				0.49	mg/kg		0.429	mg/kg	0.0000429 %	✓	
			201-581-5	85-01-8									
25	●	anthracene				0.15	mg/kg		0.131	mg/kg	0.0000131 %	✓	
			204-371-1	120-12-7									
26	●	fluoranthene				0.73	mg/kg		0.639	mg/kg	0.0000639 %	✓	
			205-912-4	206-44-0									
27	●	pyrene				0.61	mg/kg		0.534	mg/kg	0.0000534 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				0.39	mg/kg		0.342	mg/kg	0.0000342 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				0.33	mg/kg		0.289	mg/kg	0.0000289 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				0.34	mg/kg		0.298	mg/kg	0.0000298 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				0.13	mg/kg		0.114	mg/kg	0.0000114 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				0.24	mg/kg		0.21	mg/kg	0.000021 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				0.14	mg/kg		0.123	mg/kg	0.0000123 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				0.15	mg/kg		0.131	mg/kg	0.0000131 %	✓	
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				133	mg/kg	1.117	130.082	mg/kg	0.013 %	✓	
			215-127-9	1304-28-5									
38		sulfur { sulfur }				600	mg/kg		525.6	mg/kg	0.0526 %	✓	
		016-094-00-1	231-722-6	7704-34-9									
39	●	coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
40		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0911 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH07-29/09/2021-0.60-1.00m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH07-29/09/2021-0.60-1.00m
Moisture content:
11.8%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 11.8% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		2 mg/kg	1.197	2.112 mg/kg	0.000211 %	✓	
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		9.7 mg/kg	1.32	11.296 mg/kg	0.00113 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		2.2 mg/kg	1.142	2.217 mg/kg	0.000222 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		41.3 mg/kg	1.462	53.24 mg/kg	0.00532 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		28 mg/kg	1.126	27.805 mg/kg	0.00278 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	19 mg/kg	1.56	26.139 mg/kg	0.00168 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		3.5 mg/kg	1.5	4.631 mg/kg	0.000463 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		37.1 mg/kg	2.976	97.39 mg/kg	0.00974 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		1 mg/kg	2.554	2.252 mg/kg	0.000225 %	✓	
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		83 mg/kg	1.245	91.121 mg/kg	0.00911 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				8.57	pH		8.57	pH	8.57 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22	●	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23	●	fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25	●	anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26	●	fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27	●	pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				89	mg/kg	1.117	87.643	mg/kg	0.00876 %	✓	
			215-127-9	1304-28-5									
38	●	coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0451 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH07-29/09/2021-1.00-2.00m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH07-29/09/2021-1.00-2.00m
Moisture content:
10.3%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 10.3% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		2 mg/kg	1.197	2.148 mg/kg	0.000215 %	✓	
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		9.5 mg/kg	1.32	11.251 mg/kg	0.00113 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		1.7 mg/kg	1.142	1.742 mg/kg	0.000174 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		37.2 mg/kg	1.462	48.77 mg/kg	0.00488 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		30 mg/kg	1.126	30.298 mg/kg	0.00303 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	15 mg/kg	1.56	20.987 mg/kg	0.00135 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.2 mg/kg	1.353	0.243 mg/kg	0.0000243 %	✓	
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		2.5 mg/kg	1.5	3.364 mg/kg	0.000336 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		37.2 mg/kg	2.976	99.313 mg/kg	0.00993 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		1 mg/kg	2.554	2.291 mg/kg	0.000229 %	✓	
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		66 mg/kg	1.245	73.69 mg/kg	0.00737 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
18		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
19	●	pH			PH		8.66	pH		8.66	pH	8.66 pH		
20		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
21	●	acenaphthylene		205-917-1	208-96-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
22	●	acenaphthene		201-469-6	83-32-9		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
23	●	fluorene		201-695-5	86-73-7		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
24	●	phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
25	●	anthracene		204-371-1	120-12-7		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
26	●	fluoranthene		205-912-4	206-44-0		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
27	●	pyrene		204-927-3	129-00-0		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
28		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<**LOD**
29		chrysene	601-048-00-0	205-923-4	218-01-9		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<**LOD**
30		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
31		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<**LOD**
32		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
33	●	indeno[123-cd]pyrene		205-893-2	193-39-5		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
34		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
35	●	benzo[ghi]perylene		205-883-8	191-24-2		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
36	●	polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3		<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<**LOD**
37		barium { ● barium oxide }		215-127-9	1304-28-5		49	mg/kg	1.117	49.074	mg/kg	0.00491 %	✓	
38		sulfur { sulfur }	016-094-00-1	231-722-6	7704-34-9		500	mg/kg		448.5	mg/kg	0.0449 %	✓	
39	●	coronene		205-881-7	191-07-1		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
40		benzo[j]fluoranthene	601-035-00-X	205-910-3	205-82-3		<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
											Total:	0.0839 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH08-29/09/2021-0.40-1.20m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH08-29/09/2021-0.40-1.20m
Moisture content:
27%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 27% Wet Weight Moisture Correction applied (MC)

#		Determinand	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		CLP index number / EC Number / CAS Number							
1		antimony { antimony trioxide }		2 mg/kg	1.197	1.748 mg/kg	0.000175 %	✓	
		051-005-00-X / 215-175-0 / 1309-64-4							
2		arsenic { arsenic trioxide }		23.7 mg/kg	1.32	22.843 mg/kg	0.00228 %	✓	
		033-003-00-0 / 215-481-4 / 1327-53-3							
3		cadmium { cadmium oxide }		1.6 mg/kg	1.142	1.334 mg/kg	0.000133 %	✓	
		048-002-00-0 / 215-146-2 / 1306-19-0							
4		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		34.2 mg/kg	1.462	36.489 mg/kg	0.00365 %	✓	
		/ 215-160-9 / 1308-38-9							
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }		<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
		024-017-00-8 / /							
6		copper { dicopper oxide; copper (I) oxide }		87 mg/kg	1.126	71.505 mg/kg	0.00715 %	✓	
		029-002-00-X / 215-270-7 / 1317-39-1							
7		lead { lead chromate }	1	271 mg/kg	1.56	308.578 mg/kg	0.0198 %	✓	
		082-004-00-2 / 231-846-0 / 7758-97-6							
8		mercury { mercury dichloride }		1.5 mg/kg	1.353	1.482 mg/kg	0.000148 %	✓	
		080-010-00-X / 231-299-8 / 7487-94-7							
9		molybdenum { molybdenum(VI) oxide }		3.2 mg/kg	1.5	3.504 mg/kg	0.00035 %	✓	
		042-001-00-9 / 215-204-7 / 1313-27-5							
10		nickel { nickel chromate }		47.8 mg/kg	2.976	103.854 mg/kg	0.0104 %	✓	
		028-035-00-7 / 238-766-5 / 14721-18-7							
11		selenium { nickel selenate }		1 mg/kg	2.554	1.864 mg/kg	0.000186 %	✓	
		028-031-00-5 / 239-125-2 / 15060-62-5							
12		zinc { zinc oxide }		189 mg/kg	1.245	171.733 mg/kg	0.0172 %	✓	
		030-013-00-7 / 215-222-5 / 1314-13-2							
13		TPH (C6 to C40) petroleum group		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
		/ / TPH							
14		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
		603-181-00-X / 216-653-1 / 1634-04-4							
15		benzene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
		601-020-00-8 / 200-753-7 / 71-43-2							
16		toluene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
		601-021-00-3 / 203-625-9 / 108-88-3							
17		ethylbenzene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
		601-023-00-4 / 202-849-4 / 100-41-4							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				0.007	mg/kg		0.0051	mg/kg	0.000000511 %	✓	
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				7.81	pH		7.81	pH	7.81 pH		
				PH									
20		naphthalene				0.07	mg/kg		0.0511	mg/kg	0.00000511 %	✓	
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				0.07	mg/kg		0.0511	mg/kg	0.00000511 %	✓	
			205-917-1	208-96-8									
22	●	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
			201-469-6	83-32-9									
23	●	fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
			201-695-5	86-73-7									
24	●	phenanthrene				0.7	mg/kg		0.511	mg/kg	0.0000511 %	✓	
			201-581-5	85-01-8									
25	●	anthracene				0.15	mg/kg		0.109	mg/kg	0.0000109 %	✓	
			204-371-1	120-12-7									
26	●	fluoranthene				0.93	mg/kg		0.679	mg/kg	0.0000679 %	✓	
			205-912-4	206-44-0									
27	●	pyrene				0.86	mg/kg		0.628	mg/kg	0.0000628 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				0.64	mg/kg		0.467	mg/kg	0.0000467 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				0.58	mg/kg		0.423	mg/kg	0.0000423 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				0.68	mg/kg		0.496	mg/kg	0.0000496 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				0.27	mg/kg		0.197	mg/kg	0.0000197 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				0.49	mg/kg		0.358	mg/kg	0.0000358 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				0.26	mg/kg		0.19	mg/kg	0.000019 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				0.05	mg/kg		0.0365	mg/kg	0.00000365 %	✓	
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				0.3	mg/kg		0.219	mg/kg	0.0000219 %	✓	
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<**LOD**
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				159	mg/kg	1.117	129.593	mg/kg	0.013 %	✓	
			215-127-9	1304-28-5									
38		sulfur { sulfur }				900	mg/kg		657	mg/kg	0.0657 %	✓	
		016-094-00-1	231-722-6	7704-34-9									
39	●	coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
			205-881-7	191-07-1									
40		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.146 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Solid waste without liquid phase

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

xylene: (conc.: 5.11e-07%)

Classification of sample: BH08-29/09/2021-2.00-3.00m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH08-29/09/2021-2.00-3.00m
Moisture content:
10.4%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 10.4% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		2 mg/kg	1.197	2.145 mg/kg	0.000215 %	✓	
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		7.6 mg/kg	1.32	8.991 mg/kg	0.000899 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		1.7 mg/kg	1.142	1.74 mg/kg	0.000174 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		56.9 mg/kg	1.462	74.514 mg/kg	0.00745 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		20 mg/kg	1.126	20.176 mg/kg	0.00202 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	15 mg/kg	1.56	20.964 mg/kg	0.00134 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		4.7 mg/kg	1.5	6.318 mg/kg	0.000632 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		30.8 mg/kg	2.976	82.135 mg/kg	0.00821 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		61 mg/kg	1.245	68.031 mg/kg	0.0068 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				8.44	pH		8.44	pH	8.44 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25		anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium oxide }				126	mg/kg	1.117	126.049	mg/kg	0.0126 %	✓	
			215-127-9	1304-28-5									
38		coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0461 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH09-29/09/2021-0.20-0.90m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH09-29/09/2021-0.20-0.90m
Moisture content:
20.8%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 20.8% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		3 mg/kg	1.197	2.844 mg/kg	0.000284 %	✓	
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		16.3 mg/kg	1.32	17.045 mg/kg	0.0017 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.9 mg/kg	1.142	0.814 mg/kg	0.0000814 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		36.1 mg/kg	1.462	41.788 mg/kg	0.00418 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		82 mg/kg	1.126	73.12 mg/kg	0.00731 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	147 mg/kg	1.56	181.6 mg/kg	0.0116 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.6 mg/kg	1.353	0.643 mg/kg	0.0000643 %	✓	
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		1.9 mg/kg	1.5	2.257 mg/kg	0.000226 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		21.1 mg/kg	2.976	49.737 mg/kg	0.00497 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		165 mg/kg	1.245	162.659 mg/kg	0.0163 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		105 mg/kg		83.16 mg/kg	0.00832 %	✓	
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene	601-021-00-3	203-625-9	108-88-3		0.014 mg/kg		0.0111 mg/kg	0.00000111 %	✓	
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				0.008	mg/kg		0.0063	mg/kg	0.000000634 %	✓	
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				11.86	pH		11.86	pH	11.86 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				0.04	mg/kg		0.0317	mg/kg	0.00000317 %	✓	
			205-917-1	208-96-8									
22	●	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
			201-469-6	83-32-9									
23	●	fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
			201-695-5	86-73-7									
24	●	phenanthrene				0.58	mg/kg		0.459	mg/kg	0.0000459 %	✓	
			201-581-5	85-01-8									
25	●	anthracene				0.13	mg/kg		0.103	mg/kg	0.0000103 %	✓	
			204-371-1	120-12-7									
26	●	fluoranthene				0.83	mg/kg		0.657	mg/kg	0.0000657 %	✓	
			205-912-4	206-44-0									
27	●	pyrene				0.78	mg/kg		0.618	mg/kg	0.0000618 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				0.39	mg/kg		0.309	mg/kg	0.0000309 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				0.44	mg/kg		0.348	mg/kg	0.0000348 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				0.51	mg/kg		0.404	mg/kg	0.0000404 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				0.2	mg/kg		0.158	mg/kg	0.0000158 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				0.39	mg/kg		0.309	mg/kg	0.0000309 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				0.24	mg/kg		0.19	mg/kg	0.000019 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				0.06	mg/kg		0.0475	mg/kg	0.00000475 %	✓	
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				0.27	mg/kg		0.214	mg/kg	0.0000214 %	✓	
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<**LOD**
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				195	mg/kg	1.117	172.433	mg/kg	0.0172 %	✓	
			215-127-9	1304-28-5									
38	●	coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
		601-035-00-X	205-910-3	205-82-3									
40	●	pH: acid/alkali reserve				0.002	gNaOH		0.002	gNaOH	0.002 gNaOH		
				ACID_ALK_RES									
										Total:	0.0731 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"
Force this Hazardous property to non hazardous because Solid waste without liquid phase

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

toluene: (conc.: 1.11e-06%)

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinands:

TPH (C6 to C40) petroleum group: (conc.: 0.00832%)
xylene: (conc.: 6.34e-07%)

HP 4: Irritant - skin irritation and eye damage "waste which on application can cause skin irritation or damage to the eye"
Force this Hazardous property to non hazardous because This material has an elevated pH (>11.5, i.e. above Hazardous limit), however the elevated pH is due to the fact that the has fragments of concrete mixed with subsoils. This material has been declassified from Hazardous (17 05 03) to Non-Hazardous (17 05 04). Acid Alkali Reserve testing has been carried out, the results of which indicate a low buffer capacity and therefore the material is considered not a significant risk in terms of HP8 Corrosive or HP4 Irritant, however, although Acid Alkali Reserve testing is a good indicator, without In Vitro testing this cannot be said for certain, but given the material with elevated pH is due to concrete in Vitro testing is not considered necessary. Acceptance and final classification of all waste is at the discretion of the facility approached.

pH; pH "Assumed to be irritant/corrosive because of pH value"

Because of determinand:

pH: (conc.: 11.86 pH)

HP 8: Corrosive "waste which on application can cause skin corrosion"
Force this Hazardous property to non hazardous because This material has an elevated pH (>11.5, i.e. above Hazardous limit), however the elevated pH is due to the fact that the has fragments of concrete mixed with subsoils. This material has been declassified from Hazardous (17 05 03) to Non-Hazardous (17 05 04). Acid Alkali Reserve testing has been carried out, the results of which indicate a low buffer capacity and therefore the material is considered not a significant risk in terms of HP8 Corrosive or HP4 Irritant, however, although Acid Alkali Reserve testing is a good indicator, without In Vitro testing this cannot be said for certain, but given the material with elevated pH is due to concrete in Vitro testing is not considered necessary. Acceptance and final classification of all waste is at the discretion of the facility approached.

pH; pH "Assumed to be irritant/corrosive because of pH value"

Because of determinand:

pH: (conc.: 11.86 pH)

Classification of sample: BH09-29/09/2021-2.00-3.00m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH09-29/09/2021-2.00-3.00m
Moisture content:
12.3%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 12.3% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		1 mg/kg	1.197	1.05 mg/kg	0.000105 %	✓	
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		6.8 mg/kg	1.32	7.874 mg/kg	0.000787 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		1.8 mg/kg	1.142	1.803 mg/kg	0.00018 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		33.1 mg/kg	1.462	42.427 mg/kg	0.00424 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		23 mg/kg	1.126	22.71 mg/kg	0.00227 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	12 mg/kg	1.56	16.415 mg/kg	0.00105 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.2 mg/kg	1.353	0.237 mg/kg	0.0000237 %	✓	
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		4.2 mg/kg	1.5	5.526 mg/kg	0.000553 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		25 mg/kg	2.976	65.255 mg/kg	0.00653 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		60 mg/kg	1.245	65.497 mg/kg	0.00655 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				8.57	pH		8.57	pH	8.57 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22	●	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23	●	fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25	●	anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26	●	fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27	●	pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				55	mg/kg	1.117	53.855	mg/kg	0.00539 %	✓	
			215-127-9	1304-28-5									
38	●	coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0334 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH10-29/09/2021-0.20-1.00m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH10-29/09/2021-0.20-1.00m
Moisture content:
10.8%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 10.8% Wet Weight Moisture Correction applied (MC)

#		Determinand	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		CLP index number / EC Number / CAS Number							
1		antimony { antimony trioxide }		<1 mg/kg	1.197	<1.197 mg/kg	<0.00012 %		<LOD
		051-005-00-X / 215-175-0 / 1309-64-4							
2		arsenic { arsenic trioxide }		6 mg/kg	1.32	7.066 mg/kg	0.000707 %	✓	
		033-003-00-0 / 215-481-4 / 1327-53-3							
3		cadmium { cadmium oxide }		0.3 mg/kg	1.142	0.306 mg/kg	0.0000306 %	✓	
		048-002-00-0 / 215-146-2 / 1306-19-0							
4		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		26 mg/kg	1.462	33.896 mg/kg	0.00339 %	✓	
		/ 215-160-9 / 1308-38-9							
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }		<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
		024-017-00-8 / /							
6		copper { dicopper oxide; copper (I) oxide }		21 mg/kg	1.126	21.09 mg/kg	0.00211 %	✓	
		029-002-00-X / 215-270-7 / 1317-39-1							
7		lead { lead chromate }	1	24 mg/kg	1.56	33.393 mg/kg	0.00214 %	✓	
		082-004-00-2 / 231-846-0 / 7758-97-6							
8		mercury { mercury dichloride }		0.3 mg/kg	1.353	0.362 mg/kg	0.0000362 %	✓	
		080-010-00-X / 231-299-8 / 7487-94-7							
9		molybdenum { molybdenum(VI) oxide }		1.6 mg/kg	1.5	2.141 mg/kg	0.000214 %	✓	
		042-001-00-9 / 215-204-7 / 1313-27-5							
10		nickel { nickel chromate }		21 mg/kg	2.976	55.751 mg/kg	0.00558 %	✓	
		028-035-00-7 / 238-766-5 / 14721-18-7							
11		selenium { nickel selenate }		<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
		028-031-00-5 / 239-125-2 / 15060-62-5							
12		zinc { zinc oxide }		43 mg/kg	1.245	47.742 mg/kg	0.00477 %	✓	
		030-013-00-7 / 215-222-5 / 1314-13-2							
13		TPH (C6 to C40) petroleum group		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
		/ / TPH							
14		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
		603-181-00-X / 216-653-1 / 1634-04-4							
15		benzene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
		601-020-00-8 / 200-753-7 / 71-43-2							
16		toluene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
		601-021-00-3 / 203-625-9 / 108-88-3							
17		ethylbenzene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
		601-023-00-4 / 202-849-4 / 100-41-4							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				8.13	pH		8.13	pH	8.13 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22	●	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23	●	fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24	●	phenanthrene				0.15	mg/kg		0.134	mg/kg	0.0000134 %	✓	
			201-581-5	85-01-8									
25	●	anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26	●	fluoranthene				0.25	mg/kg		0.223	mg/kg	0.0000223 %	✓	
			205-912-4	206-44-0									
27	●	pyrene				0.22	mg/kg		0.196	mg/kg	0.0000196 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				0.16	mg/kg		0.143	mg/kg	0.0000143 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				0.15	mg/kg		0.134	mg/kg	0.0000134 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				0.17	mg/kg		0.152	mg/kg	0.0000152 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				0.07	mg/kg		0.0624	mg/kg	0.00000624 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				0.13	mg/kg		0.116	mg/kg	0.0000116 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				0.08	mg/kg		0.0714	mg/kg	0.00000714 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				0.09	mg/kg		0.0803	mg/kg	0.00000803 %	✓	
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				157	mg/kg	1.117	156.36	mg/kg	0.0156 %	✓	
			215-127-9	1304-28-5									
38	●	coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0405 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH10-29/09/2021-1.00-2.00m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH10-29/09/2021-1.00-2.00m
Moisture content:
13.9%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 13.9% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number / EC Number / CAS Number							
1	antimony { antimony trioxide } 051-005-00-X / 215-175-0 / 1309-64-4		2 mg/kg	1.197	2.061 mg/kg	0.000206 %	✓	
2	arsenic { arsenic trioxide } 033-003-00-0 / 215-481-4 / 1327-53-3		9.4 mg/kg	1.32	10.686 mg/kg	0.00107 %	✓	
3	cadmium { cadmium oxide } 048-002-00-0 / 215-146-2 / 1306-19-0		1.9 mg/kg	1.142	1.869 mg/kg	0.000187 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) } 215-160-9 / 1308-38-9		49.4 mg/kg	1.462	62.165 mg/kg	0.00622 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex } 024-017-00-8		<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide } 029-002-00-X / 215-270-7 / 1317-39-1		31 mg/kg	1.126	30.051 mg/kg	0.00301 %	✓	
7	lead { lead chromate } 082-004-00-2 / 231-846-0 / 7758-97-6	1	19 mg/kg	1.56	25.517 mg/kg	0.00164 %	✓	
8	mercury { mercury dichloride } 080-010-00-X / 231-299-8 / 7487-94-7		0.2 mg/kg	1.353	0.233 mg/kg	0.0000233 %	✓	
9	molybdenum { molybdenum(VI) oxide } 042-001-00-9 / 215-204-7 / 1313-27-5		4.3 mg/kg	1.5	5.554 mg/kg	0.000555 %	✓	
10	nickel { nickel chromate } 028-035-00-7 / 238-766-5 / 14721-18-7		33.4 mg/kg	2.976	85.59 mg/kg	0.00856 %	✓	
11	selenium { nickel selenate } 028-031-00-5 / 239-125-2 / 15060-62-5		1 mg/kg	2.554	2.199 mg/kg	0.00022 %	✓	
12	zinc { zinc oxide } 030-013-00-7 / 215-222-5 / 1314-13-2		86 mg/kg	1.245	92.166 mg/kg	0.00922 %	✓	
13	TPH (C6 to C40) petroleum group TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane 603-181-00-X / 216-653-1 / 1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene 601-020-00-8 / 200-753-7 / 71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene 601-021-00-3 / 203-625-9 / 108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene 601-023-00-4 / 202-849-4 / 100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				8.59	pH		8.59	pH	8.59 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22	●	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23	●	fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25	●	anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26	●	fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27	●	pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				72	mg/kg	1.117	69.214	mg/kg	0.00692 %	✓	
			215-127-9	1304-28-5									
38	●	coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0433 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH11-29/09/2021-0.00-0.70m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH11-29/09/2021-0.00-0.70m
Moisture content:
32%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 32% Wet Weight Moisture Correction applied (MC)

#		Determinand CLP index number / EC Number / CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1		antimony { antimony trioxide } 051-005-00-X / 215-175-0 / 1309-64-4		6 mg/kg	1.197	4.884 mg/kg	0.000488 %	✓	
2		arsenic { arsenic trioxide } 033-003-00-0 / 215-481-4 / 1327-53-3		30.2 mg/kg	1.32	27.114 mg/kg	0.00271 %	✓	
3		cadmium { cadmium oxide } 048-002-00-0 / 215-146-2 / 1306-19-0		2.7 mg/kg	1.142	2.097 mg/kg	0.00021 %	✓	
4		chromium in chromium(III) compounds { chromium(III) oxide (worst case) } 215-160-9 / 1308-38-9		58.7 mg/kg	1.462	58.339 mg/kg	0.00583 %	✓	
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex } 024-017-00-8		<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6		copper { dicopper oxide; copper (I) oxide } 029-002-00-X / 215-270-7 / 1317-39-1		120 mg/kg	1.126	91.872 mg/kg	0.00919 %	✓	
7		lead { lead chromate } 082-004-00-2 / 231-846-0 / 7758-97-6	1	273 mg/kg	1.56	289.564 mg/kg	0.0186 %	✓	
8		mercury { mercury dichloride } 080-010-00-X / 231-299-8 / 7487-94-7		0.8 mg/kg	1.353	0.736 mg/kg	0.0000736 %	✓	
9		molybdenum { molybdenum(VI) oxide } 042-001-00-9 / 215-204-7 / 1313-27-5		6.4 mg/kg	1.5	6.529 mg/kg	0.000653 %	✓	
10		nickel { nickel chromate } 028-035-00-7 / 238-766-5 / 14721-18-7		57.2 mg/kg	2.976	115.765 mg/kg	0.0116 %	✓	
11		selenium { nickel selenate } 028-031-00-5 / 239-125-2 / 15060-62-5		2 mg/kg	2.554	3.473 mg/kg	0.000347 %	✓	
12		zinc { zinc oxide } 030-013-00-7 / 215-222-5 / 1314-13-2		299 mg/kg	1.245	253.075 mg/kg	0.0253 %	✓	
13		TPH (C6 to C40) petroleum group TPH		144 mg/kg		97.92 mg/kg	0.00979 %	✓	
14		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane 603-181-00-X / 216-653-1 / 1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15		benzene 601-020-00-8 / 200-753-7 / 71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16		toluene 601-021-00-3 / 203-625-9 / 108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17		ethylbenzene 601-023-00-4 / 202-849-4 / 100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				7.93	pH		7.93	pH	7.93 pH		
				PH									
20		naphthalene				0.07	mg/kg		0.0476	mg/kg	0.00000476 %	✓	
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				0.06	mg/kg		0.0408	mg/kg	0.00000408 %	✓	
			205-917-1	208-96-8									
22	●	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23	●	fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24	●	phenanthrene				0.54	mg/kg		0.367	mg/kg	0.0000367 %	✓	
			201-581-5	85-01-8									
25	●	anthracene				0.13	mg/kg		0.0884	mg/kg	0.00000884 %	✓	
			204-371-1	120-12-7									
26	●	fluoranthene				0.9	mg/kg		0.612	mg/kg	0.0000612 %	✓	
			205-912-4	206-44-0									
27	●	pyrene				0.79	mg/kg		0.537	mg/kg	0.0000537 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				0.43	mg/kg		0.292	mg/kg	0.0000292 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				0.84	mg/kg		0.571	mg/kg	0.0000571 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				0.56	mg/kg		0.381	mg/kg	0.0000381 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				0.22	mg/kg		0.15	mg/kg	0.000015 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				0.47	mg/kg		0.32	mg/kg	0.000032 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				0.25	mg/kg		0.17	mg/kg	0.000017 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				0.28	mg/kg		0.19	mg/kg	0.000019 %	✓	
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				229	mg/kg	1.117	173.862	mg/kg	0.0174 %	✓	
			215-127-9	1304-28-5									
38	●	coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.103 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Solid waste without liquid phase

