5 Population & Human Health

5.1 Introduction

This chapter of the EIAR has been prepared by Brock McClure Planning and Development Consultants. It will address the potential impacts of the proposed residential development for lands (the main proposed development site area is c.2.58ha with a total site area of 2.74ha to include service connections) at St. Joseph's House, Brewery Road and properties at Leopardstown Road, Dublin 18 on population and human health.

Potential impacts of this proposal on population and human health arise in the context of land and soil, water, air and climate, material assets, cultural heritage and landscape and visual assessment. These aspects are dealt with in the specific chapters in this EIAR dedicated to those topics.

Population and Human Health comprise an important aspect of the environment to be considered. Any significant impact on the status of human health, which may be potentially caused by a development proposal, must therefore be comprehensively addressed.

As referenced on pages 28 and 29 in the Department of Housing, Planning and Local Government (2018) *Guidelines for Planning Authorities and An Bord Pleanála*, (taken from the European Commission's Environmental Impact Assessment of Projects: Guidance on the Preparation of the Environmental Impact Assessment Report (2017)), human health is;

> ***4.17.*** *"a very broad factor that would be highly project dependent. The notion of human health should be considered in the context of the other factors in Article 3(1) of the EIA Directive and thus environmentally related health issues (such as health effects caused by the release of toxic substances to the environment, health risks arising from major hazards associated with the Project, effects caused by changes in disease vectors caused by the Project, changes in living conditions, effects on vulnerable groups, exposure to traffic noise or air pollutants) are obvious aspects to study. In addition, these would concern the commissioning, operation, and decommissioning of a Project in relation to workers on the Project and surrounding population."*
>
> ***4.18.*** *The Environmental Protection Agency (EPA) Guidelines on the Information to be Contained in Environmental Impact Assessment Reports - Draft (2017) advise that "in an EIAR, the assessment of impacts on population and human health should refer to the assessments of those factors under which human health effects might occur, as addressed elsewhere in this EIAR e.g. under the environmental factors of air, water, soil etc."*

5.2 Study Methodology

This chapter of the EIAR document has been prepared with reference to guidance provided by the EU Commission and recent national publications which provide guidance on the Directive 2011/92/EU, as amended by Directive 2014/52/EU (the "EIA Directive") including the Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (2018) and the Draft Guidelines on the information to be contained in environmental impact assessment reports, published by the EPA in August 2017.

The 2018 EIA Guidelines published by the DHPLG state that there is a close interrelationship between the SEA Directive and the Directive 2011/92/EU, as amended by Directive 2014/52/EU. The Guidelines state that the term 'Human Health' is contained within both of these directives, and that a common interpretation of this term should therefore be applied.

To establish the existing receiving environment / baseline, several site visits were undertaken to appraise the location and likely significant potential impact upon human receptors. A desk-based study of the following documents was carried out to inform this chapter:

- Central Statistics Office www.cso.ie.
- Central Statistics Office (2016) – Census 2016
- Central Statistics Office (2018) – CSO Statbank
- DoHPLG (2017) Rebuilding Ireland – Action Plan for Housing and Homelessness

- Dun Laoghaire Rathdown County Development Plan 2016-2022.
- ESRI Quarterly Economic Commentary (June 2019)
- Environmental Impact Assessment of Projects – Guidance on the preparation of the Environmental Impact Assessment (European Union, 2017)
- Draft Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EPA, Draft August 2017)
- Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EPA, 2002)

5.3 The Existing Receiving Environment (Baseline)

The following provides a description of the receiving environment, with a focus on population, land use, housing, employment and local amenity.

An outline of the likely evolution without implementation of the project, the "do nothing" scenario, as regards to natural changes from the baseline scenario is also provided. A number of key factors of the existing environment are considered in this section under the following sections:

Key Factors

- Population Trends
- Population Profile
- Land Use
- Housing
- Employment
- Commuter Factors
- Economy
- Social Service Provision
- Childcare Audit

In order to assess the likely significant impacts of the proposed development on population and human health, an analysis of the Census data was undertaken. The data relating to the Stillorgan-Leopardstown Electoral Division was examined. The analysis focused on the economic, demographic and social characteristics of the Electoral District.

Population Trends

The subject site is located within the District Electoral Division (DED) of Stillorgan-Leopardstown as per the map below, but as seen it is also in close proximity to the following other Electoral Divisions:

- Blackrock - Carysfort
- Stillorgan - Merville
- Dundrum - Balally
- Glencullen
- Foxrock – Torquay

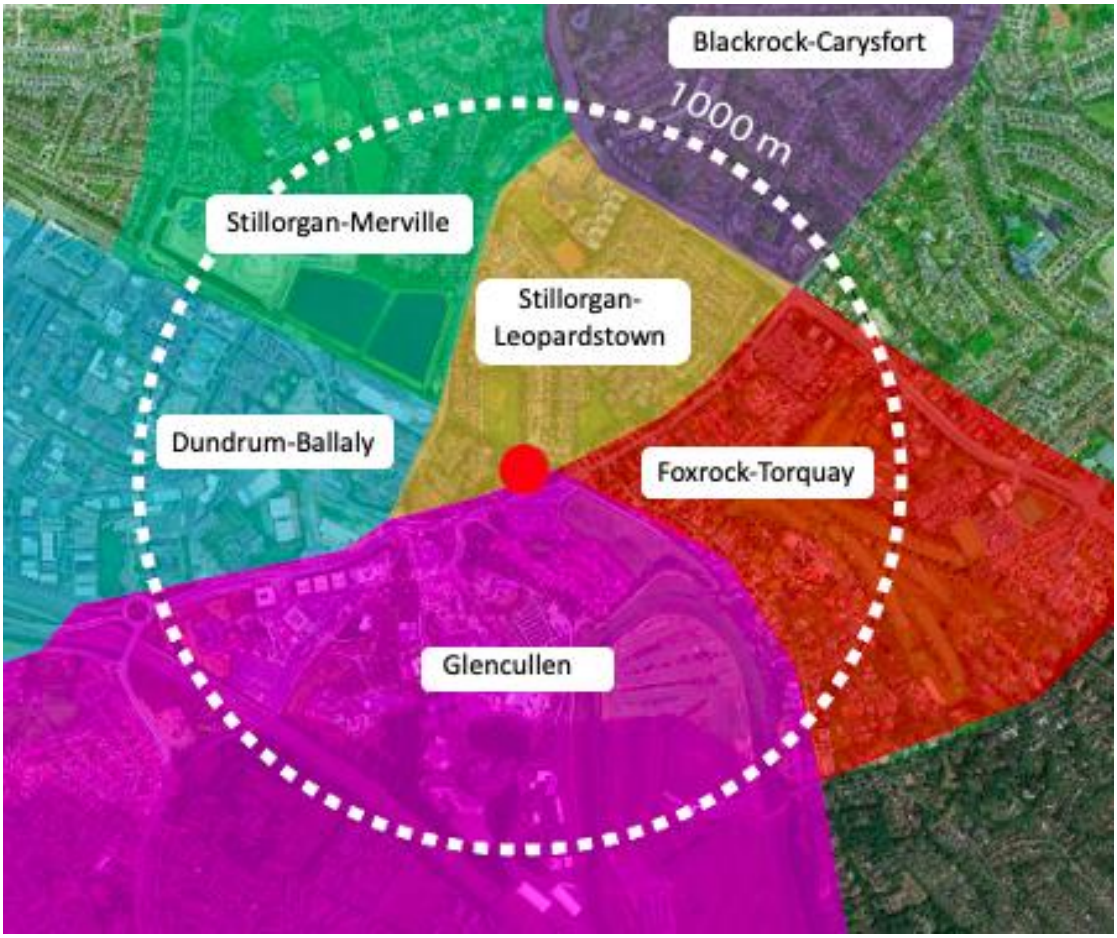


Figure 5-1 Surrounding Electoral Divisions

The total population of the Stillorgan – Leopardstown Electoral Division in 2016 was 2,714. This represents a population increase of 10.6% (289) from the 2011 Census figure.

The CSO data illustrates that the population of the Irish State increased between 2011 and 2016 by 3.8%, bringing the total population of the Irish State to 4,761,865. The rate of growth slowed from 8.1% in the previous census. This is attributable to the slower economic activity in the early part of the census period resulting in a reduced level of immigration, albeit offset to a degree by strong natural increase.

The economy has recovered in recent years with consequent population growth predominantly attributed to natural increase, greater economic activity, increased job opportunities and continued immigration.

Area	Number of Persons		
	2011	2016	% Change 11-16
Ireland-State	4,588,252	4,761,865	3.8
Dublin- County	1,273,069	1,347,359	5.8
Dun Laoghaire Rathdown	206,261	218,018	5.7
Electoral Division of Stillorgan - Leopardstown	2,429	2,714	10.5

Table 5.1 - Population change in the State, Dublin County, and Stillorgan- Leopardstown ED 2011-2016 (Source: CSO)

Notably, the population of the Stillorgan-Leopardstown Electoral Division increased at a significantly greater rate than the State as a whole, Dublin County or Dun Laoghaire Rathdown County over the

2011-2016 intercensal period. This can be attributed to continued residential development in the area. The substantial growth in the area is also likely to be attributable to the availability and provision of physical and social infrastructure, including the Luas, the associated significant level of residential development that has progressed in this area in recent years and the fact there is available zoned and served land available in the area.

The subject site is thus within an area undergoing significant population growth and this is consistent with its location adjacent to the town center and with a range of public transport options available.

Population Profile

Approximately 64% of the population of Stillorgan-Leopardstown was of working age (19-64) at the time of the 2016 Census, which is slighly higher than the c. 60% recorded for the State and county.

In 2016 there were 1,313 (48%) males and 1,401 (52%) females within the study area (2,714 altogether). The largest cohort for both males (157) and females (175) are within the 30-34-year-old category. Categorising 15 years and younger as 'youth' yields a population of 444 or approximately 16% of the total population. The total number of people aged 65 or older is 470, equates to 17% of the total population.

The dependency ratio for the area (ie those not in the workforce – aged 0-18 or over 65) is lower than the county and national figures at 36% of the population.

