NON-TECHNICAL SUMMARY OF ENVIRONMENTAL IMPACT ASSESSMENT REPORT

Mixed-use Development

The Former Chadwick's Site, South of Greenhills Road,
Walkinstown, Dublin 12.

SUBMITTED ON BEHALF OF:
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HUGHES PLANNING
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1.0 Introduction

This Non-Technical Summary (NTS) of the Environmental Impact Assessment Report (EIAR) relates to a Planning Application by Steeplefield Limited (referred to as the Applicant throughout) for a proposed LRD development comprising the demolition of the existing industrial units on site and the construction of a residential development featuring 588 no. residential units (291 no. one beds, 238 no. two beds and 59 no. three beds) in 4 no. blocks (A-D), 1 no. childcare facility at the ground floor of Block B, 6 no. commercial units at ground floor level of Blocks A, B and D, construction of 4 no. vehicular/pedestrian entrances; a primary entrance from the north (access from Greenhills Road) and a primary entrance via vehicular ramp from the north (access from Greenhills Road) and 3 no. secondary entrances from the south for access, emergency access and services (access from the existing road to the south of the site) with additional pedestrian accesses proposed along Greenhills Road, 270 no. car parking spaces comprising 240 no. standard spaces (including 6 no. car club spaces) and 13 no. mobility spaces located at surface level and within undercroft car parks within Blocks A, B , C and D, 17 no. commercial/ unloading/ drop-off parking spaces at ground level, 1,269 no. bicycle parking spaces comprising 952 no. residents' bicycle spaces, 10 no. cargo/accessible bicycle spaces in 14 no. bicycle storerooms in surface and undercroft parking areas and 307 no. visitors' bicycle spaces located externally at ground floor level, outdoor amenity space, internal communal amenity facilities, other services and ancillary site development works necessary to facilitate the development at the Former Chadwick's Site, South of Greenhills Road, Walkinstown, Dublin 12.

Article 5(1)(e) of the EIA Directive requires that an Environmental Impact Assessment Report (EIAR) is accompanied by a NTS of the EIAR and it is transposed into Irish law under Article 94(c) of the Planning and Development Regulations 2001, as amended.

This NTS presents a general overview of the proposed residential development and of associated potential environmental impacts. The term 'non-technical' indicates that this summary is intended for the educated layperson but avoids the use of technical terms, the presentation of detailed data and complex scientific discussion, that detail is presented in Volume II of the EIAR.

The EIAR complies with Article 5(1)(e) of the EIA Directive and Irish Planning and Development Regulations 2001. The NTS provides a general overview of the development and its potential environmental impacts.

2.0 Environmental Impact Assessment Requirements

The European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018, defines an EIAR as:

'A report of the effects, if any, which proposed development, if carried out, would have on the environment and shall include the information specified in Annex IV of the Environmental Impact Assessment Directive.'

The subject development is not of a type or size that would require mandatory EIA under Annex I. However, given the number of units proposed at 633 no. units on a site area of 2.79 ha, the subject proposal would constitute an "infrastructure project" with respect to Class 10 Annex II and accordingly an EIA is required under Class 10(b)(i):

"Construction of more than 500 dwelling units."

In order to ensure that all potential impacts associated with the development proposal are identified and addressed, this EIAR provides a systematic and integrated evaluation of the direct, indirect and secondary effects of the project on the natural and socio-economic environment.

The aim of the approach is to identify and predict (for a given proposed development) any impacts of consequence; to describe the means and extent by which they can be avoided in the first instance or reduced or ameliorated; to interpret and communicate information about the impacts; and to provide input into the decision-making and planning process.

The aim of the EIAR is to:

- Describe the project using information on the site, design and size of the proposed development;
- Identify and predict any impacts on environmental features likely to be affected, having regard to the specific characteristics of the proposed development;
- Describe the measures envisaged in order to avoid, reduce and, where possible, remedy significant adverse effects;
- Provide the data required to identify and assess the main effects which the proposed development is likely to have on the environment; and
- Provide a Non-Technical Summary of the information.

2.1 EIAR Study Team

The EIAR was completed by a project team led by Hughes Planning and Development Consultants, who also prepared a number of the chapters.

The members of the team and their respective inputs are outlined below:

Chapter	Title	Contributor
1	Introduction	Hughes Planning and Development Consultants (HPDC)
2	Project Description and Alternatives Examined	HPDC
3	Planning and Development Context	HPDC
4	Population and Health	HPDC
5	Biodiversity	Moore Group on behalf of AWN Consulting Limited
6	Land, Soils and Geology	AWN Consulting Limited
7	Water and Hydrology	AWN Consulting Limited
8	Noise and Vibration	AWN Consulting Limited
9	Air Quality	AWN Consulting Limited
10	Climate	AWN Consulting Limited
11	Microclimate	AWN Consulting Limited
12	Material Assets - Waste	AWN Consulting Limited
13	Material Assets - Traffic	AWN Consulting Limited
14	Material Assets - Utilities	NRB Consulting Engineers
15	Archaeology, Architectural and Cultural Heritage	Byrne Mullins & Associates
16	Landscape and Visual Amenity	Park Hood Landscape Architects
17	Interactions Between Environmental Factors	HPDC & Consultants
18	Mitigation and Monitoring Measures	HPDC & Consultants

Table 1.0 List of contributors to the EIAR

3.0 Project Description

3.1 Site Location and Context

The application site comprises a total area of 2.79 hectares, and involves the Former Chadwick's site which is located south of Greenhills Road, Walkinstown, Dublin 12. The subject site forms part of the Greenhill Industrial Estate. There are existing low-rise disused warehouse units featuring on the subject site which are proposed for demolition as part of the subject proposal. The site is currently accessed off a road within the Greenhill Industrial Estate, with 3 no. vehicular accesses featuring along the site's southern boundary. A very strong feature of the site includes a level difference that exists between the Greenhills Road interface and the subject site's southern boundary.

The site is located within an area comprising industrial land use immediately surrounding the site on all sides. The industrial land immediately surrounding the site to the southeast and west is known as the Greenhill Industrial Estate. The industrial land immediately north of the subject site forms part of the Ballymount Industrial Estate. The Greenhill Industrial Estate is expected to be the subject of extensive urban renewal in the coming years, with existing industrial buildings being replaced with higher-density development. A Quality Bus Corridor is also proposed to run along Greenhills Road, north of the site. The Greenhills Road Quality Bus Corridor forms part of the QBC Network linking Tallaght town centre to the city centre and it will also join the South Clondalkin QBC at the Walkinstown Road/Long Mile Road junction.

Walkinstown is the closet village to the subject site and offers a range of amenities and services including supermarkets, restaurants, pubs, chemist's shop, hairdressers among other services. The Ashleaf shopping centre is located c. 1.2km from the subject site. A strong feature of the site is its proximity to the Greenhills / Mulcahy Keane Estate bus stop, 2 minutes' walk away from the application site, offering a good public transport service with direct links to Jobstown, Clare Hall, Dublin City and the Dublin Docklands, Citywest Campus and Tallaght. It should also be noted that the LUAS red line stop is situated just a 20-minute walk away from the site.

Figure 2.0 Aerial image of the subject site

Figure 3.0 Aerial image showing the application site (outlined in red) in the context of the wider area land uses.

3.2 Proposed Development

The proposed development, as designed by C+W O'Brien Architects, involves the demolition of the existing industrial units on site and the construction of a residential development featuring 588 no. residential units (291 no. one beds, 238 no. two beds and 59 no. three beds) in 4 no. blocks (A-D), 1 no. childcare facility at the ground floor of Block B, 6 no. commercial units at ground floor level of Blocks A, B and D, construction of 4 no. vehicular/pedestrian entrances; a primary entrance from the north (access from Greenhills Road) and a primary entrance via vehicular ramp from the north (access from Greenhills Road) and 3 no. secondary entrances from the south for access, emergency access and services (access from the existing road to the south of the site) with additional pedestrian accesses proposed along Greenhills Road, 270 no. car parking spaces comprising 240 no. standard spaces (including 6 no. car club spaces) and 13 no. mobility spaces located at surface level and within undercroft car parks within Blocks A, B , C and D, 17 no. commercial/ unloading/ drop-off parking spaces at ground level, 1,269 no. bicycle parking spaces comprising 952 no. residents' bicycle spaces, 10 no. cargo/accessible bicycle spaces in 14 no. bicycle storerooms in surface and undercroft parking areas and 307 no. visitors' bicycle spaces located externally at ground floor level, outdoor amenity space, internal communal amenity facilities, other services and ancillary site development works necessary to facilitate the development at the Former Chadwick's Site, South of Greenhills Road, Walkinstown, Dublin 12.

The proposed scheme has a housing density of 210.5 dwellings per Ha, a plot ratio of 2.22 and a site coverage of 50% including undercroft parking areas. The proposed development has been designed having regard to the topography of the subject site, a watermain which features in the north-eastern corner of the site, the possible future extension of Calmount Road and the redevelopment of the surrounding industrial estate.

