

BLACKWOOD SQUARE SHD

EIAR Volume 1: Non-Technical Summary



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REPORT

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Preface

The structure of the EIAR is laid out in the preface of each volume for clarity. It consists of three volumes as follows:

Volume 1: Non-Technical Summary

A non-technical summary of the information contained within Volume 1

Volume 2: Environmental Impact Assessment Report

This is the main volume of the EIAR. It provides information on the location and scale of the proposed development, details on design and impacts on the environment (both positive and negative) as a result of the proposals.

Volume 3: Technical Appendices

Specialists' technical data and other related reports are contained within **Volume 3**. **Volume 3** comprises parts A and B. Part A includes 11 no. appendices associated with various specialisms. Part B includes verified views associated with **Chapter 12** Landscape only.

Glossary of Terms

AA	Appropriate Assessment
AADT	Annual Average Daily Traffic
ABP	An Bord Pleanála
ADF	Average Daylight Factor
CDWMP	Construction and Demolition Waste Management Plan
CEMP	Construction Environmental Management Plan
CFRAMS	Catchment Flood Risk Assessment and Management Study
CGS	County Geological Sites
CIRIA	Construction Industry Research and Information Association
CJEU	Court of Justice of the European Union
CSO	Central Statistics Office
DAA	Dublin Airport Authority
DB	Decibel
DEHLG	Department of Environment, Heritage and Local Government
DMRB	Design Manual for Roads and Bridges
DMURs	Design Manual Urban Roads and Streets
DoELG	Department of Environment and Local Government
DTTAS	Department of Transport, Tourism and Sport
DPHLG	Department of Housing, Planning and Local Government
ED	Electoral Division
EIAR	Environmental Impact Assessment Report
EPA	Environmental Protection Agency
ESB	Electricity Supply Board
EU	European Union
FCC	Fingal County Council
FDP	Fingal Development Plan 2017 – 2023
FFL	Finished Floor Level
FRA	Flood Risk Assessment

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FRMP	Flood Risk Management Plan
GL	Ground Level
GSI	Geological Survey Ireland
HA	Hectares
HGV	Heavy Goods Vehicle
HNDA	Housing Need and Demand Assessment
HSE	Health Services Executive
IFI	Inland Fisheries Ireland
ILO	International Labour Organization
IROPI	Imperative Reasons Of Overriding Public Interest
ITM	<i>Irish Transverse Mercator</i> , geographic coordinate system for Ireland
KER	Key Ecological Receptors
L_{Aeq}	The continuous equivalent A-weighted sound pressure level. This is an “average” of the sound pressure level.
L_{Amax}	This is the maximum A-weighted sound level measured during a sample period.
L_{Amin}	This is the minimum A-weighted sound level measured during a sample period.
L_{night, outside}	Threshold of night noise exposure for the purposes of assessing overall annoyance.
MASP	Metropolitan Area Strategic Plan
MMP	Mobility Management Plan
NBDC	National Biodiversity Data Centre
NDP	National Development Plan
NHA	National Heritage Area
NIAH	National Inventory Architectural Heritage
NPF	National Planning Framework
NPWS	The National Parks and Wildlife Service
NRA	National Roads Authority
NTA	National Transport Authority
NTS	Non-Technical Summary
NTS	Not To Scale (drawings)
OANZ	Outer Airport Noise Zone

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OPW	Office of Public Works
OSI	Ordnance Survey Ireland
OWMP	Outline Waste Management Plan
PE	Population Equivalent
pNHA's	proposed Natural Heritage Areas
QLFS	Quarterly Labour Force Survey
QNHS	Quarterly National Household Survey
PRF	Potential Roosting Features
ProPG	Professional Guidance on Planning and Noise
RMP	Record of Monuments and Places
RPG	Regional Planning Guidelines
RPS	Record of Protected Structures
RSA	Road Safety Audit
RSES	Regional Spatial Economic Strategy
RSIA	Road Safety Impact Assessment
SAC	Special Area Conservation
SHD	Strategic Housing Development
SPA	Special Protection Area
SUDS	Sustainable Urban Drainage System
TII	Transport Infrastructure Ireland
TMP	Traffic Management Plan
TPO	Tree Preservation Order
TTA	Traffic and Transport Assessment
VSC	Vertical Sky Component
WAC	Waste Acceptance Criteria
WFD	Water Framework Directive

1 INTRODUCTION

This Environmental Impact Assessment Report (EIAR) has been prepared to accompany an application for permission by Cosgrave Developments for development of a proposed Strategic Housing Development (SHD) at lands at Northwood Avenue, Santry, Dublin 9. The proposed development will consist of 331 no. apartment units over a shared basement together with ground floor mixed use commercial units, residential shared services, a childcare facility and associated car and bicycle parking spaces, landscaping, open space, pedestrian and cycle paths and ancillary services. The location of the site is illustrated on **Figure 1-1** below.

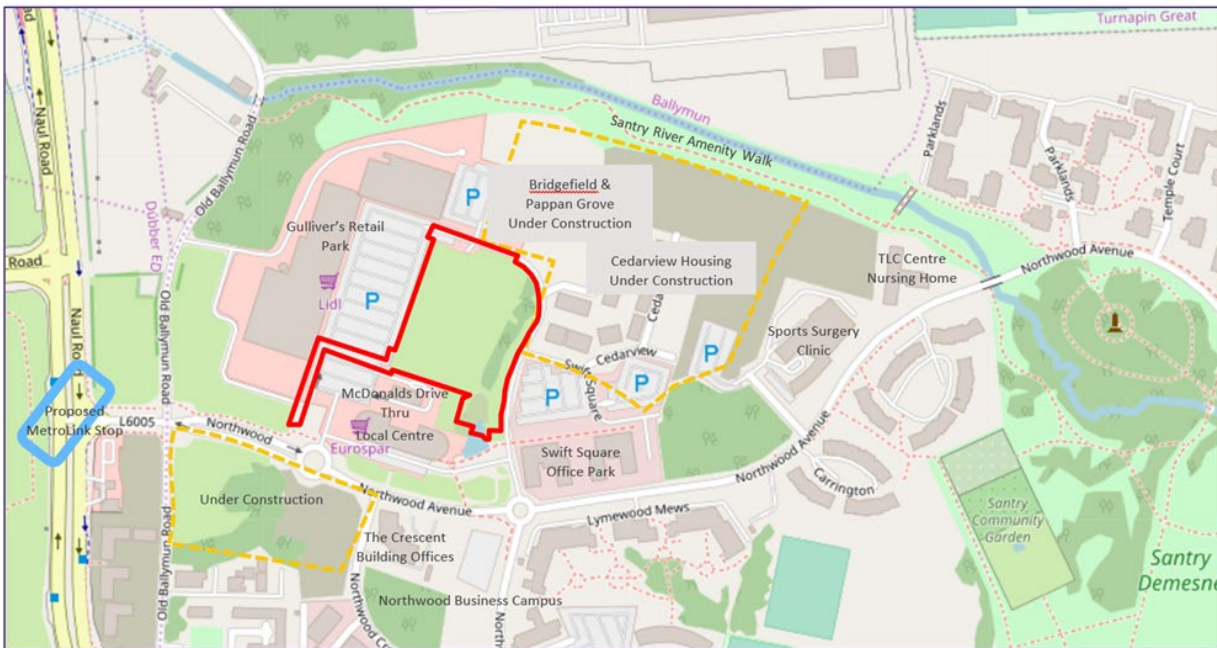


Figure 1-1: Site Location (indicative subject lands outlined in red)¹

This document is a summary of the information contained in the EIAR. For detailed information and key mitigation and remedial measures please consult the full EIAR document.

This document is a summary of the information contained in the EIAR. For detailed information and key mitigation and remedial measures please consult the full EIAR document.

1.1 Purpose of the EIAR

The objective of this EIAR is: to identify and predict the likely environmental impacts of the proposed development; to describe the means and extent by which they can be reduced or ameliorated; to interpret and communicate information about the likely impacts; and to provide an input into the decision making and planning process.

The EIAR is the primary element of the Environmental Impact Assessment (EIA) process and is recognised as a key mechanism in promoting sustainable development, identifying environmental issues, and in ensuring that such issues are properly addressed within the capacity of the planning system.

1.2 Requirements for an EIAR

Projects needing environmental impact assessment are listed in Schedule 5 of the Planning and Development Regulations 2001.

¹ Source: Google Maps and RPS Group annotation

Schedule 5 of the Planning & Development Regulations 2001 cites the size thresholds over which certain types of development require an EIAR to be prepared as part of the planning application process.

The proposed development a category 10 “*infrastructure projects*” of Part 2 of Schedule 5 of the Planning and Development Regulations 2001, as amended but does not exceed the category 10(b)(i) threshold “*construction of more than 500 dwelling units*” but does align with category 13 “*changes, extensions, development and testing*” which includes:

“(a) Any change or extension of development already authorised, executed or in the process of being executed (not being a change or extension referred to in Part 1) which would:

(i) result in the development being of a class listed in Part 1 or paragraphs 1 to 12 of Part 2 of this Schedule, and

(ii) result in an increase in size greater than –

- 25 per cent, or

- an amount equal to 50 per cent of the appropriate threshold, whichever is the greater.”

For clarity, the subject development in isolation does not fall within development classes set out in Part 1 or Class 10(b)(i) of Part 2 of Schedule 5. However, the subject development is located adjacent to a residential development which is currently under construction by the applicant. Permission for 374 no. residential units on a 7.0 hectare site under Reg. Ref. F15A/0440 was modified by F16A/0572, F17A/0371 and F18A/0205 resulting in the overall provision of 355no. residential units which are now almost complete.

It has therefore been determined that the quantum of development now proposed in addition to the adjacent permitted residential development would exceed the relevant threshold and that an EIA should therefore be undertaken to cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the proposed development.

The overall EIAR is arranged in three volumes, as follows:

1.2.1 Volume 1: Non-Technical Summary

A non-technical summary of the information contained within Volume 1.

1.2.2 Volume 2: Main Text

This is the main volume of the EIAR. It provides information on the location and scale of the proposed development, details on design and impacts on the environment (both positive and negative) as a result of the project. The structure of the EIAR document is set out in below:

- Chapter 1: Introduction
- Chapter 2: Planning Policy Context
- Chapter 3: Alternatives Examined
- Chapter 4: Project Scoping and Consultation
- Chapter 5: Project Description
- Chapter 6: Biodiversity
- Chapter 7: Land, Soils and Hydrogeology
- Chapter 8: Water and Hydrology
- Chapter 9: Air Quality and Climate

- Chapter 10: Noise and Vibration
- Chapter 11: Cultural Heritage
- Chapter 12: Landscape
- Chapter 13: Material Assets: Traffic and Transportation
- Chapter 14: Material Assets: Built Services
- Chapter 15: Population and Human Health
- Chapter 16: Cumulative Effects and Environmental Interactions

1.2.3 Volume 3: Appendices

Volume 3 Parts A and B contain specialists' technical data and other associated details that are directly related to Volume 2 of the EIAR.