Age of Cohort	% Population in each Age Cohort by Area					
	State		DLRC		Stillorgan-Leopardstown	
0-4 years	331,515	7%	13,810	6%	162	6%
5-12 years	548,693	12%	21,302	10%	220	8%
13-18 years	371,588	8%	15,651	7%	123	5%
19-24 years	276,856	7%	19,088	9%	191	7%
25-44 years	1,406,291	30%	61,495	28%	992	37%
45-64 years	1,135,003	24%	52,003	24%	556	21%
65-69 years	221,236	4%	9,765	5%	154	6%
70 years and over	426,331	9%	24,904	11%	316	12%
Dependency Ratio		**39.7%**		**39.2%**		**35.90%**

Table 5.2 - Percentage in each Age Cohort by Area (Source: CSO)

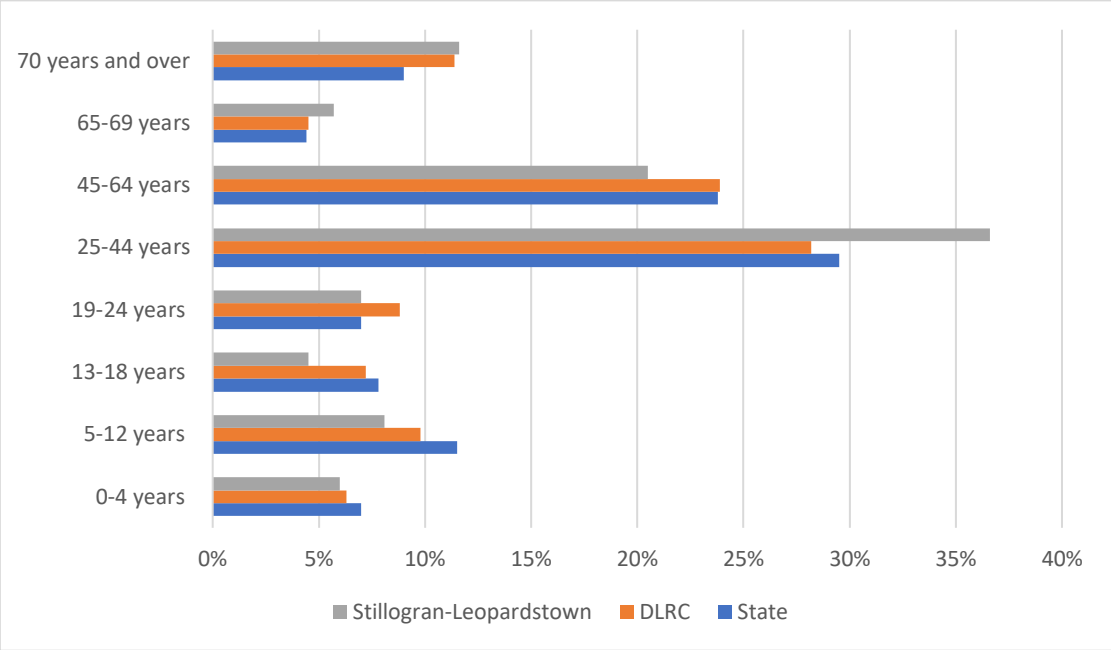


Figure 5-2 Percentage in each Age Cohort by Area (Source: CSO)

Land Use

The site is located in Stillorgan which is an area that can be characterised as a well-planned and settled mature residential area. The area which was formerly a village, is now a suburban area of Dublin. Stillorgan is located within the Dun Laoghaire Rathdown county boundaries and contains many housing developments, shops and other facilities, with the old village centre still present c. 2.5km from the subject site.

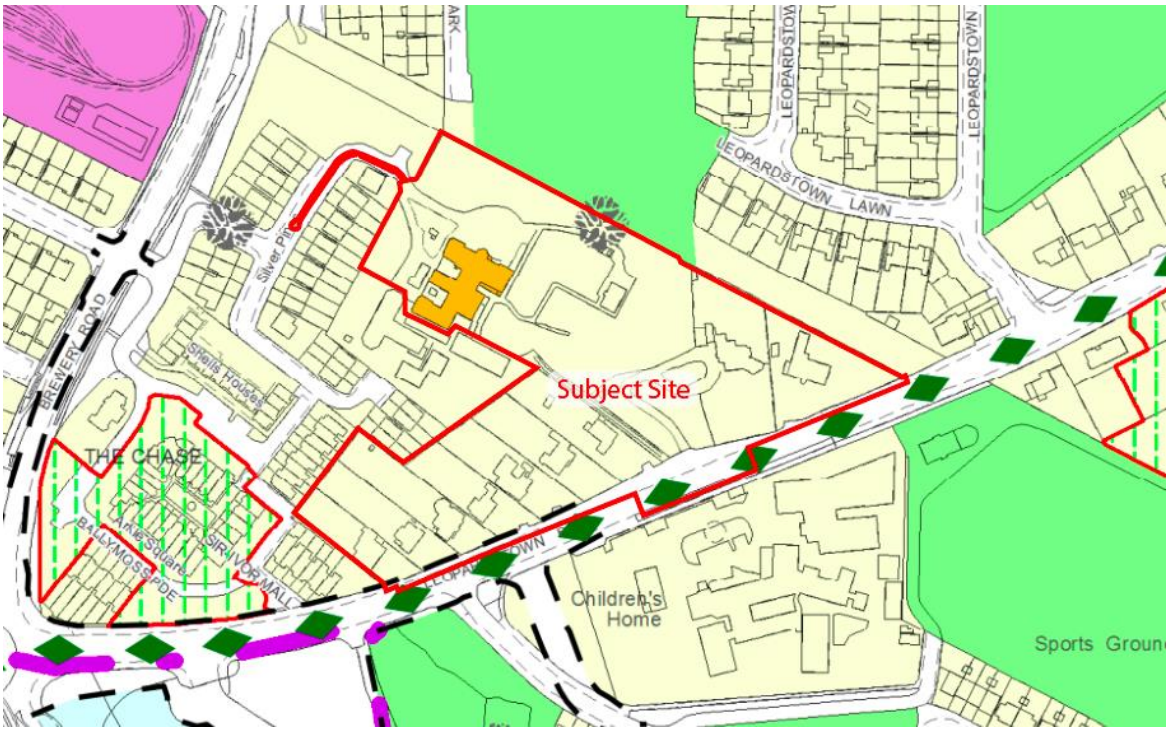


Figure 5-3 Zoning -DLR County Development Plan 2016-2022

The subject site is zoned 'A' - "To Protect and/or improve residential amenity", which includes 'Assisted Living Accommodation, Open Space, Public Services, Residential, Residential Institution, Traveler's Accommodation' as used permitted in principle.

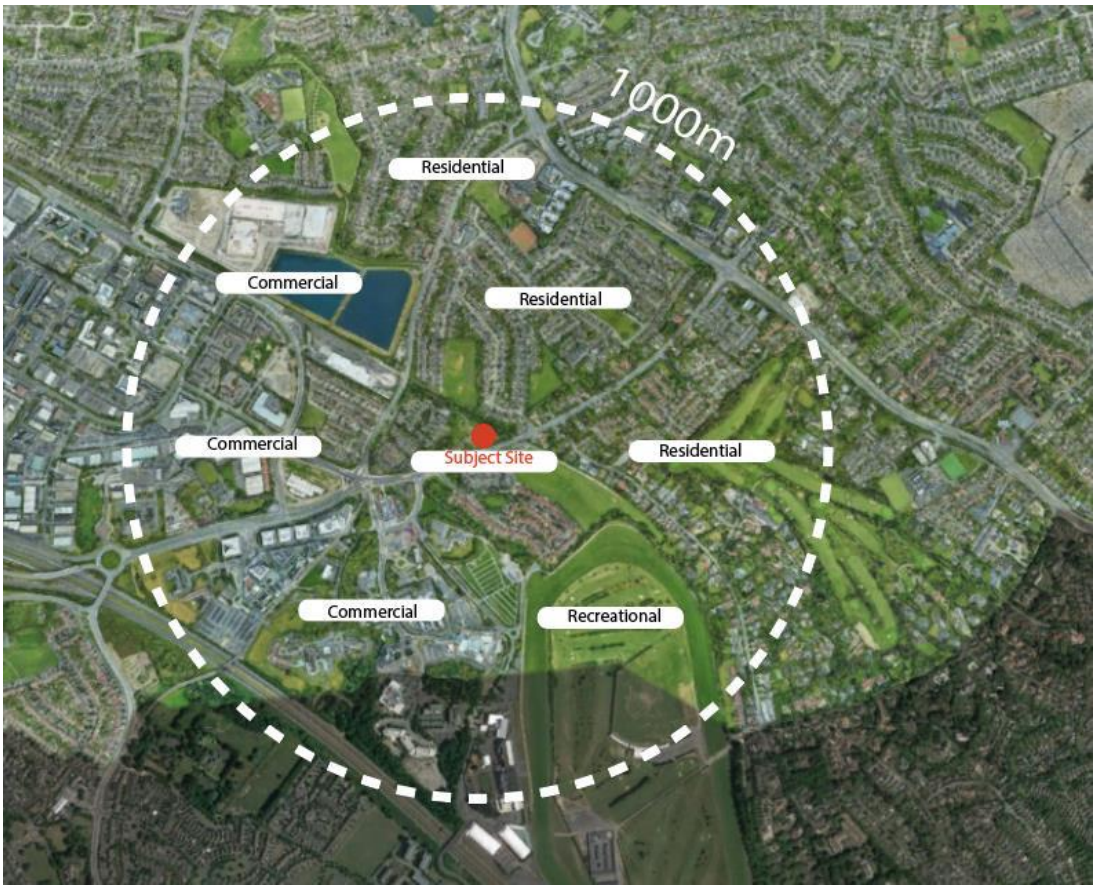


Figure 5-4 Land uses in the surrounding area

The application site extends to c.2.58ha (total overall site area is 2.74ha to include accommodation works) and is strategically located between Brewery Road (N31) and Leopardstown Road, Dublin 18. It is generally located to the south of Leopardstown Park; to the east of residential development at Silverpines; north of residential development known as 'The Chase'. The St. Joseph's House site area includes a substantial proportion of open landscape, with the primary buildings being located to the west, with a smaller 'bungalow type building' in the centre.