The layout of the proposed development has been informed by the topography of the subject site, its proximity to public transport on Greenhills Road and Walkinstown, the feedback received from South Dublin County Council, the City Edge Team, NTA, Uisce Eireann and An Bord Pleanála at the pre-

planning stage, the policies and objectives set out for the subject site and surrounding area in the South Dublin County Development Plan 2022-2028, as well as the inputs from the EIAR consultants.

Figure 4.0 Proposed site layout

Figure 5.0 Proposed landscape plan

Figure 6.0 CGI of the proposed development

Figure 7.0 CGI of the proposed development

Figure 8.0 CGI of the proposed development

Figure 9.0 CGI of the proposed development

3.3 Alternatives Considered

The Planning and Development Regulations, 2001, as amended, require:

"A description of the reasonable alternatives studied by the person or persons who prepared the EIAR, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the proposed development on the environment."

Reasonable alternatives may include project design proposals, location, size and scale, which are relevant to the proposed development and its specific characteristics. With regards to alternative locations, given the zoning objectives of the subject site as a proposed regeneration area in the South Dublin County Development Plan 2022-2028, and having regard to the project's objectives, no alternative locations were considered.

The main alternatives studied during the development of this application comprise alternative design and layout options for a largely residential development at the subject site. Alternative site layouts and siting progressed throughout the design process in order to minimise the impact on the receiving environment at the earliest opportunity. The initial stage involved a constraints analysis of the land within the proposed development site to identify all high-level constraints and aggregate them against the site to allow a suitable layout to be developed.

The alternative development options considered for the site are set out in Chapter 2, starting with the initial layout tabled at the 1st pre-planning meeting had with South Dublin County Council on 24th November 2022, and then describing design options and changes which were incorporated into the scheme as the proposals progressed through extensive pre-application discussions with South Dublin County Council, NTA and Uisce Eireann, and in response to input from the appointed EIAR team.

The principal considerations and amendments to the design of the scheme, having regard to and comparing the key environmental issues, are set out and discussed The scheme proposed in this application for permission has evolved from its original form and the consideration of alternative designs has resulted in significant environmental improvements in terms of the landscape and visual contribution that the proposed development will contribute to this area. Having examined various reasonable alternative designs and having engaged in extensive and detailed consultations with South Dublin County Council, NTA and Uisce Eireann in the course of the design evolution of the current scheme, it

is considered that the proposed design as set out in the subject LRD application is a preferable option in terms of the sustainable development of the subject site and the creation of a sustainable community neighbourhood insofar as it achieves a mixed-use development, including 588 no. units and achieving a net residential density of 210.5 units per hectare. The current design achieves a range of apartment types, sizes, and designs whilst also providing adequate open space and achieving a strong urban edge and passive surveillance. The proposed development promotes permeability through the site and will link in with future developments that will come onstream under City Edge.

Figure 10.0 Site plan of SHD development refused by An Bord Pleanála

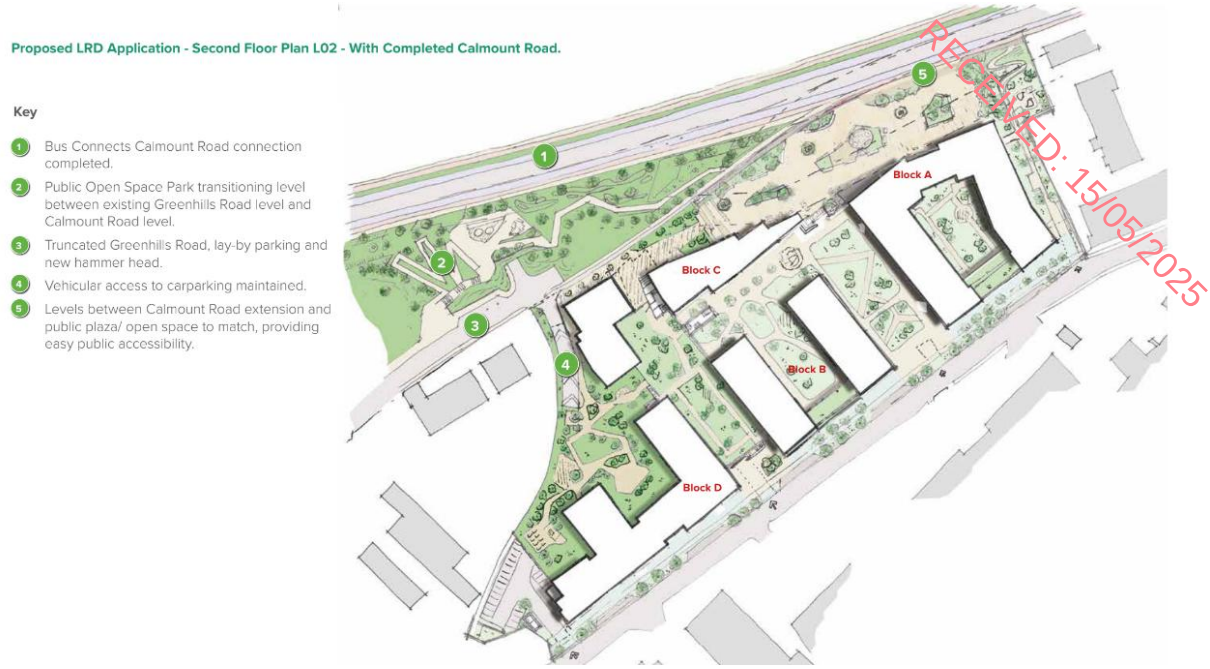

Figure 11.0 Site plan presented at the first Section 247 preplanning meeting in November 2022

Figure 12.0 Site plan presented at the first LRD Preplanning meeting in December 2023

Figure 13.0 Site plan presented at the first LRD Preplanning meeting in December 2024

4.0 Population and Health

The Population and Health chapter was prepared by Hughes Planning and Development Consultants and describes the significant effects of the development on the surrounding human environment in the general area of the subject site at Greenhills Industrial Estate, Greenhills Road, Walkinstown, Dublin 12. The assessment of the effects of the proposed development focuses on: population levels; impact on employment and economic activity; land use and settlement patterns; housing; community infrastructure and social facilities; health and safety; and risk of major accidents and disasters. In considering the impacts of the proposed development on the above key items, the chapter will assess the impacts of the works both during the construction phase and the operational phase.

In order to assess the likely significant impacts of the proposed development on population and human health, an analysis of recent Census data was undertaken. Data relating to the Electoral Division of Terenure St. James, South Dublin County and the State, were examined.

The construction phase of the proposed development is likely to result in a positive net improvement in employment and economic activity particularly in the construction sector and in associated and secondary building services industries. From the census figures, it can be gathered that the population in the vicinity of the proposed development has remained similar over recent intercensal periods. Within

the surrounding area, the population growth levels have been very disparate, however, the population levels of the area have remained relatively similar.

The construction phase of the proposed development will not have any direct impact on the population of the area as no additional persons will be housed on-site. The operational phase of the proposed development will have a direct impact on the population of the area and the subject lands. With a total of 588 no. residential units proposed to be built, the anticipated increase in population for the site can be expected to be c. 1,405 based on the average household size of 2.39 in the Terenure St. James electoral division. This is based on average household numbers for one-, two-, and three-bedroom residential units. The impacts of an increase in the population within the site will be gradual during the completion of the development. The population of the development will therefore be significant and positive, particularly in the context of current housing demand and taking account of the subject site's location in close proximity to public transport links such as the approved bus connects routes and access to areas of employment.

The construction phase of the proposed development will provide a positive improvement to the economy and employment prospects within Ballymount, Greenhills and the surrounding area more broadly, particularly within the wider construction sector for a 36 month period (estimated construction period). The construction phase will also have secondary and indirect 'spin-off' impacts on ancillary support services in the area of the site, such as retail services, together with wider benefits in the aggregate extraction (quarry) sector, building supply services, professional and technical professions etc. The operational phase of the proposed development will result in an increase in population. This increase in population in the area will enhance local spending power and will assist with the delivery of a critical mass of population which will support a wide range of additional local businesses, services, transport infrastructure and employment opportunities. This will play a role in the future growth of the area and the improvement of local amenities and infrastructure.

5.0 Biodiversity

5.1 Introduction

Moore Group on behalf of AWN Consulting Ltd undertook the biodiversity assessment. The proposed development site is located within the existing former Chadwicks site, at Greenhill Road, Walkinstown, Dublin The proposed development areas comprise buildings and artificial surfaces with pockets of mixed native and non-native trees and shrub species, mostly poor and scrubby examples.

5.2 Baseline Environment

The site is located in an area of light industrial and commercial premises, and bounded to the north by the Greenhills Road, to the south by a minor road separating the site from the Beechlawn Industrial estate, to the west by commercial premises, and to the east by the remaining Chadwicks retail site. The Greenhills Road, and the lands to the northwest are at a substantially greater elevation than the main Chadwicks site.

The site comprises principally single storey warehouses surrounded by hard surfaced access and external storage areas, with derelict 2-storey administration buildings along the eastern perimeter, all classed as Buildings and artificial surfaces.

A mix of native and nonnative tree and shrub species, mostly poor and scrubby examples, have aso colonised the Greenhills Road boundary of the site.