1.2.4 Application Documentation

In addition to the information contained in the EIAR a number of other standalone reports assessing environmental impacts are submitted with the planning application documentation. These documents have been considered in the preparation of the EIAR. These include:

- Planning Report & Statement of Consistency with Planning Policy prepared by RPS Group Ltd.
- Statement of Response (to An Bord Pleanála's Opinion) prepared by RPS Group Ltd.
- Appropriate Assessment Screening Report prepared by Scott Cawley
- Architect's Design Statement prepared by McCrossan O Rourke Manning Architects
- Building Life Cycle Report prepared by McCrossan O Rourke Manning Architects
- Housing Quality Assessment prepared by McCrossan O Rourke Manning Architects
- Schedule of Units and Areas prepared by McCrossan O Rourke Manning Architects
- Landscape Report & Outline Landscape Specification prepared by Kevin Fitzpatrick Landscape Architecture
- Arboricultural Report prepared by The Tree File Ltd
- Flood Risk Assessment prepared by JB Barry & Partners Consulting Engineers
- Water Services Report prepared by JB Barry & Partners Consulting Engineers
- Traffic and Transport Assessment by JB Barry & Partners Consulting Engineers
- Public Lighting Report prepared by McElligott Consulting Engineers.
- Multiple Occupancy Building Car Charging Strategy by McElligott Consulting Engineers
- Daylight and Sunlight Assessment prepared by Geraghty Energy Consultants
- Energy Statement prepared by McElligott Consulting Engineers
- Childcare Demand Analysis prepared by RPS Group Ltd.

- Social and Community Audit of Schools prepared by RPS Group Ltd.
- Unit Mix Justification prepared by RPS Group Ltd.
- Waste Management Plan prepared by KeyWaste Management Ltd.
- Construction and Demolition Waste Management Plan prepared by JB Barry & Partners Consulting Engineers
- Outline Construction Environmental Management Plan by JB Barry & Partners Consulting Engineers
- Owners Management Company Operational Management Plan prepared by WYSE Property Management.

1.3 Viewing of EIAR

A dedicated website for this proposed development is established enabling all elements of the planning application to be viewed. The details of this website are included on the planning application statutory notices.

The EIAR can also be viewed at the offices of An Bord Pleanála and Fingal County Council as set out in the planning application statutory notices.

1.4 EIAR Study Team

The EIAR was prepared by a study team led by RPS Group Ltd. (RPS), who were responsible for the overall management and co-ordination of the document. The EIAR team is set out in **Chapter 1** of **Volume 2** of the EIAR.

2 PLANNING POLICY CONTEXT

2.1 National Planning Framework

Project Ireland 2040 National Planning Framework (NPF), published in May 2018, is the primary articulation of spatial, planning and land use policy within Ireland up to 2040. The NPF aims to avoid urban sprawl by promoting increased residential densities in urban areas, consequently reducing pressure on infrastructure demands and adverse impacts on the environment.

National Policy Objective 33 of the NPF states that it is a national policy to, “*Prioritise the provision of new homes at locations that can support sustainable development and at an appropriate scale of provision relative to location.*” The NPF expands on this objective, explaining that the future homes of Ireland will be built in locations that support sustainable development such as cities and larger towns with provision of infrastructure, access to services and can be delivered in an efficient and appropriate way.

National Policy Objective 3b states that it is an objective of the NPF to “*deliver at least half (50%) of all new homes that are targeted in the five Cities and suburbs of Dublin, Cork, Limerick, Galway and Waterford, within their existing built-up footprints.*” In delivering these new homes the NPF aims to achieve inclusive and sustainable communities that are finished to a high standard.

National Policy Objective 4 of the NPF aims to “*ensure the creation of attractive, liveable, well designed, high-quality urban places that are home to diverse and integrated communities that enjoy a high quality of life and well-being.*”

A number of “key enablers” for the growth of Dublin are identified in the NPF which are supportive of the subject development include:

- Delivering MetroLink;
- Development of an improved bus-based system; and
- Progressing housing development on public transport corridors.

2.2 Rebuilding Ireland – Action Plan for Housing and Homelessness

Rebuilding Ireland – Action Plan for Housing and Homelessness (Rebuilding Ireland) was launched in 2016 with the overarching goal to accelerate the delivery of housing from its current under-supply across all tenures. Rebuilding Ireland aims to help individuals and families meet their housing needs, and to help those who are currently housed to remain in their homes or be provided with appropriate options of alternative accommodation, especially those families in emergency accommodation. The plan seeks to double the annual level of residential construction to 25,000 homes and deliver 47,000 units of social housing over its period (2017-2021), while at the same time making the best use of the existing stock and laying the foundation for a more vibrant and responsive private rented sector.

Rebuilding Ireland is set around five pillars of proposed actions; Pillar 1 to address homelessness; Pillar 2 to accelerate social housing; Pillar 3 to build more homes; Pillar 4 to improve the rental sector; and Pillar 5 to utilise existing housing.

The delivery of housing in the right place is also recognised as being of crucial importance within Rebuilding Ireland. Locating housing in the right place provides for access to employment opportunities and to services such as education, public transport, health and amenities, while also delivering on sustainability objectives related to efficiency in service delivery and investment provision.

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

The role of the Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas (the Residential Development Guidelines) is to ensure the sustainable delivery of new development

throughout the country. It focuses on the provision of sustainable residential development, including the promotion of layouts that:

- Prioritise walking, cycling and public transport, and minimise the need to use cars;
- Are easy to access for all users and to find one's way around;
- Promote the efficient use of land and of energy, and minimise greenhouse gas emissions; and
- Provide a mix of land uses to minimise transport demand.

The Guidelines also provide guidance on the core principles of urban design when creating places of high quality and distinct identity. They recommend that planning authorities should promote high quality design in their policy documents and in their development management process.

2.4 Sustainable Urban Housing– Design Standards for New Apartments 2018

In March 2018, the Department of Housing, Planning and Local Government published the updated *Sustainable Urban Housing: Design Standards for New Apartments, Guidelines for Planning Authorities 2018* (the New Apartment Standards). The updated document builds on previous guidelines published in 2015 taking account of; experience in their implementation since 2015; the need to enhance apartment output to secure both additional housing supply and more compact urban development patterns; and departmental and stakeholder research and analysis into the deliverability of increased supply of apartments.

Accordingly, the 2018 update of the Apartment Standards aims to:

- *“Enable a mix of apartment types that better reflects contemporary household formation and housing demand patterns and trends, particularly in urban areas;*
- *Make better provision for building refurbishment and small-scale urban infill schemes;*
- *Address the emerging ‘build to rent’ and ‘shared accommodation’ sectors; and*
- *Remove requirements for car-parking in certain circumstances where there are better mobility solutions and to reduce costs”.*

A key inclusion in the guidelines is the acknowledgement of the importance of strategic sites in existing urban areas in close proximity to existing public transport facilities. These locations within reasonable walking distance (i.e. up to 15 minutes or 1,000-1,500m) to/from high capacity urban public transport stops (such as DART or Luas); and sites within easy walking distance (i.e. up to 5 minutes or 400-500m) of reasonably frequent (min 10 minute peak hour frequency) urban bus services are considered suitable for residential development such as that proposed.

The Design Standards for New Apartment also sets out design standards that supersede Development Plan standards in relation to:

- Apartment mix;
- Internal space standards;
- Dual aspect ratios;
- Floor to ceiling heights;
- Apartment to stair / lift ratio;
- Storage spaces;
- Amenity spaces including balconies and patios;
- Car parking; and
- Room dimensions.

2.5 Design Manual for Urban Roads and Streets 2013

The *Design Manual for Urban Roads and Streets 2013* (DMURS) provides guidance and encourages safer and more sustainable forms of travel that prioritises pedestrians, cyclists and public transport (in that order) over private motor vehicles. JB Barry & Partners Consulting Engineers have undertaken a separate appraisal of the proposed development and its conformity with DMURS. This appraisal is enclosed as part of

the application documentation as an appendix to the *Planning Report and Statement of Consistency* prepared by RPS, and confirms the following:

“The roads and streets contained within the existing Northwood Park development and the proposed Blackwood Square development have been designed in accordance with the principles set out in the Design Manual for Urban Roads and Streets (DMURS).”

2.6 Urban Design Manual – A Best Practice Guide

The Urban Design Manual seeks to create residential developments where people want to live and visit. In order to achieve this, the Urban Design Manual is based around 12 no. criteria:

- Context;
- Connections;
- Inclusivity;
- Variety;
- Parking;
- Efficiency;
- Distinctiveness;
- Layout;
- Public Realm;
- Adaptability;
- Privacy and Amenity; and
- Detailed Design

The 12 no. criteria are considered as a means of testing a proposal against the principles of good urban design. The proposed development has been designed with consideration for this criteria and good urban design practice has been incorporated throughout the proposal in its layout, public realm and open space.

2.7 Guidelines for Planning Authorities on Childcare Facilities

The *Childcare Facilities – Guidelines for Planning Authorities* (Childcare Guidelines) provide a framework to planning authorities for the preparation of forward planning documents and set a standard for assessing planning applications with consideration for childcare facilities.

The Childcare Guidelines state that planning authorities should require the provision of “one childcare facility providing for a minimum 20 childcare places per approximately 75 dwellings”. However, the Guidelines note that: “this is a guideline standard and will depend on the particular circumstances of each individual site”.

2.8 The Planning System and Flood Risk Management

The *Planning System and Flood Risk Management Guidelines* (FRM Guidelines) introduced a “comprehensive mechanisms for the incorporation of flood risk identification, assessment and management into the planning process”. The FRM Guidelines were prepared by the Office of Public Works (OPW) in partnership with the then Department of Environment, Heritage and Local Government (DEHLG). The OPW are the lead agency for flood risk management in Ireland. They develop indicative flood maps and catchment-based Flood Risk Management Plans (FRMPs) in partnership with planning authorities, the Environmental Protection Agency (EPA) and other relevant departments and bodies.

Implementation of the FRM guidelines will be achieved through actions at the national, regional, local and site-specific levels. The FRM Guidelines assist in the preparation of relevant national and regional departmental publications and regulations which in turn guide local planning authority policies and objectives. At local level, the FRM Guidelines highlight that “flood risk is a key consideration in preparing development plans and local area plans and in the assessment of planning applications”.

The FRM Guidelines also states that they “should be utilised by developers and the wider public in addressing flood risk in preparing development proposals”. When applying for planning permission, applicants and their agents are required to:

76 “Carefully examine their development proposals to ensure consistency with the requirements of these Guidelines including carefully researching whether there have been instances of flooding or there is the potential for flooding, on specific sites and declaring any known flood history in the planning application form as required under the Planning and Development Regulations 2006.

77 Engage with planning authorities at an early stage, utilising the arrangements for pre-planning application consultation with regard to any flood risk assessment issues that may arise.

78 Carry out a site-specific flood risk assessment, as appropriate, and comply with the terms and conditions of any grant of planning permission with regard to the minimisation of flood risk”.

2.9 Regional Spatial and Economic Strategy

The Regional Spatial and Economic Strategies (RSES) including the Metropolitan Area Strategic Plans (MASP) shall support the implementation of the *National Planning Framework* and the economic policies and objectives of the Government by providing a long-term strategic planning and economic framework for the development of the region.

The RSES for the Eastern and Midland Region including the MASP Dublin is came into effect on 28th June 2019. The RSES will:

- *“Take account of national policy – the NPF – Ireland 2040 and future national planning frameworks,*
- *Support and reflect the economic policies and objectives of Government and link with spatial planning objectives,*
- *Consider the qualities, population size, service offering and location of our towns and cities, and*
- *Support balanced economic development, building on the individual strengths of the 3 Irish regions and our shared interests (including our links with Northern Ireland)”.*

The high level vision set out in the RSES is:

“To create a sustainable and competitive region that supports the health and wellbeing of our people and places, from urban to rural, with access to quality housing, travel and employment opportunities for all.”

This vision is underpinned by three key principles:

- *“Healthy Placemaking: To promote people’s quality of life through the creation of healthy and attractive places to live, work, visit and study in.*
- *Climate Action: The need to enhance climate resilience and to accelerate a transition to a low carbon economy recognising the role of natural capital and ecosystem services in achieving this.*
- *Economic Opportunity: To create the right conditions and opportunities for the Region to realise sustained economic growth and employment that ensures good living standards for all.”*

The RSES supports the construction of MetroLink from Swords to Sandyford.