The subject site comprises 11 main structures including 10 residential dwellings known as 'Annaghkeen', Dalwhinnie', 'Madona House, 'Alhambra', 'Souk El Raab', 'Calador', 'Cloonagh', 'The Crossing', Wellbrook' and 'Woodleigh' and a residential care facility known as St. Joseph's House for the Adult Deaf & Deaf Blind (A Protected Structure).The proposal provides for the demolition of 10 no. properties and associated outbuildings at 'Madona House' (single storey), 'Woodleigh', (2 storeys), 'Cloonagh' (2 storeys), 'Soul El Raab' (2 storeys), 'Welbrook (2 storeys), 'Calador' (2 storeys), 'Alhambra' (2 storeys), 'Dalwhinnie' (2 storeys), 'Annaghkeen' (2 storeys) and 'The Crossing' (single storey) (combined demolition approx.. 2,291.3sq m GFA). In addition, the new development will provide for the refurbishment, separation and material change of use of St. Joseph's House (a Protected Structure) from residential care facility to residential use.

Regarding the land uses in the surrounding area, it is clear from the above context map that residential use is the most prominent type of land use with some open space and commercial units. The subject site has excellent connectivity to public transport, amenities and major areas of employment.

- It is within 1km of Sandyford Business Park, Central Park and South County Business Park.

- The site is also within 2km of Stillorgan Village Centre and well serviced by the Quality Bus Corridor at the N11 les than 1km to the northeast of the site and ancillary bus routes along Brewery Road and Leopardstown Road.
    - There is a bus stop directly on the site boundary line along R113 Leopardstown Road. This stop is serviced by route 114 (Blackrock DART Station to Rockview).
    - There is another bus stop approximately 450m (3-min walking distance) from the subject site along Brewery Road and is serviced by route 118 (Kilternan to Eden Quay).
    - The closest bus stop on the N11 is approximately 16 minute walk away from the centre of the subject site, and is served by the 46A, 70, 75, 84X and 145 bus routes with services between the city centre at 10 minute intervals at peak periods and the journey time to St. Stephen's Green is 30-40 minutes.
- Both the Sandyford (c.600m) and Central Park (c.700m) LUAS stops on the Green Line are located within a 10 - minute walk of the site, with a journey time to the City Centre of 22 minutes.

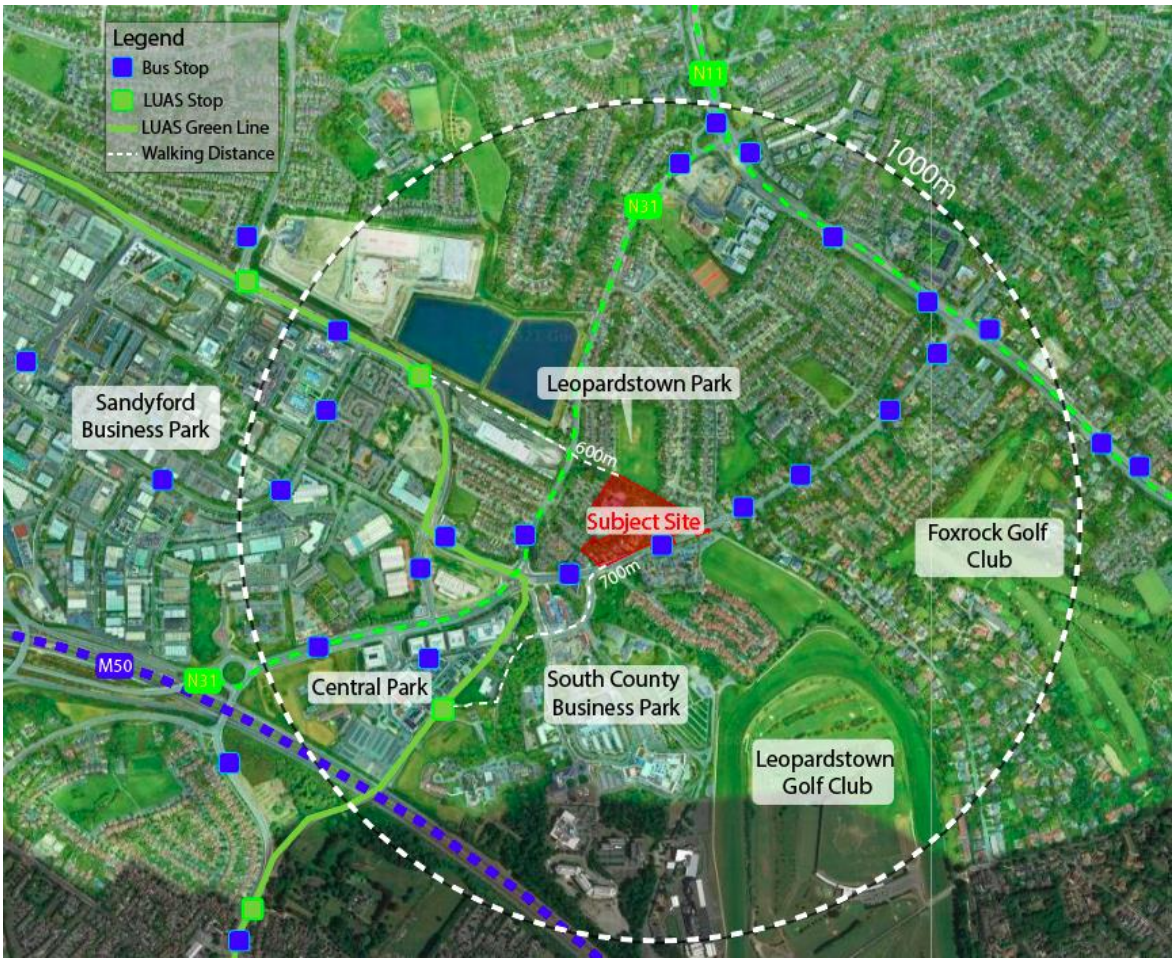


Figure 5.5 – Map showing employment centres and public transport stops within 1km radius of subject site

Housing

The subject site is located within the county boundaries of Dun Laoghaire Rathdown. The Dun Laoghaire Rathdown Development Plan 2016-2022 outlines that in relation to housing, its core strategy has been formulated from the available population and household target projections.

Table 1.2.1: RPG Targets			
	2006	2016	2022
DLR (population)	194,038	222,800	240,338
DLR (housing)	77,508	98,023	117,893

Table 5.3 - RPG Targets: Source: CSO

The Government's *Rebuilding Ireland - Action Plan for Housing and Homelessness* set a target to construct 25,000 homes annually to 2021. According to the CSO Q3 of New Dwelling Completions Report, 18,072 new dwellings were completed in 2018. This is almost 7,000 dwellings below Rebuilding Ireland's annual target. Using the Eircode Routing Key, the CSO reports that 369 no. of these completions are recorded in Dublin 18.

Employment

Within the electoral division of Stillorgan- Leopardstown, of a total 1,739 people eligible for work, 1,322 (64%) people were recorded as being within employment in the Census 2016. The employment sectors in which the population are working in are illustrated on the Figure 5.5 below. Commerce and Trade represents the largest sector, followed by Professional Services within the Electoral Division.

Table 5.4 shows the number of people within Stillorgan-Leopardstown Electoral Division working in various occupations. The most common occupation for both male and female is a 'Professional Occupation' followed by 'Managers, Directors and Senior Officials'.

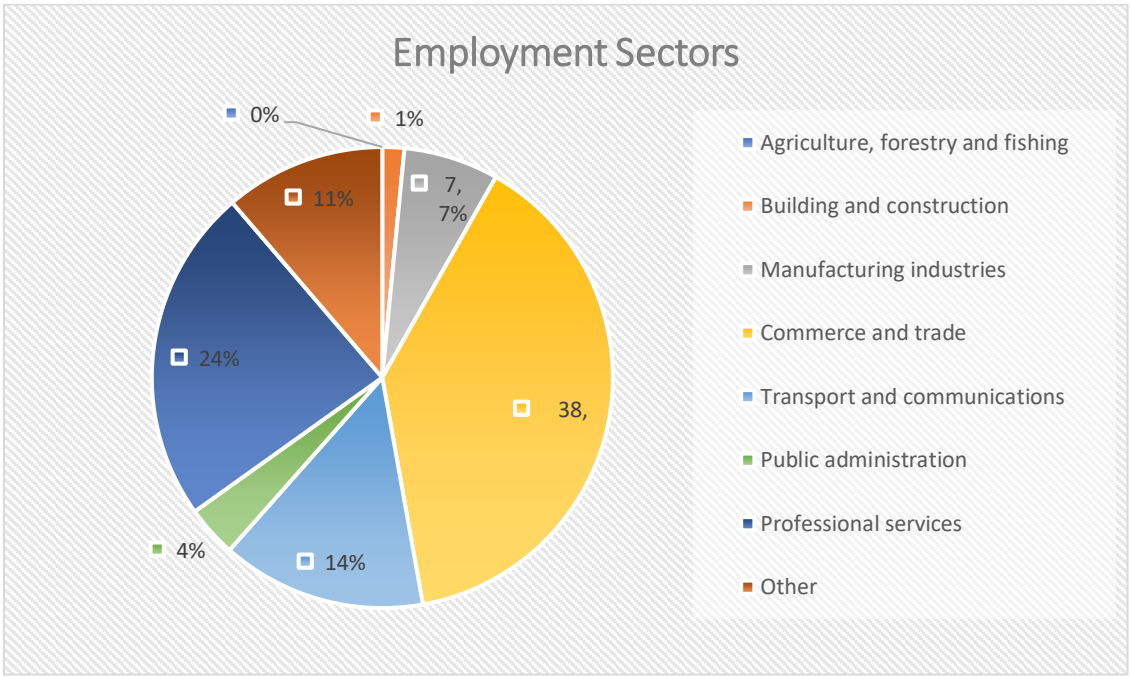


Figure 5-6 Employment Sector (Created by Author)

Occupation	Male	Female	Total
Managers, Directors and Senior Officials	138	65	203
Professional Occupations	272	250	522
Associate Professional and Technical Occupations	162	120	282
Administrative and Secretarial Occupations	46	112	158
Skilled Trades Occupations	27	3	30
Caring, Leisure and Other Service Occupations	8	37	45
Sales and Customer Service Occupations	21	28	49
Process, Plant and Machine Operatives	11	4	15
Elementary Occupations	17	19	36
Not stated	26	32	58
Total	**728**	**670**	**1,398**

Table 5.4 - Occupations (Source: CSO)

The proposed development will generate economic activity in the locality during the construction period. It is anticipated that permanent crèche staff positions, permanent apartment building management jobs and other associated jobs will be generated, with spin-off economic activity created for local retail and service providers together with wider benefits in the aggregate extraction (quarry) sector, building supply services, professional and technical professions etc. These beneficial impacts on economic activity will be largely temporary but will contribute to the overall future viability of the construction sector and related services and professions over the phased construction period.