There are no Annexed habitats at the proposed development site.

The habitats under the footprint of the proposed development are of relatively low local ecological value. Bat activity onsite during the April 21st, 2021, survey and October 2023 was absent on these nights. The inspection of all buildings onsite in April 2021, March 2022 and October 2023 revealed no bat signs inside the buildings for demolition.

The Site itself is considered to be of Lower Importance for bats.

There are no suitable habitats for otters within the site.

There were no badger setts along field boundaries which would be disturbed and no signs of badgers in the study area.

There are abundant woodland habitats available for breeding birds in the surrounding development area.

Field surveys carried out deemed the overall lands to be unsuitable feeding and/or roosting sites for Wintering Birds, due to habitat conditions being dominated by artificial habitats or subject to relatively high levels of human disturbance.

5.3 Potential Impacts of the Proposed Development

Construction Phase

There are no direct pathways to water courses leading to European sites. Significant effects on any European sites as a result of the proposed development are unlikely given the distance of removal to the River Liffey and Dublin Bay.

There will be no significant negative effects on any species of mammals including bats, badgers and otters during the construction stage.

Operational Phase
There will be no negative operational effects on badgers and otters during the operational phase. Inappropriate or excessive illumination of sites at night can cause disturbance to roosting, commuting and foraging bats. Design features are proposed as avoidance mitigation in this regard.

5.4 Mitigation and Residual Effects (Post-Mitigation)

Construction Phase

There are no specific measures for habitats.

Should best practice guidelines for the prevention of invasive species spread be adhered to, no potential for the spread or introduction of high impact invasive species are foreseen as a result of this Proposed Development.

The retention of existing green areas and promotion of biodiversity through native species landscaping will be undertaken where feasible.

Based on the findings of the survey work completed between April 2021 and May 2024, it is concluded that the overall impact on bats arising from the proposed development will likely be low to negligible, provided that the general recommendations and specific mitigation measures outlined in Section 4.0 of the Bat Report are implemented.

Operational Phase

In addition to retention of existing green areas where feasible, the proposed development includes a Landscape Plan which provides for biodiversity offset through the additional planting.

Specialist lights or low-level downward directional luminaires will be used on site. No white light will be permitted as this has the greatest impact on bats. Lighting will be fitted with LED luminaires using warm white colours. Luminaires will avoid the component of light most disturbing to bats.

Residual Effects

With the employment of appropriate mitigation measures with regard to local biodiversity, the Proposed Development will have a neutral, imperceptible and long-term effect on biodiversity.

5.5 Cumulative Impact of the Proposed Development

The potential for cumulative impact (as far as practically possible) of the Proposed Development with any/all relevant planned, existing or permitted developments as set out in Chapter 2 of the EIAR, unless otherwise stated. The likelihood of cumulative effects are discussed.

A review of the National Planning Application Database was undertaken. The database was queried for developments granted planning permission within the zone of impact of the Proposed Development. The proposed development will have no predicted impacts on European sites; therefore in-combination and cumulative effects can be ruled out.

Given the inclusion of strict Best Practice Construction Measures to be included and enforced through a Construction Environmental Management Plan, the proposed development will have no negative construction effects on local ecology and biodiversity or on hydrologically linked European sites, therefore cumulative impacts can be ruled out.

Once operational, the landscape strategy for the project to enhance and strengthen the existing native floral species, while retaining existing trees where feasible in remaining areas.

There will be no negative operational effects on biodiversity, habitats or fauna therefore, there are no cumulative effects.

6.0 Land, Soils, Geology and Hydrogeology

6.1 Introduction

This chapter of the EIAR evaluates the likely significant effects, if any, that the proposed development will have on Land, Soils, Geology and Hydrogeology. The chapter initially provides a description of the receiving environment of the site and the potential impacts of the development. When assessing the potential impacts, this assessment considers the significance of the environmental attributes, the predicted scale, and the duration of the likely effects.

6.2 Baseline Environment

The site is located near the Walkinstown Roundabout on the southern side of Greenhills Road (R918), Dublin 12. The site is approximately 2.79 hectares in area, located within an industrially surrounded zone and comprises of existing low-rise disused industrial units which are to be demolished as part of the subject proposal. The site currently has 3 vehicular accesses all of which are located along the southern part of the site boundary. The existing development does not have any SuDS measures in place. The site has been mostly infiled following quarrying and is currently occupied by several derelict industrial/commercial buildings and is situated near the Walkinstown Roundabout.

The surrounding environment can be described as industrial in the immediate environs but mostly to the northwest. Residential, parkland and community uses occupy the majority of land to the south, east and northeast. The Greenhills community college is located c. 600 m south of the development. Tymon Park lies 1km south of the proposed development.. There are also a number of national schools and communal building within the local environment.

The regional topography slopes to the north east towards the South Dublin Bay. The site is relatively level / flat with minor localised undulations and an average elevation of 57.0m above Ordnance Datum (mAOD). Topographical survey of the existing site indicates that the site is gradually sloping from west to east (C+W O'Brien Architects, 2023). The proposed development gradient ranges / varies between 55 m mAOD in the East and 58 mAOD in the West. The western site boundary, abutted to the boundary of the neighbouring development is separated via a retaining wall, with a level difference between the site in question and neighbouring development of approximately 6 meters.

The site was historically used as a gravel quarry, with a large retaining wall structure marking the southwestern boundary of the site. The site has been infilled and is currently occupied by several derelict industrial/commercial buildings.

6.3 Potential Impacts of the Proposed Development

Construction Phase

In the absence of mitigation measures, the construction phase would present potential impacts associated with the following activities:

- Excavation and Infilling.
- Accidental Spills and Leaks

Without the consideration and employment of mitigation measures, the potential impacts during the construction phase on land, soils, geology and hydrogeology (groundwater) are negative, not significant and short term.

Operational Phase

In absence of mitigation methods, the operational phase would present potential impacts associated to the following activities:

- Accidental Leaks / Unmitigated Spills

In the absence of mitigation measures (or design measures) the potential impacts during the operational phase on land, soils, geology and hydrogeology are neutral, moderate, and long-term.

6.4 Mitigation and Residual Effects (Post-Mitigation)

Construction Phase

In order to reduce impacts on the soils, geological and hydrogeological environment, a number of mitigation measures will be adopted as part of the construction works on site.

- Implementation of a Construction & Environmental Management Plan (CEMP).
- Management of excavations, stockpiled materials, and suspended solids.
- Management and disposal of accumulated rainfall/surface water / surface water management.
- Management and handling of hydrocarbons, fuel and other construction chemicals.
- Management of domestic wastewater.
- Regular inspection of surface water run-off and sediment controls.
- Soil sampling.
- Regular source of fill and aggregates
- Regular inspection on activities, such as refuelling and pouring concrete to ensure there are no unintentional leaks to ground.

The implementation of the mitigation and monitoring measures detailed in Section 6.6 and 6.8 in Chapter 6 will ensure that the potential impacts on land, soils, geology, hydrogeology during the construction phase are adequately mitigated. The residual effect on surface water quality during the construction phase is considered to be neutral, imperceptible and short-term/temporary.

Operational Phase

During operation measures there is no requirement for bulk storage of petroleum products. Due to the nature of the proposed development in operation there is no risk of potential leaks and spillages of fuel and oil.

Several design measures will be put in place to minimise the likelihood of any spills entering the soil and groundwater environment to include the design with hydrocarbon / petrol interceptors. In the event of an accidental leakage of oil, this will be intercepted by the drainage infrastructure proposed.

The proposed surface water drainage system comprises infiltration areas at the base of the attenuation tanks and pervious paving surfaces, which operate at a feasible rate. Multiple design measures will be put in place (interception system, petrol inceptors, SuDS measures, flow control device, grass swales,

permeable paving, etc). Therefore, the risk of accidental discharge of hydrocarbons or contamination sources derived from the construction process has been adequately addressed through design. No further mitigation measures are to be required during the operational phase.

The design has taken account of the potential impacts of the development on surface water quality; measures have been incorporated in the design to mitigate these potential impacts.

The proposed development stormwater drainage network design includes sustainable drainage systems (SuDS) these measures by design ensure the stormwater leaving the site is of a suitable quality prior to discharge into the local drainage network. SuDS are drainage systems that are environmentally beneficial, causing minimal or no long-term detrimental damage. These measures will work to:

- Treat runoff and remove pollutants to improve quality
- Restrict outflow and to control quantity
- Increase amenity value

The implementation of the mitigation and monitoring measures detailed in Sections 6.6 and 6.8 of Chapter 6 will ensure that the potential impacts on land, soils, geology, and hydrogeology once the proposed development is constructed and operational are adequately mitigated. The residual effect on land, soils, geology and hydrogeology during the operational phase is considered to be neutral, imperceptible and long-term.

6.5 Cumulative Impact of the Proposed Development

Construction Phase

The CEMP will be implemented and adhered to by the construction Contractor and will be overseen and updated as required if site conditions change by the Project Manager, Environmental Manager and Ecological Clerk of Works where relevant. All personnel working on the Site will be trained in the implementation of the procedures.