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00979%)

Classification of sample: BH11-29/09/2021-1.70-2.70m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH11-29/09/2021-1.70-2.70m
Moisture content:
18.9%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 18.9% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		3 mg/kg	1.197	2.913 mg/kg	0.000291 %	✓	
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		22.3 mg/kg	1.32	23.878 mg/kg	0.00239 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		1.6 mg/kg	1.142	1.482 mg/kg	0.000148 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		53 mg/kg	1.462	62.822 mg/kg	0.00628 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		98 mg/kg	1.126	89.483 mg/kg	0.00895 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	127 mg/kg	1.56	160.656 mg/kg	0.0103 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.5 mg/kg	1.353	0.549 mg/kg	0.0000549 %	✓	
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		5.6 mg/kg	1.5	6.813 mg/kg	0.000681 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		51.9 mg/kg	2.976	125.274 mg/kg	0.0125 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		2 mg/kg	2.554	4.142 mg/kg	0.000414 %	✓	
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		140 mg/kg	1.245	141.325 mg/kg	0.0141 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				8.41	pH		8.41	pH	8.41 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22	●	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23	●	fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24	●	phenanthrene				0.22	mg/kg		0.178	mg/kg	0.0000178 %	✓	
			201-581-5	85-01-8									
25	●	anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26	●	fluoranthene				0.25	mg/kg		0.203	mg/kg	0.0000203 %	✓	
			205-912-4	206-44-0									
27	●	pyrene				0.25	mg/kg		0.203	mg/kg	0.0000203 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				0.17	mg/kg		0.138	mg/kg	0.0000138 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				0.16	mg/kg		0.13	mg/kg	0.000013 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				0.16	mg/kg		0.13	mg/kg	0.000013 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				0.06	mg/kg		0.0487	mg/kg	0.00000487 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				0.14	mg/kg		0.114	mg/kg	0.0000114 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				0.07	mg/kg		0.0568	mg/kg	0.00000568 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				0.09	mg/kg		0.073	mg/kg	0.0000073 %	✓	
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				114	mg/kg	1.117	103.225	mg/kg	0.0103 %	✓	
			215-127-9	1304-28-5									
38	●	coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.072 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH12-29/09/2021-0.00-0.70m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH12-29/09/2021-0.00-0.70m
Moisture content:
15.4%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 15.4% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number / EC Number / CAS Number							
1	antimony { antimony trioxide }		<1 mg/kg	1.197	<1.197 mg/kg	<0.00012 %		<LOD
	051-005-00-X / 215-175-0 / 1309-64-4							
2	arsenic { arsenic trioxide }		7.1 mg/kg	1.32	7.931 mg/kg	0.000793 %	✓	
	033-003-00-0 / 215-481-4 / 1327-53-3							
3	cadmium { cadmium oxide }		1.3 mg/kg	1.142	1.256 mg/kg	0.000126 %	✓	
	048-002-00-0 / 215-146-2 / 1306-19-0							
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		20.3 mg/kg	1.462	25.1 mg/kg	0.00251 %	✓	
	/ 215-160-9 / 1308-38-9							
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }		<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
	024-017-00-8 / /							
6	copper { dicopper oxide; copper (I) oxide }		16 mg/kg	1.126	15.24 mg/kg	0.00152 %	✓	
	029-002-00-X / 215-270-7 / 1317-39-1							
7	lead { lead chromate }	1	17 mg/kg	1.56	22.433 mg/kg	0.00144 %	✓	
	082-004-00-2 / 231-846-0 / 7758-97-6							
8	mercury { mercury dichloride }		0.1 mg/kg	1.353	0.115 mg/kg	0.0000115 %	✓	
	080-010-00-X / 231-299-8 / 7487-94-7							
9	molybdenum { molybdenum(VI) oxide }		3 mg/kg	1.5	3.807 mg/kg	0.000381 %	✓	
	042-001-00-9 / 215-204-7 / 1313-27-5							
10	nickel { nickel chromate }		15.3 mg/kg	2.976	38.524 mg/kg	0.00385 %	✓	
	028-035-00-7 / 238-766-5 / 14721-18-7							
11	selenium { nickel selenate }		<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	028-031-00-5 / 239-125-2 / 15060-62-5							
12	zinc { zinc oxide }		49 mg/kg	1.245	51.598 mg/kg	0.00516 %	✓	
	030-013-00-7 / 215-222-5 / 1314-13-2							
13	TPH (C6 to C40) petroleum group		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
	/ / TPH							
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	603-181-00-X / 216-653-1 / 1634-04-4							
15	benzene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-020-00-8 / 200-753-7 / 71-43-2							
16	toluene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-021-00-3 / 203-625-9 / 108-88-3							
17	ethylbenzene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-023-00-4 / 202-849-4 / 100-41-4							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				8.56	pH		8.56	pH	8.56 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				0.06	mg/kg		0.0508	mg/kg	0.00000508 %	✓	
			201-581-5	85-01-8									
25		anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium oxide }				195	mg/kg	1.117	184.19	mg/kg	0.0184 %	✓	
			215-127-9	1304-28-5									
38		sulfur { sulfur }				900	mg/kg		761.4	mg/kg	0.0761 %	✓	
		016-094-00-1	231-722-6	7704-34-9									
39		coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
40		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.116 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH12-29/09/2021-1.00-2.50m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH12-29/09/2021-1.00-2.50m
Moisture content:
10.8%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 10.8% Wet Weight Moisture Correction applied (MC)

#		Determinand	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		CLP index number / EC Number / CAS Number							
1		antimony { antimony trioxide }		2 mg/kg	1.197	2.136 mg/kg	0.000214 %	✓	
		051-005-00-X / 215-175-0 / 1309-64-4							
2		arsenic { arsenic trioxide }		10.8 mg/kg	1.32	12.719 mg/kg	0.00127 %	✓	
		033-003-00-0 / 215-481-4 / 1327-53-3							
3		cadmium { cadmium oxide }		2.6 mg/kg	1.142	2.649 mg/kg	0.000265 %	✓	
		048-002-00-0 / 215-146-2 / 1306-19-0							
4		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		38.7 mg/kg	1.462	50.453 mg/kg	0.00505 %	✓	
		/ 215-160-9 / 1308-38-9							
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }		<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
		024-017-00-8 / /							
6		copper { dicopper oxide; copper (I) oxide }		34 mg/kg	1.126	34.146 mg/kg	0.00341 %	✓	
		029-002-00-X / 215-270-7 / 1317-39-1							
7		lead { lead chromate }	1	14 mg/kg	1.56	19.479 mg/kg	0.00125 %	✓	
		082-004-00-2 / 231-846-0 / 7758-97-6							
8		mercury { mercury dichloride }		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
		080-010-00-X / 231-299-8 / 7487-94-7							
9		molybdenum { molybdenum(VI) oxide }		5.5 mg/kg	1.5	7.36 mg/kg	0.000736 %	✓	
		042-001-00-9 / 215-204-7 / 1313-27-5							
10		nickel { nickel chromate }		45.4 mg/kg	2.976	120.529 mg/kg	0.0121 %	✓	
		028-035-00-7 / 238-766-5 / 14721-18-7							
11		selenium { nickel selenate }		1 mg/kg	2.554	2.278 mg/kg	0.000228 %	✓	
		028-031-00-5 / 239-125-2 / 15060-62-5							
12		zinc { zinc oxide }		89 mg/kg	1.245	98.815 mg/kg	0.00988 %	✓	
		030-013-00-7 / 215-222-5 / 1314-13-2							
13		TPH (C6 to C40) petroleum group		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
		/ / TPH							
14		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
		603-181-00-X / 216-653-1 / 1634-04-4							
15		benzene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
		601-020-00-8 / 200-753-7 / 71-43-2							
16		toluene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
		601-021-00-3 / 203-625-9 / 108-88-3							
17		ethylbenzene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
		601-023-00-4 / 202-849-4 / 100-41-4							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				8.76	pH		8.76	pH	8.76 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25		anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium oxide }				66	mg/kg	1.117	65.731	mg/kg	0.00657 %	✓	
			215-127-9	1304-28-5									
38		coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0464 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH13-29/09/2021-0.30-0.70m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH13-29/09/2021-0.30-0.70m
Moisture content:
14.8%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 14.8% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		2 mg/kg	1.197	2.04 mg/kg	0.000204 %	✓	
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		11.8 mg/kg	1.32	13.274 mg/kg	0.00133 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		1.8 mg/kg	1.142	1.752 mg/kg	0.000175 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		46.8 mg/kg	1.462	58.277 mg/kg	0.00583 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		18 mg/kg	1.126	17.267 mg/kg	0.00173 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	19 mg/kg	1.56	25.25 mg/kg	0.00162 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		5.3 mg/kg	1.5	6.774 mg/kg	0.000677 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		31 mg/kg	2.976	78.609 mg/kg	0.00786 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		81 mg/kg	1.245	85.9 mg/kg	0.00859 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				8.79	pH		8.79	pH	8.79 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25		anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium oxide }				140	mg/kg	1.117	133.177	mg/kg	0.0133 %	✓	
			215-127-9	1304-28-5									
38		coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.047 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH13-29/09/2021-1.00-2.00m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH13-29/09/2021-1.00-2.00m
Moisture content:
12%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 12% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		2 mg/kg	1.197	2.107 mg/kg	0.000211 %	✓	
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		10.5 mg/kg	1.32	12.2 mg/kg	0.00122 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		2.1 mg/kg	1.142	2.111 mg/kg	0.000211 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		45.9 mg/kg	1.462	59.035 mg/kg	0.0059 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		31 mg/kg	1.126	30.714 mg/kg	0.00307 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	17 mg/kg	1.56	23.335 mg/kg	0.0015 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		4.8 mg/kg	1.5	6.337 mg/kg	0.000634 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		37.6 mg/kg	2.976	98.479 mg/kg	0.00985 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		2 mg/kg	2.554	4.495 mg/kg	0.000449 %	✓	
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		90 mg/kg	1.245	98.581 mg/kg	0.00986 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				8.7	pH		8.7	pH	8.7 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25		anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium oxide }				144	mg/kg	1.117	141.484	mg/kg	0.0141 %	✓	
			215-127-9	1304-28-5									
38		coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0525 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH14-29/09/2021-0.30-0.90m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH14-29/09/2021-0.30-0.90m
Moisture content:
22.2%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 22.2% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		3 mg/kg	1.197	2.794 mg/kg	0.000279 %	✓	
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		25.8 mg/kg	1.32	26.502 mg/kg	0.00265 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		1.6 mg/kg	1.142	1.422 mg/kg	0.000142 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		44 mg/kg	1.462	50.032 mg/kg	0.005 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<**LOD**
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		111 mg/kg	1.126	97.229 mg/kg	0.00972 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	325 mg/kg	1.56	394.399 mg/kg	0.0253 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.8 mg/kg	1.353	0.842 mg/kg	0.0000842 %	✓	
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		3.7 mg/kg	1.5	4.318 mg/kg	0.000432 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		36.2 mg/kg	2.976	83.822 mg/kg	0.00838 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		1 mg/kg	2.554	1.987 mg/kg	0.000199 %	✓	
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		234 mg/kg	1.245	226.603 mg/kg	0.0227 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		96 mg/kg		74.688 mg/kg	0.00747 %	✓	
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<**LOD**
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<**LOD**
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<**LOD**
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				8.23	pH		8.23	pH	8.23 pH		
				PH									
20		naphthalene				0.13	mg/kg		0.101	mg/kg	0.0000101 %	✓	
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				0.14	mg/kg		0.109	mg/kg	0.0000109 %	✓	
			205-917-1	208-96-8									
22	●	acenaphthene				0.09	mg/kg		0.07	mg/kg	0.000007 %	✓	
			201-469-6	83-32-9									
23	●	fluorene				0.09	mg/kg		0.07	mg/kg	0.000007 %	✓	
			201-695-5	86-73-7									
24	●	phenanthrene				1.48	mg/kg		1.151	mg/kg	0.000115 %	✓	
			201-581-5	85-01-8									
25	●	anthracene				0.35	mg/kg		0.272	mg/kg	0.0000272 %	✓	
			204-371-1	120-12-7									
26	●	fluoranthene				2.6	mg/kg		2.023	mg/kg	0.000202 %	✓	
			205-912-4	206-44-0									
27	●	pyrene				2.43	mg/kg		1.891	mg/kg	0.000189 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				1.29	mg/kg		1.004	mg/kg	0.0001 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				1.58	mg/kg		1.229	mg/kg	0.000123 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				1.74	mg/kg		1.354	mg/kg	0.000135 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				0.68	mg/kg		0.529	mg/kg	0.0000529 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				1.4	mg/kg		1.089	mg/kg	0.000109 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				0.75	mg/kg		0.583	mg/kg	0.0000583 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				0.19	mg/kg		0.148	mg/kg	0.0000148 %	✓	
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				0.86	mg/kg		0.669	mg/kg	0.0000669 %	✓	
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<**LOD**
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				303	mg/kg	1.117	263.198	mg/kg	0.0263 %	✓	
			215-127-9	1304-28-5									
38	●	coronene				0.14	mg/kg		0.109	mg/kg	0.0000109 %	✓	
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.11 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Solid waste without liquid phase

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00747%)

Classification of sample: BH14-29/09/2021-0.90-2.00m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH14-29/09/2021-0.90-2.00m
Moisture content:
11.6%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 11.6% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		2 mg/kg	1.197	2.116 mg/kg	0.000212 %	✓	
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		9.8 mg/kg	1.32	11.438 mg/kg	0.00114 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		1.8 mg/kg	1.142	1.818 mg/kg	0.000182 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		30.9 mg/kg	1.462	39.923 mg/kg	0.00399 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		31 mg/kg	1.126	30.854 mg/kg	0.00309 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	24 mg/kg	1.56	33.093 mg/kg	0.00212 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		4 mg/kg	1.5	5.305 mg/kg	0.00053 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		34.2 mg/kg	2.976	89.981 mg/kg	0.009 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		1 mg/kg	2.554	2.258 mg/kg	0.000226 %	✓	
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		80 mg/kg	1.245	88.026 mg/kg	0.0088 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				8.56	pH		8.56	pH	8.56 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22	●	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23	●	fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25	●	anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26	●	fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27	●	pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				117	mg/kg	1.117	115.478	mg/kg	0.0115 %	✓	
			215-127-9	1304-28-5									
38		sulfur { sulfur }				300	mg/kg		265.2	mg/kg	0.0265 %	✓	
		016-094-00-1	231-722-6	7704-34-9									
39	●	coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
40		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0728 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH15-29/09/2021-0.30-0.80m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH15-29/09/2021-0.30-0.80m
Moisture content:
25.7%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 25.7% Wet Weight Moisture Correction applied (MC)

#		Determinand CLP index number / EC Number / CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1		antimony { antimony trioxide } 051-005-00-X / 215-175-0 / 1309-64-4		4 mg/kg	1.197	3.558 mg/kg	0.000356 %	✓	
2		arsenic { arsenic trioxide } 033-003-00-0 / 215-481-4 / 1327-53-3		36.8 mg/kg	1.32	36.101 mg/kg	0.00361 %	✓	
3		cadmium { cadmium oxide } 048-002-00-0 / 215-146-2 / 1306-19-0		1.4 mg/kg	1.142	1.188 mg/kg	0.000119 %	✓	
4		chromium in chromium(III) compounds { chromium(III) oxide (worst case) } 215-160-9 / 1308-38-9		33.2 mg/kg	1.462	36.053 mg/kg	0.00361 %	✓	
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex } 024-017-00-8		<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6		copper { dicopper oxide; copper (I) oxide } 029-002-00-X / 215-270-7 / 1317-39-1		128 mg/kg	1.126	107.076 mg/kg	0.0107 %	✓	
7		lead { lead chromate } 082-004-00-2 / 231-846-0 / 7758-97-6	1	413 mg/kg	1.56	478.643 mg/kg	0.0307 %	✓	
8		mercury { mercury dichloride } 080-010-00-X / 231-299-8 / 7487-94-7		1.1 mg/kg	1.353	1.106 mg/kg	0.000111 %	✓	
9		molybdenum { molybdenum(VI) oxide } 042-001-00-9 / 215-204-7 / 1313-27-5		4.5 mg/kg	1.5	5.016 mg/kg	0.000502 %	✓	
10		nickel { nickel chromate } 028-035-00-7 / 238-766-5 / 14721-18-7		61.7 mg/kg	2.976	136.441 mg/kg	0.0136 %	✓	
11		selenium { nickel selenate } 028-031-00-5 / 239-125-2 / 15060-62-5		2 mg/kg	2.554	3.795 mg/kg	0.00038 %	✓	
12		zinc { zinc oxide } 030-013-00-7 / 215-222-5 / 1314-13-2		248 mg/kg	1.245	229.356 mg/kg	0.0229 %	✓	
13		TPH (C6 to C40) petroleum group TPH		120 mg/kg		89.16 mg/kg	0.00892 %	✓	
14		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane 603-181-00-X / 216-653-1 / 1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15		benzene 601-020-00-8 / 200-753-7 / 71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16		toluene 601-021-00-3 / 203-625-9 / 108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17		ethylbenzene 601-023-00-4 / 202-849-4 / 100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
18		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
19	●	pH			PH		8.21	pH		8.21	pH	8.21 pH		
20		naphthalene	601-052-00-2	202-049-5	91-20-3		0.11	mg/kg		0.0817	mg/kg	0.00000817 %	✓	
21	●	acenaphthylene		205-917-1	208-96-8		0.09	mg/kg		0.0669	mg/kg	0.00000669 %	✓	
22	●	acenaphthene		201-469-6	83-32-9		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
23	●	fluorene		201-695-5	86-73-7		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
24	●	phenanthrene		201-581-5	85-01-8		0.74	mg/kg		0.55	mg/kg	0.000055 %	✓	
25	●	anthracene		204-371-1	120-12-7		0.17	mg/kg		0.126	mg/kg	0.0000126 %	✓	
26	●	fluoranthene		205-912-4	206-44-0		1.09	mg/kg		0.81	mg/kg	0.000081 %	✓	
27	●	pyrene		204-927-3	129-00-0		1.05	mg/kg		0.78	mg/kg	0.000078 %	✓	
28		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		0.61	mg/kg		0.453	mg/kg	0.0000453 %	✓	
29		chrysene	601-048-00-0	205-923-4	218-01-9		0.7	mg/kg		0.52	mg/kg	0.000052 %	✓	
30		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.84	mg/kg		0.624	mg/kg	0.0000624 %	✓	
31		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.33	mg/kg		0.245	mg/kg	0.0000245 %	✓	
32		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		0.69	mg/kg		0.513	mg/kg	0.0000513 %	✓	
33	●	indeno[123-cd]pyrene		205-893-2	193-39-5		0.42	mg/kg		0.312	mg/kg	0.0000312 %	✓	
34		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		0.11	mg/kg		0.0817	mg/kg	0.00000817 %	✓	
35	●	benzo[ghi]perylene		205-883-8	191-24-2		0.46	mg/kg		0.342	mg/kg	0.0000342 %	✓	
36	●	polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3		<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<**LOD**
37		barium { ● barium oxide }		215-127-9	1304-28-5		176	mg/kg	1.117	146.003	mg/kg	0.0146 %	✓	
38		sulfur { sulfur }	016-094-00-1	231-722-6	7704-34-9		1000	mg/kg		743	mg/kg	0.0743 %	✓	
39	●	coronene		205-881-7	191-07-1		0.08	mg/kg		0.0594	mg/kg	0.00000594 %	✓	
40		benzo[j]fluoranthene	601-035-00-X	205-910-3	205-82-3		<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
											Total:	0.185 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Solid waste without liquid phase

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00892%)

Classification of sample: BH15-29/09/2021-1.90-3.00m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH15-29/09/2021-1.90-3.00m
Moisture content:
14.5%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 14.5% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		1 mg/kg	1.197	1.024 mg/kg	0.000102 %	✓	
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		9.4 mg/kg	1.32	10.611 mg/kg	0.00106 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		1.5 mg/kg	1.142	1.465 mg/kg	0.000147 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		25.2 mg/kg	1.462	31.491 mg/kg	0.00315 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		25 mg/kg	1.126	24.066 mg/kg	0.00241 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	32 mg/kg	1.56	42.677 mg/kg	0.00274 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		3.1 mg/kg	1.5	3.976 mg/kg	0.000398 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		25 mg/kg	2.976	63.618 mg/kg	0.00636 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		1 mg/kg	2.554	2.184 mg/kg	0.000218 %	✓	
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		75 mg/kg	1.245	79.817 mg/kg	0.00798 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene 601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		**<LOD**
19	●	pH		PH		8.66	pH		8.66	pH	8.66 pH		
20		naphthalene 601-052-00-2	202-049-5	91-20-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		**<LOD**
21	●	acenaphthylene	205-917-1	208-96-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**
22	●	acenaphthene	201-469-6	83-32-9		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		**<LOD**
23	●	fluorene	201-695-5	86-73-7		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		**<LOD**
24	●	phenanthrene	201-581-5	85-01-8		0.09	mg/kg		0.0769	mg/kg	0.00000769 %	✓	
25	●	anthracene	204-371-1	120-12-7		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		**<LOD**
26	●	fluoranthene	205-912-4	206-44-0		0.16	mg/kg		0.137	mg/kg	0.0000137 %	✓	
27	●	pyrene	204-927-3	129-00-0		0.14	mg/kg		0.12	mg/kg	0.000012 %	✓	
28		benzo[a]anthracene 601-033-00-9	200-280-6	56-55-3		0.12	mg/kg		0.103	mg/kg	0.0000103 %	✓	
29		chrysene 601-048-00-0	205-923-4	218-01-9		0.11	mg/kg		0.094	mg/kg	0.0000094 %	✓	
30		benzo[b]fluoranthene 601-034-00-4	205-911-9	205-99-2		0.1	mg/kg		0.0855	mg/kg	0.00000855 %	✓	
31		benzo[k]fluoranthene 601-036-00-5	205-916-6	207-08-9		0.04	mg/kg		0.0342	mg/kg	0.00000342 %	✓	
32		benzo[a]pyrene; benzo[def]chrysene 601-032-00-3	200-028-5	50-32-8		0.09	mg/kg		0.0769	mg/kg	0.00000769 %	✓	
33	●	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		**<LOD**
34		dibenz[a,h]anthracene 601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		**<LOD**
35	●	benzo[ghi]perylene	205-883-8	191-24-2		0.05	mg/kg		0.0428	mg/kg	0.00000428 %	✓	
36	●	polychlorobiphenyls; PCB 602-039-00-4	215-648-1	1336-36-3		<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		**<LOD**
37		barium { ● barium oxide } 215-127-9		1304-28-5		282	mg/kg	1.117	269.201	mg/kg	0.0269 %	✓	
38		sulfur { sulfur } 016-094-00-1	231-722-6	7704-34-9		300	mg/kg		256.5	mg/kg	0.0256 %	✓	
39	●	coronene	205-881-7	191-07-1		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		**<LOD**
40		benzo[j]fluoranthene 601-035-00-X	205-910-3	205-82-3		<1	mg/kg		<1	mg/kg	<0.0001 %		**<LOD**
										Total:	0.0826 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH16-29/09/2021-0.30-0.80m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH16-29/09/2021-0.30-0.80m
Moisture content:
41.4%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 41.4% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		3 mg/kg	1.197	2.105 mg/kg	0.00021 %	✓	
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		27.7 mg/kg	1.32	21.432 mg/kg	0.00214 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		1.1 mg/kg	1.142	0.736 mg/kg	0.0000736 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		48.9 mg/kg	1.462	41.881 mg/kg	0.00419 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		111 mg/kg	1.126	73.235 mg/kg	0.00732 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	306 mg/kg	1.56	279.7 mg/kg	0.0179 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.9 mg/kg	1.353	0.714 mg/kg	0.0000714 %	✓	
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		4.7 mg/kg	1.5	4.132 mg/kg	0.000413 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		49.2 mg/kg	2.976	85.809 mg/kg	0.00858 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		1 mg/kg	2.554	1.497 mg/kg	0.00015 %	✓	
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		220 mg/kg	1.245	160.469 mg/kg	0.016 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		190 mg/kg		111.34 mg/kg	0.0111 %	✓	
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				8.2	pH		8.2	pH	8.2 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				0.1	mg/kg		0.0586	mg/kg	0.00000586 %	✓	
			205-917-1	208-96-8									
22	●	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
			201-469-6	83-32-9									
23	●	fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
			201-695-5	86-73-7									
24	●	phenanthrene				0.94	mg/kg		0.551	mg/kg	0.0000551 %	✓	
			201-581-5	85-01-8									
25	●	anthracene				0.27	mg/kg		0.158	mg/kg	0.0000158 %	✓	
			204-371-1	120-12-7									
26	●	fluoranthene				1.47	mg/kg		0.861	mg/kg	0.0000861 %	✓	
			205-912-4	206-44-0									
27	●	pyrene				1.31	mg/kg		0.768	mg/kg	0.0000768 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				0.7	mg/kg		0.41	mg/kg	0.000041 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				0.78	mg/kg		0.457	mg/kg	0.0000457 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				0.84	mg/kg		0.492	mg/kg	0.0000492 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				0.32	mg/kg		0.188	mg/kg	0.0000188 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				0.72	mg/kg		0.422	mg/kg	0.0000422 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				0.38	mg/kg		0.223	mg/kg	0.0000223 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				0.1	mg/kg		0.0586	mg/kg	0.00000586 %	✓	
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				0.43	mg/kg		0.252	mg/kg	0.0000252 %	✓	
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<**LOD**
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				192	mg/kg	1.117	125.62	mg/kg	0.0126 %	✓	
			215-127-9	1304-28-5									
38	●	coronene				0.07	mg/kg		0.041	mg/kg	0.0000041 %	✓	
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0815 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Solid waste without liquid phase