The construction phase of the project may have some short-term negative impacts on local businesses/residents during the construction phase. Such impacts are likely to be associated with construction traffic and possible nuisances associated with construction activity such as dust, noise and vibrations. Such impacts will be short term and in the longer term, the completed scheme will have long-term beneficial impacts for local businesses, residents and the wider community. The construction methods employed, and the hours of construction proposed will be designed to minimise potential impacts.

Commuter Factors

In 2016 there were 1,795 commuters who lived in the Electoral Division of Stillorgan-Leopardstown (total resident population of 2,714). There were also 1,071 commuters who lived in the Electoral Division of Stillorgan-Leopardstown but worked elsewhere. There were 438 commuters who travelled in to this electoral division to work. This resulted in a net flow of -633 commuters.

Economy

The Irish economy experienced an unprecedented period of growth from the early 1990's to 2007. According to the Economic and Social Research Institute (ESRI), the unprecedented economic growth saw the level of Irish real GDP double in size over only slightly more than a decade.

However, the pace of economic growth began to decelerate in the second half of 2007. In 2008, output fell for the first time since 1983, and the recession deepened in 2009. Ireland's economic difficulties were compounded by the global difficulties in financial markets which commenced in 2007.

The decline in economic growth was accompanied by a major decline in employment figures. From a peak rate of 2.1 million persons employed in 2007, an increase of 75% from 1990 and averaging a low unemployment rate of 5% in 2007. At its highest, unemployment was recorded at 15.1 % in December of both 2010 and 2011.

The COVID-19 pandemic, also known as the coronavirus pandemic, is an ongoing global pandemic which has been a major destabilizing threat to the Economy. The pandemic impacted various sectors of the economy differently during 2020 as the levels of Covid-19 related restrictions changed over the year. Ireland had close to 20% unemployment in 2020's fourth quarter. Notwithstanding this, Ireland's GDP (Gross Domestic Product) held up better than most European countries during 2020. The Irish economy grew by 3.4& in 2020 but the domestic sector contracted by 5.4%.

Social Service Provision

Stillorgan has a wide range of health care facilities, childcare facilities and educational facilities. There are also a number of community facilities including parks, playgrounds and libraries. They also facilitate many services for the community including sports club, hobbies & activity centers and leisure centers.

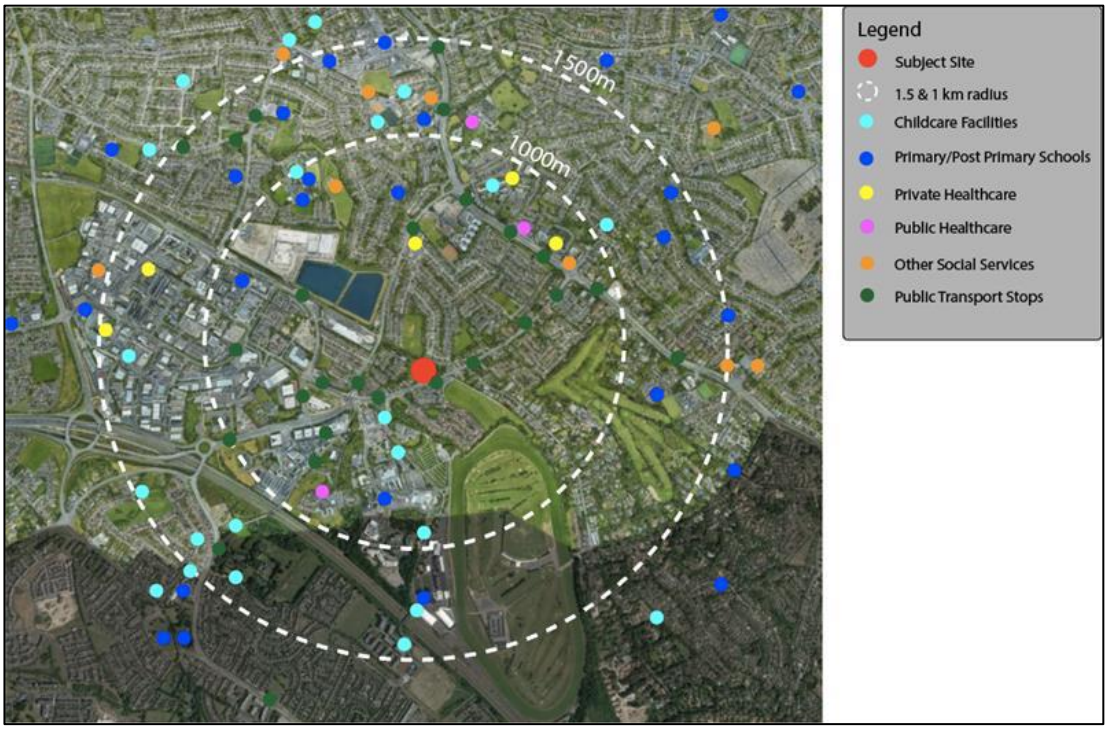


Figure 5-7 Social Services Provision

Childcare Facilities Audit

While this proposal is providing a childcare facility, a childcare facilities assessment was carried out to determine the capacity of existing childcare operators in the area. We note at this point that this initial childcare assessment has been limited to a 2km radius of the subject site. The catchment area is defined by a 2 km radius, or a 10-25 minute travel time, as it is considered a reasonable distance to travel to access childcare services. A 2 km radius ensure childcare facilities can be accessed via a number of travel alternatives including walking, cycling and driving. Public transport is not considered given the relatively short distances from the subject site to the various creche locations and was deemed impractical due to the configuration of bus routes in the area. It is recognised that there is also the option for families to avail of childcare facilities outside of this 2km radius due to a preferred location near workplaces, or schools that older children in the family may be attending.

Following the compilation of an appropriate list of childcare facilities, an email and telephone survey was carried out in April 2021 to assess available capacity. The childcare facility was contacted directly in all cases and we confirm that the data gathered and applied to this assessment is based on the information and resources available to the facilities at the time of the survey. It is worth noting at this point however that a number of these facilities were not forthcoming with the release of capacity figures given the private run nature of these businesses. We note that the conclusions drawn in this case based on the limited information available to this office.

We note that 28 no. existing facilities were identified within a 2km radius.

	Child Care	Service Type	Max. Capacity	Available Capacity
1.	Giraffe Childcare Central Park	Full Day/Part Time	68	0
2.	Giraffe Childcare Leopardstown	Full Day/Part Time	116	Not issued
3.	Glenalbyn Montessori	Sessional	22	0
4.	Busy Bees Childcare Hive Ltd.	Full Day/Part Time/ Sessional	82	0
5.	Narnia Nursery School	Full Day/Part Time/ Sessional	46	0
6.	The Park Academy Beacon South Quarter	Full Day	120	0
7.	The Park Academy Beacon Court	Full Day	144	24
8.	Lakelands Childcare	Full Day	38	0
9.	Willow House Childcare Newtonpark	Full Day	40	0
10.	Little Dale Academy	Full Day/Part Time/ Sessional	83	Not issued
11.	Brighton Day Care	Full Day/Part Time/ Sessional	100	2
12.	Links Childcare	Full Day/Sessional	74 (Full Day) 81 (Sessional)	5 (Full Day) 7 (Sessional)
13.	Beechwood Childcare	Full Day	65	Not issued
14.	Wise Little Owls	Part Time/ Sessional	77	1
15.	Star Tots Creche	Full Day/Part Time/ Sessional	101	Not issued
16.	The Playroom Stillorgan	Sessional	11	0
17.	Tigers Leopardstown	Full Day/Part Time	110	3
18.	Dimples Creche & Montessori	Full Day/Sessional	192 (Full Day) 206 (Sessional)	13 (Full Day) (8 Sessional)
19.	Cherry Blossom Grove Montessori	Sessional	22	0
20.	Fitzone Westwood Creche & Montessori	Part Time/Sessional	28	0
21.	Giant Steps	Sessional	18	0
22.	Koerne's After School Club	Sessional	Not issued	Not issued
23.	Kid's Biz	Full Day/Part Time/ Sessional	37	2
24.	Roola Boola Creche & Montessori	Full Day	22	Not issued
25.	Ballyogan Community Development	Part Time/Sessional	55	4
26.	Mountainside Montessori	Part Time	22	0
27.	Park Montessori School	Sessional	12	0
28.	Gallops Montessori School	Sessional	12	0
	Total		**2,003**	**69**

Table 5-1 Childcare Facilities (Source: Assessment by Author)

Of those 23 childcare facilities that were contactable, the table above illustrated that the total estimated available capacity in facilities is **69 childcare spaces minimum** as being available within the 2km radius of the subject site. The 69 no. spaces consist of 15 no. spaces available in sessions at two facilities and 54 no. full time spaces. A maximum overall capacity of 2,003 spaces was identified. It is worth highlighting that the following assumptions were made during the survey of places.