The works contractors for other planned or permitted developments will also be obliged to ensure that measures are in place to protect soil and water quality in compliance with legislative standards for receiving water quality (European Communities Environmental Objectives (Groundwater) Regulations (S.I. 9 of 2010, S.I. 366 of 2016 and S.I. 287 of 2022).

The implementation of mitigation and monitoring measures detailed in Section 6.6; and 6.8 as well as the compliance of the above permitted development with their respective planning conditions, will ensure there will be minimal cumulative potential for change to the land, soils, geology, hydrogeological environment during the construction phase of the proposed development. The residual cumulative impact of the proposed development in combination with other planned or permitted developments can therefore be considered to be neutral, imperceptible, and short-term.

Operational Phase

There are existing commercial developments in close proximity, along with the multiple permissions remaining in place. There will be no loss of greenfield or agricultural land area locally as part of the proposed Project.

The proposed development and the other permitted development listed in in close proximity will result in an increase in hard standing which will result in localised reduced recharge to ground. The aquifer underlying the site is mostly “Locally Important – Bedrock which is Generally Moderately Productive only in Local Zones”. The implementation of SuDs measures on site will mitigate against and reduce the recharge rate to ground.

All nearby developments will also be obliged to ensure that measures are in place to protect soil and water quality in compliance with legislative standards for receiving water quality (European Communities Environmental Objectives (Groundwater) Regulations (S.I. 9 of 2010, S.I. 366 of 2016 and S.I. 287 of 2022).

The implementation of mitigation measures detailed in Section 6.6 as well as the compliance of the above permitted development with their respective planning conditions, will ensure there will be minimal cumulative potential for change to the land, soils, geology, hydrogeological environment during the operational phase of the proposed development. The residual cumulative impact of the proposed development in combination with other planned or permitted developments can therefore be considered to be neutral, imperceptible, and long-term.

7.0 Water and Hydrology

7.1 Introduction

This chapter of the EIAR assesses and evaluates the likely significant impacts on the surrounding hydrological environment associated with the proposed development.

7.2 Baseline Environment

The site is located near the Walkinstown Roundabout on the southern side of Greenhills Road (R918), Dublin 12. The site is approximately 2.79 hectares in area, located within an industrially surrounded zone and comprises existing low-rise disused industrial units which are to be demolished as part of the subject proposal. The site currently has 3 vehicular accesses all of which are located along the southern part of the site boundary. The existing development does not have any SuDS measures in place.

The site slopes from the west to the east. The regional topography slopes to the north east towards the South Dublin Bay. Topographical survey of the existing site indicates that the site is gradually sloping from west to east (C+W O'Brien Architects, 2023).

The site is relatively level / flat with minor localised undualtions and an average elevation of 57.0m above Ordnance Datum (mAOD). The proposed project gradient ranges / varies between 55 m mAOD in the East and 58 mAOD in the West. The site was historically used as a gravel quarry, with a large retaining wall structure marking the southwestern boundary of the site. The western site boundary, abutted to the boundary of the neighbouring development is separated via a retaining wall, with a level difference between the proposed development site and the neighbouring development of approximately 6 meters.

The site has been mostly infiled following quarrying and is currently occupied by several derelict industrial/commercial buildings and is situated near the Walkinstown Roundabout.

The surrounding environment can be described as predominantly industrial in the immediate environs but mostly to the northwest. Residential, parkland and community uses occupy the majority of land to the south, east and northeast. The Greenhills community college is located c. 600 m south of the development. Tymon Park lies 1km south of the proposed development. There are also a number of national schools and communal building within the local environment.

The proposed development site is located within the former ERBD (now the Irish River Basin District), as defined under the European Communities Directive 2000/60/EC, establishing a framework for community action in the field of water policy – this is commonly known as the Water Framework Directive (WFD). The proposed development site is located in the Eastern River Basin District (ERBD). According to the EPA maps, the proposed development site lies within the Liffey and Dublin Bay Catchment (Hydrometric Area 09) and Camac River sub-catchment (WFD name: Liffey_SC_090, Id 09_15) (EPA, 2025). The current EPA watercourse mapping shows no watercourses within, traversing or bounding the proposed development site boundary.

There is no stream on the site or immediately adjacent to the site boundary. The Walkinstown Stream is located approx. 230m north of the subject development site and joins the Robinhood Stream which in turn discharges into the Ballymount Stream c. 1.1 Km northwest of the site. The Ballymount Stream discharges into the Camac River c. 1.4 Km northwest of the subject site (refer to Figure 7.1 below). The Camac outfalls into the River Liffey c. 4.6Km from the site. The River Liffey outfalls into the Dublin Bay approximately 11 Km from the site. There is no open water connection between the site and the Camac River sub-catchment.

With regard to the local drainage, there is an existing 225mm diameter surface water sewer located on the access road east of the development, parallel to the Chadwicks Plumb Centre. The sewer commences near the junction of the access road and Greenhills Road and continuous towards the south-east direction where it runs to Landsdowne Valley Park and discharges / outfalls to the River Poddle located c. 1.1 Km to the south of the subject site. Therefore, there would be an indirect hydrological connection between the site and this open watercourse through the local surface water drainage. The site has an indirect hydrological connection to the Dublin Bay via the local surface water / stormwater sewer, the River Poddle and the Liffey Estuary.

There is an existing 225mm diameter foul water sewer located in close vicinity to the proposed development. The sewer originates from south-eastern direction, wraps around the outside of the southern and eastern site boundary and turns north-east, continuing towards the Walkinstown roundabout. This sewer eventually discharges into Ringsend WWTP.

The local hydrological network (Walkinstown, Robinhood and Ballymount streams; and Camac River) is associated with the WFD surface waterbody Camac_040 (EPA Code: IE_EA_09C020500). The most recent published status (www.epa.ie – River Waterbody WFD Status 2018-2021) of this waterbody is 'Poor' and its environmental risk is qualified by the WFD as 'At Risk of not achieving good status'. This condition is due to a poor ecological and biological status (invertebrate status or potential).

In addition, the River Poddle to the south is associated to the Poddle_010 (EPA Code: IE_EA_09P030800). The most recent published status (www.epa.ie – River Waterbody WFD Status 2018-2021) of this waterbody is 'Poor' and its environmental risk is qualified by the WFD as 'At Risk of not achieving good status'. This condition is due to a poor ecological status or potential.

The Camac River and River Poddle discharge into the Liffey Estuary Upper (EPA Code: IE_EA_090_0400) which has a WFD status (2018-2021) of 'Good'. The Liffey Estuary Upper waterbody has a WFD risk score of under 'Review'.

The active quality monitoring station in closest proximity to the site is the 'Camac Close Emmet Rd' (Station Code: RS09C020500) which is located at Inchicore, along the Camac River circa 3.1km to the northeast (downstream). The latest Q score recorded at this station is Q '3' which denotes 'Poor' 'Moderately Polluted' conditions (2022). These Values are based primarily on the relative proportions of pollution sensitive to tolerant macroinvertebrates (the young stages of insects primarily but also snails, worms, shrimps etc.) resident at a river site.

7.3 Potential Impacts of the Proposed Development

Construction Phase

In the absence of mitigation measures, the construction phase would present potential impacts associated with the following activities:

- Suspended solids (muddy water with increase turbidity) – arising from exposed ground, stockpiles and access roads and ground disturbance.
- Cement/concrete (increase turbidity and pH) – arising from construction materials.
- Hydrocarbons and other construction chemicals (ecotoxic) – accidental spillages from construction plant or onsite storage.
- Wastewater (nutrient and microbial rich) – arising from accidental discharge from on-site toilets and washrooms.

Without the consideration and employment of mitigation measures, the potential impacts during the construction phase on surface water quality are negative, significant and short term.

Operational Phase

In absence of mitigation methods, the operational phase would present potential impacts associated with the following activities:

- Discharges to the Local surface water sewers which discharge to the River Poddle and subsequent Natura 2000 conservation sites associated with Dublin Bay.

In the absence of mitigation measures (or design measures) the potential impacts during the operational phase are negative, not significant, and long-term.

7.4 Mitigation and Residual Effects (Post-Mitigation)

Construction Phase

In order to reduce impacts on the hydrological environment, a number of mitigation measures will be adopted as part of the construction works on site.

- Fuel and chemical handling.
- Soil removal and compaction.
- Silt reduction/remediation measures on site will include a combination of silt fencing and settlement measures (silt traps, and settlement tanks/ponds).
- Any surface water run-off collecting in excavations will likely contain a high sediment load. This will be diverted to settlement ponds and will not be allowed to directly discharge to existing onsite concrete storm water sewer drains within the site boundary or the Liffey Estuary.
- Depending on the stage of construction and the quality of water, the disposal of water will occur to surface water (via the storm water network (sewer) drains to the River Poddle and subsequently the Liffey Estuary); or to Ringsend WWTP (via the combined foul wastewater network). The discharge to surface water sewer is subject to agreement with South Dublin County Council (SDCC); and the discharge to the combined foul sewer are subject to agreement with Uisce Eireann (formerly Irish Water IW).
- A staged treatment system (treatment-train) will be in place during construction works that will ensure the quality of the discharge water to foul sewer and storm sewer is maintained in accordance with permit conditions from SDCC and Uisce Eireann.
- Implementation of the mitigation measures set out in the EIAR and NIS via a Construction & Environmental Management Plan (CEMP).