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0111%)

Classification of sample: BH16-29/09/2021-1.00-2.00m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH16-29/09/2021-1.00-2.00m
Moisture content:
14.5%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 14.5% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number / EC Number / CAS Number							
1	antimony { antimony trioxide }		1 mg/kg	1.197	1.024 mg/kg	0.000102 %	✓	
	051-005-00-X / 215-175-0 / 1309-64-4							
2	arsenic { arsenic trioxide }		9.1 mg/kg	1.32	10.273 mg/kg	0.00103 %	✓	
	033-003-00-0 / 215-481-4 / 1327-53-3							
3	cadmium { cadmium oxide }		2.2 mg/kg	1.142	2.149 mg/kg	0.000215 %	✓	
	048-002-00-0 / 215-146-2 / 1306-19-0							
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		26.5 mg/kg	1.462	33.115 mg/kg	0.00331 %	✓	
	/ 215-160-9 / 1308-38-9							
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }		<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
	024-017-00-8 / /							
6	copper { dicopper oxide; copper (I) oxide }		23 mg/kg	1.126	22.141 mg/kg	0.00221 %	✓	
	029-002-00-X / 215-270-7 / 1317-39-1							
7	lead { lead chromate }	1	34 mg/kg	1.56	45.344 mg/kg	0.00291 %	✓	
	082-004-00-2 / 231-846-0 / 7758-97-6							
8	mercury { mercury dichloride }		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
	080-010-00-X / 231-299-8 / 7487-94-7							
9	molybdenum { molybdenum(VI) oxide }		3.6 mg/kg	1.5	4.618 mg/kg	0.000462 %	✓	
	042-001-00-9 / 215-204-7 / 1313-27-5							
10	nickel { nickel chromate }		39.5 mg/kg	2.976	100.516 mg/kg	0.0101 %	✓	
	028-035-00-7 / 238-766-5 / 14721-18-7							
11	selenium { nickel selenate }		2 mg/kg	2.554	4.367 mg/kg	0.000437 %	✓	
	028-031-00-5 / 239-125-2 / 15060-62-5							
12	zinc { zinc oxide }		85 mg/kg	1.245	90.46 mg/kg	0.00905 %	✓	
	030-013-00-7 / 215-222-5 / 1314-13-2							
13	TPH (C6 to C40) petroleum group		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
	/ / TPH							
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	603-181-00-X / 216-653-1 / 1634-04-4							
15	benzene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-020-00-8 / 200-753-7 / 71-43-2							
16	toluene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-021-00-3 / 203-625-9 / 108-88-3							
17	ethylbenzene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-023-00-4 / 202-849-4 / 100-41-4							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				8.65	pH		8.65	pH	8.65 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22	●	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23	●	fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24	●	phenanthrene				0.07	mg/kg		0.0598	mg/kg	0.00000599 %	✓	
			201-581-5	85-01-8									
25	●	anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26	●	fluoranthene				0.11	mg/kg		0.094	mg/kg	0.0000094 %	✓	
			205-912-4	206-44-0									
27	●	pyrene				0.11	mg/kg		0.094	mg/kg	0.0000094 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				0.07	mg/kg		0.0598	mg/kg	0.00000599 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				0.07	mg/kg		0.0598	mg/kg	0.00000599 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				0.08	mg/kg		0.0684	mg/kg	0.00000684 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				0.03	mg/kg		0.0256	mg/kg	0.00000257 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				0.06	mg/kg		0.0513	mg/kg	0.00000513 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				317	mg/kg	1.117	302.612	mg/kg	0.0303 %	✓	
			215-127-9	1304-28-5									
38		sulfur { sulfur }				300	mg/kg		256.5	mg/kg	0.0256 %	✓	
		016-094-00-1	231-722-6	7704-34-9									
39	●	coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
40		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0912 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH17-29/09/2021-0.00-0.60m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH17-29/09/2021-0.00-0.60m
Moisture content:
11.8%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 11.8% Wet Weight Moisture Correction applied (MC)

#		Determinand	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		CLP index number / EC Number / CAS Number							
1		antimony { antimony trioxide }		<1 mg/kg	1.197	<1.197 mg/kg	<0.00012 %		<LOD
		051-005-00-X / 215-175-0 / 1309-64-4							
2		arsenic { arsenic trioxide }		9.3 mg/kg	1.32	10.83 mg/kg	0.00108 %	✓	
		033-003-00-0 / 215-481-4 / 1327-53-3							
3		cadmium { cadmium oxide }		<0.1 mg/kg	1.142	<0.114 mg/kg	<0.0000114 %		<LOD
		048-002-00-0 / 215-146-2 / 1306-19-0							
4		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		52.2 mg/kg	1.462	67.291 mg/kg	0.00673 %	✓	
		/ 215-160-9 / 1308-38-9							
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }		<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
		024-017-00-8 / /							
6		copper { dicopper oxide; copper (I) oxide }		21 mg/kg	1.126	20.854 mg/kg	0.00209 %	✓	
		029-002-00-X / 215-270-7 / 1317-39-1							
7		lead { lead chromate }	1	10 mg/kg	1.56	13.758 mg/kg	0.000882 %	✓	
		082-004-00-2 / 231-846-0 / 7758-97-6							
8		mercury { mercury dichloride }		0.2 mg/kg	1.353	0.239 mg/kg	0.0000239 %	✓	
		080-010-00-X / 231-299-8 / 7487-94-7							
9		molybdenum { molybdenum(VI) oxide }		1.2 mg/kg	1.5	1.588 mg/kg	0.000159 %	✓	
		042-001-00-9 / 215-204-7 / 1313-27-5							
10		nickel { nickel chromate }		16.8 mg/kg	2.976	44.101 mg/kg	0.00441 %	✓	
		028-035-00-7 / 238-766-5 / 14721-18-7							
11		selenium { nickel selenate }		<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
		028-031-00-5 / 239-125-2 / 15060-62-5							
12		zinc { zinc oxide }		69 mg/kg	1.245	75.751 mg/kg	0.00758 %	✓	
		030-013-00-7 / 215-222-5 / 1314-13-2							
13		TPH (C6 to C40) petroleum group		208 mg/kg		183.456 mg/kg	0.0183 %	✓	
		/ / TPH							
14		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
		603-181-00-X / 216-653-1 / 1634-04-4							
15		benzene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
		601-020-00-8 / 200-753-7 / 71-43-2							
16		toluene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
		601-021-00-3 / 203-625-9 / 108-88-3							
17		ethylbenzene		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
		601-023-00-4 / 202-849-4 / 100-41-4							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				8.58	pH		8.58	pH	8.58 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22	●	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23	●	fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24	●	phenanthrene				0.06	mg/kg		0.0529	mg/kg	0.00000529 %	✓	
			201-581-5	85-01-8									
25	●	anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26	●	fluoranthene				0.1	mg/kg		0.0882	mg/kg	0.00000882 %	✓	
			205-912-4	206-44-0									
27	●	pyrene				0.1	mg/kg		0.0882	mg/kg	0.00000882 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				0.08	mg/kg		0.0706	mg/kg	0.00000706 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				0.09	mg/kg		0.0794	mg/kg	0.00000794 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				0.08	mg/kg		0.0706	mg/kg	0.00000706 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				0.03	mg/kg		0.0265	mg/kg	0.00000265 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				0.07	mg/kg		0.0617	mg/kg	0.00000617 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				0.06	mg/kg		0.0529	mg/kg	0.00000529 %	✓	
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				24	mg/kg	1.117	23.634	mg/kg	0.00236 %	✓	
			215-127-9	1304-28-5									
38	●	coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0443 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Solid waste without liquid phase

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0183%)

Classification of sample: BH17-29/09/2021-1.00-2.00m

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH17-29/09/2021-1.00-2.00m
Moisture content:
17.9%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 17.9% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony trioxide }	051-005-00-X	215-175-0	1309-64-4		1 mg/kg	1.197	0.983 mg/kg	0.0000983 %	✓	
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		12.1 mg/kg	1.32	13.116 mg/kg	0.00131 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		1.5 mg/kg	1.142	1.407 mg/kg	0.000141 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		54.2 mg/kg	1.462	65.037 mg/kg	0.0065 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		18 mg/kg	1.126	16.638 mg/kg	0.00166 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	32 mg/kg	1.56	40.979 mg/kg	0.00263 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		4.9 mg/kg	1.5	6.035 mg/kg	0.000604 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		34.1 mg/kg	2.976	83.324 mg/kg	0.00833 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		1 mg/kg	2.554	2.097 mg/kg	0.00021 %	✓	
12	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		118 mg/kg	1.245	120.585 mg/kg	0.0121 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
16	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
17	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19	●	pH				8.68	pH		8.68	pH	8.68 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21	●	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22	●	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23	●	fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24	●	phenanthrene				0.04	mg/kg		0.0328	mg/kg	0.00000328 %	✓	
			201-581-5	85-01-8									
25	●	anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26	●	fluoranthene				0.06	mg/kg		0.0493	mg/kg	0.00000493 %	✓	
			205-912-4	206-44-0									
27	●	pyrene				0.05	mg/kg		0.041	mg/kg	0.0000041 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				0.05	mg/kg		0.041	mg/kg	0.0000041 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36	●	polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { ● barium oxide }				250	mg/kg	1.117	229.163	mg/kg	0.0229 %	✓	
			215-127-9	1304-28-5									
38	●	coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
39		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
										Total:	0.0619 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Appendix A: Classifier defined and non CLP determinands

- **chromium(III) oxide (worst case)** (EC Number: 215-160-9, CAS Number: 1308-38-9)

Description/Comments: Data from C&L Inventory Database
Data source: https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/33806
Data source date: 17 Jul 2015
Hazard Statements: Acute Tox. 4 H332 , Acute Tox. 4 H302 , Eye Irrit. 2 H319 , STOT SE 3 H335 , Skin Irrit. 2 H315 , Resp. Sens. 1 H334 , Skin Sens. 1 H317 , Repr. 1B H360FD , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

- **TPH (C6 to C40) petroleum group** (CAS Number: TPH)

Description/Comments: Hazard statements taken from WM3 1st Edition 2015; Risk phrases: WM2 3rd Edition 2013
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: Flam. Liq. 3 H226 , Asp. Tox. 1 H304 , STOT RE 2 H373 , Muta. 1B H340 , Carc. 1B H350 , Repr. 2 H361d , Aquatic Chronic 2 H411

- **ethylbenzene** (EC Number: 202-849-4, CAS Number: 100-41-4)

CLP index number: 601-023-00-4
Description/Comments:
Data source: Commission Regulation (EU) No 605/2014 – 6th Adaptation to Technical Progress for Regulation (EC) No 1272/2008. (ATP6)
Additional Hazard Statement(s): Carc. 2 H351
Reason for additional Hazards Statement(s):
03 Jun 2015 - Carc. 2 H351 hazard statement sourced from: IARC Group 2B (77) 2000

- **pH** (CAS Number: PH)

Description/Comments: Appendix C4
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: None.

- **acenaphthylene** (EC Number: 205-917-1, CAS Number: 208-96-8)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 17 Jul 2015
Hazard Statements: Acute Tox. 4 H302 , Acute Tox. 1 H330 , Acute Tox. 1 H310 , Eye Irrit. 2 H319 , STOT SE 3 H335 , Skin Irrit. 2 H315

- **acenaphthene** (EC Number: 201-469-6, CAS Number: 83-32-9)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 17 Jul 2015
Hazard Statements: Eye Irrit. 2 H319 , STOT SE 3 H335 , Skin Irrit. 2 H315 , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410 , Aquatic Chronic 2 H411

- **fluorene** (EC Number: 201-695-5, CAS Number: 86-73-7)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 06 Aug 2015
Hazard Statements: Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

- **phenanthrene** (EC Number: 201-581-5, CAS Number: 85-01-8)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 06 Aug 2015
Hazard Statements: Acute Tox. 4 H302 , Eye Irrit. 2 H319 , STOT SE 3 H335 , Carc. 2 H351 , Skin Sens. 1 H317 , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410 , Skin Irrit. 2 H315

- **anthracene** (EC Number: 204-371-1, CAS Number: 120-12-7)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 17 Jul 2015
Hazard Statements: Eye Irrit. 2 H319 , STOT SE 3 H335 , Skin Irrit. 2 H315 , Skin Sens. 1 H317 , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

- **fluoranthene** (EC Number: 205-912-4, CAS Number: 206-44-0)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 21 Aug 2015
Hazard Statements: Acute Tox. 4 H302 , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

- **pyrene** (EC Number: 204-927-3, CAS Number: 129-00-0)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 2014
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 21 Aug 2015
Hazard Statements: Skin Irrit. 2 H315 , Eye Irrit. 2 H319 , STOT SE 3 H335 , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

- **indeno[123-cd]pyrene** (EC Number: 205-893-2, CAS Number: 193-39-5)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 06 Aug 2015
Hazard Statements: Carc. 2 H351

- **benzo[ghi]perylene** (EC Number: 205-883-8, CAS Number: 191-24-2)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 23 Jul 2015
Hazard Statements: Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

- **polychlorobiphenyls; PCB** (EC Number: 215-648-1, CAS Number: 1336-36-3)

CLP index number: 602-039-00-4
Description/Comments: Worst Case: IARC considers PCB Group 1; Carcinogenic to humans; POP specific threshold from ATP1 (Regulation 756/2010/EU) to POPs Regulation (Regulation 850/2004/EC). Where applicable, the calculation method laid down in European standards EN 12766-1 and EN 12766-2 shall be applied.
Data source: Regulation 1272/2008/EC - Classification, labelling and packaging of substances and mixtures. (CLP)
Additional Hazard Statement(s): Carc. 1A H350
Reason for additional Hazards Statement(s):
29 Sep 2015 - Carc. 1A H350 hazard statement sourced from: IARC Group 1 (23, Sup 7, 100C) 2012

- **barium oxide** (EC Number: 215-127-9, CAS Number: 1304-28-5)

Description/Comments: Data from ECHA's C&L Inventory Database, Sigma Aldrich SDS dated 6/2/20
Data source: https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/88825
Data source date: 02 Apr 2020
Hazard Statements: Acute Tox. 3 H301 , Skin Corr. 1B H314 , Eye Dam. 1 H318 , Acute Tox. 1 H332

- **coronene** (EC Number: 205-881-7, CAS Number: 191-07-1)

Description/Comments: Data from C&L Inventory Database; no entries in Registered Substances or Pesticides Properties databases; SDS: Sigma Aldrich, 1907/2006 compliant, dated 2012 - no entries; IARC – Group 3, not carcinogenic.
Data source: http://clp-inventory.echa.europa.eu/SummaryOfClassAndLabelling.aspx?SubstanceID=17010&HarmOnly=no?fc=true&lang=en
Data source date: 16 Jun 2014
Hazard Statements: STOT SE 2 H371

- **pH: acid/alkali reserve** (CAS Number: ACID_ALK_RES)

Description/Comments: Appendix C4; unit: grams of sodium hydroxide (equivalent) per 100g of substance required to adjust the pH to the appropriate value
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: None.

Appendix B: Rationale for selection of metal species

antimony {antimony trioxide}

Worst case CLP species based on hazard statements/molecular weight and low solubility. Industrial sources include: flame retardants in electrical apparatus, textiles and coatings (edit as required)

arsenic {arsenic trioxide}

Reasonable case CLP species based on hazard statements/molecular weight and most common (stable) oxide of arsenic. Industrial sources include: smelting; main precursor to other arsenic compounds (edit as required)

cadmium {cadmium oxide}

Reasonable case CLP species based on hazard statements/molecular weight, very low solubility in water. Industrial sources include: electroplating baths, electrodes for storage batteries, catalysts, ceramic glazes, phosphors, pigments and nematocides. (edit as required) Worst case compounds in CLP: cadmium sulphate, chloride, fluoride & iodide not expected as either very soluble and/or compound's industrial usage not related to site history (edit as required)

chromium in chromium(III) compounds {chromium(III) oxide (worst case)}

Reasonable case species based on hazard statements/molecular weight. Industrial sources include: tanning, pigment in paint, inks and glass (edit as required)

chromium in chromium(VI) compounds {chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex}

Worst case species based on hazard statements/molecular weight (edit as required)

copper {dicopper oxide; copper (I) oxide}

Reasonable case CLP species based on hazard statements/molecular weight and insolubility in water. Industrial sources include: oxidised copper metal, brake pads, pigments, antifouling paints, fungicide. (edit as required) Worse case copper sulphate is very soluble and likely to have been leached away if ever present and/or not enough soluble sulphate detected. (edit as required)

lead {lead chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

mercury {mercury dichloride}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

molybdenum {molybdenum(VI) oxide}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

nickel {nickel chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

selenium {nickel selenate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

zinc {zinc oxide}

Cr VI not detected

barium {barium oxide}

Cr VI not detected

sulfur {sulfur}

eoc

Appendix C: Version

HazWasteOnline Classification Engine: WM3 1st Edition v1.1, May 2018
HazWasteOnline Classification Engine Version: 2021.293.4891.9295 (20 Oct 2021)
HazWasteOnline Database: 2021.293.4891.9295 (20 Oct 2021)

This classification utilises the following guidance and legislation:
WM3 v1.1 - Waste Classification - 1st Edition v1.1 - May 2018
CLP Regulation - Regulation 1272/2008/EC of 16 December 2008
1st ATP - Regulation 790/2009/EC of 10 August 2009
2nd ATP - Regulation 286/2011/EC of 10 March 2011
3rd ATP - Regulation 618/2012/EU of 10 July 2012
4th ATP - Regulation 487/2013/EU of 8 May 2013
Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013
5th ATP - Regulation 944/2013/EU of 2 October 2013
6th ATP - Regulation 605/2014/EU of 5 June 2014
WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014
Revised List of Waste 2014 - Decision 2014/955/EU of 18 December 2014
7th ATP - Regulation 2015/1221/EU of 24 July 2015
8th ATP - Regulation (EU) 2016/918 of 19 May 2016
9th ATP - Regulation (EU) 2016/1179 of 19 July 2016
10th ATP - Regulation (EU) 2017/776 of 4 May 2017
HP14 amendment - Regulation (EU) 2017/997 of 8 June 2017
13th ATP - Regulation (EU) 2018/1480 of 4 October 2018
14th ATP - Regulation (EU) 2020/217 of 4 October 2019
15th ATP - Regulation (EU) 2020/1182 of 19 May 2020
The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use)(Amendment etc.) (EU Exit) Regulations 2019 - UK: 2019 No. 720 of 27th March 2019
The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use)(Amendment etc.) (EU Exit) Regulations 2020 - UK: 2020 No. 1567 of 16th December 2020
The Waste and Environmental Permitting etc. (Legislative Functions and Amendment etc.) (EU Exit) Regulations 2020 - UK: 2020 No. 1540 of 16th December 2020
POPs Regulation 2019 - Regulation (EU) 2019/1021 of 20 June 2019