The RSES includes a Metropolitan Area Strategic Plan (MASP) which is aimed at providing the metropolitan area with planning and investment frameworks to address high-level and long-term strategic development matters including: strategic growth and development; transport and water infrastructure; regeneration, housing and employment; and regional parks and pedestrian and cycling networks. The subject site is located within the MASP and is proximate to the Dublin – Belfast Corridor.

With regard to housing the RSES identifies an acute need to increase the supply of housing, particularly within cities and defined settlements.

2.10 Transport Strategy for the Greater Dublin Area 2016 -2035

The *Transport Strategy for the Greater Dublin Area, 2016 to 2035* (Transport Strategy), prepared by the National Transport Authority sets out how transport will be developed across the region, covering Dublin, Meath, Wicklow and Kildare up to 2035. The strategy purpose of the Transport Strategy is *“To contribute to the economic, social and cultural progress of the Greater Dublin Area by providing for the efficient, effective and sustainable movement of people and goods”.*

The Transport Strategy promotes significant improvements to the pedestrian and cycling network in order to maximise inclusive accessibility for all. The Transport Strategy supports the provision of New Metro North (Now titled MetroLink,) and the Ballymun to City Centre core bus corridor.

With regard to development, including residential development, the Transport Strategy supports the integration of land use and transport through:

- Reducing the need to travel;
- Reducing the distance travelled;
- Reducing the time take of travel;
- Promoting walking and cycling; and
- Promoting public transport use.

Strategic Planning Principles of the Transport Strategy state that:

- *“Residential development located proximate to high capacity public transport should be prioritised over development in less accessible locations in the GDA;*
- *To the extent practicable, residential development should be carried out sequentially, whereby lands which are, or will be, most accessible by walking, cycling and public transport – including infill and brownfield sites – are prioritised”.*

2.11 Fingal Development Plan 2017-2023

The local planning policy framework is set out in the *Fingal Development Plan 2017 – 2023* (FDP). Future development of the subject lands are governed by the Development Plan which sets out planning policies and objectives, as well as design standards for the administrative area.

The entire area of the subject lands is zoned “*ME – Metro Economic Corridor*” with an objective that seeks to:

“Facilitate opportunities for high density mixed use employment generating activity and commercial development, and support the provision of an appropriate quantum of residential development within the Metro Economic Corridor.” (see **Figure 2-1**).

The vision for lands with this zoning objective is to:

“Provide for an area of compact, high intensity/density, employment generating activity with associated commercial and residential development which focuses on the Metro within a setting of exemplary urban design, public realm streets and places, which are permeable, secure and within a high quality green landscape.”

Uses that are considered to be ‘Permitted in Principle’ under the ‘ME’ zoning objective include inter alia:

- Residential;
- Restaurant / Café;
- Retail -Local up to 150sq.m (net floor area);
- Community Facility; and
- Open Space.

The proposed largely residential development within a wider mixed use community including employment and retail facilities accords with the land use zoning.

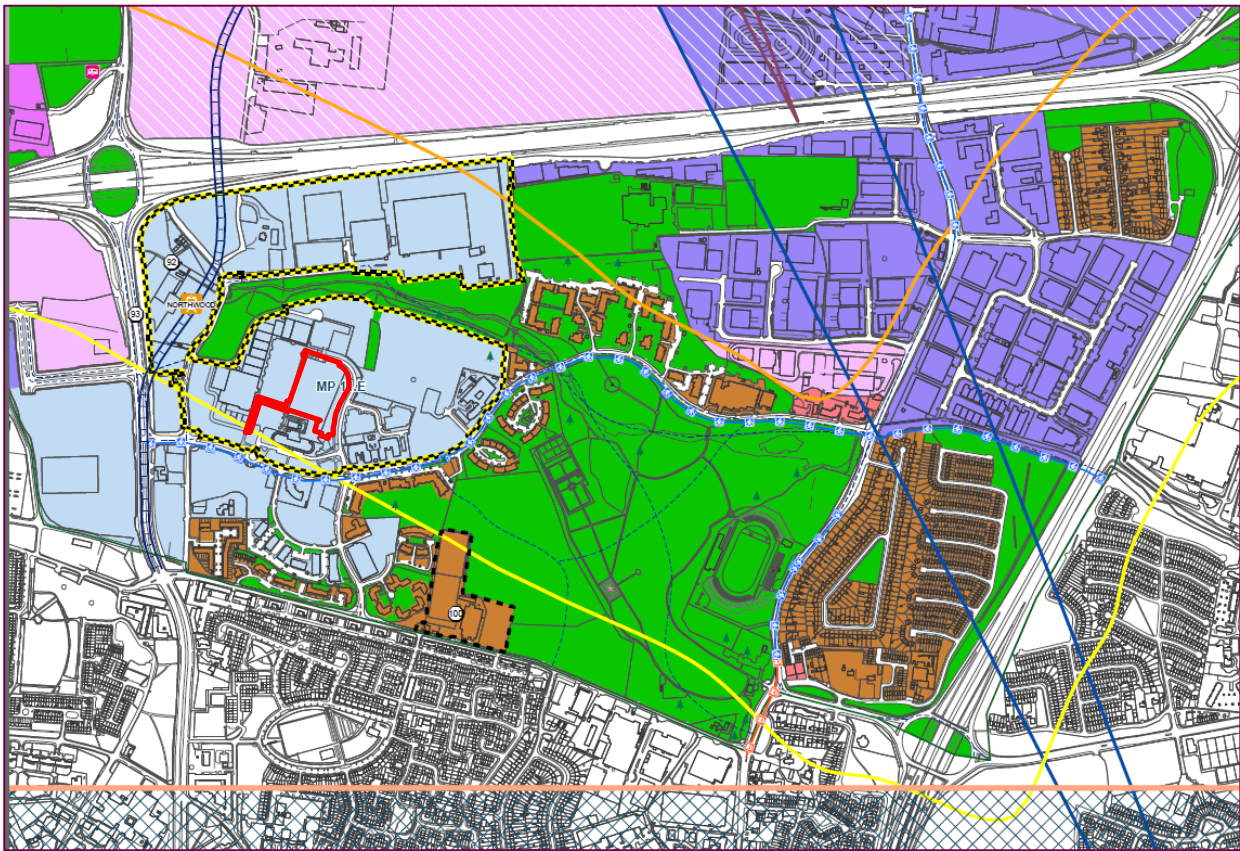


Figure 2-1: Land Use Zoning and Site Context

There is a local objective to prepare a Masterplan for lands at Northwood including the subject site.

“Objective SANTRY 5

Prepare and implement a Masterplan for lands identified at Northwood (see Map Sheet 11, MP 11.E) during the lifetime of this Plan. The main elements to be included are provided below. The list is not intended to be exhaustive.

- *Facilitate provision of an underpass to include provision for a car, bus, cycle, and pedestrian link to link lands east and west of the R108 to enhance connectivity.*
- *Ensure where feasible, development overlooks the Santry River Walk.*
- *Allow the re-location of existing units to facilitate connectivity to the proposed Northwood Metro Stop.*
- *Enhance pedestrian links within and to Santry Demesne.*
- *Ensure the continued protection of trees within the subject lands.*
- *Facilitate provision of a direct access route from Old Ballymun Road through Northwood. Development shall enhance connectivity to the proposed Northwood Metro Stop.”*

The subject site is located within the Outer Airport Noise Zone.

The Development Plan is underpinned by a number of cross cutting themes including the principles of sustainable development, climate change adaptation, social inclusion and high quality design. **Chapter 1**

provides a strategic overview which sets the context for the more detailed policies and objectives contained therein. The Development Plan's overall aims and strategic direction of consolidated development, efficient use of land and integrated transport and land-use planning was formulated from a consideration of various national, regional and local documents including the NSS and the RPGs for the GDA.

Section 1.1 of the Development Plan provides an environmental overview of the County. It acknowledges Fingal's diverse range of environmental and heritage resources which include the coast, countryside, rivers, amenity lands, and rich archaeological and architectural heritage. The Development Plan identifies a number of key environmental challenges for the County which include inter alia:

“Protecting the ecological integrity of Natura 2000 sites while allowing for ongoing growth and development.

Providing for growth and development which reduces energy consumption, promotes sustainable modes of transport and reduces car-dependency.

Ongoing provision of high-quality accessible parks and open spaces for our growing population.”

Policy objectives with regard to the Metro Economic Corridor included within the Development Plan state:

“Objective ED98

Prepare Local Area Plans and Masterplans within the lifetime of the Development Plan for strategically important Metro Economic zoned lands in collaboration with key stakeholders, relevant agencies and sectoral representatives.

Objective ED99

Protect the integrity of the Metro Economic corridor from inappropriate forms of development and optimise development potential in a sustainable and phased manner.

Objective ED100

Ensure high quality urban design proposals within the Metro Economic zoning, incorporating exemplary public spaces, contemporary architecture and sustainable places within a green landscape setting.”

The Development Plan provides specific guidance on a number of issues pertaining to the development of apartments including:

- Residential Mix;
- Private Amenity Space;
- Communal Amenity Space;
- Public Open Space;
- Overlooking and Overshadowing;
- Retail / Café Units;
- Ancillary Development Uses;
- Car Parking;

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- Cycle Parking; and
- Public Art.

3 ALTERNATIVES EXAMINED

3.1 Project Description

The subject site is located strategically within the former Santry Demesne c.7km to the north of Dublin city centre. The proposed MetroLink Northwood Stop is located c.350m to the west of the subject site. The site is bounded to the north by residential development which is currently under construction (Reg. Ref. F15A/0440 and modified by F16A/0572) and to the west by existing car parking associated with Gulliver's Retail Park. The site is bound to the east by an internal roadway and beyond that car parking associated with Swift Square Office Park office and housing under construction (Reg. Ref. F15A/0440 as modified). The site is bound to the south by a McDonald's fast food restaurant and Gulliver's Local Retail Centre.

The surrounding lands have been subject to significant land use change in the last 15 years. Our client has developed Gulliver's Retail Park, Gulliver's Local Centre and Swift offices in the immediate vicinity of the subject site and is currently completing adjacent residential development permitted under Reg. Ref. F15A/0440 as amended.

The site benefits from its location near to a number of high frequency bus services. Stops located on the R108, approximately 350m from the site are served by routes 4 and 13. The proposed Ballymun to City Centre Core Bus Corridor Route shall run along the R108 approximately 700m to the southwest of the site. MetroLink will provide a new rail line to link between Swords and Charlemont in Dublin City Centre. The planned location of the Northwood Station is approximately 350m from the subject site at the Northwood Avenue / R108 junction.

3.2 Alternatives Examined

The presentation and consideration of various alternatives investigated by the project design team is an important requirement of the EIAR process. The Examination of Alternatives had particular regard to:

- Alternative land uses;
- Alternative designs; and
- Alternative processes.

3.2.1 Alternative Land Uses

The subject site forms part of a larger Master Plan area of 19.8 hectares for which planning permission was granted in 2005 for a mixed use development under Reg. Ref. F04A/1562. The permitted Master Plan comprises modern business, enterprise and commercial facilities consisting of c. 77,016 sq. m. Starter Enterprise Units were permitted within the subject site under this application.

The permitted Starter Enterprise Units were not constructed, due first to the challenging economic conditions and following that the changed local context resultant in part from Metro North being granted permission (Rail Order 06F.NA.0003).