The predicted impact on the hydrological environment during the construction phase is neutral, imperceptible and short-term.

Operational Phase

A number of design measures will be put in place to minimise the likelihood of any spills entering the hydrological environment and to include the design with hydrocarbon / petrol interceptors. In the event of an accidental leakage of oil from the parking areas, this will be intercepted by the drainage infrastructure proposed.

The proposed surface water drainage system comprises infiltration areas which operate at a feasible rate. A number of design measures will be in place (interception system, petrol inceptors, SuDS measures, Blue Roofs, Rain Gardens etc.). No further mitigation measures are to be required during the operational phase. Uisce Éireann has confirmed that the connection to the public wastewater network is feasible.

The predicted impact on the hydrological environment during the operational phase is neutral, imperceptible and long-term.

7.5 Cumulative Impact of the Proposed Development

As has been identified in the receiving environment section, all cumulative developments that are already built and in operation contribute to the characterisation of the baseline environment. As such any further environmental impacts that the proposed development may have in addition to these already constructed and operational developments has been assessed in the preceding sections of this chapter. There are no relevant other than the permitted or proposed developments within the immediate vicinity of the proposed development site.

Construction Phase

All developments will have to incorporate SuDS measures to protect water quality in compliance with legislative standards for receiving water quality (European Communities Environmental Objectives (Surface Water) Regulations (S.I. 272 of 2009 and S.I. 77 of 2019). As a result, there will be minimal cumulative potential for change in the natural hydrological regime. The cumulative impact is considered to be short-term, neutral and imperceptible.

Operational Phase

There are existing commercial developments close by, along with the multiple permissions remaining in place. All the operational cumulative developments are required to manage discharges in accordance with S.I 272/2009 and 77/2019 amendments. As such there will be no cumulative impact to surface water quality and therefore there will be no cumulative impact on the Surface Waterbody Status. The operation of the proposed development is concluded to have a long-term, imperceptible significance with a neutral impact on surface water quality.

8.0 Noise and Vibration

AWN Consulting Limited has been commissioned to conduct an assessment of the likely impact of noise and vibration associated with the proposed residential development at the former Chadwick's Builders Merchant site.

8.1 Baseline Noise Environment

The baseline environment was quantified by undertaking environmental noise surveys, the results of which are presented within Chapter 8 of the EIAR. The baseline noise surveys determined that the noise environment was largely dominated by noise from local road networks and Industrial noise attributed to the Brennans manufacturing facility in the vicinity of the proposed development.

8.2 Potential Impact of the Proposed Development

Construction Phase

Construction noise impacts will vary at various receivers throughout the construction phase of the proposed development. The main construction activities in relation to noise are:

- Site Clearance and Demolition
- General Construction

Without mitigation, the worst-case effect of the construction phase will be short-term, negative and slight to moderate.

Operational Phase

The noise impacts relating to the operational phase of the proposed development will relate to:

- Mechanical Plant and Services
- Additional Traffic on Public Roads

The noise impacts related to mechanical plant and services will be neutral, not significant, and long-term, provided they are designed to meet the operational limits set by the guidelines and recommendations within the EIAR chapter. The noise impacts related to additional road traffic on public roads will be long-term, negative, and not significant.

8.3 Mitigation and Residual Effects (Post Mitigation)

Construction Phase

Mitigation measures to be implemented during the construction phase are discussed within the full EIAR, these measures include but are not limited to:

- Selection of quiet plant;
- Control of noise sources;
- Screening;
- Hours of work;
- Liaison with the public; and
- Monitoring.

After mitigation, it is anticipated that the residual worst-case effect of the construction phase noise will be short-term, negative, and slight to moderate.

Operational Phase

Mitigation measures to be implemented during the operational phase are discussed within the full EIAR these measures mainly relate to the selection of quiet plant as well the suppression of break out noise from items of mechanical plant, where required for apartment buildings. The residual operational noise impact in relation to the mechanical plant and services noise will be neutral, imperceptible and long term.

The residual impact of the traffic on the surrounding road will be negative, not significant and long term.

The EIAR provides a detailed Inward Impact Assessment to account for the noise climate taking into account the local road networks and industrial facilities likely to affect the proposed development. The Inward Impact Assessment within the EIAR provides details on acoustic performance to glazing and ventilation for various facades on the northern and southeastern boundaries of the site.

Cumulative Impact of the Proposed Development

Construction Phase

Cumulative noise impacts in relation to construction noise are unlikely to occur due to the location and scale of the proposed development with construction noise associated with the development likely to dominate the surrounding noise environment. The noise contribution of other sites would need to be equal to those associated with the proposed development in order to result in any cumulative effect.

Operational Phase

The noise limits set within the EIAR are designed to avoid any significant increase in the prevailing background noise environment. There is not expected to be a cumulative effect in relation to either operational mechanical plant noise or road traffic noise during the operational phase of the proposed development.

9.0 Air Quality

AWN Consulting Limited conducted an assessment of the likely impact on air quality associated with the proposed development at the former Chadwicks site, Greenhills Road, Walkinstown, Dublin 12.

9.1 Baseline Environment

Baseline data and data available from similar environments indicates that levels of nitrogen dioxide (NO_2), particulate matter less than 10 microns (PM_{10}) and particulate matter less than 2.5 microns

($PM_{2.5}$) and are generally in compliance with the current National and European Union (EU) ambient air quality standards.

9.2 Potential Impact of the Proposed Development

Construction Phase

An assessment of the potential dust impacts as a result of the construction phase of the proposed development was carried out based on the UK Institute for Air Quality Management 2024 guidance document *'Guidance on the Assessment of Dust from Demolition and Construction'*. This established the sensitivity of the area to impacts from construction dust in terms of dust soiling of property and human health effects. The surrounding area was assessed as being of medium sensitivity to dust soiling and of low sensitivity to dust-related human health effects.

The sensitivity of the area was combined with the dust emission magnitude for the site under four distinct categories: demolition, earthworks, construction and trackout (movement of vehicles) in order to determine the mitigation measures necessary to avoid significant dust impacts. It was determined that there is a medium risk of dust related impacts associated with the proposed development. In the absence of mitigation there is the potential for ***direct, short-term, localised, negative, slight*** and ***not significant*** impacts to air quality.

In addition, construction phase traffic emissions have the potential to impact air quality, particularly due to the increase in the number of HGVs accessing the site. Construction stage traffic did not meet the scoping criteria for a detailed modelling assessment outlined in Transport Infrastructure Ireland's 2022 guidance document *'Air Quality Assessment of Specified Infrastructure Projects – PE-ENV-01106'.* As a result a detailed air assessment of construction stage traffic emissions has been scoped out and the construction stage traffic emissions will have a ***imperceptible, short-term*** and ***neutral*** impact on air quality.

Operational Phase

Operational phase traffic has the potential to impact air quality due to vehicle exhaust emissions as a result of the increased number of vehicles accessing the site. Operational stage traffic emissions were calculated at representative worst-case receptors in the area and it was determined that concentrations of NO_2, PM_{10} and $PM_{2.5}$ will increase by an imperceptible amount as a result of the proposed development. Operational stage traffic emissions will have a ***long-term, direct, negative*** and ***not significant*** impact on air quality.

9.3 Mitigation and Residual Effects (Post-Mitigation)

Construction Phase

Detailed dust mitigation measures are outlined within Section 9.5.1 of Chapter 9 to ensure that no significant nuisance as a result of construction dust emissions occurs at nearby sensitive receptors. Once these best practice mitigation measures, derived from the Institute for Air Quality Management 2024 guidance '*Guidance on the Assessment of Dust from Demolition and Construction'* as well as other relevant dust management guidance, are implemented the impacts to air quality during the construction of the proposed development are considered, ***short-term, direct, negative*** and ***not significant***, posing no nuisance at nearby sensitive receptors (such as local residences).

Operational Phase

As the predicted concentrations of pollutants will be imperceptible no mitigation is required. The impact to air quality has been assessed as ***long-term, localised, negative*** and ***not significant***.

9.4 Cumulative Impact of the Proposed Development

Construction Phase

There is the potential for cumulative impacts to air quality should the construction phase of the proposed development coincide with that of other developments within 500m of the site. A review of proposed/permitted developments in the vicinity of the site was undertaken to determine the potential for cumulative impacts.

The dust mitigation measures outlined in Section 9.5.1 of Chapter 9 will be applied during the construction phase which will avoid significant cumulative impacts on air quality. With appropriate mitigation measures in place, the predicted cumulative impacts on air quality associated with the construction phase of the proposed development and the permitted cumulative developments are deemed ***short-term, localised, negative*** and ***not significant.***

Operational Phase

The direct impacts of the operational phase on air quality associated with the proposed development are predicted to be imperceptible. Cumulative impacts are considered ***direct, long-term, negative*** and ***not significant.***

Overall no significant impacts to air quality are predicted during the construction or operational phases of the proposed development.