APPENDIX 8 – WAC Summary Data

Waste Categorisation Summary Table

Saint Teresa's Gardens

Sample ID	WS01	WS01	WS01	WS02	WS02	WS02	WS03	WS03	WS03	WS04					
Sample Depth (m)	0.00-1.00	1.00-2.00	2.00-3.00	0.00-0.70	0.70-2.60	2.60-3.00	0.00-1.00	1.00-1.60	1.60-3.00	0.00-0.80					
Material Description	Made Ground	Clay	Clay	Made Ground	Clay	Clay	Made Ground	Clay	Clay	Made Ground					
Sample Date	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021					
LoW Code	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	Inert Criteria	IMS* Criteria	Hazardous Criteria	LOD LOR	Units
Waste Category	Category B1	Category A	Category C	Category B2	Category A	Category C	Category C	Category A	Category C	Category B2					
Metals															
Antimony	2	<1	1	3	2	2	2	3	1	3	-	-	HazWaste	<1	mg/kg
Arsenic	17.3	5.7	8.7	25.5	9.8	11.5	23.5	15.8	18.0	25.9	-	-	HazWaste	<0.5	mg/kg
Barium	417	53	53	252	77	51	203	671	71	169	-	-	HazWaste	<1	mg/kg
Cadmium	4.0	2.0	1.9	2.6	2.4	2.1	1.5	1.9	1.5	2.3	-	-	HazWaste	<0.1	mg/kg
Chromium	59.4	38.0	39.5	45.6	35.3	43.8	54.7	50.6	54.2	63.3	-	-	HazWaste	<0.5	mg/kg
Copper	68	21	27	89	34	31	231	33	29	73	-	-	HazWaste	<1	mg/kg
Lead	80	14	19	418	15	23	220	17	12	213	-	-	HazWaste	<5	mg/kg
Mercury	<0.1	<0.1	<0.1	0.6	<0.1	<0.1	0.6	<0.1	<0.1	0.5	-	-	HazWaste	<0.1	mg/kg
Molybdenum	8.2	2.6	4.0	6.4	4.4	4.3	4.7	8.9	5.3	5.3	-	-	HazWaste	<0.1	mg/kg
Nickel	42.7	26.5	33.2	53.2	41.9	38.0	75.4	47.2	34.2	51.6	-	-	HazWaste	<0.7	mg/kg
Selenium	3	<1	7	2	1	8	1	2	3	2	-	-	HazWaste	<1	mg/kg
Zinc	126	69	89	179	91	91	209	84	80	275	-	-	HazWaste	<5	mg/kg
Hexavalent Chromium	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	-	-	HazWaste	<0.3	mg/kg
pH (solid sample)	8.33	8.83	8.88	8.33	8.94	8.86	8.28	8.80	8.90	8.42	-	-	HazWaste	<0.01	pH units
alkali reserve	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.000	gNaOH/100g
Asbestos															
Asbestos (Dry Weight)	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	-	-	-	-	%
Asbestos (Moisture Corrected Weight)	-	-	-	-	-	-	-	-	-	-	-	-	0.1	<0.001	%
ACM Detected	-	-	-	-	-	-	-	-	-	-	-	-	-	Presence	Presence
PAHs															
Naphthalene	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	-	-	HazWaste	<0.04	mg/kg
Acenaphthylene	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.04	<0.03	<0.03	<0.03	-	-	HazWaste	<0.03	mg/kg
Acenaphthene	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	HazWaste	<0.05	mg/kg
Fluorene	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	-	-	HazWaste	<0.04	mg/kg
Phenanthrene	<0.03	<0.03	<0.03	0.12	<0.03	<0.03	0.33	<0.03	<0.03	0.30	-	-	HazWaste	<0.03	mg/kg
Anthracene	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.08	<0.04	<0.04	0.05	-	-	HazWaste	<0.04	mg/kg
Fluoranthene	<0.03	<0.03	<0.03	0.12	<0.03	<0.03	0.51	<0.03	<0.03	0.30	-	-	HazWaste	<0.03	mg/kg
Pyrene	<0.03	<0.03	<0.03	0.12	<0.03	<0.03	0.47	<0.03	<0.03	0.29	-	-	HazWaste	<0.03	mg/kg
Benzo(a)anthracene	<0.06	<0.06	<0.06	0.10	<0.06	<0.06	0.31	<0.06	<0.06	0.22	-	-	HazWaste	<0.06	mg/kg
Chrysene	<0.02	<0.02	<0.02	0.09	<0.02	<0.02	0.35	<0.02	<0.02	0.27	-	-	HazWaste	<0.02	mg/kg
Benzo(bk)fluoranthene	<0.07	<0.07	<0.07	0.14	<0.07	<0.07	0.58	<0.07	<0.07	0.43	-	-	HazWaste	<0.07	mg/kg
Benzo(a)pyrene	<0.04	<0.04	<0.04	0.08	<0.04	<0.04	0.30	<0.04	<0.04	0.26	-	-	HazWaste	<0.04	mg/kg
Indeno(123cd)pyrene	<0.04	<0.04	<0.04	0.05	<0.04	<0.04	0.18	<0.04	<0.04	0.15	-	-	HazWaste	<0.04	mg/kg
Dibenzo(ah)anthracene	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	-	-	HazWaste	<0.04	mg/kg
Benzo(ghi)perylene	<0.04	<0.04	<0.04	0.06	<0.04	<0.04	0.20	<0.04	<0.04	0.19	-	-	HazWaste	<0.04	mg/kg
Coronene	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	-	-	HazWaste	<0.04	mg/kg
PAH 6 Total	<0.22	<0.22	<0.22	0.45	<0.22	<0.22	1.77	<0.22	<0.22	1.33	-	-	-	<0.22	mg/kg
PAH 17 Total	<0.64	<0.64	<0.64	0.88	<0.64	<0.64	3.35	<0.64	<0.64	2.46	100	100	-	<0.64	mg/kg
Benzo(b)fluoranthene	<0.05	<0.05	<0.05	0.10	<0.05	<0.05	0.42	<0.05	<0.05	0.31	-	-	HazWaste	<0.05	mg/kg
Benzo(k)fluoranthene	<0.02	<0.02	<0.02	0.04	<0.02	<0.02	0.16	<0.02	<0.02	0.12	-	-	HazWaste	<0.02	mg/kg
Benzo(j)fluoranthene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	HazWaste	<1	mg/kg
Hydrocarbons															
TPH (C5-40)	<52	<52	<52	<52	<52	<52	<52	<52	<52	<52	-	-	HazWaste	<52	mg/kg
MTBE	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
Benzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
Toluene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
Ethylbenzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
m/p-Xylene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
o-Xylene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
Total 7 PCBs	<35	<35	<35	<35	<35	<35	<35	<35	<35	<35	1,000	1,000	HazWaste	<35	ug/kg
WAC Solid Sample Summary**															
Total Organic Carbon *	1.27	0.34	0.48	5.94	0.44	0.66	7.68	0.35	0.61	4.68	3	6	-	<0.02	%
Sum of BTEX	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	6	6	-	<0.025	mg/kg
Sum of 7 PCBs	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	1	1	-	<0.035	mg/kg
Mineral Oil	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	500	500	-	<30	mg/kg
PAH Sum of 6	<0.22	<0.22	<0.22	0.45	<0.22	<0.22	1.77	<0.22	<0.22	1.33	-	-	-	<0.22	mg/kg
PAH Sum of 17	<0.64	<0.64	<0.64	0.88	<0.64	<0.64	3.35	<0.64	<0.64	2.46	100	100	-	<0.64	mg/kg
WAC Leachate Data**															
Arsenic	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.032	<0.025	<0.025	0.037	0.5	1.5	-	<0.025	mg/kg
Barium	<0.03	<0.03	0.21	<0.03	<0.03	0.11	0.08	<0.03	0.16	0.18	20	20	-	<0.03	mg/kg
Cadmium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.04	0.04	-	<0.005	mg/kg
Chromium	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	0.5	0.5	-	<0.015	mg/kg
Copper	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	2	2	-	<0.07	mg/kg
Mercury	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.01	0.01	-	<0.0001	mg/kg
Molybdenum	0.10	0.10	0.10	0.07	0.14	0.13	0.04	0.09	0.14	0.04	0.5	1.5	-	<0.02	mg/kg
Nickel	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.4	0.4	-	<0.02	mg/kg
Lead	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.5	0.5	-	<0.05	mg/kg
Antimony	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.04	0.06	0.18	-	<0.02	mg/kg
Selenium	0.05	0.06	0.40	0.05	<0.03	0.30	0.05	<0.03	0.35	<0.03	0.1	0.3	-	<0.03	mg/kg
Zinc	<0.03	<0.03	<0.03	<0.03	<0.03	0.42	<0.03	<0.03	<0.03	<0.03	4	4	-	<0.03	mg/kg
Total Dissolved Solids	810	580	530	840	520	430	1200	580	520	2540	4000	12,000	-	<350	mg/kg
Dissolved Organic Carbon	30	<20	<20	<20	<20	<20	30	<20	<20	40	500	500	-	<20	mg/kg
Phenol	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1	1	-	<0.1	mg/kg
Sulphate as SO4	56	38	40	52	19	52	98	25	71	257	1000	3,000	-	<0.5	mg/kg
Chloride	8	3	3	6	<3	3	12	4	4	183	800	2,400	-	<3	mg/kg

NAD- no asbestos detected

* - Integrated Materials Solutions Landfill, Hollywood Great, Nag's Head, The Naul, Co. Dublin

** - limits as specified in Council Decision 2003/33/EC

Waste Categorisation Summary Table

Saint Teresa's Gardens

Sample ID	WS04	WS04	WS05	WS05	WS05	WS05	WS06	WS06	WS06	WS07					
Sample Depth (m)	0.80-2.80	2.80-3.00	0.00-1.00	1.00-1.30	1.30-2.70	2.70-3.00	0.00-1.00	1.00-2.30	2.30-3.00	0.00-0.70					
Material Description	Clay	Clay	Made Ground	Clay	Clay	Clay	Made Ground	Clay	Clay	Made Ground					
Sample Date	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021					
LoW Code	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	Inert Criteria	IMS* Criteria	Hazardous Criteria	LOD LOR	Units
Waste Category	Category A	Category A	Category C	Category A	Category A	Category B2	Category B1	Category A	Category A	Category B1					
Metals															
Antimony	2	2	4	3	<1	2	3	<1	2	3	-	-	HazWaste	<1	mg/kg
Arsenic	10.8	10.6	32.8	14.9	4.2	9.3	9.2	6.6	10.2	26.1	-	-	HazWaste	<0.5	mg/kg
Barium	83	54	187	492	49	59	73	53	104	134	-	-	HazWaste	<1	mg/kg
Cadmium	1.9	2.0	1.4	1.7	1.5	1.9	1.6	1.3	1.9	2.5	-	-	HazWaste	<0.1	mg/kg
Chromium	57.8	39.5	51.7	57.7	61.1	41.9	33.8	44.1	43.2	54.6	-	-	HazWaste	<0.5	mg/kg
Copper	25	32	107	20	27	28	33	19	32	70	-	-	HazWaste	<1	mg/kg
Lead	21	21	317	19	9	18	41	11	25	164	-	-	HazWaste	<5	mg/kg
Mercury	<0.1	<0.1	0.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.3	-	-	HazWaste	<0.1	mg/kg
Molybdenum	4.4	4.1	5.3	7.5	4.3	4.5	3.6	3.9	4.6	5.1	-	-	HazWaste	<0.1	mg/kg
Nickel	44.5	38.2	46.6	40.0	22.3	33.9	32.1	21.0	38.9	53.2	-	-	HazWaste	<0.7	mg/kg
Selenium	1	5	2	2	<1	5	<1	<1	2	2	-	-	HazWaste	<1	mg/kg
Zinc	108	87	275	93	60	75	89	51	90	200	-	-	HazWaste	<5	mg/kg
Hexavalent Chromium	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	-	-	HazWaste	<0.3	mg/kg
pH (solid sample)	8.53	8.72	8.21	8.74	8.77	8.66	8.49	8.87	8.84	8.45	-	-	HazWaste	<0.01	pH units
alkali reserve	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.000	gNaOH/100g
Asbestos															
Asbestos (Dry Weight)	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	-	-	-	-	%
Asbestos (Moisture Corrected Weight)	-	-	-	-	-	-	-	-	-	-	-	-	0.1	<0.001	%
ACM Detected	-	-	-	-	-	-	-	-	-	-	-	-	-	Presence	Presence
PAHs															
Naphthalene	<0.04	<0.04	0.11	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	-	-	HazWaste	<0.04	mg/kg
Acenaphthylene	<0.03	<0.03	0.11	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	-	-	HazWaste	<0.03	mg/kg
Acenaphthene	<0.05	<0.05	0.15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	HazWaste	<0.05	mg/kg
Fluorene	<0.04	<0.04	0.13	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	-	-	HazWaste	<0.04	mg/kg
Phenanthrene	<0.03	<0.03	1.90	<0.03	<0.03	<0.03	0.54	<0.03	<0.03	0.19	-	-	HazWaste	<0.03	mg/kg
Anthracene	<0.04	<0.04	0.43	<0.04	<0.04	<0.04	0.14	<0.04	<0.04	<0.04	-	-	HazWaste	<0.04	mg/kg
Fluoranthene	<0.03	<0.03	3.60	<0.03	<0.03	<0.03	1.03	<0.03	<0.03	0.24	-	-	HazWaste	<0.03	mg/kg
Pyrene	<0.03	<0.03	3.17	<0.03	<0.03	<0.03	0.89	<0.03	<0.03	0.24	-	-	HazWaste	<0.03	mg/kg
Benzo(a)anthracene	<0.06	<0.06	1.90	<0.06	<0.06	<0.06	0.56	<0.06	<0.06	0.20	-	-	HazWaste	<0.06	mg/kg
Chrysene	<0.02	<0.02	2.26	<0.02	<0.02	<0.02	0.66	<0.02	<0.02	0.18	-	-	HazWaste	<0.02	mg/kg
Benzo(bk)fluoranthene	<0.07	<0.07	3.62	<0.07	<0.07	<0.07	0.97	<0.07	<0.07	0.23	-	-	HazWaste	<0.07	mg/kg
Benzo(a)pyrene	<0.04	<0.04	2.05	<0.04	<0.04	<0.04	0.54	<0.04	<0.04	0.14	-	-	HazWaste	<0.04	mg/kg
Indeno(123cd)pyrene	<0.04	<0.04	1.29	<0.04	<0.04	<0.04	0.35	<0.04	<0.04	0.09	-	-	HazWaste	<0.04	mg/kg
Dibenzo(ah)anthracene	<0.04	<0.04	0.25	<0.04	<0.04	<0.04	0.07	<0.04	<0.04	<0.04	-	-	HazWaste	<0.04	mg/kg
Benzo(ghi)perylene	<0.04	<0.04	1.30	<0.04	<0.04	<0.04	0.36	<0.04	<0.04	0.10	-	-	HazWaste	<0.04	mg/kg
Coronene	<0.04	<0.04	0.25	<0.04	<0.04	<0.04	0.07	<0.04	<0.04	<0.04	-	-	HazWaste	<0.04	mg/kg
PAH 6 Total	<0.22	<0.22	11.86	<0.22	<0.22	<0.22	3.25	<0.22	<0.22	0.80	-	-	-	<0.22	mg/kg
PAH 17 Total	<0.64	<0.64	22.52	<0.64	<0.64	<0.64	6.18	<0.64	<0.64	1.61	100	100	-	<0.64	mg/kg
Benzo(b)fluoranthene	<0.05	<0.05	2.61	<0.05	<0.05	<0.05	0.70	<0.05	<0.05	0.17	-	-	HazWaste	<0.05	mg/kg
Benzo(k)fluoranthene	<0.02	<0.02	1.01	<0.02	<0.02	<0.02	0.27	<0.02	<0.02	0.06	-	-	HazWaste	<0.02	mg/kg
Benzo(j)fluoranthene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	HazWaste	<1	mg/kg
Hydrocarbons															
TPH (C5-40)	<52	<52	190	<52	<52	<52	<52	<52	<52	<52	-	-	HazWaste	<52	mg/kg
MTBE	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
Benzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
Toluene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
Ethylbenzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
m/p-Xylene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
o-Xylene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
Total 7 PCBs	<35	<35	<35	<35	<35	<35	<35	<35	<35	<35	1,000	1,000	HazWaste	<35	ug/kg
WAC Solid Sample Summary**															
Total Organic Carbon *	0.50	0.65	8.38	0.39	0.46	0.68	0.86	0.28	0.65	2.82	3	6	-	<0.02	%
Sum of BTEX	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	6	6	-	<0.025	mg/kg
Sum of 7 PCBs	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	1	1	-	<0.035	mg/kg
Mineral Oil	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	500	500	-	<30	mg/kg
PAH Sum of 6	<0.22	<0.22	11.86	<0.22	<0.22	<0.22	3.25	<0.22	<0.22	0.80	-	-	-	<0.22	mg/kg
PAH Sum of 17	<0.64	<0.64	22.52	<0.64	<0.64	<0.64	6.18	<0.64	<0.64	1.61	100	100	-	<0.64	mg/kg
WAC Leachate Data**															
Arsenic	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.070	0.5	1.5	-	<0.025	mg/kg
Barium	<0.03	<0.03	0.04	<0.03	0.21	0.25	0.07	<0.03	0.08	0.04	20	20	-	<0.03	mg/kg
Cadmium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.04	0.04	-	<0.005	mg/kg
Chromium	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	0.5	0.5	-	<0.015	mg/kg
Copper	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	2	2	-	<0.07	mg/kg
Mercury	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.01	0.01	-	<0.0001	mg/kg
Molybdenum	0.10	0.08	0.11	0.07	0.10	0.11	0.23	0.15	0.27	0.08	0.5	1.5	-	<0.02	mg/kg
Nickel	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.4	0.4	-	<0.02	mg/kg
Lead	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.5	0.5	-	<0.05	mg/kg
Antimony	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.06	0.18	-	<0.02	mg/kg
Selenium	0.04	0.06	<0.03	<0.03	0.06	0.16	<0.03	0.04	<0.03	<0.03	0.1	0.3	-	<0.03	mg/kg
Zinc	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	4	4	-	<0.03	mg/kg
Total Dissolved Solids	440	460	790	520	420	470	740	<350	<350	920	4000	12,000	-	<350	mg/kg
Dissolved Organic Carbon	<20	<20	<20	<20	<20	<20	<20	<20	<20	30	500	500	-	<20	mg/kg
Phenol	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1	1	-	<0.1	mg/kg
Sulphate as SO4	29	41	39	37	64	68	95	18	30	11	1000	3,000	-	<0.5	mg/kg
Chloride	<3	<3	4	4	5	4	<3	3	3	4	800	2,400	-	<3	mg/kg

NAD- no asbestos detected

* - Integrated Materials Solutions Landfill, Hollywood Great, Nag's Head, The Naul, Co. Dublin

** - limits as specified in Council Decision 2003/33/EC

Waste Categorisation Summary Table

Saint Teresa's Gardens

Sample ID	WS07	WS07	WS08	WS08	WS08	WS08	WS09A	WS10	WS10	BH01					
Sample Depth (m)	0.70-1.80	1.80-2.00	0.00-1.00	1.00-2.00	2.00-3.30	3.30-4.00	0.00-0.85	0.00-2.30	2.30-3.00	0.00-1.60					
Material Description	Clay	Clay	Made Ground	Clay	Clay	Clay	Made Ground	Made Ground	Clay	Made Ground					
Sample Date	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021	29/09/2021					
LoW Code	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	Inert Criteria	IMS* Criteria	Hazardous Criteria	LOD LOR	Units
Waste Category	Category A	Category A	Category C	Category A	Category A	Category A	Category B1	Category B1	Category A	Category B1					
Metals															
Antimony	2	1	3	2	2	1	1	2	1	1	-	-	HazWaste	<1	mg/kg
Arsenic	17.8	9.6	16.2	12.3	10.4	10.9	8.7	26.8	7.9	29.6	-	-	HazWaste	<0.5	mg/kg
Barium	124	75	154	94	181	76	108	133	56	95	-	-	HazWaste	<1	mg/kg
Cadmium	2.3	2.0	2.6	1.8	2.6	1.4	0.7	0.9	1.5	0.7	-	-	HazWaste	<0.1	mg/kg
Chromium	53.5	40.3	49.5	76.9	37.8	35.8	47.4	65.4	40.1	32.7	-	-	HazWaste	<0.5	mg/kg
Copper	42	27	66	20	35	27	24	46	22	29	-	-	HazWaste	<1	mg/kg
Lead	34	16	96	18	15	23	87	23	23	54	-	-	HazWaste	<5	mg/kg
Mercury	<0.1	<0.1	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	-	-	HazWaste	<0.1	mg/kg
Molybdenum	5.3	4.1	6.3	5.1	6.4	4.0	2.5	4.0	3.6	1.4	-	-	HazWaste	<0.1	mg/kg
Nickel	45.8	37.5	52.8	42.8	51.0	35.3	21.4	57.4	37.6	28.9	-	-	HazWaste	<0.7	mg/kg
Selenium	<1	<1	4	1	2	3	<1	5	2	<1	-	-	HazWaste	<1	mg/kg
Zinc	142	82	249	76	105	84	94	105	81	105	-	-	HazWaste	<5	mg/kg
Hexavalent Chromium	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	-	-	HazWaste	<0.3	mg/kg
pH (solid sample)	8.60	8.92	7.91	8.48	8.81	8.23	11.28	8.10	8.71	8.56	-	-	HazWaste	<0.01	pH units
alkali reserve	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.000	gNaOH/100g
Asbestos															
Asbestos (Dry Weight)	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	-	-	-	-	%
Asbestos (Moisture Corrected Weight)	-	-	-	-	-	-	-	-	-	-	-	-	0.1	<0.001	%
ACM Detected	-	-	-	-	-	-	-	-	-	-	-	-	-	Presence	Presence
PAHs															
Naphthalene	<0.04	<0.04	0.05	<0.04	<0.04	<0.04	0.08	<0.04	<0.04	0.06	-	-	HazWaste	<0.04	mg/kg
Acenaphthylene	<0.03	<0.03	0.07	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.14	-	-	HazWaste	<0.03	mg/kg
Acenaphthene	<0.05	<0.05	0.09	<0.05	<0.05	<0.05	0.07	<0.05	<0.05	0.18	-	-	HazWaste	<0.05	mg/kg
Fluorene	<0.04	<0.04	0.09	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.11	-	-	HazWaste	<0.04	mg/kg
Phenanthrene	<0.03	<0.03	1.35	<0.03	<0.03	<0.03	0.50	<0.03	<0.03	2.01	-	-	HazWaste	<0.03	mg/kg
Anthracene	<0.04	<0.04	0.34	<0.04	<0.04	<0.04	0.19	<0.04	<0.04	0.49	-	-	HazWaste	<0.04	mg/kg
Fluoranthene	<0.03	<0.03	2.54	<0.03	<0.03	<0.03	1.19	0.04	<0.03	3.01	-	-	HazWaste	<0.03	mg/kg
Pyrene	<0.03	<0.03	2.17	<0.03	<0.03	<0.03	1.58	0.04	<0.03	2.90	-	-	HazWaste	<0.03	mg/kg
Benzo(a)anthracene	<0.06	<0.06	1.35	<0.06	<0.06	<0.06	0.96	<0.06	<0.06	1.53	-	-	HazWaste	<0.06	mg/kg
Chrysene	<0.02	<0.02	1.64	<0.02	<0.02	<0.02	1.00	<0.02	<0.02	1.69	-	-	HazWaste	<0.02	mg/kg
Benzo(bk)fluoranthene	<0.07	<0.07	2.36	<0.07	<0.07	<0.07	1.72	<0.07	<0.07	3.59	-	-	HazWaste	<0.07	mg/kg
Benzo(a)pyrene	<0.04	<0.04	1.32	<0.04	<0.04	<0.04	0.92	<0.04	<0.04	2.02	-	-	HazWaste	<0.04	mg/kg
Indeno(123cd)pyrene	<0.04	<0.04	0.81	<0.04	<0.04	<0.04	0.60	<0.04	<0.04	1.37	-	-	HazWaste	<0.04	mg/kg
Dibenzo(ah)anthracene	<0.04	<0.04	0.17	<0.04	<0.04	<0.04	0.09	<0.04	<0.04	0.28	-	-	HazWaste	<0.04	mg/kg
Benzo(ghi)perylene	<0.04	<0.04	0.81	<0.04	<0.04	<0.04	0.59	<0.04	<0.04	1.44	-	-	HazWaste	<0.04	mg/kg
Coronene	<0.04	<0.04	0.13	<0.04	<0.04	<0.04	0.11	<0.04	<0.04	0.23	-	-	HazWaste	<0.04	mg/kg
PAH 6 Total	<0.22	<0.22	7.84	<0.22	<0.22	<0.22	5.02	<0.22	<0.22	11.43	-	-	-	<0.22	mg/kg
PAH 17 Total	<0.64	<0.64	15.29	<0.64	<0.64	<0.64	9.60	<0.64	<0.64	21.05	100	100	-	<0.64	mg/kg
Benzo(b)fluoranthene	<0.05	<0.05	1.70	<0.05	<0.05	<0.05	1.24	<0.05	<0.05	2.58	-	-	HazWaste	<0.05	mg/kg
Benzo(k)fluoranthene	<0.02	<0.02	0.66	<0.02	<0.02	<0.02	0.48	<0.02	<0.02	1.01	-	-	HazWaste	<0.02	mg/kg
Benzo(j)fluoranthene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	HazWaste	<1	mg/kg
Hydrocarbons															
TPH (C5-40)	<52	<52	294	<52	<52	<52	660	<52	<52	286	-	-	HazWaste	<52	mg/kg
MTBE	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
Benzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
Toluene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
Ethylbenzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
m/p-Xylene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
o-Xylene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
Total 7 PCBs	<35	<35	<35	<35	<35	<35	<35	<35	<35	<35	1,000	1,000	HazWaste	<35	ug/kg
WAC Solid Sample Summary**															
Total Organic Carbon *	1.26	0.38	2.64	0.30	0.42	0.61	1.21	0.91	0.30	1.06	3	6	-	<0.02	%
Sum of BTEX	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	6	6	-	<0.025	mg/kg
Sum of 7 PCBs	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	1	1	-	<0.035	mg/kg
Mineral Oil	<30	<30	42	<30	<30	<30	204	<30	<30	53	500	500	-	<30	mg/kg
PAH Sum of 6	<0.22	<0.22	7.84	<0.22	<0.22	<0.22	5.02	<0.22	<0.22	11.43	-	-	-	<0.22	mg/kg
PAH Sum of 17	<0.64	<0.64	15.29	<0.64	<0.64	<0.64	9.60	<0.64	<0.64	21.05	100	100	-	<0.64	mg/kg
WAC Leachate Data**															
Arsenic	0.030	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.035	<0.025	0.136	0.5	1.5	-	<0.025	mg/kg
Barium	0.03	<0.03	0.34	<0.03	<0.03	0.20	0.13	0.17	0.36	<0.03	20	20	-	<0.03	mg/kg
Cadmium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.04	0.04	-	<0.005	mg/kg
Chromium	<0.015	<0.015	0.019	<0.015	<0.015	<0.015	0.124	<0.015	<0.015	0.023	0.5	0.5	-	<0.015	mg/kg
Copper	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	2	2	-	<0.07	mg/kg
Mercury	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.01	0.01	-	<0.0001	mg/kg
Molybdenum	0.22	0.14	0.20	<0.02	0.14	0.20	0.02	0.06	0.22	0.04	0.5	1.5	-	<0.02	mg/kg
Nickel	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.4	0.4	-	<0.02	mg/kg
Lead	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.5	0.5	-	<0.05	mg/kg
Antimony	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.03	<0.02	<0.02	<0.02	0.06	0.18	-	<0.02	mg/kg
Selenium	<0.03	0.04	0.14	<0.03	<0.03	0.18	<0.03	<0.03	<0.03	<0.03	0.1	0.3	-	<0.03	mg/kg
Zinc	<0.03	<0.03	0.07	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	4	4	-	<0.03	mg/kg
Total Dissolved Solids	820	470	7398	1070	500	940	1990	1370	520	1750	4000	12,000	-	<350	mg/kg
Dissolved Organic Carbon	30	<20	<20	<20	<20	<20	20	<20	<20	60	500	500	-	<20	mg/kg
Phenol	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1	1	-	<0.1	mg/kg
Sulphate as SO4	42	16	4194	356	44	201	477	237	29	440	1000	3,000	-	<0.5	mg/kg
Chloride	7	5	5	<3	<3	5	12	16	4	19	800	2,400	-	<3	mg/kg

NAD- no asbestos detected

* - Integrated Materials Solutions Landfill, Hollywood Great, Nag's Head, The Naul, Co. Dublin