The acute shortage of housing and the location of the Masterplan lands adjacent to planned high capacity public transport links including Metro Link and Bus Connects Core Corridors has led to refinement of development plans within the Masterplan lands.

Our client met with Fingal County Council to discuss proposals for the development of student accommodation and a hotel at the subject site on 10th September 2018. Following this meeting our client and the project team undertook further analysis of the student accommodation and hotels. These reviews identified the significant travel time to most third level institutions by sustainable transport modes (walk, public transport, cycle), increased supply of student accommodation permitted / under construction within Dublin and very significant increase in hotel beds throughout Dublin under construction / permitted.

Having considered these factors and identified clear demand for additional housing within Northwood as evidenced during the construction of apartments and houses under Reg. Ref. F15A/0440 as amended it is considered that the provision of residential units at this site is a more appropriate land use.

3.2.2 Alternative Designs

Alternative design and layouts for the subject lands were considered over approximately 6 month period up to the finalisation of the scheme. These design alternatives were themselves informed in part by analysis of design alternatives in the consideration of alternative land uses described above.

The proposals for the subject site were the subject of detailed discussions with the Planning Authority prior to the principles of the finalised scheme being agreed. The scheme as presented to ABP addresses the input of Fingal Council at pre application meetings and the evolution of the project through the design process including:

- Amending pedestrian route to planned Northwood MetroLink station following publication of Preferred Route in March 2019;
- Childcare facility parking; and
- Shared usage of existing surface car parking spaces to the west for visitor parking.

3.2.3 Alternative Processes

The EIA Guidelines² state that within each design solution there can be a number of different options as to how the processes or activities of the development can be carried out. These can include management of emissions, residues, traffic and the use of natural resources. A key consideration in the various options which were considered, as discussed above, was the overall land use mix and layout of the development resulting in potential impact on human health and the presence of underground services resulting in impacts on the water supply in the area. Where relevant, alternative processes are considered in each Chapter of the EIAR.

This is not considered relevant to this EIAR having regard to the nature of the proposed development which contains over 100 residential units and as such, it is mandatory that the planning application is submitted to An Bord Pleanála as a Strategic Housing Development under the Planning and Development (Housing) and Residential Tenancies Act 2016.

² EPA (2017) Guidelines on the Information to be contained in Environmental Impact Assessment Reports

4 PROJECT SCOPING AND CONSULTATION

4.1 Consultation

In relation to consultation, the EIA Directive, Irish implementing legislation and recent guidance documentation make clear that there are specific requirements regarding the use of the EIAR, both as a tool to inform concerned stakeholders and the public, as well as to make decisions regarding development consent for projects. Accordingly, this EIAR provides evidence of effective consultations which have already taken place and provides the basis for effective consultations to come.

The scoping and consultation process have resulted in an iterative design procedure, such that the project has been modified to address the issues raised by statutory consultees, stakeholders and the public.

A pre-planning meeting took place with Fingal County Council on 10th September 2018 which included an overview of the applicant's intention to deliver student housing and hotel on the subject site. The planning authority confirmed that the proposal would be compliant with Development Plan and provided a list of items that would need to be addressed in a planning application taking the proposal forward. The applicant undertook a detailed analysis of the proposed development and determined that the provision of a residential scheme was in keeping with the overall vision for Northwood.

Two pre-application meetings took place with Fingal County Council with respect to a residentially focused development proposal. The first meeting took place on 5th March 2019. The applicant submitted details of the proposed development to Fingal County Council including a description of the nature and scale of the project in advance of the meeting. A copy of the record is included in **Volume 3 Appendix 2.1**.

The second meeting with Fingal County Council took place on 2nd May 2019. The applicant provided an update on progress in relation to the project and how the findings were influencing the evolution of the project design process. A copy of the record is included in **Volume 3 Appendix 2.2**.

The Tripartite Meeting took place with Fingal County Council and An Bord Pleanála on 2nd September 2019. The Applicant submitted a preapplication meeting request to An Bord Pleanála. A copy of the meeting record is included in **Volume 3 Appendix 2.3** together with the Opinion.

4.2 Scoping of the Project

An informal EIAR scoping exercise was undertaken as part of the EIAR process. During this process information on the project and an outline of the proposed EIAR was provided to consultees inviting any comments, queries or observations from the contacted parties on the nature of the proposed development, the potential environmental impacts and the content of the EIAR. The EIAR Scoping Report was issued via e-mail to the following organisations on the 21st of June 2019:

- Fingal County Council (Roads, Drainage, Environment Depts);
- Fingal Childcare Committee;
- An Bord Pleanála;
- Irish Aviation Authority;
- daa - Dublin Airport Authority;
- Development Application Unit, Department of Culture, Heritage and the Gaeltacht;
- Department of Communications, Climate Action and Environment;
- Department of the Housing, Planning, Community and Local Government;
- Transport Infrastructure Ireland (TII);

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- National Transport Authority (NTA);
- Inland Fisheries Ireland;
- An Taisce;
- Failte Ireland;
- The Heritage Council;
- ESB Networks;
- National Monuments Service;
- Environmental Pillar; and
- Irish Water.

The primary objective of involving these organisations and parties at an early stage in the EIA process is to aid in the scoping of and the content of the EIAR. All comments and recommendations from each of the Statutory Authorities and Consultees have been taken into consideration in this EIAR.

Through the scoping process which has been carried out in the preparation of this EIAR, the issues which are likely to be important during the environmental impact assessment have been identified. The scoping process has identified the sources or causes of potential environmental effects, the pathways by which the effects can happen, and the sensitive receptors, which are likely to be affected, and has defined the appropriate level of detail for the information to be provided in the EIAR.

5 PROJECT DESCRIPTION

5.1 Introduction

This Chapter of the EIAR sets out a description of the proposed development and contains information on the project site, design, size and other relevant features in order to establish the characteristics of the project for the purposes of environmental assessment.

In accordance with Article 5(1)(a) of the 2011 Directive as amended by Directive 2014/52/EU the description of the proposal should comprise “...information on the site, design, size and other relevant features of the project”.

A description of the site and its surrounding is presented, together with the proposed design parameters. A summary of the demolition and construction phases of the development is also presented. This description sets the basis against which the specialist assessments presented in this EIAR have been undertaken.

5.2 Location of the Project

The subject site is located within the former Santry Demesne c.7km to the north of Dublin’s city centre. The proposed MetroLink Northwood Stop is located c.350m to the west of the subject site. The site is bounded to the north by a residential development which is currently under construction (Reg. Ref. F15A/0440, as modified) and to the west by existing car parking associated with Gulliver’s Retail Park. The site is bound to the east by an internal roadway and beyond this, by car parking associated with Swift Square Office Park office and housing under construction (Reg. Ref. F15A/0440, as modified). The site is bound to the south by a McDonald’s fast food restaurant and Gulliver’s Local Centre. Further to the south of the subject site is Northwood Avenue. The M50 is located c. 500m to the north. The location of the subject site and its surrounding context is illustrated in **Figure 5-1**.

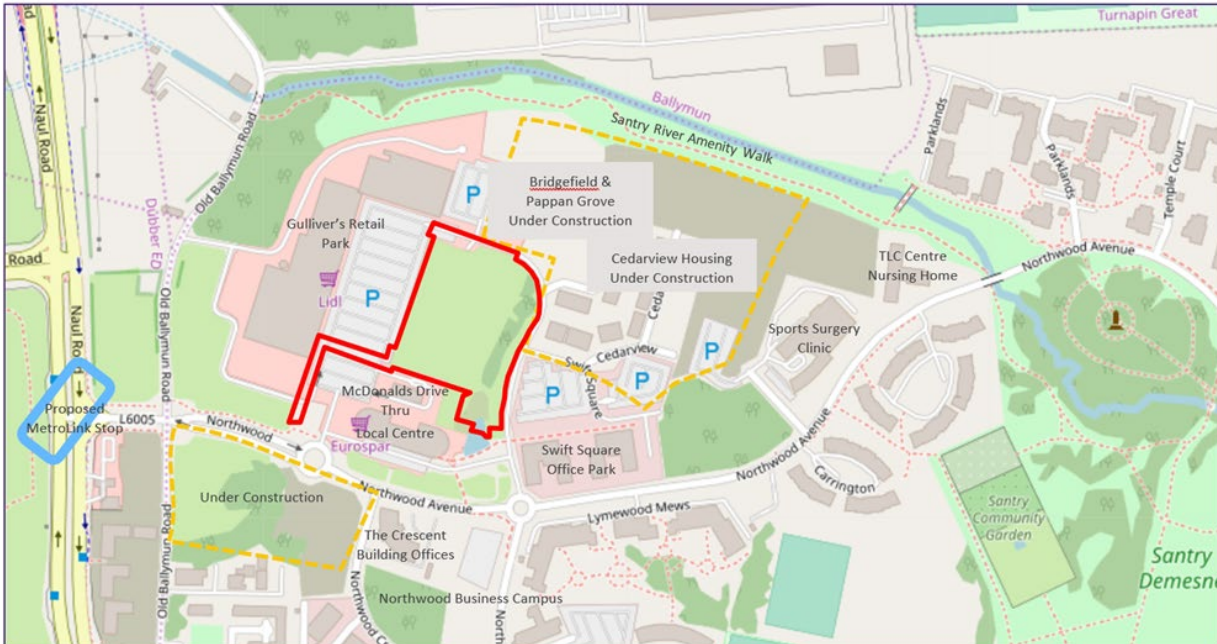


Figure 5-1: Site Location (indicative subject lands outlined in red)³

5.1 Adjacent Land Uses

The surrounding lands have been subject to significant land use change over the last 15 years.

³ Source: Openstreet Maps and RPS Group annotation

The applicant has developed Gulliver's Retail Park, Gulliver's Local Centre and part of Swift Square Office Park in the immediate vicinity of the subject site and is currently completing adjacent residential development to the north (Bridgefield and Pappan Grove) and to the east (Cedarview) - part of which will be occupied later this year. A childcare facility within the adjacent Bridgefield development has recently opened and will accommodate 100 no. children.

Gulliver's Retail Park accommodates Lidl, Home Base, Home Focus, Mr. Price, Petmania and a number of furniture stores. Gulliver's Local Centre accommodates Spar, Costa Coffee, a chemist, hair and beauty salon and other local shops.

To the east of the subject site is the Sports Surgery Clinic and TLC Centre Nursing Home. To the south of Northwood Avenue is The Crescent Building office complex, Northwood Business Campus and Lymewood Mews Apartments. Other sites along Northwood Avenue are under currently construction. The Santry River Amenity Walk is located c. 250m to the north of the subject site, and Santry Park (a regional park) is located c.350m to the southeast.

5.2 Existing Site

The southern portion of the 2.1 hectare site primarily consists of a greenfield area. The northern portion of the site comprises a temporary surface car park and including storage and temporary structures for construction workers at the adjacent residential development. The ground levels within the site area are generally flat with a slow and gradual rise from the southwest corner in a northerly direction. There are some localised steep slopes, however this only occurs along the banks of the drainage ditch on the eastern edge of the lands. Apart from the drain, the lowest level is in the southwest corner of the site (57.10m OD). From this low point the ground levels rise by 1.4m towards the very northern edge of the site (58.50m OD). Other than the drainage ditch and temporary spoil heaps, the slope across the site is consistent. The site drains to the Santry River.

The trees on site are from two different origins. The first is the primary, more historic trees which are remnants of agricultural stock proof field boundaries. These are contained on the eastern side of the ditch. These trees are primarily oak and are very large both in height and crown spread. The second type of trees are the more recently planted trees within the historic tree line and along the path on the eastern perimeter.