A number of the childcare facilities were unable to establish a max capacity figure and in such cases this report assumed that there is no capacity available in order to provide for a conservative analysis.

Demand for Childcare Places

The recommendation for new housing developments is the provision of 1 facility providing for a minimum 20 childcare places per approximately 75 dwellings. The relevant guidelines state that if its assumed 50% of units can be assumed to require childcare in a new housing area of 75 dwellings, approximately 35 will need childcare. However, one bedroom units are not considered to contribute to the childcare provision under the new apartments guidelines. This may also apply in part to the provision of 2 bedroom units.

The proposed development is comprised of 463 new residential apartments. The following indicative summary mix is identified for a total of 463 units:

- 85 x studio apartment units
- 117 x 1 bedroom apartment units
- 248 x 2 bedroom apartment units
- 13 x 3 bedroom apartment units

It is noted that the 2 and 3 bed units should only be considered as contributing to a requirement for childcare in accordance with the provisions of the Apartment Guidelines of 2018. **A total of 261 units therefore have the potential to require childcare facilities**. We note the following calculations based on these uppermost requirements.

- 50% of all 2 and 3 bed units = 261/2 = 130.5
- 130.5 units - 1 facility required for every 75 units = 130.5/75 = 1.74

20 childcare spaces required for every 75 units = 20 x 1.74 = 35 (34.8) spaces required are required to address the requirements of the proposed development and the current proposal.

Findings

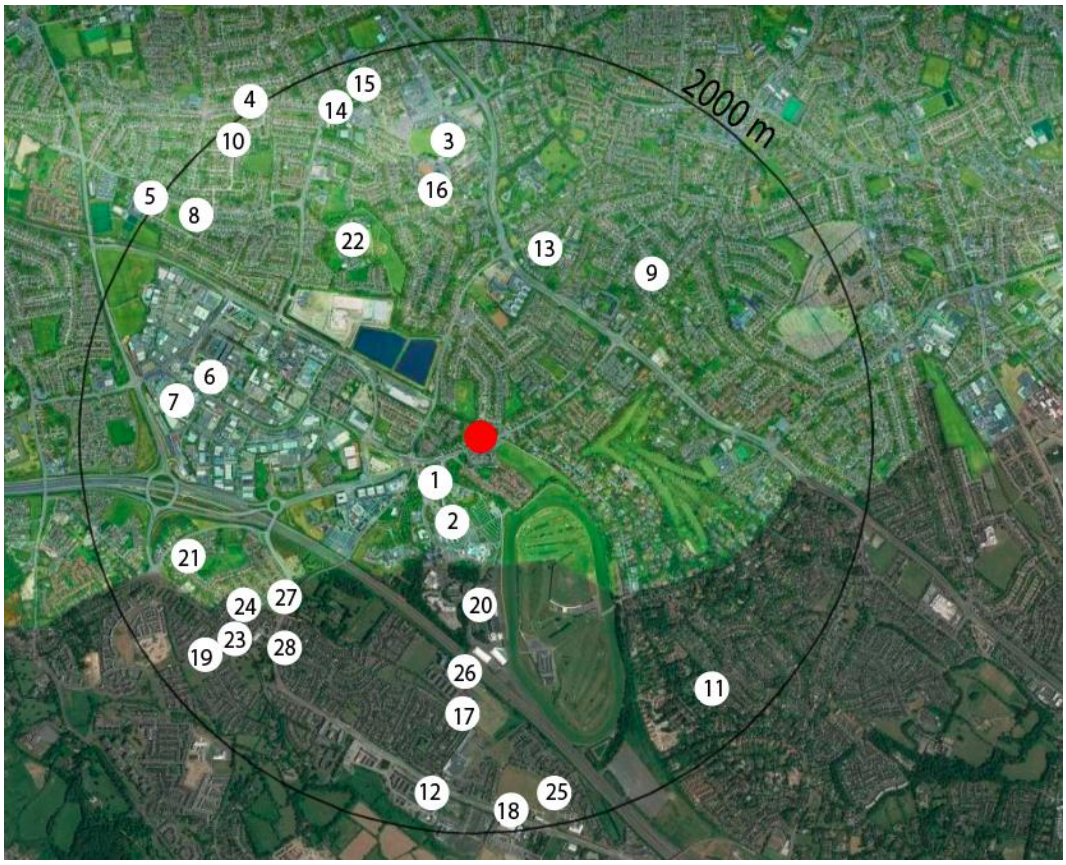
Overall findings are noted as follows:

Proposal	Estimated Demand	Available Capacity
463 residential units	35 spaces	69 spaces minimum

Table 5-2 Estimated Demand vs. Available Capacity for Childcare Spaces

The childcare assessment demonstrates that there is a limited number of childcare places remaining for future children. In addition to these 69 available spaces in the surrounding area, the proposed creche facility of 282 sq m will provide 115 childcare spaces in the development, which will be sufficient to cater for all of the estimated new spaces required with additional capacity. It is submitted that the development will therefore be self-sufficient with regard to childcare requirements, which is considered acceptable and in line with national guidance.

Figure 5.8 – Location of Childcare Facilities



Schools Capacity

It has been established that 17.48% of the existing population in the Stillorgan-Leopardstown Electoral Division is of the average school going age (4-19 years of age). We can assume that 12% of the population created by this development will attend primary school and the remaining 5.48% will attend secondary school. This assumption is made based on guidance detailed in *"The Provision of Schools and the Planning System"*, which details that primary school demand can be assessed based on a rate of 12% of the school going age and that the remaining 5.48% attend post primary facilities. Having considered the above, this equates to **c. 222** no. persons of the 1,273 person population envisioned for the site.

Based on the figures provided and the guidance provided in the "*Provision of Schools and the Planning System*" document, we can therefore estimate that the demand for primary school places would equate to c.152 no. pupils (12% of the total population) and the demand for post primary school places to 70 no. pupils (5.48% of the total population).

A schools capacity assessment of primary and secondary schools within a 5km radius was carried out. A 5km (10 minute drivetime) catchment area was chosen as an appropriate radius to access educational facilities. Not only does this provide with more options to facilities in the area but these can also be accessible via a number of travel alternatives including walking, cycling, driving and public transport. We note that 62 primary schools and 33 post primary facilities have been examined as part of this assessment. A list of the primary schools in the subject catchment area is detailed in Table 5 below. The enrolment figures and available capacity at each school is detailed.

	Primary School	Type	Enrolment Figure	Max. Capacity Figure	Available Capacity
1	All Saints NS	Mixed	55	60	5
2	Ballinteer Educate Together	Mixed	390	414	24
3	Benicasa Special School	Mixed	46	48	2
4	Booterstown Boys	Boys	326	360	51
5	Booterstown National School	Mixed	89	116	27
6	Carmona Special NS	Mixed	36	37	1
7	Carysfort National School	Mixed	569	614	18
6	Carmona Special NS	Mixed	36	37	1
7	Carysfort National School	Mixed	569	614	18
8	CBC Monkstown JS	Boys	515	Not issued	0
9	Cherrywood ETNS	Mixed	5	Not issued	-
10	Clochar San Dominic	Mixed	206	222	16
11	Dalkey School Project	Mixed	234	240	6
12	Dun Laoghaire ETNS	Mixed	62	Not issued	0
13	Gaelscoil Na Fuinseoige	Mixed	140	140	0
14	Gaelscoil Shliabh Rua	Mixed	236	285	49
15	Gaelscoil Thaobh na Coille	Mixed	450	458	8
16	Goatstown Stillorgan Primary School	Mixed	40	40	0
17	Guardian Angels NS	Mixed	429	440	11
18	Holy Cross NS	Mixed	301	303	2
19	Holy Trinity NS	Mixed	578	604	26
20	Islamic National School	Mixed	305	305	0
21	Kill O The Grange NS	Mixed	217	Not issued	-
22	Kilternan Church of Ireland NS	Mxied	211	217	6
23	Lycee Francais D'Irlande	Mixed	300	Not issued	-
24	Monkstown ETNS	Mixed	455	459	4
25	Mount Anville Primary School	Girls	480	480	0
26	Nord Anglia International School	Mixed	Not issued	Not issued	-
27	Oatlands Primary School	Mixed	440	440	0
28	Our Lady's BNS	Boys	283	283	0
29	Our Lady's NS	Mixed	254	254	0
30	Our Lady's Grove Primary School	Mixed	439	Not issued	-
31	Our Lady of Mercy Convent School	Girls	270	Not issued	-
32	Our Lady's Good Counsel GNS	Girls	297	297	0
33	Our Lady's Good Counsel BNS	Boys	391	417	26
34	Queen of Angels National School	Mixed	314	314	0
35	Rathdown School	Girls	263	Not issued	0
36	Scoil Lorcain	Mixed	484	Not issued	-
37	Scoil Mhuire	Girls	278	Not issued	0
38	Scoil San Treasa	Mixed	452	450	0
39	Setanta Special School	Mixed	54	55	1
40	Sharavogue Junior School	Mixed	Not issued	180	-
41	St Attractas Senior NS	Mixed	356	356	0
42	St Andrew's Junior College	Mixed	991	Not issued	-
43	St Brigids National School	Mixed	99	110	4
44	St Brigids BNS	Boys	458	484	26
45	St Brgids GNS	Girls	536	540	4
46	St Josephs NS	Mixed	316	320	4
47	St Laurences BNS	Boys	450	450	0
48	St Kevins NS	Mixed	199	200	1
49	St. Kilian's German School	Mixed	300	300	0
50	St. Marys BNS	Boys	326	360	51
51	St Marys NS	Mixed	455	Not issued	-
52	St Olafs National School	Mixed	509	550	41
53	St Oliver Plunkett Special School	Mixed	63	63	0
54	St Patricks GNS	Mixed	568	Not issued	-
55	St. Patrick's BNS	Boys	137	145	7

56	St Raphealas NS	Girls	456	460	4
57	Stepaside ETNS	Mixed	337	371	34
58	Taney NS	Mixed	434	434	0
59	The Children's House Primary	Mixed	78	80	2
60	The Harold School	Mixed	677	Not issued	-
61	The Red Door School	Mixed	24	23	0
62	The Teresian School	Girls	198	200	2
	Total		***18,406***	***13,978***	***463***

Table 5-3 Enrolment, Capacity and Current Availability for Existing Primary School Facilities

The table above illustrates the total estimated available capacity in existing primary schools in a 5km radius from the subject site to be **463 pupil spaces**.