** - limits as specified in Council Decision 2003/33/EC

Waste Categorisation Summary Table

Saint Teresa's Gardens

Sample ID	BH01	BH02	BH02	BH03	BH03	BH04	BH04	BH05	BH05	BH07					
Sample Depth (m)	3.00-3.40	0.00-1.40	1.40-2.00	0.00-1.70	1.70-2.00	0.00-1.10	2.50-3.00	0.20-1.60	1.60-2.00	0.60-1.00					
Material Description	Clay	Made Ground	Clay	Made Ground	Clay	Made Ground	Clay	Made Ground	Clay	Made Ground					
Sample Date	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021					
LoW Code	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	Inert Criteria	IMS* Criteria	Hazardous Criteria	LOD LOR	Units
Waste Category	Category A	Category B2	Category A	Category B1	Category A	Category B1	Category A	Category B1	Category B1	Category B1					
Metals															
Antimony	2	2	2	2	1	2	2	2	1	2	-	-	HazWaste	<1	mg/kg
Arsenic	7.9	32.5	9.8	12.8	8.6	10.1	10.7	11.7	6.9	9.7	-	-	HazWaste	<0.5	mg/kg
Barium	74	238	207	105	250	78	94	107	133	89	-	-	HazWaste	<1	mg/kg
Cadmium	1.9	2.5	2.6	1.9	2.4	1.9	2.0	1.5	1.6	2.2	-	-	HazWaste	<0.1	mg/kg
Chromium	39.5	64.2	64.2	39.3	33.1	48.6	80.5	34.2	21.1	41.3	-	-	HazWaste	<0.5	mg/kg
Copper	28	67	46	51	27	33	35	59	20	28	-	-	HazWaste	<1	mg/kg
Lead	27	84	36	55	25	21	26	46	15	19	-	-	HazWaste	<5	mg/kg
Mercury	<0.1	0.4	0.4	0.3	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	-	-	HazWaste	<0.1	mg/kg
Molybdenum	3.0	2.7	2.5	4.2	3.4	4.7	6.7	3.3	2.4	3.5	-	-	HazWaste	<0.1	mg/kg
Nickel	36.3	53.3	49.0	40.2	32.1	40.1	50.5	34.8	24.9	37.1	-	-	HazWaste	<0.7	mg/kg
Selenium	1	2	2	3	2	4	2	2	<1	1	-	-	HazWaste	<1	mg/kg
Zinc	90	192	160	104	63	122	95	90	52	83	-	-	HazWaste	<5	mg/kg
Hexavalent Chromium	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	-	-	HazWaste	<0.3	mg/kg
pH (solid sample)	8.36	7.81	8.04	7.80	8.09	7.93	8.31	7.93	8.08	8.57	-	-	HazWaste	<0.01	pH units
alkali reserve	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.000	gNaOH/100g
Asbestos															
Asbestos (Dry Weight)	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	-	-	-	-	%
Asbestos (Moisture Corrected Weight)	-	-	-	-	-	-	-	-	-	-	-	-	0.1	<0.001	%
ACM Detected	-	-	-	-	-	-	-	-	-	-	-	-	-	Presence	Presence
PAHs															
Naphthalene	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	-	-	HazWaste	<0.04	mg/kg
Acenaphthylene	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	-	-	HazWaste	<0.03	mg/kg
Acenaphthene	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	HazWaste	<0.05	mg/kg
Fluorene	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.05	<0.04	-	-	HazWaste	<0.04	mg/kg
Phenanthrene	<0.03	0.05	<0.03	0.21	0.23	0.05	<0.03	0.20	0.49	<0.03	-	-	HazWaste	<0.03	mg/kg
Anthracene	<0.04	<0.04	<0.04	0.05	0.08	<0.04	<0.04	0.06	0.15	<0.04	-	-	HazWaste	<0.04	mg/kg
Fluoranthene	<0.03	0.09	0.07	0.23	0.36	<0.03	0.06	0.27	0.73	<0.03	-	-	HazWaste	<0.03	mg/kg
Pyrene	<0.03	0.08	0.06	0.22	0.32	<0.03	0.06	0.26	0.61	<0.03	-	-	HazWaste	<0.03	mg/kg
Benzo(a)anthracene	<0.06	0.09	<0.06	0.14	0.21	<0.06	<0.06	0.17	0.39	<0.06	-	-	HazWaste	<0.06	mg/kg
Chrysene	<0.02	0.06	0.06	0.16	0.21	0.03	0.05	0.19	0.33	<0.02	-	-	HazWaste	<0.02	mg/kg
Benzo(bk)fluoranthene	<0.07	0.12	<0.07	0.22	0.32	<0.07	<0.07	0.26	0.47	<0.07	-	-	HazWaste	<0.07	mg/kg
Benzo(a)pyrene	<0.04	0.08	<0.04	0.10	0.16	<0.04	<0.04	0.14	0.24	<0.04	-	-	HazWaste	<0.04	mg/kg
Indeno(123cd)pyrene	<0.04	<0.04	<0.04	0.05	0.09	<0.04	<0.04	0.07	0.14	<0.04	-	-	HazWaste	<0.04	mg/kg
Dibenzo(ah)anthracene	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	-	-	HazWaste	<0.04	mg/kg
Benzo(ghi)perylene	<0.04	<0.04	<0.04	0.07	0.11	<0.04	<0.04	0.10	0.15	<0.04	-	-	HazWaste	<0.04	mg/kg
Coronene	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	-	-	HazWaste	<0.04	mg/kg
PAH 6 Total	<0.22	0.29	<0.22	0.67	1.04	<0.22	<0.22	0.84	1.73	<0.22	-	-	-	<0.22	mg/kg
PAH 17 Total	<0.64	<0.64	<0.64	1.45	2.09	<0.64	<0.64	1.72	3.75	<0.64	100	100	-	<0.64	mg/kg
Benzo(b)fluoranthene	<0.05	0.09	<0.05	0.16	0.23	<0.05	<0.05	0.19	0.34	<0.05	-	-	HazWaste	<0.05	mg/kg
Benzo(k)fluoranthene	<0.02	0.03	<0.02	0.06	0.09	<0.02	<0.02	0.07	0.13	<0.02	-	-	HazWaste	<0.02	mg/kg
Benzo(j)fluoranthene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	HazWaste	<1	mg/kg
Hydrocarbons															
TPH (C5-40)	<52	456	<52	<52	<52	<52	<52	171	<52	<52	-	-	HazWaste	<52	mg/kg
MTBE	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
Benzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
Toluene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
Ethylbenzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
m/p-Xylene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
o-Xylene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
Total 7 PCBs	<35	<35	<35	<35	<35	<35	<35	<35	<35	<35	1,000	1,000	HazWaste	<35	ug/kg
WAC Solid Sample Summary**															
Total Organic Carbon *	0.33	3.08	1.97	1.96	0.77	0.62	0.53	1.70	1.63	0.33	3	6	-	<0.02	%
Sum of BTEX	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	6	6	-	<0.025	mg/kg
Sum of 7 PCBs	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	1	1	-	<0.035	mg/kg
Mineral Oil	<30	77	<30	<30	<30	<30	<30	<30	<30	<30	500	500	-	<30	mg/kg
PAH Sum of 6	<0.22	0.29	<0.22	0.67	1.04	<0.22	<0.22	0.84	1.73	<0.22	-	-	-	<0.22	mg/kg
PAH Sum of 17	<0.64	<0.64	<0.64	1.45	2.09	<0.64	<0.64	1.72	3.75	<0.64	100	100	-	<0.64	mg/kg
WAC Leachate Data**															
Arsenic	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.5	1.5	-	<0.025	mg/kg
Barium	0.27	0.20	0.14	0.48	0.55	0.09	0.07	0.25	0.47	<0.03	20	20	-	<0.03	mg/kg
Cadmium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.04	0.04	-	<0.005	mg/kg
Chromium	<0.015	0.021	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	0.5	0.5	-	<0.015	mg/kg
Copper	<0.07	0.13	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	2	2	-	<0.07	mg/kg
Mercury	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0003	<0.0001	0.01	0.01	-	<0.0001	mg/kg
Molybdenum	0.13	0.13	0.10	0.12	0.23	0.31	0.19	0.23	0.25	0.12	0.5	1.5	-	<0.02	mg/kg
Nickel	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	<0.02	0.4	0.4	-	<0.02	mg/kg
Lead	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.5	0.5	-	<0.05	mg/kg
Antimony	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.06	0.18	-	<0.02	mg/kg
Selenium	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.05	<0.03	<0.03	0.1	0.3	-	<0.03	mg/kg
Zinc	<0.03	0.11	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	4	4	-	<0.03	mg/kg
Total Dissolved Solids	610	1711	1380	2789	1711	2149	670	1810	870	560	4000	12,000	-	<350	mg/kg
Dissolved Organic Carbon	30	60	50	50	30	<20	30	30	30	<20	500	500	-	<20	mg/kg
Phenol	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1	1	-	<0.1	mg/kg
Sulphate as SO4	86	560	343	893	724	949	116	546	210	48	1000	3,000	-	<0.5	mg/kg
Chloride	7	19	6	7	4	<3	4	7	7	4	800	2,400	-	<3	mg/kg

NAD- no asbestos detected

* - Integrated Materials Solutions Landfill, Hollywood Great, Nag's Head, The Naul, Co. Dublin

** - limits as specified in Council Decision 2003/33/EC

Waste Categorisation Summary Table

Saint Teresa's Gardens

Sample ID	BH07	BH08	BH08	BH09	BH09	BH10	BH10	BH11	BH11	BH12					
Sample Depth (m)	1.00-2.00	0.40-1.20	2.00-3.00	0.20-0.90	2.00-3.00	0.20-1.00	1.00-2.00	0.00-0.70	1.70-2.70	0.00-0.70					
Material Description	Made Ground	Made Ground	Clay	Made Ground	Clay	Made Ground	Clay	Made Ground	Made Ground	Made Ground					
Sample Date	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021					
LoW Code	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	Inert Criteria	IMS* Criteria	Hazardous Criteria	LOD LOR	Units
Waste Category	Category B1	Category C	Category A	Category B1	Category A	Category B1	Category A	Category C	Category C	Category B1					
Metals															
Antimony	2	2	2	3	1	<1	2	6	3	<1	-	-	HazWaste	<1	mg/kg
Arsenic	9.5	23.7	7.6	16.3	6.8	6.0	9.4	30.2	22.3	7.1	-	-	HazWaste	<0.5	mg/kg
Barium	49	159	126	195	55	157	72	229	114	195	-	-	HazWaste	<1	mg/kg
Cadmium	1.7	1.6	1.7	0.9	1.8	0.3	1.9	2.7	1.6	1.3	-	-	HazWaste	<0.1	mg/kg
Chromium	37.2	34.2	56.9	36.1	33.1	26.0	49.4	58.7	53.0	20.3	-	-	HazWaste	<0.5	mg/kg
Copper	30	87	20	82	23	21	31	120	98	16	-	-	HazWaste	<1	mg/kg
Lead	15	271	15	147	12	24	19	273	127	17	-	-	HazWaste	<5	mg/kg
Mercury	0.2	1.5	<0.1	0.6	0.2	0.3	0.2	0.8	0.5	0.1	-	-	HazWaste	<0.1	mg/kg
Molybdenum	2.5	3.2	4.7	1.9	4.2	1.6	4.3	6.4	5.6	3.0	-	-	HazWaste	<0.1	mg/kg
Nickel	37.2	47.8	30.8	21.1	25.0	21.0	33.4	57.2	51.9	15.3	-	-	HazWaste	<0.7	mg/kg
Selenium	1	1	<1	<1	<1	<1	1	2	2	<1	-	-	HazWaste	<1	mg/kg
Zinc	66	189	61	165	60	43	86	299	140	49	-	-	HazWaste	<5	mg/kg
Hexavalent Chromium	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	-	-	HazWaste	<0.3	mg/kg
pH (solid sample)	8.66	7.81	8.44	11.86	8.57	8.13	8.59	7.93	8.41	8.56	-	-	HazWaste	<0.01	pH units
alkali reserve	-	-	-	0.002	-	-	-	-	-	-	-	-	-	<0.000	gNaOH/100g
Asbestos															
Asbestos (Dry Weight)	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	-	-	-	-	%
Asbestos (Moisture Corrected Weight)	-	-	-	-	-	-	-	-	-	-	-	-	0.1	<0.001	%
ACM Detected	-	-	-	-	-	-	-	-	-	-	-	-	-	Presence	Presence
PAHs															
Naphthalene	<0.04	0.07	<0.04	<0.04	<0.04	<0.04	<0.04	0.07	<0.04	<0.04	-	-	HazWaste	<0.04	mg/kg
Acenaphthylene	<0.03	0.07	<0.03	0.04	<0.03	<0.03	<0.03	0.06	<0.03	<0.03	-	-	HazWaste	<0.03	mg/kg
Acenaphthene	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	HazWaste	<0.05	mg/kg
Fluorene	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	-	-	HazWaste	<0.04	mg/kg
Phenanthrene	<0.03	0.70	<0.03	0.58	<0.03	0.15	<0.03	0.54	0.22	0.06	-	-	HazWaste	<0.03	mg/kg
Anthracene	<0.04	0.15	<0.04	0.13	<0.04	<0.04	<0.04	0.13	<0.04	<0.04	-	-	HazWaste	<0.04	mg/kg
Fluoranthene	<0.03	0.93	<0.03	0.83	<0.03	0.25	<0.03	0.90	0.25	<0.03	-	-	HazWaste	<0.03	mg/kg
Pyrene	<0.03	0.86	<0.03	0.78	<0.03	0.22	<0.03	0.79	0.25	<0.03	-	-	HazWaste	<0.03	mg/kg
Benzo(a)anthracene	<0.06	0.64	<0.06	0.39	<0.06	0.16	<0.06	0.43	0.17	<0.06	-	-	HazWaste	<0.06	mg/kg
Chrysene	<0.02	0.58	<0.02	0.44	<0.02	0.15	<0.02	0.84	0.16	<0.02	-	-	HazWaste	<0.02	mg/kg
Benzo(bk)fluoranthene	<0.07	0.95	<0.07	0.71	<0.07	0.24	<0.07	0.78	0.22	<0.07	-	-	HazWaste	<0.07	mg/kg
Benzo(a)pyrene	<0.04	0.49	<0.04	0.39	<0.04	0.13	<0.04	0.47	0.14	<0.04	-	-	HazWaste	<0.04	mg/kg
Indeno(123cd)pyrene	<0.04	0.26	<0.04	0.24	<0.04	0.08	<0.04	0.25	0.07	<0.04	-	-	HazWaste	<0.04	mg/kg
Dibenzo(ah)anthracene	<0.04	0.05	<0.04	0.06	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	-	-	HazWaste	<0.04	mg/kg
Benzo(ghi)perylene	<0.04	0.30	<0.04	0.27	<0.04	0.09	<0.04	0.28	0.09	<0.04	-	-	HazWaste	<0.04	mg/kg
Coronene	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	-	-	HazWaste	<0.04	mg/kg
PAH 6 Total	<0.22	2.93	<0.22	2.44	<0.22	0.79	<0.22	2.68	0.77	<0.22	-	-	-	<0.22	mg/kg
PAH 17 Total	<0.64	6.05	<0.64	4.86	<0.64	1.47	<0.64	5.54	1.57	<0.64	100	100	-	<0.64	mg/kg
Benzo(b)fluoranthene	<0.05	0.68	<0.05	0.51	<0.05	0.17	<0.05	0.56	0.16	<0.05	-	-	HazWaste	<0.05	mg/kg
Benzo(k)fluoranthene	<0.02	0.27	<0.02	0.20	<0.02	0.07	<0.02	0.22	0.06	<0.02	-	-	HazWaste	<0.02	mg/kg
Benzo(j)fluoranthene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	HazWaste	<1	mg/kg
Hydrocarbons															
TPH (C5-40)	<52	<52	<52	105	<52	<52	<52	144	<52	<52	-	-	HazWaste	<52	mg/kg
MTBE	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
Benzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
Toluene	<5	<5	<5	14	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
Ethylbenzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
m/p-Xylene	<5	7	<5	8	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
o-Xylene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
Total 7 PCBs	<35	<35	<35	<35	<35	<35	<35	<35	<35	<35	1,000	1,000	HazWaste	<35	ug/kg
WAC Solid Sample Summary**															
Total Organic Carbon *	0.39	9.13	0.37	1.93	0.34	0.81	0.57	8.29	6.49	0.72	3	6	-	<0.02	%
Sum of BTEX	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	6	6	-	<0.025	mg/kg
Sum of 7 PCBs	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	1	1	-	<0.035	mg/kg
Mineral Oil	<30	<30	<30	30	<30	<30	<30	<30	<30	<30	500	500	-	<30	mg/kg
PAH Sum of 6	<0.22	2.93	<0.22	2.44	<0.22	0.79	<0.22	2.68	0.77	<0.22	-	-	-	<0.22	mg/kg
PAH Sum of 17	<0.64	6.05	<0.64	4.86	<0.64	1.47	<0.64	5.54	1.57	<0.64	100	100	-	<0.64	mg/kg
WAC Leachate Data**															
Arsenic	<0.025	0.035	<0.025	<0.025	<0.025	0.096	<0.025	0.102	<0.025	<0.025	0.5	1.5	-	<0.025	mg/kg
Barium	<0.03	0.05	<0.03	0.69	<0.03	0.10	<0.03	0.06	<0.03	<0.03	20	20	-	<0.03	mg/kg
Cadmium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.04	0.04	-	<0.005	mg/kg
Chromium	<0.015	<0.015	<0.015	0.210	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	0.5	0.5	-	<0.015	mg/kg
Copper	<0.07	<0.07	<0.07	2.19	<0.07	<0.07	<0.07	0.09	<0.07	<0.07	2	2	-	<0.07	mg/kg
Mercury	<0.0001	<0.0001	<0.0001	0.0002	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	0.01	0.01	-	<0.0001	mg/kg
Molybdenum	0.16	0.04	0.12	0.10	0.17	0.05	0.15	0.08	0.20	0.07	0.5	1.5	-	<0.02	mg/kg
Nickel	<0.02	<0.02	<0.02	0.20	<0.02	<0.02	<0.02	0.02	<0.02	<0.02	0.4	0.4	-	<0.02	mg/kg
Lead	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.5	0.5	-	<0.05	mg/kg
Antimony	<0.02	0.04	<0.02	0.04	<0.02	<0.02	<0.02	0.03	<0.02	<0.02	0.06	0.18	-	<0.02	mg/kg
Selenium	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.1	0.3	-	<0.03	mg/kg
Zinc	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.05	<0.03	0.05	4	4	-	<0.03	mg/kg
Total Dissolved Solids	540	1240	400	3999	590	1490	520	1010	580	640	4000	12,000	-	<350	mg/kg
Dissolved Organic Carbon	<20	30	<20	130	<20	40	<20	70	<20	50	500	500	-	<20	mg/kg
Phenol	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1	1	-	<0.1	mg/kg
Sulphate as SO4	79	251	19	94	7	606	42	<5	48	57	1000	3,000	-	<0.5	mg/kg
Chloride	4	6	<3	23	<3	3	<3	7	5	5	800	2,400	-	<3	mg/kg

NAD- no asbestos detected

* - Integrated Materials Solutions Landfill, Hollywood Great, Nag's Head, The Naul, Co. Dublin

** - limits as specified in Council Decision 2003/33/EC

Waste Categorisation Summary Table

Saint Teresa's Gardens

Sample ID	BH12	BH13	BH13	BH14	BH14	BH15	BH15	BH16	BH16	BH17					
Sample Depth (m)	1.00-2.50	0.30-0.70	1.00-2.00	0.30-0.90	0.90-2.00	0.30-0.80	1.90-3.00	0.30-0.80	1.00-2.00	0.00-0.60					
Material Description	Clay	Made Ground	Clay	Made Ground	Clay	Made Ground	Clay	Made Ground	Clay	Made Ground					
Sample Date	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021					
LoW Code	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	Inert Criteria	IMS* Criteria	Hazardous Criteria	LOD LOR	Units
Waste Category	Category A	Category B2	Category A	Category C	Category A	Category C	Category A	Category C	Category A	Category B2					
Metals															
Antimony	2	2	2	3	2	4	1	3	1	<1	-	-	HazWaste	<1	mg/kg
Arsenic	10.8	11.8	10.5	25.8	9.8	36.8	9.4	27.7	9.1	9.3	-	-	HazWaste	<0.5	mg/kg
Barium	66	140	144	303	117	176	282	192	317	24	-	-	HazWaste	<1	mg/kg
Cadmium	2.6	1.8	2.1	1.6	1.8	1.4	1.5	1.1	2.2	<0.1	-	-	HazWaste	<0.1	mg/kg
Chromium	38.7	46.8	45.9	44.0	30.9	33.2	25.2	48.9	26.5	52.2	-	-	HazWaste	<0.5	mg/kg
Copper	34	18	31	111	31	128	25	111	23	21	-	-	HazWaste	<1	mg/kg
Lead	14	19	17	325	24	413	32	306	34	10	-	-	HazWaste	<5	mg/kg
Mercury	<0.1	<0.1	<0.1	0.8	<0.1	1.1	<0.1	0.9	<0.1	0.2	-	-	HazWaste	<0.1	mg/kg
Molybdenum	5.5	5.3	4.8	3.7	4.0	4.5	3.1	4.7	3.6	1.2	-	-	HazWaste	<0.1	mg/kg
Nickel	45.4	31.0	37.6	36.2	34.2	61.7	25.0	49.2	39.5	16.8	-	-	HazWaste	<0.7	mg/kg
Selenium	1	<1	2	1	1	2	1	1	2	<1	-	-	HazWaste	<1	mg/kg
Zinc	89	81	90	234	80	248	75	220	85	69	-	-	HazWaste	<5	mg/kg
Hexavalent Chromium	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	-	-	HazWaste	<0.3	mg/kg
pH (solid sample)	8.76	8.79	8.70	8.23	8.56	8.21	8.66	8.20	8.65	8.58	-	-	HazWaste	<0.01	pH units
alkali reserve	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.000	gNaOH/100g
Asbestos															
Asbestos (Dry Weight)	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	-	-	-	-	%
Asbestos (Moisture Corrected Weight)	-	-	-	-	-	-	-	-	-	-	-	-	0.1	<0.001	%
ACM Detected	-	-	-	-	-	-	-	-	-	-	-	-	-	Presence	Presence
PAHs															
Naphthalene	<0.04	<0.04	<0.04	0.13	<0.04	0.11	<0.04	<0.04	<0.04	<0.04	-	-	HazWaste	<0.04	mg/kg
Acenaphthylene	<0.03	<0.03	<0.03	0.14	<0.03	0.09	<0.03	0.10	<0.03	<0.03	-	-	HazWaste	<0.03	mg/kg
Acenaphthene	<0.05	<0.05	<0.05	0.09	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	HazWaste	<0.05	mg/kg
Fluorene	<0.04	<0.04	<0.04	0.09	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	-	-	HazWaste	<0.04	mg/kg
Phenanthrene	<0.03	<0.03	<0.03	1.48	<0.03	0.74	0.09	0.94	0.07	0.06	-	-	HazWaste	<0.03	mg/kg
Anthracene	<0.04	<0.04	<0.04	0.35	<0.04	0.17	<0.04	0.27	<0.04	<0.04	-	-	HazWaste	<0.04	mg/kg
Fluoranthene	<0.03	<0.03	<0.03	2.60	<0.03	1.09	0.16	1.47	0.11	0.10	-	-	HazWaste	<0.03	mg/kg
Pyrene	<0.03	<0.03	<0.03	2.43	<0.03	1.05	0.14	1.31	0.11	0.10	-	-	HazWaste	<0.03	mg/kg
Benzo(a)anthracene	<0.06	<0.06	<0.06	1.29	<0.06	0.61	0.12	0.70	0.07	0.08	-	-	HazWaste	<0.06	mg/kg
Chrysene	<0.02	<0.02	<0.02	1.58	<0.02	0.70	0.11	0.78	0.07	0.09	-	-	HazWaste	<0.02	mg/kg
Benzo(bk)fluoranthene	<0.07	<0.07	<0.07	2.42	<0.07	1.17	0.14	1.16	0.11	0.11	-	-	HazWaste	<0.07	mg/kg
Benzo(a)pyrene	<0.04	<0.04	<0.04	1.40	<0.04	0.69	0.09	0.72	0.06	0.07	-	-	HazWaste	<0.04	mg/kg
Indeno(123cd)pyrene	<0.04	<0.04	<0.04	0.75	<0.04	0.42	<0.04	0.38	<0.04	<0.04	-	-	HazWaste	<0.04	mg/kg
Dibenzo(ah)anthracene	<0.04	<0.04	<0.04	0.19	<0.04	0.11	<0.04	0.10	<0.04	<0.04	-	-	HazWaste	<0.04	mg/kg
Benzo(ghi)perylene	<0.04	<0.04	<0.04	0.86	<0.04	0.46	0.05	0.43	<0.04	0.06	-	-	HazWaste	<0.04	mg/kg
Coronene	<0.04	<0.04	<0.04	0.14	<0.04	0.08	<0.04	0.07	<0.04	<0.04	-	-	HazWaste	<0.04	mg/kg
PAH 6 Total	<0.22	<0.22	<0.22	8.03	<0.22	3.83	0.44	4.16	0.28	0.34	-	-	-	<0.22	mg/kg
PAH 17 Total	<0.64	<0.64	<0.64	15.94	<0.64	7.49	0.90	8.43	<0.64	0.67	100	100	-	<0.64	mg/kg
Benzo(b)fluoranthene	<0.05	<0.05	<0.05	1.74	<0.05	0.84	0.10	0.84	0.08	0.08	-	-	HazWaste	<0.05	mg/kg
Benzo(k)fluoranthene	<0.02	<0.02	<0.02	0.68	<0.02	0.33	0.04	0.32	0.03	0.03	-	-	HazWaste	<0.02	mg/kg
Benzo(j)fluoranthene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	HazWaste	<1	mg/kg
Hydrocarbons															
TPH (C5-40)	<52	<52	<52	96	<52	120	<52	190	<52	208	-	-	HazWaste	<52	mg/kg
MTBE	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
Benzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
Toluene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
Ethylbenzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
m/p-Xylene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
o-Xylene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
Total 7 PCBs	<35	<35	<35	<35	<35	<35	<35	<35	<35	<35	1,000	1,000	HazWaste	<35	ug/kg
WAC Solid Sample Summary**															
Total Organic Carbon *	0.46	0.59	0.50	8.92	0.53	11.51	1.33	14.67	1.01	0.19	3	6	-	<0.02	%
Sum of BTEX	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	6	6	-	<0.025	mg/kg
Sum of 7 PCBs	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	1	1	-	<0.035	mg/kg
Mineral Oil	<30	<30	<30	<30	<30	<30	<30	<30	<30	44	500	500	-	<30	mg/kg
PAH Sum of 6	<0.22	<0.22	<0.22	8.03	<0.22	3.83	0.44	4.16	0.28	0.34	-	-	-	<0.22	mg/kg
PAH Sum of 17	<0.64	<0.64	<0.64	15.94	<0.64	7.49	0.90	8.43	<0.64	0.67	100	100	-	<0.64	mg/kg
WAC Leachate Data**															
Arsenic	<0.025	<0.025	<0.025	0.079	<0.025	0.070	<0.025	0.040	<0.025	0.033	0.5	1.5	-	<0.025	mg/kg
Barium	<0.03	<0.03	0.10	0.07	0.07	0.05	0.03	0.04	<0.03	<0.03	20	20	-	<0.03	mg/kg
Cadmium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.04	0.04	-	<0.005	mg/kg
Chromium	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	0.5	0.5	-	<0.015	mg/kg
Copper	<0.07	<0.07	<0.07	0.08	<0.07	0.11	<0.07	<0.07	<0.07	<0.07	2	2	-	<0.07	mg/kg
Mercury	<0.0001	<0.0001	<0.0001	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.01	0.01	-	<0.0001	mg/kg
Molybdenum	0.17	0.18	0.19	0.05	0.20	0.05	0.12	0.05	0.15	0.05	0.5	1.5	-	<0.02	mg/kg
Nickel	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.4	0.4	-	<0.02	mg/kg
Lead	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.5	0.5	-	<0.05	mg/kg
Antimony	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.06	0.18	-	<0.02	mg/kg
Selenium	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.1	0.3	-	<0.03	mg/kg
Zinc	<0.03	<0.03	<0.03	0.04	<0.03	0.04	<0.03	<0.03	<0.03	<0.03	4	4	-	<0.03	mg/kg
Total Dissolved Solids	390	630	390	1040	550	1080	760	830	600	630	4000	12,000	-	<350	mg/kg
Dissolved Organic Carbon	<20	<20	<20	50	<20	50	<20	40	<20	<20	500	500	-	<20	mg/kg
Phenol	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1	1	-	<0.1	mg/kg
Sulphate as SO4	16	54	27	<5	33	56	32	8	31	32	1000	3,000	-	<0.5	mg/kg
Chloride	<3	5	4	10	<3	6	<3	<3	<3	<3	800	2,400	-	<3	mg/kg