The proposed development is located within an area that is covered by the Tree Preservation (Santry Demesne) Order 1987. An *Arboricultural Report* prepared by The Tree File is included as part of the planning application documentation. The *Arboricultural Report* indicates that the root systems related to these trees are contained to the east of the ditch running along the western side of the tree belt. This drainage ditch, which runs north to south through the site, historically acted as constraint to natural root development of the belt of trees and effectively prevented root growth across the ditch line in a westerly direction.

5.2.1 Existing Access

5.2.1.1 Existing Vehicular Access

The existing site is a part greenfield and part temporary car park site. The temporary car park is used for construction workers from the adjacent construction site. Vehicular access is currently provided off Northwood Avenue past Swift Square Office Park and also through Gulliver's Retail Park off Northwood Avenue.

5.2.1.2 Existing Cycling and Pedestrian Facilities

There are good quality pedestrian walkways on all of the major links locally, including dedicated pedestrian crossing facilities at the signalised junctions in the area. Along the length of Northwood Avenue, adjacent to the Sports Surgery Clinic, there are footpaths on both sides of the road and an off-road cycle track.

Additionally, off-road cycle tracks are provided throughout Northwood and on the external road network. Ballymun Road has an off-road cycle track while Swords Road has an on-road cycle track. The off-road cycle

track along Northwood Avenue branches out at numerous locations along the route providing additional cycle facilities throughout Northwood.

5.2.1.3 Existing and Proposed Public Transport Facilities

The subject site benefits from its proximity to a number of high frequency bus services. Stops are located on the R108, c. 350m from the site are served by routes 4 and 13. Dublin Bus and TFI operate numerous routes along Swords Road, Ballymun Road and Santry Avenue. These Dublin Bus operated services operate on a daily basis and offer relatively frequent schedules as summarised in **Chapter 13**.

The National Transport Authority is currently progressing the Bus Connects project. This includes Core Bus Corridors which will provide higher frequency and capacity bus services including measures such as dedicated lanes, higher quality stops, off-board ticketing and full priority at traffic signals. The proposed Ballymun to City Centre Core Bus Corridor Route runs along the R102, c. 700m to the southwest of the site. Bus Connects also provides for the redesign of the bus network. Revised Network Maps have been published and are subject to public consultation until the 3rd of December 2019.

Metro Link is the proposed high-capacity, high-frequency rail line running from Swords to Charlemont, linking Dublin Airport, Irish Rail, DART, Dublin Bus and Luas services and thereby creating a fully integrated public transport service in the Greater Dublin Area. The 'Preferred Route' has been published with the location of the planned Northwood Station located c. 350m from the subject site at the Northwood Avenue / R108 junction.

Metro Link will be similar to the Luas in operation, but will enjoy complete priority along its route, allowing for increased frequency of service with a tram expected every 2 minutes during peak periods. Services are scheduled to commence in 2027. The preferred route and location of Northwood Station is illustrated in **Figure 5-2**.



Figure 5-2: MetroLink Preferred Route⁴

The site is located within a developing mixed-use community which will benefit from excellent metro and bus public transport linkages.

⁴ Source: NTA

5.2.2 Services and Utilities

5.2.2.1 Potable Water Supply

The existing 600mm North Fringe Watermain is located along Northwood Avenue. The North Fringe Watermain is a key trunk watermain laid along the North Fringe from Cappagh Cross to Baldoyle. It is supplied from the Leixlip Water Treatment Plant via the Ballycoolin Reservoir and the High Level Water Tower at Sillogue.

5.2.2.2 Wastewater Services

The North Fringe Sewer is located along Northwood Avenue. The North Fringe Sewer is a major trunk sewer that runs east from Ballymun / Santry to Baldoyle. At Baldoyle the sewer is laid in a south easterly direction to Sutton Pumping Station. The Sutton Pumping Station is connected via submarine pipeline to the Wastewater Treatment Plant at Ringsend. The Ringsend Plant is currently being upgraded from a Population Equivalent (PE) of 1.6 Million to 2.4 million PE.

5.2.2.3 Electricity & Gas

There are no electricity or gas connections on the subject site but electricity and gas are available in the area.

5.2.2.4 Telecommunications

There is a dedicated ducting network installed by Virgin and Eir within the Northwood area.

5.2.3 Cultural Heritage

There are no previously identified individual sites of archaeological interest located within the defined study area.

There are no structures listed in the RPS of the *Fingal Development Plan 2017-2023* as being located within the subject site.

5.3 Proposed Development

5.3.1 Vision

The vision for the development of the subject lands is to provide a high quality residential development that promotes sustainability, a connected and legible movement network as well as high quality and usable public spaces that fully accord with the policies and objectives of the *Fingal Development Plan 2017-2023*. To achieve this vision, a set of guiding development principles have been set for the lands, which include:

- Fully capitalise on the location of the site by providing a well-connected, permeable built environment that establishes a clear urban structure;
- Provide well landscaped public realm that integrates existing mature vegetation where possible and promote opportunities for active and passive recreation while ensuring that the majority of residential units have a relationship with open space areas and the public realm;
- Provide a range of unit types and sizes to provide further housing choice for future residents of Northwood while supporting a sustainable and diverse community; and
- Integrate sustainable development principles into the design and management of the development.

5.3.2 Proposed Site Layout

A site layout has been prepared by McCrossan O'Rourke Manning Architects for the subject site within the context of the masterplan for the Applicant's landholding and the Northwood area. This layout has been devised with reference to the policies and objectives of the Development Plan and the adjoining development. The site layout is illustrated in **Figure 5-3** and is included in the *Architect's Design Statement*

prepared by McCrossan O'Rourke Manning Architects which accompanies the application. It is based on best practice in urban design, including providing permeability, connectivity and legibility. The proposed development completes the central portion of the overall masterplan lands, connecting into the hierarchy of streets, public realm, residential zones, employment zones and recreational open spaces.

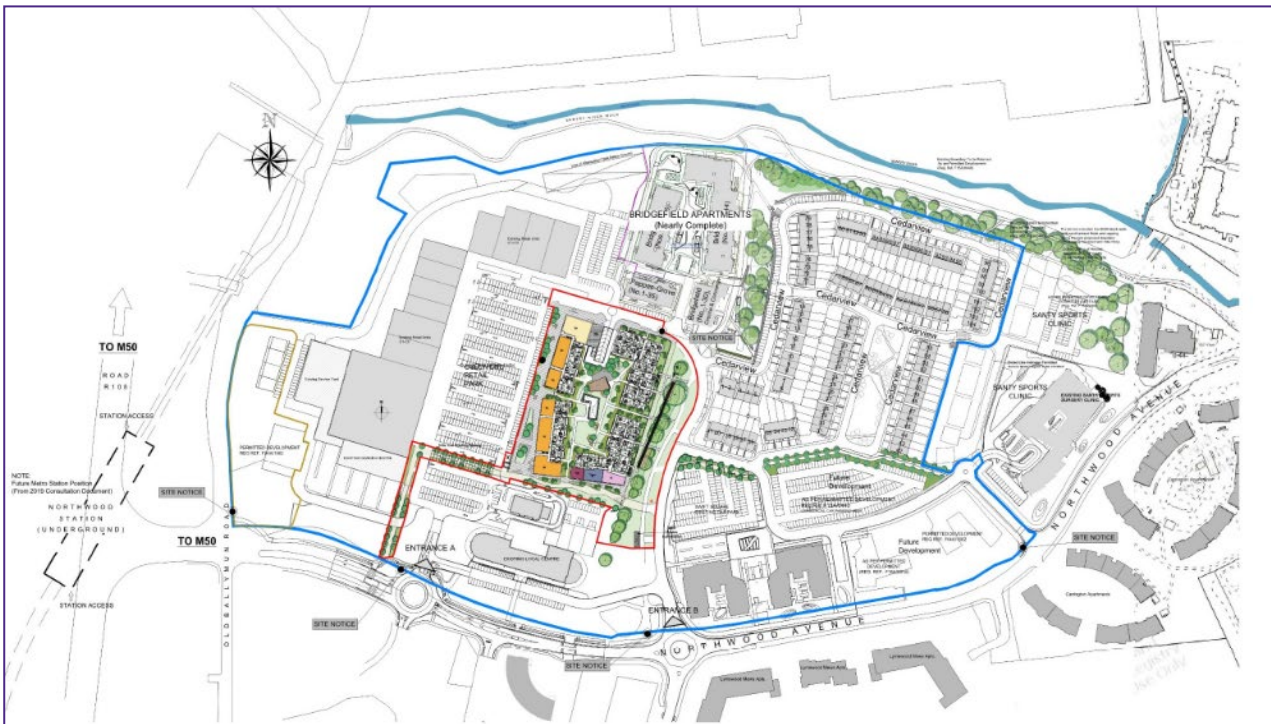


Figure 5-3: Proposed Site Layout⁵

5.3.3 Proposed Development

The proposed development comprises of 4 no. apartment blocks arranged around an internal courtyard over a shared basement. A description of each block is set out below:

- **Block A** with a parapet height of 82.225mOD, comprises 88 no. units (2 no. one bedroom units, 63 no. two bedroom units and 23 no. three bedroom units).
- **Block B** with a parapet height of 82.875mOD, comprises 77 no. units (70 no. two bedroom units and 7 no. three bedroom units).
- **Block C** with a parapet height of 82.875mOD, comprises 77 no. units (76 no. two bedroom units and 1 no. three bedroom units).
- **Block D** with a parapet height of 82.225mOD, comprises 89 no. units (4 no. one bedroom units, 83 no. two bedroom units and 2 no. three bedroom units).

Each of the apartment blocks are 7 no. storeys plus penthouse (8-storeys). Some roof top plant will also be required to service the building.

The proposed development will also include the provision of a childcare facility and 5 no. mixed use commercial units which may accommodate a range of Class 1, 2 and 8, café, restaurant uses at ground floor within Blocks B and C (c. 939 sq.m). These units will address and animate pedestrian routes and existing retail development in the environs. Ancillary resident facilities include communal open space, concierge, multi-function room area and gym are also provided at ground floor level.

⁵ Source: Architect's Design Statement

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Secured resident bicycle parking spaces comprising 690 no. are provided at basement level and an additional 70 no. bicycle parking spaces are provided at surface level.

Resident car parking is comprised of 331 no. car parking spaces and 3 no. disabled spaces at basement level. Visitor car parking shall be facilitated through shared use of existing surface level car parking spaces associated with the adjoining retail park and local centre. In addition to the disabled car parking spaces at basement level, 1 no. disabled car parking space will be allocated at surface level. 3 no. car club spaces shall also be allocated at surface level.

Landscaping and boundary treatments including a new east-west pedestrian/cyclist route linking to existing and planned public transport services is proposed. A north-south pedestrian cycle route is also proposed linking with the pedestrian route through the residential development to the north and providing connectivity with the Santry River Amenity Walk. A site plan of the proposed elements of the works is presented in **Figure 5-4**.