10.0 Climate

AWN Consulting Limited has been commissioned to conduct an assessment of the likely impact on climate associated with the proposed residential development at the former Chadwicks site, Greenhills Road, Walkinstown, Dublin 12.

10.1 Baseline Environment

The existing climate baseline can be determined by reference to data from the EPA on Ireland's total greenhouse gas (GHG) emissions and compliance with European Union's Effort Sharing Decision "EU 2020 Strategy" (Decision 406/2009/EC). The EPA state that Ireland had total GHG emissions of 60.6 Mt CO_2e in 2023. This is 2.27 Mt CO_2e higher than Ireland's annual target for emissions in 2023. EPA projections indicate that Ireland has used 63.9% of the 295 Mt CO_2e Carbon Budget for the five-year period 2021-2025. Further reduction measures are required in order to stay within the budget requirements.

10.2 Potential Impact of the Proposed Development

The potential impacts on climate have been assessed in two distinct ways – a greenhouse gas assessment (GHGA) and a climate change risk assessment (CCRA). The GHGA quantifies the GHG emissions from a project over its lifetime and compares these emissions to relevant carbon budgets, targets and policy to contextualise magnitude. The CCRA considers a projects vulnerability to climate change and identifies adaptation measures to increase project resilience.

Greenhouse Gas Assessment

GHG emissions associated with the proposed development are predicted to be a small fraction of the relevant sectoral 2030 emissions ceilings. The proposed development will incorporate some mitigation measures which will aim to reduce climate impacts during construction and once the development is operational. At a minimum these include the Nearly Zero Energy Building (NZEB) compliance and targeting a Building Energy Ratio (BER) in line with the NZEB requirements.

GHG emissions during the operational phase due to road traffic were assessed. The changes in traffic volumes associated with the operational phase of the development were substantial enough the meet the assessment criteria requiring a detailed climate modelling assessment, as per Transport Infrastructure Ireland (TII) 2022 guidance "*PE-ENV-01104: Climate Guidance for National Roads, Light Rail and Rural Cycleways (Offline & Greenways) – Overarching Technical Document"*. There will be a slight increase in the traffic on the local road network which will result in some minor increases in CO_2 emissions. These have been assessed as a small fraction of Ireland's transport sector 2030 emissions ceiling.

A number of sustainability measures have been incorporated into the design of the development to ensure impacts to climate are reduced.

Climate Change Risk Assessment

A CCRA was conducted to consider the vulnerability of the proposed development to climate change, as per the TII 2022 PE-ENV-01104 guidance. This involves an analysis of the sensitivity and exposure of the development to future climate hazards which together provide a measure of vulnerability. The hazards assessed included flooding (coastal, pluvial, fluvial); extreme heat; extreme cold; drought; extreme wind; lightning, hail and fog; wildfire and landslides. The proposed development is predicted to have at most low vulnerabilities to the various climate hazards and therefore climate change risk is not considered significant.

Overall, no significant impacts to climate are predicted during the construction or operational phases of the proposed development.

10.3 Mitigation and Residual Effects (Post-Mitigation)

A number of best practice mitigation measures are proposed for the construction phase of the proposed development to ensure that impacts to climate are minimised. Design mitigation has been considered when assessing the vulnerability of the development to future climate change.

The impact to climate as a result of a proposed development must be assessed as a whole for all phases. The proposed development will result in some impacts to climate through the release of GHGs. TII reference the IEMA guidance which states that the crux of assessing significance is *"not whether a project emits GHG emissions, nor even the magnitude of GHG emissions alone, but whether it contributes to reducing GHG emissions relative to a comparable baseline consistent with a trajectory towards net zero by 2050".* The proposed development has been designed to reduce the impact on climate where possible during operation. The proposed development has incorporated some mitigation measures to reduce climate change impacts. Once mitigation measures are put in place, the effect of the proposed development in relation to GHG emissions is considered ***direct, long-term, negative*** and ***slight*** which is ***not significant*** in EIA terms.

In relation to climate change vulnerability, it has been assessed that there are no significant risks to the proposed development as a result of climate change.

10.4 Cumulative Impact of the Proposed Development

With respect to the requirement for a cumulative assessment PE-ENV-01104 states that *"the identified receptor for the GHG Assessment is the global climate and impacts on the receptor from a project are not geographically constrained, the normal approach for cumulative assessment in EIA is not considered applicable. By presenting the GHG impact of a project in the context of its alignment to Ireland's trajectory of net zero and any sectoral carbon budgets, this assessment will demonstrate the potential for the project to affect Ireland's ability to meet its national carbon reduction target. This assessment approach is considered to be inherently cumulative".*

As a result, the cumulative impact of the proposed development in relation to GHG emissions is considered direct, long-term, negative and slight, which is overall not significant in EIA terms.

11.0 Microclimate

AWN Consulting Ltd has assessed the likely microclimate impacts associated with the construction and operational phases of the proposed development located in Greenhills, Dublin 12.

This assessment includes a description of the receiving environment in the vicinity of the subject site and an assessment of the potential microclimate impact associated with the proposed development during both the short-term construction phase and the long-term operational phase on its surrounding environment. The assessment of direct, indirect and cumulative impacts on the surrounding environment have been considered as part of the assessment.

The subject site is located in Greenhills, Dublin 12, within the Greenhills Industrial Estate. The site is bound to the north by the Greenhills Road, and to the east, south and west by existing commercial buildings. The surrounding environment in the vicinity of the development site is mixed in nature with manufacturing, retail units and warehousing making up the majority of the surrounding building uses .

It was determined that the site typically experiences Beaufort 3/4 (B3/4) wind conditions for much of the time.

Construction Phase

Construction involves the erection of scaffolding and the development of a structure starting with steelwork and rising walls, with window and door openings. Structures under construction are therefore porous to wind and tend to allow wind to flow through the structure with little interference with wind flow patterns and hence predicted impacts are direct, long-term, neutral and slight which is overall not significant.

Operational Phase

It can be expected that the skimming regime will dominate, with little in the way of wind flow down to street level and therefore the proposed development is not expected to lead to elevated windspeeds at street level. Given the scale and nature of the proposed development and the existing low-rise buildings in the area, accelerated windspeeds at ground level are not expected and predicted impacts are therefore long-term, direct, localised, imperceptible, and overall not significant.

Mitigation and Residual Impacts

No mitigation measures are considered necessary.

Due to the lack of effects associated with the construction phase the predicted residual effects are short-term, direct, neutral, localised and not significant. For the operational phase, the residual impact is predicted to be localised, direct, long-term, neutral and imperceptible, which is overall not significant.

Cumulative Impact

During the construction phase, given the lack of predicted impact during the construction phase of the proposed development it can be expected there will be similar impacts associated with the permitted developments and cumulative impacts are predicted to be short-term, direct, neutral and not significant.

During the operational phase, due to the lack of predicted impacts at ground level, the predicted cumulative impact is long-term, localised, direct, neutral, and imperceptible which is overall not significant.

12.0 Material Assets – Waste

12.1 Introduction

AWN Consulting undertook the waste management assessment. The receiving environment is largely defined by South Dublin County Council (SDCC) as the local authority responsible for setting and administering waste management activities in the area through regional and development zone specific policies and regulations.

12.2 Baseline Environment

There is currently no waste generated at the proposed development site.

12.3 Potential Impacts of the Proposed Development

12.3.1 Construction Phase

During the construction phase the mismanagement of waste , including the inadequate storage of waste, inadequate handling of hazardous waste, the use of inappropriate or insufficient segregation techniques, and the use of non-permitted waste contractors, would likely lead to negative impacts such as waste unnecessarily being diverted to landfill, litter pollution which may lead to vermin, runoff pollution from waste, fly tipping and illegal dumping of waste. In the absence of mitigation, the effect on the local and regional environment is likely to be ***long-term, significant*** and ***negative***.

12.3.2 Operational Phase

The potential impacts on the environment during the operational phase of the proposed development would be caused by improper, or lack of waste management. In the absence of mitigation, the effect on the local and regional environment is likely to be ***long-term, significant*** and ***negative***.

12.4 Mitigation and Residual Effects (Post-Mitigation)

12.4.1 Construction Phase

During the construction phase, typical construction waste materials will be generated which will be source segregated on-site into appropriate skips/containers, within designated waste storage areas and removed from site by suitably permitted waste contractors as required, to authorised waste facilities, by appropriately licensed waste contractors. While the accurate keeping of waste records will be undertaken. All waste leaving the site will be recorded and copies of relevant documentation maintained.

This will all be overseen by the main contractor, who will appoint a construction phase Resource Manager to ensure effective management of waste during the excavation and construction works. All construction staff will be provided with training regarding the waste management procedures on site.