NAD- no asbestos detected

* - Integrated Materials Solutions Landfill, Hollywood Great, Nag's Head, The Naul, Co. Dublin

** - limits as specified in Council Decision 2003/33/EC

Waste Categorisation Summary Table
Saint Teresa's Gardens

Sample ID	BH17	Inert Criteria	IMS* Criteria	Hazardous Criteria	LOD LOR	Units
Sample Depth (m)	**1.00-2.00**					
Material Description	**Clay**					
Sample Date	**29/09/2021**					
LoW Code	**17 05 04**					
Waste Category	**Category A**					
Metals						
Antimony	1	-	-	HazWaste	<1	mg/kg
Arsenic	12.1	-	-	HazWaste	<0.5	mg/kg
Barium	250	-	-	HazWaste	<1	mg/kg
Cadmium	1.5	-	-	HazWaste	<0.1	mg/kg
Chromium	54.2	-	-	HazWaste	<0.5	mg/kg
Copper	18	-	-	HazWaste	<1	mg/kg
Lead	32	-	-	HazWaste	<5	mg/kg
Mercury	<0.1	-	-	HazWaste	<0.1	mg/kg
Molybdenum	4.9	-	-	HazWaste	<0.1	mg/kg
Nickel	34.1	-	-	HazWaste	<0.7	mg/kg
Selenium	1	-	-	HazWaste	<1	mg/kg
Zinc	118	-	-	HazWaste	<5	mg/kg
Hexavalent Chromium	<0.3	-	-	HazWaste	<0.3	mg/kg
pH (solid sample)	8.68	-	-	HazWaste	<0.01	pH units
alkali reserve	-	-	-	-	<0.000	gNaOH/100g
Asbestos						
Asbestos (Dry Weight)	NAD	-	-	-	-	%
Asbestos (Moisture Corrected Weight)	-	-	-	0.1	<0.001	%
ACM Detected	-	-	-	-	Presence	Presence
PAHs						
Naphthalene	<0.04	-	-	HazWaste	<0.04	mg/kg
Acenaphthylene	<0.03	-	-	HazWaste	<0.03	mg/kg
Acenaphthene	<0.05	-	-	HazWaste	<0.05	mg/kg
Fluorene	<0.04	-	-	HazWaste	<0.04	mg/kg
Phenanthrene	0.04	-	-	HazWaste	<0.03	mg/kg
Anthracene	<0.04	-	-	HazWaste	<0.04	mg/kg
Fluoranthene	0.06	-	-	HazWaste	<0.03	mg/kg
Pyrene	0.05	-	-	HazWaste	<0.03	mg/kg
Benzo(a)anthracene	<0.06	-	-	HazWaste	<0.06	mg/kg
Chrysene	0.05	-	-	HazWaste	<0.02	mg/kg
Benzo(bk)fluoranthene	<0.07	-	-	HazWaste	<0.07	mg/kg
Benzo(a)pyrene	<0.04	-	-	HazWaste	<0.04	mg/kg
Indeno(123cd)pyrene	<0.04	-	-	HazWaste	<0.04	mg/kg
Dibenzo(ah)anthracene	<0.04	-	-	HazWaste	<0.04	mg/kg
Benzo(ghi)perylene	<0.04	-	-	HazWaste	<0.04	mg/kg
Coronene	<0.04	-	-	HazWaste	<0.04	mg/kg
PAH 6 Total	<0.22	-	-	-	<0.22	mg/kg
PAH 17 Total	<0.64	100	100	-	<0.64	mg/kg
Benzo(b)fluoranthene	<0.05	-	-	HazWaste	<0.05	mg/kg
Benzo(k)fluoranthene	<0.02	-	-	HazWaste	<0.02	mg/kg
Benzo(j)fluoranthene	<1	-	-	HazWaste	<1	mg/kg
Hydrocarbons						
TPH (C5-40)	<52	-	-	HazWaste	<52	mg/kg
MTBE	<5	-	-	HazWaste	<5	ug/kg
Benzene	<5	-	-	HazWaste	<5	ug/kg
Toluene	<5	-	-	HazWaste	<5	ug/kg
Ethylbenzene	<5	-	-	HazWaste	<5	ug/kg
m/p-Xylene	<5	-	-	HazWaste	<5	ug/kg
o-Xylene	<5	-	-	HazWaste	<5	ug/kg
Total 7 PCBs	<35	1,000	1,000	HazWaste	<35	ug/kg
WAC Solid Sample Summary**						
Total Organic Carbon *	0.67	3	6	-	<0.02	%
Sum of BTEX	<0.025	6	6	-	<0.025	mg/kg
Sum of 7 PCBs	<0.035	1	1	-	<0.035	mg/kg
Mineral Oil	<30	500	500	-	<30	mg/kg
PAH Sum of 6	<0.22	-	-	-	<0.22	mg/kg
PAH Sum of 17	<0.64	100	100	-	<0.64	mg/kg
WAC Leachate Data**						
Arsenic	<0.025	0.5	1.5	-	<0.025	mg/kg
Barium	<0.03	20	20	-	<0.03	mg/kg
Cadmium	<0.005	0.04	0.04	-	<0.005	mg/kg
Chromium	<0.015	0.5	0.5	-	<0.015	mg/kg
Copper	<0.07	2	2	-	<0.07	mg/kg
Mercury	<0.0001	0.01	0.01	-	<0.0001	mg/kg
Molybdenum	0.12	0.5	1.5	-	<0.02	mg/kg
Nickel	<0.02	0.4	0.4	-	<0.02	mg/kg
Lead	<0.05	0.5	0.5	-	<0.05	mg/kg
Antimony	<0.02	0.06	0.18	-	<0.02	mg/kg
Selenium	<0.03	0.1	0.3	-	<0.03	mg/kg
Zinc	<0.03	4	4	-	<0.03	mg/kg
Total Dissolved Solids	<350	4000	12,000	-	<350	mg/kg
Dissolved Organic Carbon	<20	500	500	-	<20	mg/kg
Phenol	<0.1	1	1	-	<0.1	mg/kg
Sulphate as SO4	31	1000	3,000	-	<0.5	mg/kg
Chloride	<3	800	2,400	-	<3	mg/kg

NAD- no asbestos detected

* - Integrated Materials Solutions Landfill, Hollywood Great, Nag's Head, The Naul, Co. Dublin

** - limits as specified in Council Decision 2003/33/EC

APPENDIX 9 – Suitable 4 Use Data

S4UL - Metals (Residential without homegrown produce), Saint Teresa's Gardens

Sample ID	WS01	WS01	WS01	WS02	WS02	WS02	WS03	WS03	WS03	WS04	Max Level Detected	Units	Residential without homegrown produce
Sample Depth (m)	0.00-1.00	1.00-2.00	2.00-3.00	0.00-0.70	0.70-2.60	2.60-3.00	0.00-1.00	1.00-1.60	1.60-3.00	0.00-0.80			
Antimony	2	<1	1	3	2	2	2	3	1	3	3	mg/kg	550*
Arsenic	17.3	5.7	8.7	25.5	9.8	11.5	23.5	15.8	18	25.9	25.9	mg/kg	40
Barium	417	53	53	252	77	51	203	671	71	169	671	mg/kg	1300*
Cadmium	4	2	1.9	2.6	2.4	2.1	1.5	1.9	1.5	2.3	4	mg/kg	85
Chromium	59.4	38	39.5	45.6	35.3	43.8	54.7	50.6	54.2	63.3	63.3	mg/kg	910
Copper	68	21	27	89	34	31	231	33	29	73	231	mg/kg	7,100
Lead	80	14	19	418	15	23	220	17	12	213	418	mg/kg	310**
Mercury	<0.1	<0.1	<0.1	0.6	<0.1	<0.1	0.6	<0.1	<0.1	0.5	0.6	mg/kg	1.2
Molybdenum	8.2	2.6	4	6.4	4.4	4.3	4.7	8.9	5.3	5.3	8.9	mg/kg	670*
Nickel	42.7	26.5	33.2	53.2	41.9	38	75.4	47.2	34.2	51.6	75.4	mg/kg	180
Selenium	3	<1	7	2	1	8	1	2	3	2	8	mg/kg	430
Zinc	126	69	89	179	91	91	209	84	80	275	275	mg/kg	40,000
Hexavalent Chromium	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0	mg/kg	6*

* CL:AIRE GAC

** - Category 4 Screening Levels

S4UL - Metals (Residential without homegrown produce), Saint Teresa's Gardens

Sample ID	WS04	WS04	WS05	WS05	WS05	WS05	WS06	WS06	WS06	WS07	Max Level Detected	Units	Residential without homegrown produce
Sample Depth (m)	0.80-2.80	2.80-3.00	0.00-1.00	1.00-1.30	1.30-2.70	2.70-3.00	0.00-1.00	1.00-2.30	2.30-3.00	0.00-0.70			
Antimony	2	2	4	3	<1	2	3	<1	2	3	4	mg/kg	550*
Arsenic	10.8	10.6	32.8	14.9	4.2	9.3	9.2	6.6	10.2	26.1	32.8	mg/kg	40
Barium	83	54	187	492	49	59	73	53	104	134	492	mg/kg	1300*
Cadmium	1.9	2	1.4	1.7	1.5	1.9	1.6	1.3	1.9	2.5	2.5	mg/kg	85
Chromium	57.8	39.5	51.7	57.7	61.1	41.9	33.8	44.1	43.2	54.6	61.1	mg/kg	910
Copper	25	32	107	20	27	28	33	19	32	70	107	mg/kg	7,100
Lead	21	21	317	19	9	18	41	11	25	164	317	mg/kg	310**
Mercury	<0.1	<0.1	0.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.3	0.8	mg/kg	1.2
Molybdenum	4.4	4.1	5.3	7.5	4.3	4.5	3.6	3.9	4.6	5.1	7.5	mg/kg	670*
Nickel	44.5	38.2	46.6	40	22.3	33.9	32.1	21	38.9	53.2	53.2	mg/kg	180
Selenium	1	5	2	2	<1	5	<1	<1	2	2	5	mg/kg	430
Zinc	108	87	275	93	60	75	89	51	90	200	275	mg/kg	40,000
Hexavalent Chromium	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0	mg/kg	6*

* CL:AIRE GAC

** - Category 4 Screening Levels

S4UL - Metals (Residential without homegrown produce), Saint Teresa's Gardens

Sample ID	WS07	WS07	WS08	WS08	WS08	WS08	WS09A	WS10	WS10	BH01	Max Level Detected	Units	Residential without homegrown produce
Sample Depth (m)	0.70-1.80	1.80-2.00	0.00-1.00	1.00-2.00	2.00-3.30	3.30-4.00	0.00-0.85	0.00-2.30	2.30-3.00	0.00-1.60			
Antimony	2	1	3	2	2	1	1	2	1	1	3	mg/kg	550*
Arsenic	17.8	9.6	16.2	12.3	10.4	10.9	8.7	26.8	7.9	29.6	29.6	mg/kg	40
Barium	124	75	154	94	181	76	108	133	56	95	181	mg/kg	1300*
Cadmium	2.3	2	2.6	1.8	2.6	1.4	0.7	0.9	1.5	0.7	2.6	mg/kg	85
Chromium	53.5	40.3	49.5	76.9	37.8	35.8	47.4	65.4	40.1	32.7	76.9	mg/kg	910
Copper	42	27	66	20	35	27	24	46	22	29	66	mg/kg	7,100
Lead	34	16	96	18	15	23	87	23	23	54	96	mg/kg	310**
Mercury	<0.1	<0.1	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.5	mg/kg	1.2
Molybdenum	5.3	4.1	6.3	5.1	6.4	4	2.5	4	3.6	1.4	6.4	mg/kg	670*
Nickel	45.8	37.5	52.8	42.8	51	35.3	21.4	57.4	37.6	28.9	57.4	mg/kg	180
Selenium	<1	<1	4	1	2	3	<1	5	2	<1	5	mg/kg	430
Zinc	142	82	249	76	105	84	94	105	81	105	249	mg/kg	40,000
Hexavalent Chromium	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0	mg/kg	6*

* CL:AIRE GAC

** - Category 4 Screening Levels

S4UL - Metals (Residential without homegrown produce), Saint Teresa's Gardens

Sample ID	BH01	BH02	BH02	BH03	BH03	BH04	BH04	BH05	BH05	BH07	Max Level Detected	Units	Residential without homegrown produce
Sample Depth (m)	3.00-3.40	0.00-1.40	1.40-2.00	0.00-1.70	1.70-2.00	0.00-1.10	2.50-3.00	0.20-1.60	1.60-2.00	0.60-1.00			
Antimony	2	2	2	2	1	2	2	2	1	2	2	mg/kg	550*
Arsenic	7.9	32.5	9.8	12.8	8.6	10.1	10.7	11.7	6.9	9.7	32.5	mg/kg	40
Barium	74	238	207	105	250	78	94	107	133	89	250	mg/kg	1300*
Cadmium	1.9	2.5	2.6	1.9	2.4	1.9	2	1.5	1.6	2.2	2.6	mg/kg	85
Chromium	39.5	64.2	64.2	39.3	33.1	48.6	80.5	34.2	21.1	41.3	80.5	mg/kg	910
Copper	28	67	46	51	27	33	35	59	20	28	67	mg/kg	7,100
Lead	27	84	36	55	25	21	26	46	15	19	84	mg/kg	310**
Mercury	<0.1	0.4	0.4	0.3	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	0.4	mg/kg	1.2
Molybdenum	3	2.7	2.5	4.2	3.4	4.7	6.7	3.3	2.4	3.5	6.7	mg/kg	670*
Nickel	36.3	53.3	49	40.2	32.1	40.1	50.5	34.8	24.9	37.1	53.3	mg/kg	180
Selenium	1	2	2	3	2	4	2	2	<1	1	4	mg/kg	430
Zinc	90	192	160	104	63	122	95	90	52	83	192	mg/kg	40,000
Hexavalent Chromium	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0	mg/kg	6*

* CL:AIRE GAC

** - Category 4 Screening Levels

S4UL - Metals (Residential without homegrown produce), Saint Teresa's Gardens

Sample ID	BH07	BH08	BH08	BH09	BH09	BH10	BH10	BH11	BH11	BH12	Max Level Detected	Units	Residential without homegrown produce
Sample Depth (m)	1.00-2.00	0.40-1.20	2.00-3.00	0.20-0.90	2.00-3.00	0.20-1.00	1.00-2.00	0.00-0.70	1.70-2.70	0.00-0.70			
Antimony	2	2	2	3	1	<1	2	6	3	<1	6	mg/kg	550*
Arsenic	9.5	23.7	7.6	16.3	6.8	6	9.4	30.2	22.3	7.1	30.2	mg/kg	40
Barium	49	159	126	195	55	157	72	229	114	195	229	mg/kg	1300*
Cadmium	1.7	1.6	1.7	0.9	1.8	0.3	1.9	2.7	1.6	1.3	2.7	mg/kg	85
Chromium	37.2	34.2	56.9	36.1	33.1	26	49.4	58.7	53	20.3	58.7	mg/kg	910
Copper	30	87	20	82	23	21	31	120	98	16	120	mg/kg	7,100
Lead	15	271	15	147	12	24	19	273	127	17	273	mg/kg	310**
Mercury	0.2	1.5	<0.1	0.6	0.2	0.3	0.2	0.8	0.5	0.1	1.5	mg/kg	1.2
Molybdenum	2.5	3.2	4.7	1.9	4.2	1.6	4.3	6.4	5.6	3	6.4	mg/kg	670*
Nickel	37.2	47.8	30.8	21.1	25	21	33.4	57.2	51.9	15.3	57.2	mg/kg	180
Selenium	1	1	<1	<1	<1	<1	1	2	2	<1	2	mg/kg	430
Zinc	66	189	61	165	60	43	86	299	140	49	299	mg/kg	40,000
Hexavalent Chromium	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0	mg/kg	6*

* CL:AIRE GAC

** - Category 4 Screening Levels

S4UL - Metals (Residential without homegrown produce), Saint Teresa's Gardens

Sample ID	BH12	BH13	BH13	BH14	BH14	BH15	BH15	BH16	BH16	BH17	Max Level Detected	Units	Residential without homegrown produce
Sample Depth (m)	1.00-2.50	0.30-0.70	1.00-2.00	0.30-0.90	0.90-2.00	0.30-0.80	1.90-3.00	0.30-0.80	1.00-2.00	0.00-0.60			
Antimony	2	2	2	3	2	4	1	3	1	<1	4	mg/kg	550*
Arsenic	10.8	11.8	10.5	25.8	9.8	36.8	9.4	27.7	9.1	9.3	36.8	mg/kg	40
Barium	66	140	144	303	117	176	282	192	317	24	317	mg/kg	1300*
Cadmium	2.6	1.8	2.1	1.6	1.8	1.4	1.5	1.1	2.2	<0.1	2.6	mg/kg	85
Chromium	38.7	46.8	45.9	44	30.9	33.2	25.2	48.9	26.5	52.2	52.2	mg/kg	910
Copper	34	18	31	111	31	128	25	111	23	21	128	mg/kg	7,100
Lead	14	19	17	325	24	413	32	306	34	10	413	mg/kg	310**
Mercury	<0.1	<0.1	<0.1	0.8	<0.1	1.1	<0.1	0.9	<0.1	0.2	1.1	mg/kg	1.2
Molybdenum	5.5	5.3	4.8	3.7	4	4.5	3.1	4.7	3.6	1.2	5.5	mg/kg	670*
Nickel	45.4	31	37.6	36.2	34.2	61.7	25	49.2	39.5	16.8	61.7	mg/kg	180
Selenium	1	<1	2	1	1	2	1	1	2	<1	2	mg/kg	430
Zinc	89	81	90	234	80	248	75	220	85	69	248	mg/kg	40,000
Hexavalent Chromium	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0	mg/kg	6*

* CL:AIRE GAC

** - Category 4 Screening Levels

S4UL - Metals (Residential without homegrown produce), Saint Teresa's Gardens

Sample ID	BH17	Max Level Detected	Units	Residential without homegrown produce
Sample Depth (m)	**1.00-2.00**			
Antimony	1	1	mg/kg	550*
Arsenic	12.1	12.1	mg/kg	40
Barium	250	250	mg/kg	1300*
Cadmium	1.5	1.5	mg/kg	85
Chromium	54.2	54.2	mg/kg	910
Copper	18	18	mg/kg	7,100
Lead	32	32	mg/kg	310**
Mercury	<0.1	0	mg/kg	1.2
Molybdenum	4.9	4.9	mg/kg	670*
Nickel	34.1	34.1	mg/kg	180
Selenium	1	1	mg/kg	430
Zinc	118	118	mg/kg	40,000
Hexavalent Chromium	<0.3	0	mg/kg	6*

* CL:AIRE GAC

** - Category 4 Screening Levels

S4UL - Organic Compounds (Residential without homegrown produce), Saint Teresa's Gardens

													Residential without homegrown produce		
Sample ID	**WS01**	**WS01**	**WS01**	**WS02**	**WS02**	**WS02**	**WS03**	**WS03**	**WS03**	**WS04**	**Max Level**	**Units**	**LQM/CIEH Suitable 4 Use Levels (S4ULs) [mg/kg DW]**		
Sample Depth (m)	**0.00-1.00**	**1.00-2.00**	**2.00-3.00**	**0.00-0.70**	**0.70-2.60**	**2.60-3.00**	**0.00-1.00**	**1.00-1.60**	**1.60-3.00**	**0.00-0.80**	**Detected**		**1 % SOM**	**2.5 % SOM**	**6 % SOM**
Aliphatics															
>C5-C6	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	42	78	160
>C6-C8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	100	230	530
>C8-C10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	27	65	150
>C10-C12	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.00	mg/kg	130	330	770
>C12-C16	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	0.00	mg/kg	1,100	2,400	4,400
>C16-C21	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	0.00	mg/kg	ne	ne	ne
>C21-C35	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	0.00	mg/kg	ne	ne	ne
>C16-C35	<14	<14	<14	<14	<14	<14	<14	<14	<14	<14	0.00	mg/kg	65000	92000	110000
>C35-C40	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	0.00	mg/kg	ne	ne	ne
Total aliphatics C5-40	<26	<26	<26	<26	<26	<26	<26	<26	<26	<26	0.00	mg/kg	ne	ne	ne
>C6-C10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	ne	ne	ne
>C10-C25	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	0.00	mg/kg	ne	ne	ne
>C25-C35	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	0.00	mg/kg	ne	ne	ne
Aromatics															
>C5-EC7	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	370	690	1400
>EC7-EC8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	860	1800	3900
>EC8-EC10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	47	110	270
>EC10-EC12	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.00	mg/kg	250	590	1200
>EC12-EC16	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	0.00	mg/kg	1800	2300	2500
>EC16-EC21	<7	<7	<7	<7	<7	<7	11	<7	<7	<7	11.00	mg/kg	1900	1900	1900
>EC21-EC35	<7	<7	<7	<7	<7	<7	18	<7	<7	<7	18.00	mg/kg	1,900	1,900	1,900
>EC35-EC40	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	0.00	mg/kg	ne	ne	ne
Total aromatics C5-40	<26	<26	<26	<26	<26	<26	29	<26	<26	<26	29.00	mg/kg	ne	ne	ne
Total aliphatics and aromatics(C5-40)	<52	<52	<52	<52	<52	<52	<52	<52	<52	<52	0.00	mg/kg	ne	ne	ne
>EC6-EC10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	ne	ne	ne
>EC10-EC25	<10	<10	<10	<10	<10	<10	23	<10	<10	<10	23.00	mg/kg	ne	ne	ne
>EC25-EC35	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	0.00	mg/kg	ne	ne	ne
BTEX												mg/kg			
MTBE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00	mg/kg	ne	ne	ne
Benzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00	mg/kg	0.38	0.7	1.4
Toluene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00	mg/kg	880	1900	3900
Ethylbenzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00	mg/kg	83	190	440
m/p-Xylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00	mg/kg	79	180	430
o-Xylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00	mg/kg	88	210	480
TOC	1.27	0.34	0.48	5.94	0.44	0.66	7.68	0.35	0.61	4.68	7.68	%			
SOM (Note 1)	2.19	0.59	0.83	10.24	0.76	1.14	13.24	0.60	1.05	8.07	13.24	%			