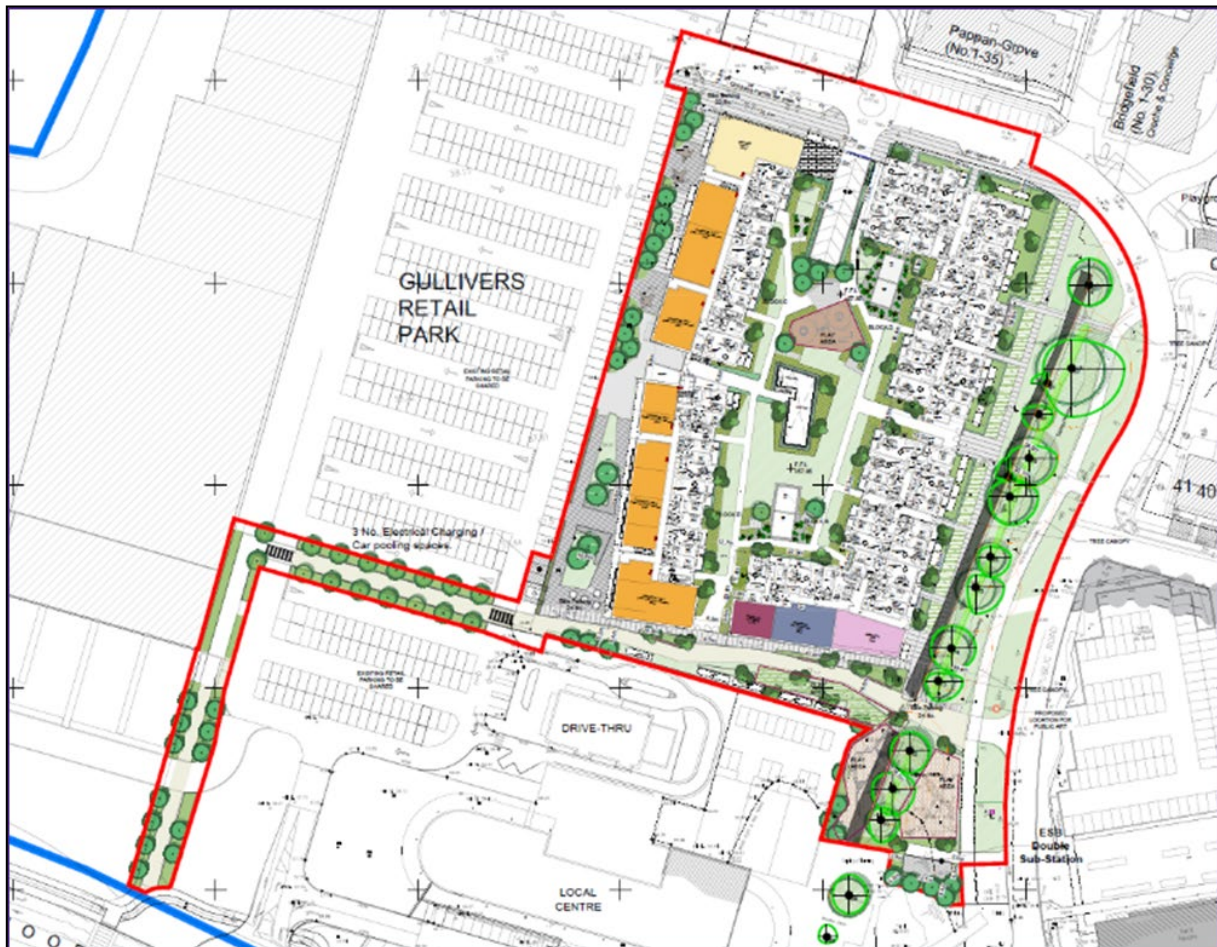


Figure 5-4: Site Plan⁶

The principal development statistics of the proposal are as shown in **Table 5-1**.

Table 5-1: Principal Development Statistics

Development Statistic	Area / Quantum
• Red Line Boundary	• 21,191sq.m
• Apartments	• 331 no. apartments
• Childcare Centre	• 224 sq.m
• Mixed Use Commercial Units	• 939 sq.m
• Gym	• 140 sq.m

⁶ Source: Architect's Design Statement

- Multi-Function Area
- Concierge
- Car Parking
- Car club/share spaces
- Childcare facility short term parking spaces
- Bicycle Parking
- Motorcycle Parking
- Public Open Space
- Private courtyard and periphery gardens
- Public Realm including route to Metrolink
- 133 sq.m
- 81.5 sq.m
- 331 no. spaces + 4 no. disabled
- 3 no. spaces
- 5 no. spaces
- 690 no. spaces (basement) + 70 (surface)
- 5 no. spaces
- 4,672 sq.m (incl. 650sq.m play area)
- 3,671 sq.m (incl. 152sq.m play area)
- 5,255 sq.m

5.3.4 Proposed Residential Use

The development will include the construction of 4 no. apartment blocks with a combined total of 331 no. apartment units. All proposed apartments are provided with private balcony / terrace. A summary of unit sizes within each block is provided in **Table 5-2**.

Table 5-2: Schedule of Areas⁷

<i>Schedule of Apartment Units and Areas</i>		
<i>Block A</i>	No. of Units	Area
1 Bed	2	50.0 – 70.7sq.m
2 Bed	63	81 - 100.8sq.m
3 Bed	23	99 – 121sq.m
<i>Block B</i>	No. of Units	Area
1 Bed	0	
2 Bed	70	80 – 99sq.m
3 Bed	7	105 - 119sq.m
<i>Block C</i>	No. of Units	Area
1 Bed	0	
2 Bed	76	80 – 110sq.m 3.6
3 Bed	1	105sq.m
<i>Block D</i>	No. of Units	Area
1 Bed	4	50 – 57.5sq.m
2 Bed	83	76 – 99sq.m
3 Bed	2	107 – 110sq.m

Further details on proposed apartments is set out in the *Housing Quality Assessment* prepared by McCrossan O'Rourke Manning Architects and enclosed as part of the application documentation.

5.3.5 Proposed Commercial Units

The proposed development also includes provision of mixed use commercial, café and restaurant uses along the southern and western boundaries adjacent to the existing neighbourhood centre, adjacent to the proposed pedestrian / cycle route to the planned Northwood Metro Station and addressing existing retail development in the area. These units will accommodate a range of uses under class 1, 2 and 8 of the Planning and Development Regulations 2001, as amended, in addition to café/restaurant uses. It is proposed that the first use within each of the units will be agreed with the planning authority prior to

⁷ Source: Architect's Schedules

occupancy with the exempted development planning regulations commencing on all changes of uses thereafter.

The provision of these uses along this frontage will provide for increased activity at ground level and increase the level of animation along the frontage. The provision of these uses at ground level will provide for additional amenity to the future and existing residents in the area. A summary of unit sizes is provided in **Table 5-3**.

Table 5-3: Commercial Units Schedule of Areas

Proposed Units	Area
Unit 1 - Block B	• 239sq.m
Unit 2 - Block B	• 216sq.m
Unit 3 - Block B	• 102sq.m
Unit 4 - Block C	• 140sq.m
Unit 5 - Block C	• 242sq.m

5.3.6 Proposed Childcare Facility

A childcare facility of 224sqm is to be provided in the ground floor of Block C in the northwest of the site. This facility can accommodate 48 no. places as derived from the *Childcare Demand Analysis* prepared by RPS which forms part the application documentation. This facility will be designed and fitted out to best practice standards with a dedicated area of private open space for the use of staff and children and is proximate to the proposed playground within the courtyard.

5.3.7 Cycle Parking

The proposed development will provide 690 no. resident bicycle parking spaces in bicycle store areas within the basement. This equates to 1 no. bicycle space per bedroom. These bicycle store areas will provide for the secure storage of bicycles with access restricted to residents only. The storage areas are located in close proximity to the apartment entrances to ensure ease of access and convenience for apartment residents.

A further 70 no. bicycle spaces are provided in the form of sheltered bike rails. These rails will be suitably overlooked for passive surveillance.

5.3.8 Car Parking

The proposed development will include a total of 335 no. car parking spaces (including 4 no. disabled car parking). Each apartment will have one dedicated car parking space.

In order to support sustainable use of private vehicular transport provision shall be made for electric vehicle spaces with charging facilities. All car parking spaces shall be ducted to allow for future provision of electric charging. A *Multiple Occupancy Building Car Charging Strategy* prepared by McElligott Engineers is included as part of the planning application documentation and sets out the rationale for the nature, extent, further provision and management of car charging facilities which accord with policy and SEAI grant incentives.

To further support sustainable transport patterns an additional 3 no. spaces for short term car club rental are proposed. These are located at surface level proximate to the proposed commercial units and adjacent to the pedestrian route connecting the subject site to the planned Northwood Metro Link station. 1 no. of the disabled car parking space will also be provided at this location.

The provision of resident car parking spaces within the basement ensures that surface car parking within the subject site is minimised with spaces around the proposed apartment blocks instead forming part of the designed landscape.

Visitor parking and any car park demand generated by the local commercial units shall be facilitated by the use of existing car parking immediately to the west of the subject site associated with the existing retail park and local centre.

5.3.9 Nature of Materials and Building Elevational Treatments

Finishes and materials will ensure consistency with existing surrounding developments including the housing scheme to the north and wider development within Santry Demesne (currently under construction).

The proposed buildings employ a controlled palette of materials. It is envisaged that the brickwork will match or be similar in character to that of the adjacent Bridgefield apartments, a soft muted buff. Window, balcony and cladding material and detail will also carry through from Bridgefield.

Continuous vertical planes of bay windows will contrast with and visually break the general brickwork – taut technical planes set against the warm buff masonry.

The top floor of each building is clad with glazed curtain walling which allows the buildings to read as 7 storeys of masonry with a visually and materially lighter sky reflecting attic storey over. Balconies at this level will be punched into the curtain walled volume, retaining a clean un-broken parapet line

Further details in relation to the proposed materials and finishes are provided in the *Architect's Design Statement* prepared by McCrossan O'Rourke Manning Architects and enclosed as part of the application documentation.

5.3.10 Access and Connectivity

The proposed development identifies a clear hierarchy of pedestrian, cycle and vehicular routes to provide movement to and through the site. This is illustrated on **Figure 5-5**.

The proposed development will connect with the existing pedestrian and cycle route running east-west along Northwood Avenue and provide connectivity with wider development within Santry Demesne and a future Northwood Metro Stop. There will also be a north-south pedestrian / cycle route running from Northwood Avenue to the Santry River Amenity Walk. A Metro Link stop is currently proposed at Northwood in close proximity to the proposed development. Metro Link is the proposed high-capacity, high-frequency rail line running from Swords to Charlemont, linking Dublin Airport, Irish Rail, DART, Dublin Bus and Luas services, creating a fully integrated public transport service in the Greater Dublin Area. The proposed Northwood Metro Link stop will likely be located west of the proposed development at the junction of the Ballymun Road (R108)/Northwood Avenue. The exact location is yet to be confirmed. In this regard, the proposed development also includes a new pedestrian walkway through Gulliver's Retail Park, providing direct access to the MetroLink stop. The new route will require removing c.44 car parking existing spaces.

Vehicular and bicycle access to the proposed residential scheme will be via Northwood Avenue. It is proposed that an existing roundabout shall provide access to the basement car park.



Figure 5-5: Connectivity to Proposed Development⁸

5.3.11 Proposed Public Realm and Open Spaces

The open space within the proposed residential scheme provides a hierarchy of spaces comprising public, communal and private open spaces. Proposals are illustrated on the landscape drawings prepared by Kevin Fitzpatrick Landscape Architecture within the planning application package. These proposals have been developed and refined in close collaboration with the project arborist and project engineer. The character of the open spaces proposed comprise public parkland open spaces and public realm open space. The private open spaces are confined to the central communal courtyard and private balconies and terraces.

5.3.11.1 Public Parkland Open Space

The public parkland open space is located to the east and south of the proposed apartment blocks and is indicated on drawing number PL03 prepared by McCrossan O'Rourke Manning Architects. This area (4,672sq.m) is predominantly characterised by mature trees forming a linear belt running north to south through the site. An area has been designated to the south east for a future Public Art commission, located along the green route and at the entrance to the apartment development.