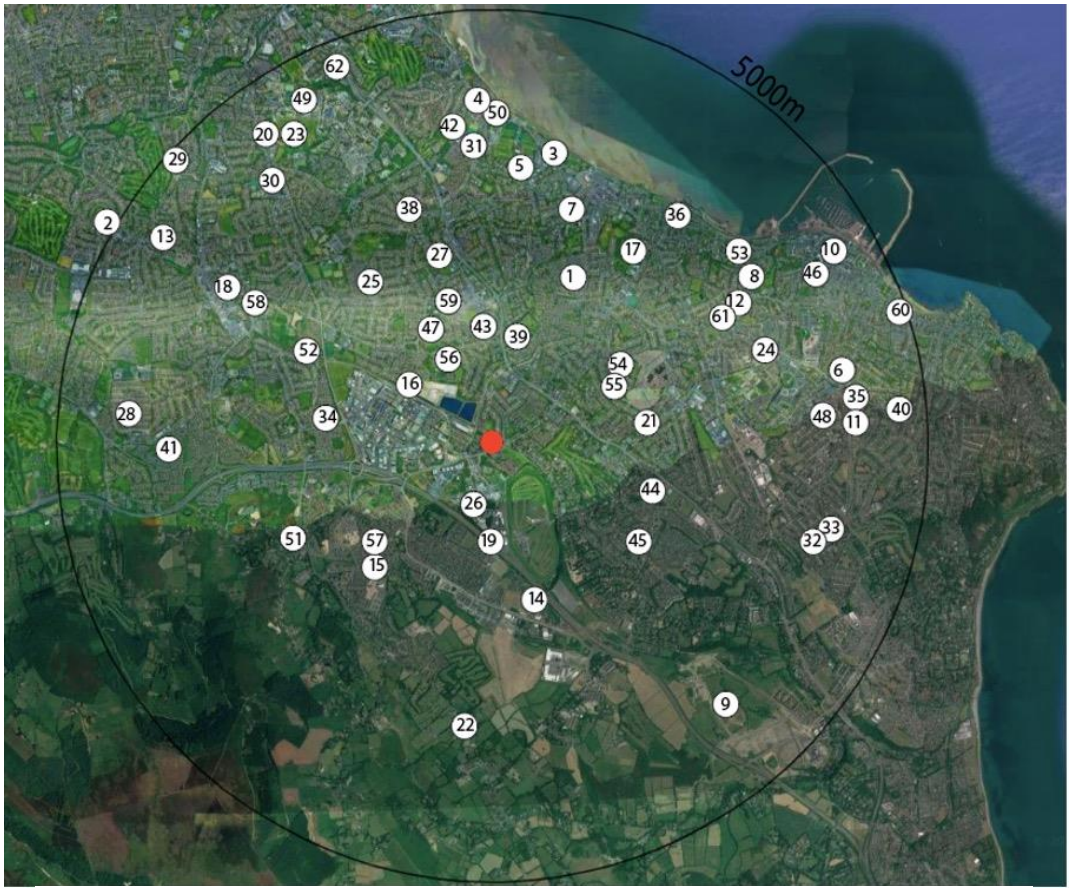


Figure 5-9 Location of Primary Schools in relation to the subject site

Taking the above into account, it is submitted that there exists sufficient capacity in the surrounding area to cater for the primary school needs arising from the proposed development of 463no. residential units.

Capacity of Post Primary School Facilities

Table 5.7 below details the existing post primary schools within the catchment area chosen and specifically the enrolment, capacity and total estimated capacity of these schools.

	Post Primary School	Type	Enrolment Figure	Max. Capacity Figure	Available Capacity
1.	Ballinteer Community College	Mixed	407	Not issued	-
2.	Blackrock College	Boys	1024	Not issued	-
3.	Cabinteely Community School	Mixed	471	495	38
4.	Christian Brothers College	Boys	515	538	23
5.	Clonkeen College	Boys	575	590	15
6.	Colaiste Eoin	Boys	496	Not issued	-
7.	Colaiste Iosagain	Girls	485	Not issued	-
8.	De la Salle College	Boys	283	320	37
9.	Dominican College Sion Hill	Girls	437	464	27
10.	Goatstown Educate Together Secondary School	Mixed	17	Not issued	-
11.	Holy Child Community School	Mixed	246	255	9
12.	Jesus and Mary College, Our Lady's Grove	Girls	309	Not issued	-
13.	Loreto College Foxrock	Girls	519	Not issued	-
14.	Mount Anville Secondary School	Girls	698	800	102
15.	Newpark Comprehensive School	Mixed	861	863	2
16.	Oatlands College	Boys	567	Not issued	-
17.	Our Lady's Grove Secondary School	Girls	304	309	5
18.	Rathdown School	Girls	249	Not issued	-
19.	Rockford Manor Secondary School	Girls	277	Not issued	-
20.	Rosemont School	Girls	182	190	8
21.	Saint Augustines School	Mixed	158	160	2
22.	St Joseph of Cluny Secondary School	Girls	252	Not issued	-
23.	St. Andrews College	Mixed	988	996	8
24.	St. Benildus College	Boys	807	820	13
25.	St. Columba's College	Mixed	333	Not issued	-
26.	St. Killian's German School	Mixed	403	500	97
27.	St. Laurence College	Mixed	258	258	0
28.	St. Raphaelas Secondary School	Girls	569	583	14
29.	St. Tiernan's Community College	Mixed	315	345	30
30.	Stepaside Educate Together Secondary	Mixed	214	314	100
31.	The Teresian School	Girls	198	260	62
32.	Wesley College	Mixed	907	937	30
33.	Willow Park College	Boys	207	208	1
	Total	-	***14,531***	***10,205***	***623***

***Table 5-4 Enrolment, Capacity and Current Availability for Existing Post-Primary School* Facilities**

Table 5-7 above illustrates the total estimated available capacity of post primary schools examined within this assessment, which equates to **623 pupil spaces.** It is submitted that this is sufficient to cater for the 70 no. demand places arising from this proposal.

The demand arising from the proposed development is examined in Table 5-8 below.

Proposal	Estimated Demand	Available Capacity
463 residential units	70 spaces	623 spaces

Table 5-5 Estimated Demand vs. Available Capacity for Post-Primary School Education

Figure 5.10 – Location of Post Primary Schools

As previously discussed, the development has a unit mix of studio, one, two and three bedroomed apartments, which greatly reduces the number of children or families that will be present within this development. It is considered that this will reduce the demand created for school places. Notwithstanding the above, we have carried out our assessment with the consideration that this development would create an average demand for places.

Based on an initial review of capacity available in the various primary and post primary school facilities within the area, there is sufficient capacity to cater for the 152 no. primary pupils and 70 post primary pupils arising from the proposal.

These conclusions are based on an assessment of demand arising from the site based on standard school going ages in the area and a telephone survey carried out in April 2021 and a further online cross check this year, which established the capacity of the various schools referenced above.

5.4 Characteristics of Potential Impacts

This section provides a description of the specific, direct and indirect, impacts that the proposed development may have in a 'do nothing scenario', and during both the construction and operational phases of the proposed development. As stated, guidance documents from the EPA and the Department outline that the assessment of impacts on population and human health should focus on health issues and environmental hazards arising from the other environmental factors, and does not require a wider consideration of human health effects which do not relate to the factors identified in the EIA Directive.

In relation to the extent of the impact of the proposed development during the construction phase, the vast majority of impacts are local (with no transfrontier impact), are acceptable in terms of the magnitude of impact and are temporary, as they will last only for the period of construction of 40 months.

The potential impacts arising during the construction phase are not complex and can be addressed by good construction practice that includes, in particular, the mitigation measures set out in the Construction Management Plan.

Consideration is given to the likely impacts of the development on the factors outlined above in Section 5.3. This consideration focuses on the overall impact if the development were not to proceed; and the impact of the development on each of the above factors at the construction, and operational phases of the development, respectively.

Due to the size of the development, the overall construction phase of the development will last approximately 40 months from the date of commencement.

Impacts on Population Profile

Do Nothing Scenario

Were the development to not proceed, it is likely that the permitted development of 131 no. residential units (D17A/0337) would be implemented with the permission expiring in 2024. The seven large detached houses on large plots fronting Leopardstown Road would remain in use as individual dwellings. This would not fully realise the potential of the subject sites for sustainable residential use in line with the current national policy mandate.

As such, the impact of the development not proceeding on population profile and trends in the area would be negative as the permitted development does not make use of the full potential of the site boundary

Furthermore, the positive nature of the proposed development in terms of its location within a centre of employment, and therefore the associated increase in sustainable commuter trips in the area, would be lost.

Construction Phase

During the construction phase of the development there will be a neutral impact on the population trends and profile for the area as no additional persons will be housed on site

Operational Phase

The proposed development will consist of 463 no. residential units/households. Using the local average household size indicators from Census 2016 for surrounding electoral divisions (2.69), this may result in a projected population of approximately 1,246 no. persons. Using the average household figures for the state (2.75), this may result in a projected population of approximately 1,273 no persons. In terms of analysis for EIAR purposes, the larger population figure is used to assess impact. This will result in a sizeable addition to the emerging Stillorgan-Leopardstown Electoral Division. This is considered significant and positive, particularly in the context of current housing demand, while also taking account of the location's access to places of employment.

Impacts on Housing

Do Nothing Scenario

Where the development does not proceed, it is likely that the permitted development of 131 no. residential units (D17A/0337) would be implemented with the permission expiring in 2024.

The seven large detached houses on large plots fronting Leopardstown Road would remain in use as individual dwellings. This would not fully realise the potential of the subject sites for sustainable residential use in line with the current national policy mandate.