Note 1 - TOC * 1.724

S4UL - Organic Compounds (Residential without homegrown produce), Saint Teresa's Gardens

													Residential without homegrown produce		
Sample ID	**WS04**	**WS04**	**WS05**	**WS05**	**WS05**	**WS05**	**WS06**	**WS06**	**WS06**	**WS07**	**Max Level**	**Units**	**LQM/CIEH Suitable 4 Use Levels (S4ULs) [mg/kg DW]**		
Sample Depth (m)	**0.80-2.80**	**2.80-3.00**	**0.00-1.00**	**1.00-1.30**	**1.30-2.70**	**2.70-3.00**	**0.00-1.00**	**1.00-2.30**	**2.30-3.00**	**0.00-0.70**	**Detected**		**1 % SOM**	**2.5 % SOM**	**6 % SOM**
Aliphatics															
>C5-C6	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	42	78	160
>C6-C8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	100	230	530
>C8-C10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	27	65	150
>C10-C12	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.00	mg/kg	130	330	770
>C12-C16	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	0.00	mg/kg	1,100	2,400	4,400
>C16-C21	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	0.00	mg/kg	ne	ne	ne
>C21-C35	<7	<7	<7	<7	<7	9	<7	<7	<7	<7	9.00	mg/kg	ne	ne	ne
>C16-C35	<14	<14	<14	<14	<14	16	<14	<14	<14	<14	16.00	mg/kg	65000	92000	110000
>C35-C40	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	0.00	mg/kg	ne	ne	ne
Total aliphatics C5-40	<26	<26	<26	<26	<26	<26	<26	<26	<26	<26	0.00	mg/kg	ne	ne	ne
>C6-C10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	ne	ne	ne
>C10-C25	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	0.00	mg/kg	ne	ne	ne
>C25-C35	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	0.00	mg/kg	ne	ne	ne
Aromatics															
>C5-EC7	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	370	690	1400
>EC7-EC8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	860	1800	3900
>EC8-EC10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	47	110	270
>EC10-EC12	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.00	mg/kg	250	590	1200
>EC12-EC16	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	0.00	mg/kg	1800	2300	2500
>EC16-EC21	<7	<7	40	<7	<7	<7	<7	<7	<7	<7	40.00	mg/kg	1900	1900	1900
>EC21-EC35	<7	<7	141	<7	<7	<7	<7	<7	<7	<7	141.00	mg/kg	1,900	1,900	1,900
>EC35-EC40	<7	<7	9	<7	<7	<7	<7	<7	<7	<7	9.00	mg/kg	ne	ne	ne
Total aromatics C5-40	<26	<26	190	<26	<26	<26	<26	<26	<26	<26	190.00	mg/kg	ne	ne	ne
Total aliphatics and aromatics(C5-40)	<52	<52	190	<52	<52	<52	<52	<52	<52	<52	190.00	mg/kg	ne	ne	ne
>EC6-EC10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	ne	ne	ne
>EC10-EC25	<10	<10	27	<10	<10	<10	<10	<10	<10	<10	27.00	mg/kg	ne	ne	ne
>EC25-EC35	<10	<10	102	<10	<10	<10	<10	<10	<10	<10	102.00	mg/kg	ne	ne	ne
BTEX												mg/kg			
MTBE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00	mg/kg	ne	ne	ne
Benzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00	mg/kg	0.38	0.7	1.4
Toluene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00	mg/kg	880	1900	3900
Ethylbenzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00	mg/kg	83	190	440
m/p-Xylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00	mg/kg	79	180	430
o-Xylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00	mg/kg	88	210	480
TOC	0.5	0.65	8.38	0.39	0.46	0.68	0.86	0.28	0.65	2.82	8.38	%			
SOM (Note 1)	0.86	1.12	14.45	0.67	0.79	1.17	1.48	0.48	1.12	4.86	14.45	%			

Note 1 - TOC * 1.724

S4UL - Organic Compounds (Residential without homegrown produce), Saint Teresa's Gardens

													Residential without homegrown produce		
Sample ID	**WS07**	**WS07**	**WS08**	**WS08**	**WS08**	**WS08**	**WS09A**	**WS10**	**WS10**	**BH01**	**Max Level**	**Units**	**LQM/CIEH Suitable 4 Use Levels (S4ULs) [mg/kg DW]**		
Sample Depth (m)	**0.70-1.80**	**1.80-2.00**	**0.00-1.00**	**1.00-2.00**	**2.00-3.30**	**3.30-4.00**	**0.00-0.85**	**0.00-2.30**	**2.30-3.00**	**0.00-1.60**	**Detected**		**1 % SOM**	**2.5 % SOM**	**6 % SOM**
Aliphatics															
>C5-C6	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	42	78	160
>C6-C8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	100	230	530
>C8-C10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	27	65	150
>C10-C12	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.00	mg/kg	130	330	770
>C12-C16	<4	<4	<4	<4	<4	<4	6	<4	<4	<4	6.00	mg/kg	1,100	2,400	4,400
>C16-C21	<7	<7	<7	<7	<7	<7	30	<7	<7	9	30.00	mg/kg	ne	ne	ne
>C21-C35	<7	<7	42	<7	<7	<7	157	<7	<7	44	157.00	mg/kg	ne	ne	ne
>C16-C35	<14	<14	49	<14	<14	<14	187	<14	<14	53	187.00	mg/kg	65000	92000	110000
>C35-C40	<7	<7	<7	<7	<7	<7	11	<7	<7	<7	11.00	mg/kg	ne	ne	ne
Total aliphatics C5-40	<26	<26	42	<26	<26	<26	204	<26	<26	53	204.00	mg/kg	ne	ne	ne
>C6-C10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	ne	ne	ne
>C10-C25	<10	<10	14.00	<10	<10	<10	65.00	<10	<10	14.00	65.00	mg/kg	ne	ne	ne
>C25-C35	<10	<10	29.00	<10	<10	<10	114.00	<10	<10	31.00	114.00	mg/kg	ne	ne	ne
Aromatics															
>C5-EC7	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	370	690	1400
>EC7-EC8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	860	1800	3900
>EC8-EC10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	47	110	270
>EC10-EC12	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.00	mg/kg	250	590	1200
>EC12-EC16	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	0.00	mg/kg	1800	2300	2500
>EC16-EC21	<7	<7	47	<7	<7	<7	97	<7	<7	38	97.00	mg/kg	1900	1900	1900
>EC21-EC35	<7	<7	193	<7	<7	<7	331	<7	<7	181	331.00	mg/kg	1,900	1,900	1,900
>EC35-EC40	<7	<7	12	<7	<7	<7	28	<7	<7	14	28.00	mg/kg	ne	ne	ne
Total aromatics C5-40	<26	<26	252	<26	<26	<26	456	<26	<26	233	456.00	mg/kg	ne	ne	ne
Total aliphatics and aromatics(C5-40)	<52	<52	294	<52	<52	<52	660	<52	<52	286	660.00	mg/kg	ne	ne	ne
>EC6-EC10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	ne	ne	ne
>EC10-EC25	<10	<10	23	<10	<10	<10	89	<10	<10	<10	89.00	mg/kg	ne	ne	ne
>EC25-EC35	<10	<10	132	<10	<10	<10	354	<10	<10	120	354.00	mg/kg	ne	ne	ne
BTEX												mg/kg			
MTBE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<5	0.00	mg/kg	ne	ne	ne
Benzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<5	0.00	mg/kg	0.38	0.7	1.4
Toluene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<5	0.00	mg/kg	880	1900	3900
Ethylbenzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<5	0.00	mg/kg	83	190	440
m/p-Xylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<5	0.00	mg/kg	79	180	430
o-Xylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<5	0.00	mg/kg	88	210	480
TOC	1.26	0.38	2.64	0.3	0.42	0.61	1.21	0.91	0.3	1.06	2.64	%			
SOM (Note 1)	2.17	0.66	4.55	0.52	0.72	1.05	2.09	1.57	0.52	1.83	4.55	%			

Note 1 - TOC * 1.724

S4UL - Organic Compounds (Residential without homegrown produce), Saint Teresa's Gardens

													Residential without homegrown produce		
Sample ID	**BH01**	**BH02**	**BH02**	**BH03**	**BH03**	**BH04**	**BH04**	**BH05**	**BH05**	**BH07**	**Max Level**	**Units**	**LQM/CIEH Suitable 4 Use Levels (S4ULs) [mg/kg DW]**		
Sample Depth (m)	**3.00-3.40**	**0.00-1.40**	**1.40-2.00**	**0.00-1.70**	**1.70-2.00**	**0.00-1.10**	**2.50-3.00**	**0.20-1.60**	**1.60-2.00**	**0.60-1.00**	**Detected**		**1 % SOM**	**2.5 % SOM**	**6 % SOM**
Aliphatics															
>C5-C6	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	42	78	160
>C6-C8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	100	230	530
>C8-C10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	27	65	150
>C10-C12	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.00	mg/kg	130	330	770
>C12-C16	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	0.00	mg/kg	1,100	2,400	4,400
>C16-C21	<7	23	<7	<7	<7	<7	<7	<7	<7	<7	23.00	mg/kg	ne	ne	ne
>C21-C35	<7	54	<7	<7	<7	<7	<7	<7	<7	<7	54.00	mg/kg	ne	ne	ne
>C16-C35	<14	77	<14	<14	<14	<14	<14	<14	<14	<14	77.00	mg/kg	65000	92000	110000
>C35-C40	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	0.00	mg/kg	ne	ne	ne
Total aliphatics C5-40	<26	77	<26	<26	<26	<26	<26	<26	<26	<26	77.00	mg/kg	ne	ne	ne
>C6-C10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	ne	ne	ne
>C10-C25	<10	30	<10	<10	<10	<10	<10	<10	<10	<10	30.00	mg/kg	ne	ne	ne
>C25-C35	<10	33.00	<10	<10	<10	<10	<10	<10	<10	<10	33.00	mg/kg	ne	ne	ne
Aromatics															
>C5-EC7	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	370	690	1400
>EC7-EC8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	860	1800	3900
>EC8-EC10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	47	110	270
>EC10-EC12	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.00	mg/kg	250	590	1200
>EC12-EC16	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	0.00	mg/kg	1800	2300	2500
>EC16-EC21	<7	63	<7	<7	<7	<7	<7	31	<7	<7	63.00	mg/kg	1900	1900	1900
>EC21-EC35	<7	296	<7	<7	<7	<7	<7	126	<7	<7	296.00	mg/kg	1,900	1,900	1,900
>EC35-EC40	<7	20	<7	<7	<7	<7	<7	14	<7	<7	20.00	mg/kg	ne	ne	ne
Total aromatics C5-40	<26	379	<26	<26	<26	<26	<26	171	<26	<26	379.00	mg/kg	ne	ne	ne
Total aliphatics and aromatics(C5-40)	<52	456	<52	<52	<52	<52	<52	171	<52	<52	456.00	mg/kg	ne	ne	ne
>EC6-EC10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	ne	ne	ne
>EC10-EC25	<10	<10	<10	<10	<10	<10	<10	46	<10	<10	46.00	mg/kg	ne	ne	ne
>EC25-EC35	<10	194	<10	<10	<10	<10	<10	85	<10	<10	194.00	mg/kg	ne	ne	ne
BTEX												mg/kg			
MTBE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00	mg/kg	ne	ne	ne
Benzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00	mg/kg	0.38	0.7	1.4
Toluene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00	mg/kg	880	1900	3900
Ethylbenzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00	mg/kg	83	190	440
m/p-Xylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00	mg/kg	79	180	430
o-Xylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00	mg/kg	88	210	480
TOC	0.33	3.08	1.97	1.96	0.77	0.62	0.53	1.7	1.63	0.33	3.08	%			
SOM (Note 1)	0.57	5.31	3.40	3.38	1.33	1.07	0.91	2.93	2.81	0.57	5.31	%			

Note 1 - TOC * 1.724

S4UL - Organic Compounds (Residential without homegrown produce), Saint Teresa's Gardens

													Residential without homegrown produce		
Sample ID	**BH07**	**BH08**	**BH08**	**BH09**	**BH09**	**BH10**	**BH10**	**BH11**	**BH11**	**BH12**	**Max Level**	**Units**	**LQM/CIEH Suitable 4 Use Levels (S4ULs) [mg/kg DW]**		
Sample Depth (m)	**1.00-2.00**	**0.40-1.20**	**2.00-3.00**	**0.20-0.90**	**2.00-3.00**	**0.20-1.00**	**1.00-2.00**	**0.00-0.70**	**1.70-2.70**	**0.00-0.70**	**Detected**		**1 % SOM**	**2.5 % SOM**	**6 % SOM**
Aliphatics															
>C5-C6	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	42	78	160
>C6-C8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	100	230	530
>C8-C10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	27	65	150
>C10-C12	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.00	mg/kg	130	330	770
>C12-C16	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	0.00	mg/kg	1,100	2,400	4,400
>C16-C21	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	0.00	mg/kg	ne	ne	ne
>C21-C35	<7	<7	<7	30	<7	<7	<7	<7	<7	<7	30.00	mg/kg	ne	ne	ne
>C16-C35	<14	<14	<14	37	<14	<14	<14	<14	<14	<14	37.00	mg/kg	65000	92000	110000
>C35-C40	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	0.00	mg/kg	ne	ne	ne
Total aliphatics C5-40	<26	<26	<26	30	<26	<26	<26	<26	<26	<26	30.00	mg/kg	ne	ne	ne
>C6-C10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	ne	ne	ne
>C10-C25	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	0.00	mg/kg	ne	ne	ne
>C25-C35	<10	<10	<10	28	<10	<10	<10	<10	<10	<10	28.00	mg/kg	ne	ne	ne
Aromatics															
>C5-EC7	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	370	690	1400
>EC7-EC8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	860	1800	3900
>EC8-EC10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	47	110	270
>EC10-EC12	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.00	mg/kg	250	590	1200
>EC12-EC16	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	0.00	mg/kg	1800	2300	2500
>EC16-EC21	<7	10	<7	14	<7	<7	<7	26	<7	<7	26.00	mg/kg	1900	1900	1900
>EC21-EC35	<7	11	<7	61	<7	<7	<7	106	<7	<7	106.00	mg/kg	1,900	1,900	1,900
>EC35-EC40	<7	<7	<7	<7	<7	<7	<7	12	<7	<7	12.00	mg/kg	ne	ne	ne
Total aromatics C5-40	<26	<26	<26	75	<26	<26	<26	144	<26	<26	144.00	mg/kg	ne	ne	ne
Total aliphatics and aromatics(C5-40)	<52	<52	<52	105	<52	<52	<52	144	<52	<52	144.00	mg/kg	ne	ne	ne
>EC6-EC10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	ne	ne	ne
>EC10-EC25	<10	<10	<10	20	<10	<10	<10	43	<10	<10	43.00	mg/kg	ne	ne	ne
>EC25-EC35	<10	<10	<10	47	<10	<10	<10	72	<10	<10	72.00	mg/kg	ne	ne	ne
BTEX												mg/kg			
MTBE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00	mg/kg	ne	ne	ne
Benzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00	mg/kg	0.38	0.7	1.4
Toluene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00	mg/kg	880	1900	3900
Ethylbenzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00	mg/kg	83	190	440
m/p-Xylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00	mg/kg	79	180	430
o-Xylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00	mg/kg	88	210	480
TOC	0.39	9.13	0.37	1.93	0.34	0.81	0.57	8.29	6.49	0.72	9.13	%			
SOM (Note 1)	0.67	15.74	0.64	3.33	0.59	1.40	0.98	14.29	11.19	1.24	15.74	%			

Note 1 - TOC * 1.724

S4UL - Organic Compounds (Residential without homegrown produce), Saint Teresa's Gardens

													Residential without homegrown produce		
Sample ID	**BH12**	**BH13**	**BH13**	**BH14**	**BH14**	**BH15**	**BH15**	**BH16**	**BH16**	**BH17**	**Max Level**	**Units**	**LQM/CIEH Suitable 4 Use Levels (S4ULs) [mg/kg DW]**		
Sample Depth (m)	**1.00-2.50**	**0.30-0.70**	**1.00-2.00**	**0.30-0.90**	**0.90-2.00**	**0.30-0.80**	**1.90-3.00**	**0.30-0.80**	**1.00-2.00**	**0.00-0.60**	**Detected**		**1 % SOM**	**2.5 % SOM**	**6 % SOM**
Aliphatics															
>C5-C6	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	42	78	160
>C6-C8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	100	230	530
>C8-C10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	27	65	150
>C10-C12	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.00	mg/kg	130	330	770
>C12-C16	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	0.00	mg/kg	1,100	2,400	4,400
>C16-C21	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	0.00	mg/kg	ne	ne	ne
>C21-C35	<7	<7	<7	<7	<7	24	<7	<7	<7	44	44.00	mg/kg	ne	ne	ne
>C16-C35	<14	<14	<14	<14	<14	31	<14	<14	<14	51	51.00	mg/kg	65000	92000	110000
>C35-C40	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	0.00	mg/kg	ne	ne	ne
Total aliphatics C5-40	<26	<26	<26	<26	<26	<26	<26	<26	<26	44	44.00	mg/kg	ne	ne	ne
>C6-C10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	ne	ne	ne
>C10-C25	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	0.00	mg/kg	ne	ne	ne
>C25-C35	<10	<10	<10	<10	<10	19	<10	<10	<10	39	39.00	mg/kg	ne	ne	ne
Aromatics															
>C5-EC7	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	370	690	1400
>EC7-EC8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	860	1800	3900
>EC8-EC10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	47	110	270
>EC10-EC12	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.00	mg/kg	250	590	1200
>EC12-EC16	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	0.00	mg/kg	1800	2300	2500
>EC16-EC21	<7	<7	<7	18	<7	16	<7	31	<7	<7	31.00	mg/kg	1900	1900	1900
>EC21-EC35	<7	<7	<7	78	<7	93	<7	140	<7	135	140.00	mg/kg	1,900	1,900	1,900
>EC35-EC40	<7	<7	<7	<7	<7	11	<7	19	<7	29	29.00	mg/kg	ne	ne	ne
Total aromatics C5-40	<26	<26	<26	96	<26	120	<26	190	<26	164	190.00	mg/kg	ne	ne	ne
Total aliphatics and aromatics(C5-40)	<52	<52	<52	96	<52	120	<52	190	<52	208	208.00	mg/kg	ne	ne	ne
>EC6-EC10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00	mg/kg	ne	ne	ne
>EC10-EC25	<10	<10	<10	31	<10	28	<10	53	<10	14	53.00	mg/kg	ne	ne	ne
>EC25-EC35	<10	<10	<10	53	<10	66	<10	97	<10	110	110.00	mg/kg	ne	ne	ne
BTEX												mg/kg			
MTBE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00	mg/kg	ne	ne	ne
Benzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00	mg/kg	0.38	0.7	1.4
Toluene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00	mg/kg	880	1900	3900
Ethylbenzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00	mg/kg	83	190	440
m/p-Xylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00	mg/kg	79	180	430
o-Xylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00	mg/kg	88	210	480
TOC	0.46	0.59	0.5	8.92	0.53	11.51	1.33	14.67	1.01	0.19	14.67	%			
SOM (Note 1)	0.79	1.02	0.86	15.38	0.91	19.84	2.29	25.29	1.74	0.33	25.29	%			

Note 1 - TOC * 1.724

S4UL - Organic Compounds (Residential without homegrown produce), Saint Teresa's Gardens

Sample ID	BH17			Residential without homegrown produce		
Sample Depth (m)	1.00-2.00	Max Level Detected	Units	LQM/CIEH Suitable 4 Use Levels (S4ULs) [mg/kg DW]		
				1 % SOM	2.5 % SOM	6 % SOM
Aliphatics						
>C5-C6	<0.1	0.00	mg/kg	42	78	160
>C6-C8	<0.1	0.00	mg/kg	100	230	530
>C8-C10	<0.1	0.00	mg/kg	27	65	150
>C10-C12	<0.2	0.00	mg/kg	130	330	770
>C12-C16	<4	0.00	mg/kg	1,100	2,400	4,400
>C16-C21	<7	0.00	mg/kg	ne	ne	ne
>C21-C35	<7	0.00	mg/kg	ne	ne	ne
>C16-C35	<7	0.00	mg/kg	65000	92000	110000
>C35-C40	<26	0.00	mg/kg	ne	ne	ne
Total aliphatics C5-40	<0.1	0.00	mg/kg	ne	ne	ne
>C6-C10	<10	0.00	mg/kg	ne	ne	ne
>C10-C25	<10	0.00	mg/kg	ne	ne	ne
>C25-C35		0.00	mg/kg	ne	ne	ne
Aromatics	<0.1					
>C5-EC7	<0.1	0.00	mg/kg	370	690	1400
>EC7-EC8	<0.1	0.00	mg/kg	860	1800	3900
>EC8-EC10	<0.2	0.00	mg/kg	47	110	270
>EC10-EC12	<4	0.00	mg/kg	250	590	1200
>EC12-EC16	<7	0.00	mg/kg	1800	2300	2500
>EC16-EC21	<7	0.00	mg/kg	1900	1900	1900
>EC21-EC35	<7	0.00	mg/kg	1,900	1,900	1,900
>EC35-EC40	<26	0.00	mg/kg	ne	ne	ne
Total aromatics C5-40	<52	0.00	mg/kg	ne	ne	ne
Total aliphatics and aromatics(C5-40)	<0.1	0.00	mg/kg	ne	ne	ne
>EC6-EC10	<10	0.00	mg/kg	ne	ne	ne
>EC10-EC25	<10	0.00	mg/kg	ne	ne	ne
>EC25-EC35		0.00	mg/kg	ne	ne	ne
BTEX	<0.005		mg/kg			
MTBE	<0.005	0.00	mg/kg	ne	ne	ne
Benzene	<0.005	0.00	mg/kg	0.38	0.7	1.4
Toluene	<0.005	0.00	mg/kg	880	1900	3900
Ethylbenzene	<0.005	0.00	mg/kg	83	190	440
m/p-Xylene	<0.005	0.00	mg/kg	79	180	430
o-Xylene	0.067	0.07	mg/kg	88	210	480
TOC	0.46	0.46	%			
SOM (Note 1)	0.79	0.79	%			

Note 1 - TOC * 1.724

S4UL - PAHs (Residential without homegrown produce), Saint Teresa's Gardens

Sample ID	WS01	WS01	WS01	WS02	WS02	WS02	WS03	WS03	WS03	WS04	Max Level Detected	Units	Residential without homegrown produce LQM/CIEH Suitable 4 Use Levels (S4ULs) [mg/kg DW]		
Sample Depth (m)	0.00-1.00	1.00-2.00	2.00-3.00	0.00-0.70	0.70-2.60	2.60-3.00	0.00-1.00	1.00-1.60	1.60-3.00	0.00-0.80			1 % SOM	2.5 % SOM	6 % SOM
Naphthalene	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.00	mg/kg	2.3*	5.6*	13*
Acenaphthylene	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.04	<0.03	<0.03	<0.03	0.04	mg/kg	2,900	4,600	6,000
Acenaphthene	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.00	mg/kg	3,000	4,700	6,000
Fluorene	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.00	mg/kg	2,800	3,800	4,500
Phenanthrene	<0.03	<0.03	<0.03	0.12	<0.03	<0.03	0.33	<0.03	<0.03	0.3	0.33	mg/kg	1,300	1,500	1,500
Anthracene	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.08	<0.04	<0.04	0.05	0.08	mg/kg	31,000	35,000	37,000
Fluoranthene	<0.03	<0.03	<0.03	0.12	<0.03	<0.03	0.51	<0.03	<0.03	0.3	0.51	mg/kg	1,500	1,600	1,600
Pyrene	<0.03	<0.03	<0.03	0.12	<0.03	<0.03	0.47	<0.03	<0.03	0.29	0.47	mg/kg	3,700	3,800	3,800
Benzo(a)anthracene	<0.06	<0.06	<0.06	0.1	<0.06	<0.06	0.31	<0.06	<0.06	0.22	0.31	mg/kg	11	14	15
Chrysene	<0.02	<0.02	<0.02	0.09	<0.02	<0.02	0.35	<0.02	<0.02	0.27	0.35	mg/kg	30	31	32
Benzo(bk)fluoranthene	<0.07	<0.07	<0.07	0.14	<0.07	<0.07	0.58	<0.07	<0.07	0.43	0.58	mg/kg	ne	ne	ne
Benzo(a)pyrene	<0.04	<0.04	<0.04	0.08	<0.04	<0.04	0.3	<0.04	<0.04	0.26	0.30	mg/kg	3.2	3.2	3.2
Indeno(123cd)pyrene	<0.04	<0.04	<0.04	0.05	<0.04	<0.04	0.18	<0.04	<0.04	0.15	0.18	mg/kg	33	7.7	220
Dibenzo(ah)anthracene	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.00	mg/kg	0.31	0.32	0.32
Benzo(ghi)perylene	<0.04	<0.04	<0.04	0.06	<0.04	<0.04	0.2	<0.04	<0.04	0.19	0.20	mg/kg	360	360	360
Coronene	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.00	mg/kg	ne	ne	ne
PAH 6 Total	<0.22	<0.22	<0.22	0.45	<0.22	<0.22	1.77	<0.22	<0.22	1.33	1.77	mg/kg	ne	ne	ne
PAH 17 Total	<0.64	<0.64	<0.64	0.88	<0.64	<0.64	3.35	<0.64	<0.64	2.46	3.35	mg/kg	ne	ne	ne
Benzo(b)fluoranthene	<0.05	<0.05	<0.05	0.1	<0.05	<0.05	0.42	<0.05	<0.05	0.31	0.42	mg/kg	3.9	4	4
Benzo(k)fluoranthene	<0.02	<0.02	<0.02	0.04	<0.02	<0.02	0.16	<0.02	<0.02	0.12	0.16	mg/kg	110	110	110
Benzo(j)fluoranthene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.00	mg/kg	ne	ne	ne
TOC	1.27	0.34	0.48	5.94	0.44	0.66	7.68	0.35	0.61	4.68	7.68	%			
SOM (Note 1)	2.19	0.59	0.83	10.24	0.76	1.14	13.24	0.60	1.05	8.07	13.24	%			