5.3.11.1.1 Play Areas

In compliance with the *Sustainable Urban Housing: Design Standards for New Apartments, Guidelines for Planning Authorities 2018*, 3 no. play spaces (175sq.m, 237sq.m, 238sq.m) have been located to the south east of the apartment buildings. Details of these spaces are illustrated on drawing number 101 prepared by Kevin Fitzpatrick Landscape Architecture. The play areas are located where they may be passively supervised from the concierge/management suite and pedestrians moving along north-south and east-west pedestrian pathways through the proposed development and which connect into wider landscape and public

⁸ Architect's Drawings

open space strategy for the overall residential area. These connections are illustrated on drawing number PL02 prepared by McCrossan O'Rourke Manning Architects.

5.3.11.2 Public Realm Open Space

The site layout has been devised to respond to the urban design principles as set out in the *Sustainable Residential Density Guidelines for Planning Authorities* and seeks to provide a legible layout through the creation of a new public realm with a strong building line, active frontages and the varied use of materials, finishes and planting. The public realm open space (5,255sq.m) is located to the west and south of the proposed apartment blocks and is indicated on drawing number PL02 prepared by McCrossan O'Rourke Manning Architects.

This part of the site is devoted to the creation of a public realm which will provide a new street edge and also form part of a defined route through the subject site area enabling a direct connection between the existing and proposed residential development with the potential MetroLink station at the junction of Northwood Avenue and Ballymun Road.

The new north-south street is west facing with the space widening the closer it gets to the intersection with the east-west pedestrian route. The landscaping proposals have been formulated with flexibility in mind to ensure that those areas capable of optimising aspect and position will be provided with seating to facilitate passive leisure or spill out areas associated with any prospective café type use.

The landscape measures provide open space areas to a high specification at ground level. The landscaping strategy and public realm proposals have been developed with particular regard to the existing character of the site, the particular position of the space in respect of light availability and functionality of the space in order to ensure that the landscaping of the development is tailored specifically to the site. The landscape strategy will increase the quantity and diversity in the locale adhere to sound sustainable development principles. The suite of measures includes paving, civic and amenity lighting and appropriate planting.

5.3.11.3 Central Communal Courtyard

Semi-private open space is included as an integral part of the proposed development in the form of a communal landscaped area (3,196sq.m) at the centre of the proposed development and surrounded by the apartment buildings. This semi-private open space will be a high quality useable space which will be a genuine addition to the residential amenity for the future residents of the proposed scheme. This space will be accessible to the future residents of the proposed scheme only. In addition, private spaces (475sq.m) are provided external to the apartment blocks which act as defensible or buffer areas between ground floor residential units and public areas.

5.3.11.3.1 Area of Play

Within the communal courtyard it is proposed to locate an area of play intended for use by younger children. This area comprises approximately 152sq.m, which was agreed with Fingal County Council during the pre-application stage as being appropriate, and will be for the sole use of the residents of the development.

5.3.11.4 Planting Strategy

The plant species are chosen to respect the local environment while providing suitable vegetation that is harmonious with a residential area and will be successful through all stages of its maturity. Therefore, the planting palette has a limited number of species chosen for their appropriateness and with a preference for native planting where possible.

There are a large number of new trees proposed and the species are chosen for their appropriateness to the scale of the scheme. The planting palette is chosen to provide seasonal interest all year round, whilst contributing to the local biodiversity, with herbaceous planting interspersed throughout and evergreen planting and hedges as a backdrop. The herbaceous planting is intended to support the aims of the Council's *All Ireland Pollinator Plan 2015-2020*.

The tree species have been chosen specifically for their suitable compact habit. These species are appropriate for the scale of the spaces in which they are to be used and are of a variety that will complement other native trees. Where required, structural tree pits are provided using a 'Rootcell' Soil Structure System.

The existing trees that are retained within the scheme are to be complemented by additional planting of native and naturalised broadleaf tree planting. Throughout the landscape spaces a mix of broadleaf deciduous trees will be planted that will increase the woodland cover while facilitating safe use of the spaces.

5.3.11.5 Management and Taking in Charge

The proposed apartment development will be located over a podium basement area. The open space on the podium will be privately managed and no private open space areas will be taken in charge by the Planning Authority. The maintenance of high quality landscaping will be ensured into the future by means of a management company.

Public open spaces will also be privately managed however should taking in charge procedures occur in the future the landscape design ensures that a clear delineation of management can take place. These areas are illustrated on drawings number PL26 prepared by McCrossan O'Rourke Manning Architects.



Figure 5-6: Proposed Public Realm and Public and Private Open Space and Play Areas⁹

⁹ Architect's Drawings

5.3.12 Services and Utilities

5.3.12.1 Water Supply and Wastewater Disposal

A pre-connection application to Irish Water in respect of water supply and wastewater disposal for the proposed development was submitted on the 25th January 2019. Irish Water advised in their *Confirmation of Feasibility Statement*, dated 8th March 2019 that their water supply network and wastewater infrastructure could cater without upgrades for the proposed development. A copy of the *Confirmation of Feasibility Statement* is included in an Appendix to the *Water Services Report* prepared by JB Barry & Partners Consulting Engineers and which form part of the application documentation.

The proposed development will be supplied via the existing 200mm watermain in the Access Road. This 200mm main is supplied from the existing 600mm North Fringe Watermain in Northwood Avenue. The North Fringe Watermain is a key trunk watermain laid along the North Fringe from Cappagh Cross to Baldoyle. It is supplied from the Leixlip Water Treatment Plant via the Ballycoolin Reservoir and the High Level Water Tower at Sillogue. The proposed watermain layout is shown on Drawing 19205-JBB-00-XX-DR-C-01004 prepared by JB Barry & Partners Consulting Engineers and which form part of the application documentation.

The proposed development will be connected to the 225mm foul sewer in the Access Road. This sewer is connected to the North Fringe Sewer at the roundabout on Northwood Avenue. The North Fringe Sewer is a Major trunk sewer that runs east from Ballymun / Santry to Baldoyle. At Baldoyle the sewer is laid in a south easterly direction to Sutton Pumping Station. The Sutton Pumping Station is connected via submarine pipeline to the Wastewater Treatment Plant at Ringsend. The Ringsend Plant is currently being upgraded from a Population Equivalent (PE) of 1.6 Million to 2.4 million PE. Irish Water advised in their *Confirmation of Feasibility Statement*, dated 8 March 2019, that their water wastewater infrastructure could cater for the proposed development. A *Statement of Design Acceptance* from Irish Water, dated 29 October 2019, also forms part of the planning documentation. The proposed foul sewer layout is shown on Drawing 9205-JBB-00-XX-DR-C-01003 prepared by JB Barry & Partners Consulting Engineers and which form part of the application documentation.

5.3.12.2 Surface Water

The foul and storm sewer networks will be on the separate systems. No foul effluent will discharge to the storm water system.

The SUDS strategy for the development provides a comprehensive approach to the management of surface water on the site including: water quality and water quantity. Source controls proposed for this development include permeable Paving and a Stormtech System / Hydrocarbon interceptor.

There is provision for outflows(overflows) from the permeable paving via the internal surface water drains to the Stormtech system and then to the surface water infrastructure (including the existing attenuation tank) which discharges to the Santry River in the North-West corner of the existing development.

The proposed surface water network and the proposed SUDS measures for this development are shown on Drawings 19205-JBB-00-XX-DR-C-01001, 19205-JBB-00-XX-DR-C-01002 and 19205-JBB-00-XX-DR-C-01007 prepared by JB Barry & Partners Consulting Engineers and which form part of the application documentation.

5.3.12.3 Lighting

The application proposes street lighting throughout the development as an integral part of the scheme. The lighting plan has been designed in accordance with the *Fingal Development Plan 2017-2023* providing a level of brightness that will minimise incidences of light spillage or pollution on the neighbouring residential developments and biodiversity in the surrounding area. Detailed lighting proposals are set out in the *Public Lighting Report* and associated drawings prepared by McElligott Consulting Engineers and which form part of the application documentation.

5.3.12.4 ESB Substation

A double substation is required to support the proposed development and future level of car charging facilities. The requirements of the ESB in this regard are set out in the *Energy Statement* prepared by McElligott Engineers and which form part of the application documentation. A design rationale for the location of the utility is set out in the *Architect's Design Statement* prepared by McCrossan O'Rourke Manning Architects.

5.3.13 Sustainability

An *Energy Statement* has been prepared by McCrossan O'Rourke Manning Architects and McElligott Engineers in order to identify the energy strategy for the proposed development and confirmation of the proposed method of compliance with Part L 2011 of the Building Regulations and is included with the application documentation. The *Energy Statement* confirms that the approved construction details will achieve a minimal thermal bridging factor of 0.08. The net impact of these combined criteria is that the heat losses associated with the apartments will be below 25% of the total thermal demand.

5.3.14 Emissions and Waste

Effluent arising from foul drainage from the proposed development will be discharged through piped systems to the local authority sewers. Operation of the development will involve the discharge of uncontaminated surface water from the impermeable areas to a proposed network all linking into the proposed wetland area to the north. Details of the impacts and remedial and reductive measures for surface water and foul drainage are recorded in **Chapter 8** of this EIAR.

5.3.14.1 Municipal Waste/Waste Management

The principal objective of sustainable resource and waste management is to use material resources more efficiently, to reuse, recycle and recover material and reduce the amount of waste requiring final disposal.

Municipal waste means household waste as well as commercial and other waste that, because of its nature or composition, is similar to household waste. It excludes municipal sludge and effluents.

- An operational *Waste Management Plan* has been prepared by KeyWaste Management Ltd. and is included in the application documentation.
- The proposed development will include 9 no. dedicated bin stores (8 no. at basement level and 1 no. at surface level) providing a total of 68 no. Euro Bins and 21 no. 240lt bins at basement level, and 10 no. Euro Bins at surface.

These bin stores are distributed evenly around the basement area, proximate to the lift cores serving the floors above. The filled bins will be taken via the vehicular ramp to the layby located at the north of the proposed buildings for collection on designated days. The *Waste Management Plan* prepared by KeyWaste Management Ltd. proposes collection staggered across a number of days to limit the bins volume on any particular day.

- The bin store serving the proposed ground floor commercial units is located between Blocks B and C, immediately inside the western entrance gate. This ground level location is seen as the most convenient for the commercial units and avoids the carrying of waste from these units down a level to the basement. The location of this bin store just inside the courtyard gate minimises the distance bins will have to be rolled within the courtyard on collection days thereby maintaining the residential amenity of the shared open space and protecting the privacy of residents.
- All waste will be collected in accordance with the relevant by-laws and there will be a 'zero to landfill' policy for the development.
- General Waste - General waste will be sent to the newly opened 'Waste to Energy Plant' in Poolbeg Dublin 4, where it will be transferred into energy.

- Recycling/Cardboard – Recycling and cardboard will be processed and transferred to mills and recycling plants.
- Glass – Glass is brought to KeyWaste's partner, Glassco who have a world class facility in Kildare. There it is turned into glass cullet and eventually is recycled back into glass bottles.
- Food Waste – Food waste is fully composted while trapping methane produced to create electricity, making it the greenest practice available.

5.3.14.2 Air Emissions

The greatest potential impact on air quality during the construction phase of the proposed development is from construction dust emissions and the potential for nuisance dust and PM10/PM2.5 emissions.

There is the potential for a number of emissions to the atmosphere during the operational phase of the development. In particular, the traffic-related air emissions may generate quantities of air pollutants such as NO₂, CO, benzene, PM10 and PM2.5. This is considered more fully in **Chapter 9**.