A carefully planned approach to waste management and adherence to the site-specific Resource and Waste Management Plan (Appendix 12.1) and Chapter 12 during the construction phase, this will ensure that the effect on the environment will be ***short-term, neutral*** and ***imperceptible.***

12.4.2 Operational Phase

During the operational phase, waste will be generated by the residents and commercial tenants. Dedicated Waste Storage Areas (WSAs) have been allocated throughout the development for the use of the residents and the commercial tenants. The WSAs have been appropriately sized to accommodate the estimated waste arisings from the development. The WSAs have been allocated to ensure a convenient and efficient management strategy with source segregation a priority. Waste will be collected from the designated waste collection areas by permitted waste contractors and removed off-site for re-use, recycling, recovery and/or disposal.

An Operational Waste Management Plan has been prepared by AWN and is included as Appendix 12.2. The proposed development will give rise to a wide variety of waste streams during the operational phase, i.e. when the project is completed, open and occupied. Operational waste will be generated on a daily basis by the operator including cardboard, plastic, paper, glass, dry mixed recyclables, mixed non-recyclables, cooking oil, lightbulbs, batteries, WEEE waste, and organic waste.

All recyclable materials will be segregated at source where possible to reduce waste contractor costs and ensure maximum diversion of materials from landfill in line with the development OWMP. This strategy will be supplemented, as required, by the operator as required with any new information on waste segregation, storage, reuse and recycling initiatives that are subsequently introduced.

Provided the mitigation measures in the development OWMP (Appendix 12.2) and in Chapter 12 are implemented, and a high rate of reuse, recycling and recovery is achieved, the predicted effect of the operational phase on the environment will be ***long-term, neutral*** and ***imperceptible***.

12.5 Cumulative Impact of the Proposed Development

12.5.1 Construction Phase

There are existing residential and commercial developments close by, along with the multiple permissions remaining in place in the area. In a worst-case scenario, multiple developments in the area could be developed concurrently or overlap in the construction phase. Due to the high number of waste contractors in the SDCC region, as provided from the National Waste Collection Permit Office and the EPA, there would be sufficient contractors available to handle waste generated from a large number of these sites simultaneously, if required. Similar waste materials would be generated by all of the developments.

Other developments in the area will be required to manage waste in compliance with national and local legislation, policies and plans which will mitigate against any potential cumulative effects associated with waste generation and waste management. As such the cumulative effect will be ***short-term, imperceptible*** and ***neutral.***

12.5.2 Operational Phase

There are existing residential and commercial developments close by, along with the multiple permissions remaining in place. All of the current and potential developments will generate similar waste types during their operational phases. Authorised waste contractors will be required to collect waste materials segregated, at a minimum, into recyclables, organic waste and non-recyclables. An increased density of development in the area is likely improve the efficiencies of waste collections in the area.

Other developments in the area will be required to manage waste in compliance with national and local legislation, policies and plans which will mitigate any potential cumulative impacts associated with waste generation and waste management. As such the cumulative effect will be a ***long-term***, ***imperceptible*** and ***neutral***.

13.0 Material Assets – Traffic and Transportation

13.1 Introduction

NRB Consulting Engineers Ltd were appointed to address the Traffic/Transportation issues associated with a planning application by Steeplefield Limited for a Large Scale Residential Development (LRD) on lands at Greenhills Road, Walkinstown, Dublin 12. This report assesses the impact of 588 no. Apartment units on the site.

All traffic and transport issues previously raised in relation to the earlier SHD planning application on this site (Planning Ref. ABP-313129-22), including by the National Transport Authority (NTA) have been addressed in the new layout and are as outlined in this report. Furthermore, NRB and the design team have engaged with the NTA in relation to this new application to ensure that the development proposals are in compliance with the requirements of the NTA, ensuring that the Bus-Connects proposals are facilitated with the design. with the NTA noting by email that they "*are satisfied that the drawings now*

reflect the current approved Core Bus Corridor alignment for the Tallaght/ Clondalkin to City Centre Scheme". The NTA has now received notification of planning approval by An Bord Pleanála for the Tallaght/Clondalkin to City Centre Scheme.

The subject scheme has been carefully considered and designed to respond to both the existing Greenhills Road and the accommodation of the future Bus Connects scheme.

The proposed new LRD development provides for 588 no. residential apartments, and a mix of commercial & communal units over 4 blocks within the site development area. The vehicular access arrangement is by way of a simple priority junction from the Greenhills Road.

Being located adjacent a busy Bus Corridor, with pedestrian and cyclist provision, the site is very well placed to take advantage of non-car modes of travel to support the development.

The Traffic Chapter has been prepared to address the traffic and transportation issues associated with the proposal, and the capacity of the existing road network and the future road network. An assessment of current and future alternative transportation modes has also been undertaken. The report has been prepared in accordance with TII's Traffic & Transport Assessment Guidelines and addresses the worst-case traffic impact of the proposal locally.

This TTA addresses the adequacy of the existing and future road network to safely and appropriately accommodate the worst-case transport demands with the development fully occupied, taking account of the existing traffic demands locally and the proposed new access.

Comprehensive classified turning movement surveys of the existing affected roads and junctions were carried out by specialist data collection company. Furthermore, predicted future network traffic flows were established based on all traffic rerouting from the Greenhills Road to the new Ballymount Avenue and Calmount Road, with the proposed Tallaght to City Centre BusConnects scheme in place.

The comprehensive traffic surveys together formed the basis of the study. The analysis includes the effects of the existing traffic on the local roads and assesses the impact during the traditional peak commuter peaks periods.

The TTA confirms that the road network and the vehicular access junction are more than adequate to accommodate the worst-case traffic associated with the development. The assessment confirms that the full occupation of the scheme will have a negligible and unnoticeable impact upon the operation of the adjacent road network.

Based on all of these studies, it is concluded that there are no adverse traffic/transportation capacity or operational issues associated with the occupation of the proposed 588 no. Unit Residential apartment development and ancillary uses that would prevent planning permission being granted by South Dublin County Council (SDCC).

14.0 Material Assets – Utilities

14.1 Introduction

This chapter assesses ownership and access, built services and infrastructure, which have not already been addressed elsewhere in this EIA Report. The associated built services and infrastructure in the vicinity of the site are summarised in the following sections; further detail is provided within the planning application documentation.

14.2 Baseline Environment

The proposed development site has an existing connection into the local ESB network.

The proposed development site currently has live telecommunications network supply around the perimeter of the site.

Uisce Éireann drainage record map shows an existing 225mm diameter surface water sewer located on the access road east of the development, parallel to the Chadwicks Plumb Centre.

Uisce Éireann drainage record map shows an existing 225mm diameter foul water sewer located in close vicinity to the proposed development.

14.3 Potential Impacts of the Proposed Development

14.3.1 Construction Phase

The potential impact associated with land use, property, access, power, electrical supply and telecommunications for the construction phase will be, ***neutral-negative, not significant***, and ***short term***.

The potential impact on surface water networks during the construction phase in the absence of mitigation measures is ***negative, slight,*** and ***short-term.***

The potential impact on foul drainage for the construction phase is ***negative, not significant,*** and ***short term.***

The water demand during the construction phase will not be significant enough to affect existing pressures. The potential impact on potable water supplies and infrastructure during the construction phase is ***negative, imperceptible,*** and ***short term.***

14.3.2 Operational Phase

The potential impact is ***long-term, neutral, imperceptible*** with respect to with power and electrical supply for the proposed development for the operational phase.

It is assumed that there is sufficient capacity available in the network to accommodate the development, so there are ***no potential impacts*** associated with telecommunications for the proposed development for the operational phase.

The design of the proposed development includes design mitigation, as set out in Section 14.7.2 of Chapter 14, to addresses these potential impacts. In the absence of these designed mitigations, the potential impact associated with surface water for the operational phase is ***moderate, negative*** and ***long-term***.

There are ***no potential impacts*** associated with foul drainage for the proposed development for the operational phase.

Uisce Éireann have confirmed through the PCE that there is available supply within the network for the proposed development. Uisce Éireann is the National Authority for water management and should there have been an inadequate supply this would have been confirmed to the developer during consultation. There are ***no potential impacts*** associated with water supply for the proposed development for the operational phase.

14.4 Mitigation and Residual Effects (Post-Mitigation)

14.4.1 Construction Phase

Ongoing consultation with Uisce Éireann, Eirgrid, ESB Networks and other relevant service providers will ensure a smooth construction schedule without disruption to local and business community. Best practice measures shall be put in place to ensure that there are no interruptions to these utilities, unless this has been agreed in advance.

Detailed mitigation measures for each utility during the construction phase can be found in Section 14.7.1 of Chapter 14.

The implementation of mitigation measures detailed in Section 14.7.1 will ensure that the overall predicted impacts on the material assets described above will be ***short-term, neutral*** and ***imperceptible*** for the construction phase.

14.4.2 Operational Phase

Ongoing consultation with Uisce Éireann, Eirgrid, ESB Networks and other relevant service providers ensures that there is adequate capacity in the respective utilities networks to facilitate the Proposed Development during the operational phase.

Detailed mitigation measures for each utility during the operational phase can be found in Section 14.7.2 of Chapter 14.

The implementation of mitigation measures detailed in Section 14.7.2 of Chapter 14 will ensure that the predicted impacts on the material assets will be ***long-term, neutral*** and ***not significant***.