Note 1 - TOC * 1.724

S4UL - PAHs (Residential without homegrown produce), Saint Teresa's Gardens

Sample ID	WS04	WS04	WS05	WS05	WS05	WS05	WS06	WS06	WS06	WS07	Max Level Detected	Units	Residential without homegrown produce LQM/CIEH Suitable 4 Use Levels (S4ULs) [mg/kg DW]		
Sample Depth (m)	0.80-2.80	2.80-3.00	0.00-1.00	1.00-1.30	1.30-2.70	2.70-3.00	0.00-1.00	1.00-2.30	2.30-3.00	0.00-0.70			1 % SOM	2.5 % SOM	6 % SOM
Naphthalene	<0.04	<0.04	0.11	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.11	mg/kg	2.3*	5.6*	13*
Acenaphthylene	<0.03	<0.03	0.11	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.11	mg/kg	2,900	4,600	6,000
Acenaphthene	<0.05	<0.05	0.15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.15	mg/kg	3,000	4,700	6,000
Fluorene	<0.04	<0.04	0.13	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.13	mg/kg	2,800	3,800	4,500
Phenanthrene	<0.03	<0.03	1.9	<0.03	<0.03	<0.03	0.54	<0.03	<0.03	0.19	1.90	mg/kg	1,300	1,500	1,500
Anthracene	<0.04	<0.04	0.43	<0.04	<0.04	<0.04	0.14	<0.04	<0.04	<0.04	0.43	mg/kg	31,000	35,000	37,000
Fluoranthene	<0.03	<0.03	3.6	<0.03	<0.03	<0.03	1.03	<0.03	<0.03	0.24	3.60	mg/kg	1,500	1,600	1,600
Pyrene	<0.03	<0.03	3.17	<0.03	<0.03	<0.03	0.89	<0.03	<0.03	0.24	3.17	mg/kg	3,700	3,800	3,800
Benzo(a)anthracene	<0.06	<0.06	1.9	<0.06	<0.06	<0.06	0.56	<0.06	<0.06	0.2	1.90	mg/kg	11	14	15
Chrysene	<0.02	<0.02	2.26	<0.02	<0.02	<0.02	0.66	<0.02	<0.02	0.18	2.26	mg/kg	30	31	32
Benzo(bk)fluoranthene	<0.07	<0.07	3.62	<0.07	<0.07	<0.07	0.97	<0.07	<0.07	0.23	3.62	mg/kg	ne	ne	ne
Benzo(a)pyrene	<0.04	<0.04	2.05	<0.04	<0.04	<0.04	0.54	<0.04	<0.04	0.14	2.05	mg/kg	3.2	3.2	3.2
Indeno(123cd)pyrene	<0.04	<0.04	1.29	<0.04	<0.04	<0.04	0.35	<0.04	<0.04	0.09	1.29	mg/kg	33	7.7	220
Dibenzo(ah)anthracene	<0.04	<0.04	0.25	<0.04	<0.04	<0.04	0.07	<0.04	<0.04	<0.04	0.25	mg/kg	0.31	0.32	0.32
Benzo(ghi)perylene	<0.04	<0.04	1.3	<0.04	<0.04	<0.04	0.36	<0.04	<0.04	0.1	1.30	mg/kg	360	360	360
Coronene	<0.04	<0.04	0.25	<0.04	<0.04	<0.04	0.07	<0.04	<0.04	<0.04	0.25	mg/kg	ne	ne	ne
PAH 6 Total	<0.22	<0.22	11.86	<0.22	<0.22	<0.22	3.25	<0.22	<0.22	0.8	11.86	mg/kg	ne	ne	ne
PAH 17 Total	<0.64	<0.64	22.52	<0.64	<0.64	<0.64	6.18	<0.64	<0.64	1.61	22.52	mg/kg	ne	ne	ne
Benzo(b)fluoranthene	<0.05	<0.05	2.61	<0.05	<0.05	<0.05	0.7	<0.05	<0.05	0.17	2.61	mg/kg	3.9	4	4
Benzo(k)fluoranthene	<0.02	<0.02	1.01	<0.02	<0.02	<0.02	0.27	<0.02	<0.02	0.06	1.01	mg/kg	110	110	110
Benzo(j)fluoranthene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.00	mg/kg	ne	ne	ne
TOC	0.5	0.65	8.38	0.39	0.46	0.68	0.86	0.28	0.65	2.82	8.38	%			
SOM (Note 1)	0.86	1.12	14.45	0.67	0.79	1.17	1.48	0.48	1.12	4.86	14.45	%			

Note 1 - TOC * 1.724

S4UL - PAHs (Residential without homegrown produce), Saint Teresa's Gardens

Sample ID	WS07	WS07	WS08	WS08	WS08	WS08	WS09A	WS10	WS10	BH01	Max Level Detected	Units	Residential without homegrown produce LQM/CIEH Suitable 4 Use Levels (S4ULs) [mg/kg DW]		
Sample Depth (m)	0.70-1.80	1.80-2.00	0.00-1.00	1.00-2.00	2.00-3.30	3.30-4.00	0.00-0.85	0.00-2.30	2.30-3.00	0.00-1.60			1 % SOM	2.5 % SOM	6 % SOM
Naphthalene	<0.04	<0.04	0.05	<0.04	<0.04	<0.04	0.08	<0.04	<0.04	0.06	0.08	mg/kg	2.3*	5.6*	13*
Acenaphthylene	<0.03	<0.03	0.07	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.14	0.14	mg/kg	2,900	4,600	6,000
Acenaphthene	<0.05	<0.05	0.09	<0.05	<0.05	<0.05	0.07	<0.05	<0.05	0.18	0.18	mg/kg	3,000	4,700	6,000
Fluorene	<0.04	<0.04	0.09	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.11	0.11	mg/kg	2,800	3,800	4,500
Phenanthrene	<0.03	<0.03	1.35	<0.03	<0.03	<0.03	0.5	<0.03	<0.03	2.01	2.01	mg/kg	1,300	1,500	1,500
Anthracene	<0.04	<0.04	0.34	<0.04	<0.04	<0.04	0.19	<0.04	<0.04	0.49	0.49	mg/kg	31,000	35,000	37,000
Fluoranthene	<0.03	<0.03	2.54	<0.03	<0.03	<0.03	1.19	0.04	<0.03	3.01	3.01	mg/kg	1,500	1,600	1,600
Pyrene	<0.03	<0.03	2.17	<0.03	<0.03	<0.03	1.58	0.04	<0.03	2.9	2.90	mg/kg	3,700	3,800	3,800
Benzo(a)anthracene	<0.06	<0.06	1.35	<0.06	<0.06	<0.06	0.96	<0.06	<0.06	1.53	1.53	mg/kg	11	14	15
Chrysene	<0.02	<0.02	1.64	<0.02	<0.02	<0.02	1	<0.02	<0.02	1.69	1.69	mg/kg	30	31	32
Benzo(bk)fluoranthene	<0.07	<0.07	2.36	<0.07	<0.07	<0.07	1.72	<0.07	<0.07	3.59	3.59	mg/kg	ne	ne	ne
Benzo(a)pyrene	<0.04	<0.04	1.32	<0.04	<0.04	<0.04	0.92	<0.04	<0.04	2.02	2.02	mg/kg	3.2	3.2	3.2
Indeno(123cd)pyrene	<0.04	<0.04	0.81	<0.04	<0.04	<0.04	0.6	<0.04	<0.04	1.37	1.37	mg/kg	33	7.7	220
Dibenzo(ah)anthracene	<0.04	<0.04	0.17	<0.04	<0.04	<0.04	0.09	<0.04	<0.04	0.28	0.28	mg/kg	0.31	0.32	0.32
Benzo(ghi)perylene	<0.04	<0.04	0.81	<0.04	<0.04	<0.04	0.59	<0.04	<0.04	1.44	1.44	mg/kg	360	360	360
Coronene	<0.04	<0.04	0.13	<0.04	<0.04	<0.04	0.11	<0.04	<0.04	0.23	0.23	mg/kg	ne	ne	ne
PAH 6 Total	<0.22	<0.22	7.84	<0.22	<0.22	<0.22	5.02	<0.22	<0.22	11.43	11.43	mg/kg	ne	ne	ne
PAH 17 Total	<0.64	<0.64	15.29	<0.64	<0.64	<0.64	9.6	<0.64	<0.64	21.05	21.05	mg/kg	ne	ne	ne
Benzo(b)fluoranthene	<0.05	<0.05	1.7	<0.05	<0.05	<0.05	1.24	<0.05	<0.05	2.58	2.58	mg/kg	3.9	4	4
Benzo(k)fluoranthene	<0.02	<0.02	0.66	<0.02	<0.02	<0.02	0.48	<0.02	<0.02	1.01	1.01	mg/kg	110	110	110
Benzo(j)fluoranthene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.00	mg/kg	ne	ne	ne
TOC	1.26	0.38	2.64	0.3	0.42	0.61	1.21	0.91	0.3	1.06	2.64	%			
SOM (Note 1)	2.17	0.66	4.55	0.52	0.72	1.05	2.09	1.57	0.52	1.83	4.55	%			

Note 1 - TOC * 1.724

S4UL - PAHs (Residential without homegrown produce), Saint Teresa's Gardens

Sample ID	BH01	BH02	BH02	BH03	BH03	BH04	BH04	BH05	BH05	BH07	Max Level Detected	Units	Residential without homegrown produce LQM/CIEH Suitable 4 Use Levels (S4ULs) [mg/kg DW]		
Sample Depth (m)	3.00-3.40	0.00-1.40	1.40-2.00	0.00-1.70	1.70-2.00	0.00-1.10	2.50-3.00	0.20-1.60	1.60-2.00	0.60-1.00			1 % SOM	2.5 % SOM	6 % SOM
Naphthalene	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.00	mg/kg	2.3*	5.6*	13*
Acenaphthylene	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.00	mg/kg	2,900	4,600	6,000
Acenaphthene	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.00	mg/kg	3,000	4,700	6,000
Fluorene	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.05	<0.04	0.05	mg/kg	2,800	3,800	4,500
Phenanthrene	<0.03	0.05	<0.03	0.21	0.23	0.05	<0.03	0.2	0.49	<0.03	0.49	mg/kg	1,300	1,500	1,500
Anthracene	<0.04	<0.04	<0.04	0.05	0.08	<0.04	<0.04	0.06	0.15	<0.04	0.15	mg/kg	31,000	35,000	37,000
Fluoranthene	<0.03	0.09	0.07	0.23	0.36	<0.03	0.06	0.27	0.73	<0.03	0.73	mg/kg	1,500	1,600	1,600
Pyrene	<0.03	0.08	0.06	0.22	0.32	<0.03	0.06	0.26	0.61	<0.03	0.61	mg/kg	3,700	3,800	3,800
Benzo(a)anthracene	<0.06	0.09	<0.06	0.14	0.21	<0.06	<0.06	0.17	0.39	<0.06	0.39	mg/kg	11	14	15
Chrysene	<0.02	0.06	0.06	0.16	0.21	0.03	0.05	0.19	0.33	<0.02	0.33	mg/kg	30	31	32
Benzo(bk)fluoranthene	<0.07	0.12	<0.07	0.22	0.32	<0.07	<0.07	0.26	0.47	<0.07	0.47	mg/kg	ne	ne	ne
Benzo(a)pyrene	<0.04	0.08	<0.04	0.1	0.16	<0.04	<0.04	0.14	0.24	<0.04	0.24	mg/kg	3.2	3.2	3.2
Indeno(123cd)pyrene	<0.04	<0.04	<0.04	0.05	0.09	<0.04	<0.04	0.07	0.14	<0.04	0.14	mg/kg	33	7.7	220
Dibenzo(ah)anthracene	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.00	mg/kg	0.31	0.32	0.32
Benzo(ghi)perylene	<0.04	<0.04	<0.04	0.07	0.11	<0.04	<0.04	0.1	0.15	<0.04	0.15	mg/kg	360	360	360
Coronene	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.00	mg/kg	ne	ne	ne
PAH 6 Total	<0.22	0.29	<0.22	0.67	1.04	<0.22	<0.22	0.84	1.73	<0.22	1.73	mg/kg	ne	ne	ne
PAH 17 Total	<0.64	<0.64	<0.64	1.45	2.09	<0.64	<0.64	1.72	3.75	<0.64	3.75	mg/kg	ne	ne	ne
Benzo(b)fluoranthene	<0.05	0.09	<0.05	0.16	0.23	<0.05	<0.05	0.19	0.34	<0.05	0.34	mg/kg	3.9	4	4
Benzo(k)fluoranthene	<0.02	0.03	<0.02	0.06	0.09	<0.02	<0.02	0.07	0.13	<0.02	0.13	mg/kg	110	110	110
Benzo(j)fluoranthene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.00	mg/kg	ne	ne	ne
TOC	0.33	3.08	1.97	1.96	0.77	0.62	0.53	1.7	1.63	0.33	3.08	%			
SOM (Note 1)	0.57	5.31	3.40	3.38	1.33	1.07	0.91	2.93	2.81	0.57	5.31	%			

Note 1 - TOC * 1.724

S4UL - PAHs (Residential without homegrown produce), Saint Teresa's Gardens

Sample ID	BH07	BH08	BH08	BH09	BH09	BH10	BH10	BH11	BH11	BH12	Max Level Detected	Units	Residential without homegrown produce LQM/CIEH Suitable 4 Use Levels (S4ULs) [mg/kg DW]		
Sample Depth (m)	1.00-2.00	0.40-1.20	2.00-3.00	0.20-0.90	2.00-3.00	0.20-1.00	1.00-2.00	0.00-0.70	1.70-2.70	0.00-0.70			1 % SOM	2.5 % SOM	6 % SOM
Naphthalene	<0.04	0.07	<0.04	<0.04	<0.04	<0.04	<0.04	0.07	<0.04	<0.04	0.07	mg/kg	2.3*	5.6*	13*
Acenaphthylene	<0.03	0.07	<0.03	0.04	<0.03	<0.03	<0.03	0.06	<0.03	<0.03	0.07	mg/kg	2,900	4,600	6,000
Acenaphthene	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.00	mg/kg	3,000	4,700	6,000
Fluorene	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.00	mg/kg	2,800	3,800	4,500
Phenanthrene	<0.03	0.7	<0.03	0.58	<0.03	0.15	<0.03	0.54	0.22	0.06	0.70	mg/kg	1,300	1,500	1,500
Anthracene	<0.04	0.15	<0.04	0.13	<0.04	<0.04	<0.04	0.13	<0.04	<0.04	0.15	mg/kg	31,000	35,000	37,000
Fluoranthene	<0.03	0.93	<0.03	0.83	<0.03	0.25	<0.03	0.9	0.25	<0.03	0.93	mg/kg	1,500	1,600	1,600
Pyrene	<0.03	0.86	<0.03	0.78	<0.03	0.22	<0.03	0.79	0.25	<0.03	0.86	mg/kg	3,700	3,800	3,800
Benzo(a)anthracene	<0.06	0.64	<0.06	0.39	<0.06	0.16	<0.06	0.43	0.17	<0.06	0.64	mg/kg	11	14	15
Chrysene	<0.02	0.58	<0.02	0.44	<0.02	0.15	<0.02	0.84	0.16	<0.02	0.84	mg/kg	30	31	32
Benzo(bk)fluoranthene	<0.07	0.95	<0.07	0.71	<0.07	0.24	<0.07	0.78	0.22	<0.07	0.95	mg/kg	ne	ne	ne
Benzo(a)pyrene	<0.04	0.49	<0.04	0.39	<0.04	0.13	<0.04	0.47	0.14	<0.04	0.49	mg/kg	3.2	3.2	3.2
Indeno(123cd)pyrene	<0.04	0.26	<0.04	0.24	<0.04	0.08	<0.04	0.25	0.07	<0.04	0.26	mg/kg	33	7.7	220
Dibenzo(ah)anthracene	<0.04	0.05	<0.04	0.06	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.06	mg/kg	0.31	0.32	0.32
Benzo(ghi)perylene	<0.04	0.3	<0.04	0.27	<0.04	0.09	<0.04	0.28	0.09	<0.04	0.30	mg/kg	360	360	360
Coronene	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.00	mg/kg	ne	ne	ne
PAH 6 Total	<0.22	2.93	<0.22	2.44	<0.22	0.79	<0.22	2.68	0.77	<0.22	2.93	mg/kg	ne	ne	ne
PAH 17 Total	<0.64	6.05	<0.64	4.86	<0.64	1.47	<0.64	5.54	1.57	<0.64	6.05	mg/kg	ne	ne	ne
Benzo(b)fluoranthene	<0.05	0.68	<0.05	0.51	<0.05	0.17	<0.05	0.56	0.16	<0.05	0.68	mg/kg	3.9	4	4
Benzo(k)fluoranthene	<0.02	0.27	<0.02	0.2	<0.02	0.07	<0.02	0.22	0.06	<0.02	0.27	mg/kg	110	110	110
Benzo(j)fluoranthene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.00	mg/kg	ne	ne	ne
TOC	0.39	9.13	0.37	1.93	0.34	0.81	0.57	8.29	6.49	0.72	9.13	%			
SOM (Note 1)	0.67	15.74	0.64	3.33	0.59	1.40	0.98	14.29	11.19	1.24	15.74	%			

Note 1 - TOC * 1.724

S4UL - PAHs (Residential without homegrown produce), Saint Teresa's Gardens

Sample ID	BH12	BH13	BH13	BH14	BH14	BH15	BH15	BH16	BH16	BH17	Max Level Detected	Units	Residential without homegrown produce		
Sample Depth (m)	1.00-2.50	0.30-0.70	1.00-2.00	0.30-0.90	0.90-2.00	0.30-0.80	1.90-3.00	0.30-0.80	1.00-2.00	0.00-0.60			LQM/CIEH Suitable 4 Use Levels (S4ULs) [mg/kg DW]		
													1 % SOM	2.5 % SOM	6 % SOM
Naphthalene	<0.04	<0.04	<0.04	0.13	<0.04	0.11	<0.04	<0.04	<0.04	<0.04	0.13	mg/kg	2.3*	5.6*	13*
Acenaphthylene	<0.03	<0.03	<0.03	0.14	<0.03	0.09	<0.03	0.1	<0.03	<0.03	0.14	mg/kg	2,900	4,600	6,000
Acenaphthene	<0.05	<0.05	<0.05	0.09	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.09	mg/kg	3,000	4,700	6,000
Fluorene	<0.04	<0.04	<0.04	0.09	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.09	mg/kg	2,800	3,800	4,500
Phenanthrene	<0.03	<0.03	<0.03	1.48	<0.03	0.74	0.09	0.94	0.07	0.06	1.48	mg/kg	1,300	1,500	1,500
Anthracene	<0.04	<0.04	<0.04	0.35	<0.04	0.17	<0.04	0.27	<0.04	<0.04	0.35	mg/kg	31,000	35,000	37,000
Fluoranthene	<0.03	<0.03	<0.03	2.6	<0.03	1.09	0.16	1.47	0.11	0.1	2.60	mg/kg	1,500	1,600	1,600
Pyrene	<0.03	<0.03	<0.03	2.43	<0.03	1.05	0.14	1.31	0.11	0.1	2.43	mg/kg	3,700	3,800	3,800
Benzo(a)anthracene	<0.06	<0.06	<0.06	1.29	<0.06	0.61	0.12	0.7	0.07	0.08	1.29	mg/kg	11	14	15
Chrysene	<0.02	<0.02	<0.02	1.58	<0.02	0.7	0.11	0.78	0.07	0.09	1.58	mg/kg	30	31	32
Benzo(bk)fluoranthene	<0.07	<0.07	<0.07	2.42	<0.07	1.17	0.14	1.16	0.11	0.11	2.42	mg/kg	ne	ne	ne
Benzo(a)pyrene	<0.04	<0.04	<0.04	1.4	<0.04	0.69	0.09	0.72	0.06	0.07	1.40	mg/kg	3.2	3.2	3.2
Indeno(123cd)pyrene	<0.04	<0.04	<0.04	0.75	<0.04	0.42	<0.04	0.38	<0.04	<0.04	0.75	mg/kg	33	7.7	220
Dibenzo(ah)anthracene	<0.04	<0.04	<0.04	0.19	<0.04	0.11	<0.04	0.1	<0.04	<0.04	0.19	mg/kg	0.31	0.32	0.32
Benzo(ghi)perylene	<0.04	<0.04	<0.04	0.86	<0.04	0.46	0.05	0.43	<0.04	0.06	0.86	mg/kg	360	360	360
Coronene	<0.04	<0.04	<0.04	0.14	<0.04	0.08	<0.04	0.07	<0.04	<0.04	0.14	mg/kg	ne	ne	ne
PAH 6 Total	<0.22	<0.22	<0.22	8.03	<0.22	3.83	0.44	4.16	0.28	0.34	8.03	mg/kg	ne	ne	ne
PAH 17 Total	<0.64	<0.64	<0.64	15.94	<0.64	7.49	0.9	8.43	<0.64	0.67	15.94	mg/kg	ne	ne	ne
Benzo(b)fluoranthene	<0.05	<0.05	<0.05	1.74	<0.05	0.84	0.1	0.84	0.08	0.08	1.74	mg/kg	3.9	4	4
Benzo(k)fluoranthene	<0.02	<0.02	<0.02	0.68	<0.02	0.33	0.04	0.32	0.03	0.03	0.68	mg/kg	110	110	110
Benzo(j)fluoranthene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.00	mg/kg	ne	ne	ne
TOC	0.46	0.59	0.5	8.92	0.53	11.51	1.33	14.67	1.01	0.19	14.67	%			
SOM (Note 1)	0.79	1.02	0.86	15.38	0.91	19.84	2.29	25.29	1.74	0.33	25.29	%			

Note 1 - TOC * 1.724

S4UL - PAHs (Residential without homegrown produce), Saint Teresa's Gardens

Sample ID	BH17
Sample Depth (m)	1.00-2.00
Naphthalene	<0.04
Acenaphthylene	<0.03
Acenaphthene	<0.05
Fluorene	<0.04
Phenanthrene	0.04
Anthracene	<0.04
Fluoranthene	0.06
Pyrene	0.05
Benzo(a)anthracene	<0.06
Chrysene	0.05
Benzo(bk)fluoranthene	<0.07
Benzo(a)pyrene	<0.04
Indeno(123cd)pyrene	<0.04
Dibenzo(ah)anthracene	<0.04
Benzo(ghi)perylene	<0.04
Coronene	<0.04
PAH 6 Total	<0.22
PAH 17 Total	<0.64
Benzo(b)fluoranthene	<0.05
Benzo(k)fluoranthene	<0.02
Benzo(j)fluoranthene	<1
TOC	0.67
SOM (Note 1)	1.16

Note 1 - TOC * 1.724

		Residential without homegrown produce		
Max Level Detected	Units	LQM/CIEH Suitable 4 Use Levels (S4ULs) [mg/kg DW]		
		1 % SOM	2.5 % SOM	6 % SOM
0.00	mg/kg	2.3*	5.6*	13*
0.00	mg/kg	2,900	4,600	6,000
0.00	mg/kg	3,000	4,700	6,000
0.00	mg/kg	2,800	3,800	4,500
0.04	mg/kg	1,300	1,500	1,500
0.00	mg/kg	31,000	35,000	37,000
0.06	mg/kg	1,500	1,600	1,600
0.05	mg/kg	3,700	3,800	3,800
0.00	mg/kg	11	14	15
0.05	mg/kg	30	31	32
0.00	mg/kg	ne	ne	ne
0.00	mg/kg	3.2	3.2	3.2
0.00	mg/kg	33	7.7	220
0.00	mg/kg	0.31	0.32	0.32
0.00	mg/kg	360	360	360
0.00	mg/kg	ne	ne	ne
0.00	mg/kg	ne	ne	ne
0.00	mg/kg	ne	ne	ne
0.00	mg/kg	3.9	4	4
0.00	mg/kg	110	110	110
0.00	mg/kg	ne	ne	ne
0.67	%			
1.16	%			