Construction Phase

The residential amenity of the area will be unavoidably affected during the construction phase due to the works taking place. There will be a loss of 10 no. houses proposed to be demolished. This impact is not considered to be significant however.

Operational Phase

The proposed development will result in the addition of 463 no. units to the supply of housing in the Stillogran-Lepordstown area. These will be a mixture of studios, 1, 2 and 3 residential units.

The addition of these proposed units will contribute to the housing unit target outlined in the *Dún Laoghaire-Rathdown County Development Plan 2016 - 2022*, which states that a net requirement of approximately 30,800 no. new units are required over the lifetime of the plan. This equates to an average requirement of approximately 3,080 no. new residential units per annum to 2022.

Impacts on Land Use

Do Nothing Scenario

If the proposed development does not go ahead, it is likely that the permitted development of 131 no. residential units (D17A/0337) would be implemented with the permission expiring in 2024. This would change the townscape character of the Tipperstown triangle of lands in keeping with the evolution of the wider Sandyford/Leopardstown urban district. The seven large detached houses on large plots fronting Leopardstown Road would remain in use as individual dwellings. This would (a) not fully realise the potential of the subject sites for sustainable residential use, and (b) not change the character (for the better) or improve the quality of the Leopardstown Road streetscape to the extent that the proposed development would.

Construction Phase

The proposed development complies with the statutory land-use zoning for the site. The development of the subject site is in accordance with the objective to achieve compact growth contained with the National Planning Framework and will realise the efficient use of currently under-utillised brownfield land and higher housing density that is well served by public transport.

In light of national policy, it is likely that that the impact of this development would have a significant positive effect that will achieve local and wider county, regional and national objectives.

Operational Phase

The proposed development will deliver 463 no. residential units of which 45no. will be for the purposes of Part V, social housing.

In light of the existing housing crisis, it is considered that a high-density development at this location would result in a likely significant positive impact as it would realise the objective of compact urban growth through the efficient and effective use of zoned and services landbank to provide much needed housing for future populations.

Impacts on Employment

Do Nothing Scenario

Where the proposed development does not proceed, it is likely that the permitted development of 131 no. residential units (D17A/0337) would be implemented with the permission expiring in 2024. This

would increase the current levels of employment required to maintain the site (security personnel and maintenance) however, this increase would not be as significant as it would with the fully realised site potential of the proposed scheme.

Construction Phase

The construction phase will provide employment for a large workforce at various stages during the life of the 40 month project. These construction workers will likely be recruited from Dublin and the wider metropolitan area. The multiplier effect arising from these additional construction jobs will also lead to an increase in employment in local businesses providing services to construction workers. As a result, the project will have a positive impact on employment numbers in the area during the construction phase.

Operational Phase

The proposed development will provide housing for a potential number of approximately 1,273 no. persons, when using average household figures for the State. Given the multitude of large employment centres within close proximity to the site, the existence of significant transport infrastructure providing access to other centres it is likely that future residents of the scheme would work within close proximity to nearby employment centres. The multiplier effect arising from these additional residents using local services and purchasing goods at local businesses will also lead to an increase in employment in those businesses, which meet this demand.

Impacts on Traffic and Transport

Do Nothing Scenario

If the development did not proceed, there would be an increase on commuting patterns in the area from the permitted development (D17A/0337). The impact would be minor as the permitted development does not provide any additional transport infrastructure services.

Construction Phase

During the construction phase the site will be accessed via Leopardstown Road. An Outline Construction Management Plan is required in accordance with the *County Development Plan 2016-2022.* The Plan includes a section which covers the Preliminary Traffic Management Plan. Further information on this is outlined in Chapter 13 of this EIAR – *Material Assets, Traffic and Transportation.*

Operational Phase

An Bord Pleanala will note from a review of the Traffic Assessment submitted by ILTP that traffic generated by the proposed development will be relatively low and is not expected to result in a significant impact.

Impacts on Social Service Provision

Do Nothing Scenario

If the proposed development did not proceed, it is likely that the permitted development of 131 no. residential units (D17A/0337) would be implements with the permission expiring in 2024. This permission does not contain any social service provisions i.e. creche, café, gym. This would impact the existing social services in the area.

Construction Phase

Not applicable.

Operational Phase

As stated above, it has been established that 17.48% of the existing population is of the average school going age (4-19 years of age). This equates to 222 persons of the 1,273 person population envisioned for the site.

Based on the figures provided we can estimate that the demand for primary school places would equate to c 152 no. pupils (12% of the total population) and the demand for post primary school places to 70 no. pupils (5.48% of the total population).

It is submitted that this demand can be absorbed by the current schools capacity of the area and no further educational provision will be required in the context of this proposal. .

5.5 Human Health – The Potential Impacts

Lands & Soils

The following were concluded by Barrett Mahony in Chapter 7 of this EIAR.

Construction Stage

A potential risk to human health due to the associated works during construction is the direct contact, ingestion or inhalation of receptors (i.e. construction workers) with any soils which may potentially contain low level hydrocarbon concentrations from site activities(potential minor leaks, oils and paint)

Operational Stage

No human health risks associated with long term exposure to contaminants (via. direct contact, ingestion or inhalation) resulting from the proposed development are anticipated.

Water

The following were concluded by Barrett Mahony Chapter 8 of this EIAR.

Construction Stage

There is a risk to Human Health should the ground water or the existing water supply become contaminated during the construction or operational stages, and the water is consumed. In order to mitigate these risks the measures outlined below will be adopted.

Operational Stage

There is a risk to Human Health should the ground water or the existing water supply become contaminated during the construction or operational stages, and the water is consumed. In order to mitigate these risks the measures outlined below will be adopted.

Noise and Vibration

The following were concluded by AWN in Chapter 9 of this EIAR.

Construction Stage

Construction phase noise and vibration emissions will be temporary and transient and will be managed so as to minimise impact to population and human health by complying with all relevant guidance, as such the impact will be short-term and have a slight impact overall.

Best practice noise and vibration control measures will be employed by the contractor during the construction phase in order to avoid significant impacts at the nearest sensitive buildings. The best practice measures set out in BS 5228 (2009 +A1 2014) Parts 1 and 2 will be complied with. Predictions indicate that significant construction noise impacts are expected to occur when work is ongoing at boundary locations adjacent to noise sensitive locations, hence the contractor will ensure that all best practice noise and vibration control methods will be used.

In this regard, various mitigation measures can be considered and applied during the construction of the proposed development, such as:

1. limiting the hours during which site activities likely to create high levels of noise or vibration are permitted;
2. establishing channels of communication between the contractor/developer, Local Authority and residents;
3. appointing a site representative responsible for matters relating to noise and vibration;
4. monitoring typical levels of noise and vibration during critical periods and at sensitive locations;
5. all site access roads will be kept even so as to mitigate the potential for vibration from lorries.

Furthermore, it is envisaged that a variety of practicable noise and vibration control measures will be employed. These may include:

1. no blasting is to occur;
2. selection of plant with low inherent potential for generation of noise and/ or vibration;
3. solid site hoarding is to be provided which will act as a noise barrier;
4. erection of barriers as necessary around noisy processes and items such as generators, rock breaker, heavy mechanical plant or high duty compressors;
5. placing of noisy / vibratory plant as far away from sensitive properties as permitted by site constraints and the use of vibration isolated support structures where necessary.

Operational Stage

Operational phase noise will also be managed to achieve relevant noise limit values and is predicted to meet all such requirements. All wall constructions (i.e. block work or concrete and spandrel elements) offer a high degree of sound insulation, much greater than that offered by glazing systems. Therefore, noise intrusion via the wall construction will be minimal, No operational phase vibration impacts are predicted. Therefore, the operational phase noise impacts will be neutral for the life of the development.

Air and Climatic Factors

The following points were concluded by AWN Consulting Ltd in Chapter 10 of this EIAR.

Construction Stage

Best practice mitigation measures are proposed for the construction phase of the proposed development which will focus on the pro-active control of dust and other air pollutants to minimise generation of emissions at source. The mitigation measures that will be put in place during construction of the proposed development will ensure that the impact of the development complies with all EU ambient air quality legislative limit values which are based on the protection of human health. Therefore, the impact of construction of the proposed development is likely to be short-term and imperceptible with respect to human health

Operational Stage

Impacts to air quality and climate are predicted to be imperceptible during the operational phase of the proposed development.

Landscape and Visual

The following points were concluded by Modelworks in Chapter 12 of this EIAR:

Construction Stage

During the construction phase, the visual impacts on the landscape will be of short-term duration.

Operational Stage

The townscape and visual effects on all receptors are predicted to be neutral or positive. Therefore, no mitigation measures other than those incorporated into the design proposal are considered necessary.

Traffic and Transport

The following points were concluded by ILTP Chapter 13 of this EIAR.:

Construction Stage

A number of temporary risks to human health may occur during construction phase related to noise, dust, air quality and visual impacts which are addressed in other sections of this EIAR.

The following mitigation measures due to the additional HGV Traffic can be considered and applied during the construction phase:

1. Tracked excavators will be moved to and from the Site on low-loaders and will not be permitted to drive onto the adjacent roadway.
2. The applicant shall at all times keep all public and private roads and footpaths entirely free of excavated materials, debris and rubbish.
3. Public roads outside the Site shall be regularly inspected for cleanliness, as a minimum on a daily basis, and cleaned as necessary. A road sweeper will be made available to ensure that public roads are kept free of debris.
4. The applicant shall be responsible for and make good any damages to existing roads or footpaths caused by his own contractors or suppliers transporting to and from the Site.
5. The contractor shall confine his activities to the area of the Site occupied by the works and the builders' compound, as far as practicably possible, during any particular phase of the works.

The following mitigation measure for the additional construction personnel vehicle movements can be considered and applied during the construction stage:

1. All construction workers will be encouraged to use public transport, and also to car share where appropriate. On site staff car parking can also be provided to ensure no construction workers will be required to park on adjacent roads or streets.
2. No daytime or night-time parking of site vehicles or construction staff vehicles will be permitted outside agreed areas.