14.5 Cumulative Impacts Of The Proposed Development

14.5.1 Construction Phase

The proposed development entails minimal use of material assets during construction therefore there is limited opportunity for the causation of cumulative impacts during the construction phase of the proposed development in combination with other planned or permitted developments (as described in Chapter 3 (Planning and Development Context)).

In summary, based on the consideration above cumulative impact of the proposed development will be ***neutral, imperceptible,*** and ***short-term*** for the construction phase.

14.5.2 Operational Phase

Once operational, the proposed development will result in minimal impact on telecommunications, surface water, foul drainage and water infrastructure.

The location of the proposed has access to existing utilities and, through confirmation by utilities suppliers, the proposal will not have an impact on the capacity for off-site development. Therefore, the proposed development will result in ***imperceptible*** impacts on material assets therefore there is limited potential for cumulative impacts with any other developments within the study area. In summary, based on the consideration above, it is predicted that the cumulative impact of the proposed development with other existing and or permitted developments is considered to be ***long-term*** and ***imperceptible*** during the operational phase.

15.0 Archaeology, Architectural and Cultural Heritage

The Cultural Heritage of the area of the proposed development was examined through an Archaeological, Architectural, and Historical study. The Archaeological and Architectural studies involved a documentary/cartographic search and focussed field inspection, while the Historical study involved a documentary search.

The overall extent/boundaries of the site and an area of 500m surrounding such lands were determined to be the Study Area for Cultural Heritage. The extent of the Cultural Heritage Study Area was chosen to reflect an appropriate context for the project, beyond which it was considered that any development of the lands would have no direct/indirect impacts.

The Proposed Development Area (PDA) forms part of the townland Greenhills, in the civil parish of Crumlin and the barony of Uppercross. Research indicates that the lands were in agricultural use until the later nineteenth century when a series of sand hills, which formed the original topography of the site and area to the southwest, were removed and a sand extraction pit was established. Parts of the parish of Crumlin were incorporated into the Dublin County Borough in 1941. Residential estates were constructed in the general area from the late 1930s into the 1940s and in the early 1950s, at which time new road infrastructure, including the nearby Walkinstown Roundabout, was constructed. In

subsequent years, a number of industrial and commercial facilities were constructed in the area; Greenhills Industrial Estate was initially developed in the early 1960s, with further expansion within the existing site in the 1970s and thereafter.

A review of the Sites and Monuments Record (SMR)/Historic Environment Viewer (HEV) of the National Monuments Service (www.archaeology.ie) indicates that there are no previously identified archaeological monuments located within the extent of the PDA boundary. A prehistoric Flat Cemetery (SMR Ref: DU022-002; SITE CH-1) was uncovered in 1892 during the quarrying of a sand to the east of the subject site; the area of the former cemetery is now developed and forms part of the Mulcahy Keane Industrial Estate. A Holy Well (SMR Ref: DU011-001; SITE CH-2) was formerly situated in a Green off Walkinstown Crescent, approximately 350m to the north; there are no extant or surface traces of the feature.

There are no Protected Structures or Industrial Heritage features identified by South Dublin County Council as being located within the PDA or wider defined Study Area. A milestone on Walkinstown Road, 430m to the northeast of the PDA is the nearest feature of Architectural Heritage Interest, as identified by the National Inventory of Architectural Heritage (NIAH Reg. No: 50080455; SITE CH-3). It is not considered likely that this feature has the ability to be impacted by the proposed development.

Given the developmental history of the site, it is considered that the PDA is of no archaeological potential and it is considered that the development, as proposed, will have no impacts on Cultural Heritage monuments, structures or features at construction or operational phases. Consequently, no mitigation measures are required.

16.0 Landscape and Visual Amenity

The Application Site comprises 2.79 hectares / 6.89 acres of land off Greenhills Road in Walkinstown, Dublin 12. It comprises an extensive area of commercial warehouses and functional buildings some of which are degraded, run-down and vacant with extensive areas of utilitarian parking provision. The majority of the site has been subject to historic quarrying with grading and modifications to the original landscape undertaken to facilitate industrial scale buildings and yard areas and large areas are graded flat. To the north, the land rises towards the Greenhills Road which is set on an embankment associated with a glacial esker.

Bound by unsightly security fences and walls subject to graffiti and weed growth respectively, the site would be categorised as poor townscape and very capable of accommodating change in townscape / landscape and visual terms. It has been in a similar condition for some time and contributes adversely to the setting of Greenhills and Walkinstown and would be categorised as townscape of low sensitivity, quality and value. The site carries no environment, amenity, heritage, visual amenity or landscape designations and possesses nothing that would be categorised as sensitive in terms of townscape character, features or vegetation.

Beyond the Application Site and adjacent industrial park areas, the townscape of Walkinstown and Greenhills comprises a mix of good to ordinary townscape of medium sensitivity comprising extensive areas of low-rise mid-20th century housing estates and incidental parks. There are no heritage or conservation areas in this area. The *Landscape Character Assessment of South Dublin County 2015* (LCA) noted that the key "*Landscape Value*" contributors in south Dublin are the public parks, the Dodder River Valley, 19th century industrial heritage and views out to Dublin (Wicklow) Mountains and agricultural hinterland. These are all sufficiently distant from the Application Site to be subject to any significant landscape or visual effects.

A review was also undertaken of the *Prospects to be reserved and protected*" as per the *South Dublin County Council Development Plan (2016-2022)* and established none are in close proximity to the site or will be impacted by activity or land use on the Application Site. Site surveys identified 12 no. representative viewpoints in this part of the city where key visual receptor groups might visit, work or stay or have a general movement through the area. Built-up townscape, infrastructure and vegetation are features of the Greenhills townscape ensuring that views consistently change in context, scale and extent with many views of the Application Site, even from close proximity locations within the nearby housing estates and business parks closed off.

Any assessment must be measured against the current situation on site which comprises utilitarian buildings set in a largely functional landscape that has limited aesthetic appeal and value. In broad terms, a proposal of this nature and scale will become part of the integrity, legibility and identity of the Greenhills and Walkinstown area having significant effects to local townscape character, visual amenity and local sense of place become an immediately apparent and substantial change in close proximity views from Greenhills Road and immediately adjacent areas.

While it will be a substantial development, the baseline setting of large scale townscape, adjacent built form and broad road-scape ensure this area is capable of absorbing such a change without detriment. In all views, the proposed development would be seen in context with other large buildings, infrastructure, elements or structures and would not have any detrimental effects.

The proposal offers the opportunity for a marked improvement in the architecture / building quality and streetscape comparative to the existing situation. This includes significant planting works and extensive public realm landscape works which will provide an enhanced townscape sense of place and legibility while offering variation and relief from the prevailing similar and repetitive building type in this part of the city. Consequently, it is considered the development can be successfully absorbed into this area without causing adverse townscape / landscape effects.

Beyond any close proximity areas, the existing built environment provides a density of building and vegetation ensuring the majority of areas will experience negligible to no effects (i.e., insignificant) on townscape character and visual amenity due to the proposal being visually obscured. There will be no effects to any designated historic sites, views, townscapes, key landmarks or environments at a local or city wide level.

In summary, the proposed development would result in a positive contribution to the townscape character and urban fabric of this part of Greenhills and Walkinstown. While recognising there are some significant local impacts, this report concludes that this proposal, on balance, has no unacceptable townscape / landscape or visual effects and can be successfully absorbed into the character and views of this part of the city

17.0 Interactions Between Environmental Factors

This section describes interactions between impacts on various environmental factors. A summary matrix showing interdependencies between these environmental factors is presented below for the proposed development.

Interactions	Chapter 4: Population and Health	Chapter 5: Biodiversity	Chapter 6: Land, Soils, and Geology	Chapter 7: Water and Hydrology	Chapter 8: Noise and Vibration	Chapter 9: Air Quality	Chapter 10: Climate	Chapter 11: Microclimate	Chapter 12: Material Assets Waste	Chapter 13: Material Assets Traffic	Chapter 14: Material Assets Utilities	Chapter 15: Archaeology	Chapter 16: Landscape and Visual Amenity
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Chapter 15: Archaeology Architecture, and Cultural Heritage													
Chapter 16: Landscape and Visual Amenity													

Table 3.0 Summary matrix showing interdependencies between various environmental factors

All potential interactions have been addressed as required throughout the EIAR. During each stage of the assessment, contributors have liaised with each other (where relevant) to ensure that all such potential interactions have been addressed. The various interactions between environmental topics considered within the EIAR are further discussed in Chapter 17.0 included in Volume 2 of the EIAR.

18.0 Mitigation and Monitoring Measures

A summary of mitigation and monitoring measures has been prepared, for ease of reference and clarity, and to facilitate enforcement of all environmental mitigation and monitoring measures specified within Chapters 4.0 to 17.0 of the EIAR. All mitigation and monitoring commitments detailed within the EIAR have been included in a separate compendium and are presented in Chapter 17.0 included in Volume II of the EIAR.

Further to those outlined in the EIAR, a Construction Management Plan (CMP) will be agreed with the Planning Authority, prior to the commencement of construction activities on the site, and will incorporate provision for the primary construction mitigation measures.