Operational Stage

There will be a slight increase in traffic on the local road network.

Material Assets – Utilities

The following points were concluded by Barrett Mahony Chapter 14 of this EIAR.

Construction

There are potential implications for the local populations if there are disruption to utility services during the connection of the new services to the proposed development. disrupt the existing services.

The construction works contractor shall liaise with the relevant utilities provider prior to works commencing, with on-going consultation throughout the proposed development. Where new services are required, the construction works contractor shall apply to the relevant utility provider and adhere to the requirements outlined in the connection permit / licence.

The Contractor will be obliged to put measures in place to ensure that there are no interruptions to existing services unless this has been agreed in advance with the relevant service provider. Please refer to section 8.10.1 of the water chapter for further mitigation measures.

Operational Stage

Not applicable.

Please refer to Chapter 8 of the EIAR – 'Water', for mitigation measures associated with the surface water drainage. All new drainage lines (foul and surface water) will be pressure tested and will be subject to a CCTV survey to identify any possible defects prior to being made operational.

Material Assets – Waste Management

Construction

The potential impacts on human beings in relation to the generation of waste during the construction and operational phases are that incorrect management of waste could result in littering which could cause a nuisance to the public and attract vermin. A carefully planned approach to waste management and adherence to the project specific C&DWMP and OWMP, will ensure appropriate management of waste and avoid any negative impacts on the local population. The predicted effect of the generation of waste during the construction and operational phases on human health will be ***long-term, imperceptible and neutral***.

In addition, the following mitigation measures will be implemented:

- Building materials will be chosen with an aim to 'design out waste';
- On-site segregation of waste materials will be carried out to increase opportunities for off-site reuse, recycling, and recovery. The following waste types, at a minimum, will be segregated:
    - Concrete rubble (including ceramics, tiles, and bricks);
    - Plasterboard;
    - Metals;
    - Glass; and
    - Timber.
- Left over materials (e.g., timber off-cuts, broken concrete blocks / bricks) and any suitable construction materials shall be re-used on-site, where possible;
- All waste materials will be stored in skips or other suitable receptacles in designated areas of the site;
- Any hazardous wastes generated (such as chemicals, solvents, glues, fuels, oils) will also be segregated and will be stored in appropriate receptacles (in suitably bunded areas, where required);
- A Waste Manager will be appointed by the main Contractor(s) to ensure effective management of waste during the demolition, excavation and construction works;

- All construction staff will be provided with training regarding the waste management procedures;
- All waste leaving site will be reused, recycled, or recovered, where possible, to avoid material designated for disposal;
- All waste leaving the site will be transported by suitably permitted contractors and taken to suitably registered, permitted, or licenced facilities; and
- All waste leaving the site will be recorded and copies of relevant documentation maintained.
- Nearby sites requiring clean fill material will be contacted to investigate reuse opportunities for clean and inert material, if required. If any of the material is to be reused on another site as by-product (and not as a waste), this will be done in accordance with Article 27 of the EC (Waste Directive) Regulations (2011). EPA approval will be obtained prior to moving material as a by-product. However, it is not currently anticipated that Article 27 will be used.

Operational Stage

- The Operator / Buildings Manager of the Site during the operational phase will be responsible for ensuring – allocating personnel and resources, as needed – the ongoing implementation of this OWMP, ensuring a high level of recycling, reuse, and recovery at the Site of the proposed Development.

In addition, the following mitigation measures will be implemented:

- The Operator / Buildings Manager will ensure on-Site segregation of all waste materials into appropriate categories, including (but not limited to):
    - Organic waste;
    - Dry Mixed Recyclables;
    - Mixed Non-Recyclable Waste;
    - Glass;
    - Waste electrical and electronic equipment (WEEE);
    - Batteries (non-hazardous and hazardous);
    - Cooking oil;
    - Light bulbs;
    - Cleaning chemicals (pesticides, paints, adhesives, resins, detergents, etc.);
    - Furniture (and from time-to-time other bulky waste); and
    - Abandoned bicycles.
- The Operator / Buildings Manager will ensure that all waste materials will be stored in colour coded bins or other suitable receptacles in designated, easily accessible locations. Bins will be clearly identified with the approved waste type to ensure there is no cross contamination of waste materials;
- The Operator / Buildings Manager will ensure that all waste collected from the Site of the proposed Development will be reused, recycled, or recovered, where possible, with the exception of those waste streams where appropriate facilities are currently not available; and
- The Operator / Buildings Manager will ensure that all waste leaving the Site will be transported by suitable permitted contractors and taken to suitably registered, permitted, or licensed facilities.

Daylight and Sunlight

Construction

The potential impact of the construction phase of the proposed development on daylight and sunlight access is likely to be, initially, lesser than the potential impact of the completed development. As the proposed development nears completion, the potential impact of the emerging development is likely to be similar in all material respects to that of the completed development. It is noted that temporary structures and machinery (e.g. hoarding, scaffolding, cranes, etc.) have the potential to result in changes in daylight access in buildings, although any additional impacts arising from temporary structures or machinery are likely to be temporary and minor.

Operational Stage

As is always the case where a development will result in a change to the sunlight and daylight environment of an area, the impacts of the development on sunlight access will result in interactions with climate, population and human health and the landscape. Chapter 18 Daylight and Sunlight by ARC Architectural Consultants Ltd addresses the impacts and mitigation measures during the operational stage.

5.2 Potential Cumulative Impacts

The potential cumulative impacts of the proposed development on population and human health have been considered in conjunction with the ongoing changes in the surrounding area. Cumulative impacts, if any, will be limited to the construction stage and will, therefore, be temporary to short-term in duration. Appendix 2.1, submitted as part of this application, has highlighted 14 no. applications in the local area. Per the map, there are 2 no. planning applications proposed further east of the site along the Leopardstown Road, (D19A/0972 – ABP 300757/20 and D21A/0294).

The cumulative impact of the proposed development will be a further increase in the population of the wider area. The proposed development lands will provide for 463 no. new 1, 2 and 3 bed residential units. This will have a moderate impact on the population (human beings) in the area. This impact is likely to be long term and is considered to be positive, having regard to the zoning objective for the subject ands, and their strategic location in close proximity to high quality, high frequency public transport, and the high level of demand for new housing in the area.

With regard to human health, the cumulative impact of the proposed development in conjunction with other nearby developments will provide for the introduction of high quality new neighbourhoods in the area with a high level of accessibility and amenity. The overall cumulative impact of the proposed development will therefore be long term and positive with regard to human health, as residents will benefit from a high quality, visually attractive living environment, with ample opportunity for active and passive recreation and strong links and pedestrian permeability, with a direct and convenient link to high frequency public transport modes.

5.6 Mitigation Measures

Construction Phase

A bespoke and detailed Construction Management Plan (CMP) has been prepared by AWN. The main purpose of a CMP is to provide a mechanism for implementation of the various mitigation measures which are described in chapter 20 of the EIAR. The purpose of this report is to summarise the possible impacts and measures to be implemented and to guide the Contractor who will be required to develop and implement the CMP on site.

All personnel will be required to understand and implement the requirements of the CMP and shall be required to comply with all legal requirements and best practice guidance for construction sites.

Project supervisors for the construction phase will be appointed in accordance with the Health, Safety and Welfare at Work (Construction Regulations) 2013, and a Preliminary Health and Safety Plan will be formulated during the detailed design stage which will address health and safety issues from the design stages, through to the completion of the construction phases.

Adherence to the construction phase mitigation measures presented in this EIAR will ensure that the construction of the proposed development will have an imperceptible and neutral impact in terms of health and safety.

Operational Phase

The proposed development has been designed to avoid negative impacts on population and human health through;

- The inclusion of a childcare facility within the proposed development;
- Landscaping to mitigate against issues arising from microclimate conditions;
- The inclusion of a comprehensive foul and surface water management system;
- Energy efficient measures; and,
- High quality finishes and materials.

5.7 Residual Impacts

It is anticipated that the proposed development will realise significant positive overall economic and social benefits for the local community and the wider Stillorgan area.

Strict adherence to the mitigation measures recommended in this EIAR will ensure that there will be no negative residual impacts or effects on Population and Human Health from the construction and operation of the proposed scheme. Indeed, the delivery of much needed housing will realise a likely significant positive effect for the local area.

5.3 Monitoring

Measures to avoid negative impacts on Population and Human Health are largely integrated in to the design and layout of the proposed development. Compliance with the design and layout will be a condition of any permitted development.

Monitoring will be undertaken by the Building Regulations certification process and by the requirements of specific conditions of a planning permission.

Monitoring of compliance with Health & Safety requirements will be undertaken by the Project Supervisor for the Construction Process.

5.4 Reinstatement

While not applicable to every aspect of the environment considered within the EIAR, certain measures may be proposed to ensure that in the event of the proposal being discontinued, there will be minimal impact to the environment.

There are no reinstatement works proposed specifically with respect to population and human health.

5.5 Interactions

As noted above, there are numerous inter-related environmental topics described in detail throughout this EIAR document which are of relevance to human health. This chapter of the EIAR has been instructed by updated guidance documents reflecting the changes within the Directive 2011/92/EU, as amended by Directive 2014/52/EU (the "EIA Directive"). These documents include the European Commission's Environmental Impact Assessment of Projects: Guidance on the Preparation of the Environmental Impact Assessment Report (2017) ,Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (2018) and the Draft Guidelines on the information to be contained in environmental impact assessment reports, published by the EPA in August 2017. Therefore, in line with the guidance documents referred to, this chapter of the EIAR

focuses primarily on the potential likely and significant impact on Population and Human Health in relation to health effects/issues and environmental hazards from the other environmental factors and interactions that potentially may occur.

Where there are identified associated and inter-related potential likely and significant impacts which are more comprehensively addressed elsewhere in this EIAR document, these are referred to. However, the reader is directed to the relevant environmental topic chapter of this EIAR document for a more detailed assessment.

5.6 Difficulties Encountered

No significant difficulties were experienced in compiling this chapter of the EIAR document.

5.7 References

Central Statistics Office www.cso.ie.

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