5.4 Construction Management Strategy

5.4.1 Phasing / Stages of Construction

The expected construction will be delivered in a single phase. However, it is feasible that market conditions would require alterations to any programme which is specified at this time and it is likely that it will be reviewed in the course of construction. The proposed phasing programme is outlined in the *Construction and Environment Management Plan (CEMP)* prepared by JB Barry & Partners Consulting Engineers (part of the planning documentation).

The main stages of construction will proceed in a general sequence as follows:

- Removal of the existing hard standing areas;
- Enabling Works including set-up of site construction facilities;
- Service diversion works;
- Site clearance will include cut and fill of existing ground profiles and formation of basement excavation;
- Construction of drainage, water supply and utility service distribution network within the site;
- Construction of basement car park and podium/transfer slab at ground level;
- Construction of multi-storey apartment blocks;
- Roads, landscaping and paving; and
- Building fit-out and commissioning.

5.4.2 Construction Waste

The scheme will result in waste generation from the following activities:

- Removal of the existing boundaries;
- Removal of the existing hard standing areas; and
- Removal of soil to make way for construction.

A geotechnical investigation was undertaken by Ground Investigation Ireland Limited in February 2019. The main findings established a stiff layer of black boulder clay at approximately 2.0-2.5m below ground level throughout the site and the water table was not encountered in any trial pits or boreholes at a depth of 7.5m.

The construction of the basement will involve excavations to an approximate depth of 4.0m below existing ground level and the removal of approximately 47,000m³ of excavated material from site.

Management of all waste throughout the project lifecycle will be in accordance with EU, National and Regional waste management policy and the principles of the Waste Hierarchy i.e. prevention, minimization, reuse, recovery and recycling. In order to prevent and minimize the generation of wastes, the Contractor is required to ensure that raw materials are ordered in a timely manner so as the quantity delivered, and the storage does not lead to the creation of unnecessary waste.

A *Construction and Demolition Waste Management Plan* (CDWMP) has been prepared by JB Barry & Partners Consulting Engineers and forms part of the planning documentation. Further detail on construction waste is provided in **Volume 2 Chapter 7**.

5.4.3 Site Management

All construction activities will be governed by a construction Traffic Management Plan (TMP) the details of which will be agreed with Fingal County Council's Roads Department prior to the commencement of the Construction Phase.

5.4.3.1 Construction Hours

This plan will include the permitted site operation hours which are expected to be 07:00-19:00 on weekdays and 09:00-13:00 on Saturdays with no works on Sundays or bank/public holidays in accordance with the Environmental Noise regulations 2006 and subject to final agreement with Fingal County Council.

In exceptional instances should works be required outside of these hours, bespoke agreement will be sought from Fingal County Council prior to any works taking place. The appointed contractor will be required to prepare and adhere to a Site Environmental Policy Plan and any employed subcontractors will be required to buy into this document. Unscheduled deliveries will not be allowed access.

5.4.3.2 Construction Site Access

Pedestrian access will be strictly controlled. Only Safepass accredited personnel will be permitted on site and daily in-out attendance records will be maintained. Safe pedestrian access points will be provided based on the stage of works and layout of the construction site.

Construction traffic will access the site via the service entrance to the rear (west) of Gulliver's Retail Park so as to minimise disruption on other routes. The routing will be strictly managed and controlled, and details will be incorporated into the Traffic Management Plan.

A site compound will be provided to the north of the development site as shown in **Figure 5.7**.

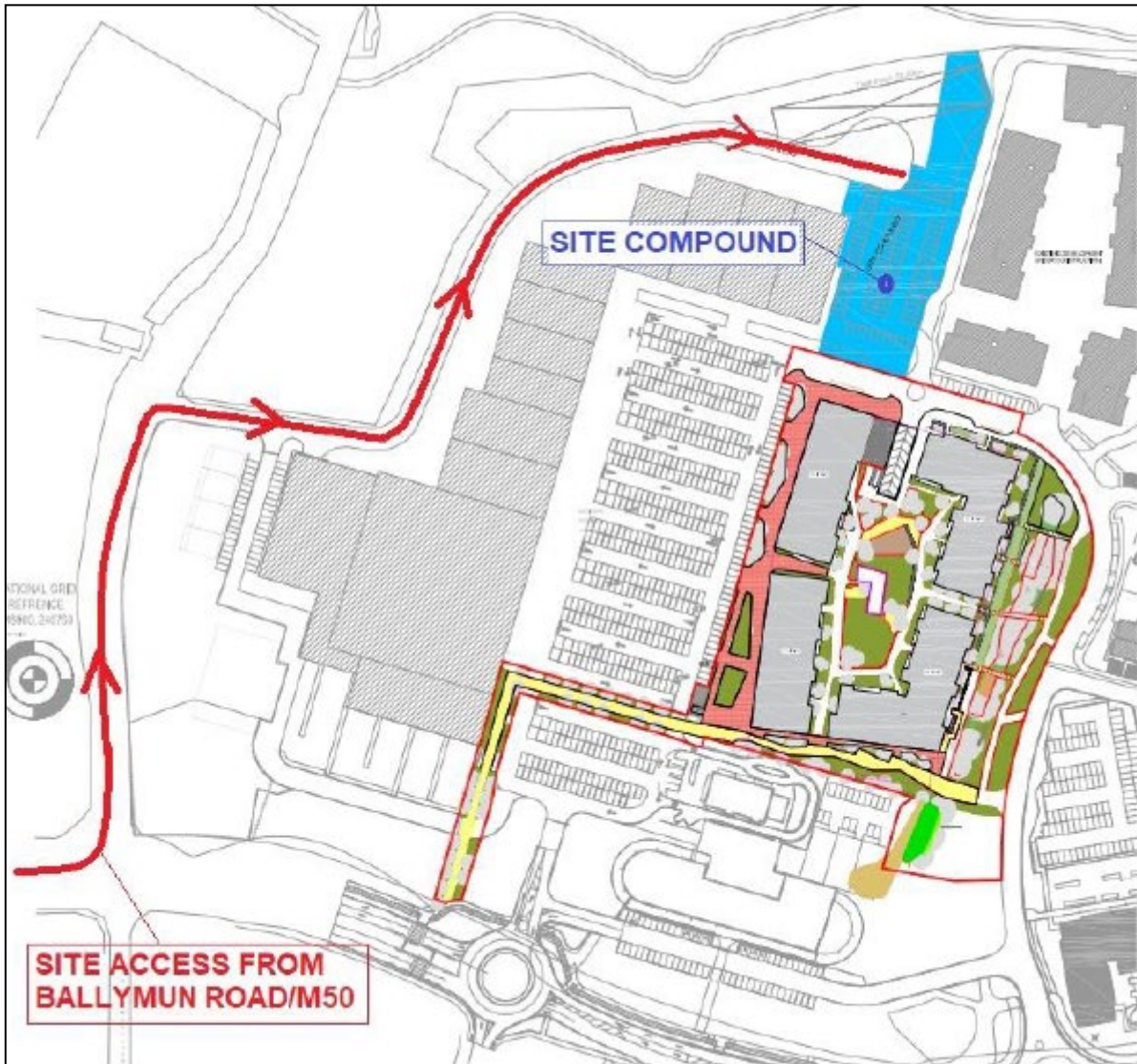


Figure 5-7: Site Access and Construction Compound¹⁰

5.4.3.3 On Site Parking

Construction car park will be accommodated within the site compound.

5.4.3.4 Construction Personnel

Based on a 150-week construction period and on industry standard figures it is likely that an average of c.60 construction personnel will be on site on a daily basis. However, it is likely that this figure may be higher during periods of peak activity.

5.4.3.5 Traffic Management

Construction traffic generated during the Construction Phase tends to be outside of peak hours (staff and deliveries arrive before 07:00 and generally depart after 19:00). The traffic generated by the construction phase will not be higher than the peak hour predicted volumes for the Operational Phase. Any specific recommendations/requirements with regard to construction traffic management made by Fingal County Council will be adhered to during this phase.

¹⁰ Construction and Demolition Waste Management Plan

6 BIODIVERSITY

This Biodiversity Chapter describes the likely significant effects on biodiversity resulting from the proposed strategic housing development in Northwood, Santry. Where necessary, mitigation measures are identified to address likely significant effects and the likely residual effects are also described.

The assessment takes account of international and national legislation relating to biodiversity, and local authority policies relating to biodiversity. The assessment is based on the results of a desk study and field surveys undertaken in 2019. The desk study included a search of datasets held by the National Parks and Wildlife Service (NPWS), the Environmental Protection Agency (EPA) and National Biodiversity Data Centre (NBDC). Field surveys were undertaken between 8th February and 20th June 2019, and included habitat and invasive species surveys, protected mammal surveys, breeding bird surveys and bat surveys.

The lands are not contained within any designated sites but are hydrologically connected to European sites in Dublin Bay via the Santry River. These sites have been designated for their coastal and marine habitats and wetland bird species. It was concluded in the Appropriate Assessment Screening report, included in this planning application, that there is no possibility of significant effects on European sites from the proposed development, either alone or in-combination with any other plans and projects. With regards to nationally protected sites, Santry Demesne pNHA is located c. 150m north of the subject lands.

6.1 Flora

No notable or protected flora species occur within the subject lands. Habitats within the proposed development site considered to be key ecological receptors (KERs), and of local importance are hedgerows and dry meadows and grassy verges.

6.2 Fauna

In terms of protected fauna, the hedgerow along the eastern boundary of the lands has 2 no. trees with potential roosting features for bats. The hedgerow is also considered to be suitable for commuting and foraging bats, although existing light spill reduces the suitability of the subject lands for bats. One species of bat- Leisler's bat *Nyctalus leisleri* was recorded within the subject lands. No signs of other protected mammals were found within the lands. The drainage ditch onsite is considered to be suitable for breeding amphibians, particularly frogs. The lands were found to contain a range of breeding bird species, predominantly within and adjacent to the hedgerow onsite. Bird activity was also noted within the 'Dry meadows and grassy verges/ recolonising bare ground' habitat.

6.3 Impact Assessment

Significant effects are predicted to arise at the construction phase of the proposed development from: the removal of vegetation; infilling of the drainage ditch and, the potential generation and mobilisation of silts, sediments and other pollutants to the local surface water network. Disturbance impacts have been considered during construction but are not predicted to be significant. Operational phase impacts are predicted from the operation of artificial lighting and disturbance from increased human traffic within the lands.

With regards to habitats, significant impacts are predicted during the construction phase of the proposed development. This would arise from the loss of hedgerow and dry meadows habitats during site clearance works; potential accidental damage to retained trees through machinery strikes or compaction of soils during construction works; and accidental pollution of watercourses downstream of the lands.

With regards to fauna, significant effects are predicted to arise from loss of suitable habitat for bats, birds and amphibians, and from mortality of birds arising from the destruction of bird nests, during the construction phase of the proposed development. Operational phase impacts extend to the introduction of extra artificial lighting to the lands, and the illumination of suitable habitat for commuting and foraging bats.

6.4 Mitigation Measures

Measures have been provided for the protection of retained trees, including the use of protective barriers and the utilisation of a root protection area, to be calculated by a qualified arborist. A compensatory measure has been proposed for the loss of hedgerow habitat- the remaining sections of hedgerow will be kept intact and planted with a range of native species to prevent further deterioration of the habitat. Following the implementation of the mitigation and compensation measures to protect the remaining sections of hedgerow, residual impacts on hedgerows are considered to be reduced, but will remain significant at a local level.

Measures have been proposed to address impacts on fauna. In the case of bats, the hedgerow within the lands will be kept as dark as feasibly possible and lighting columns will be fitted with baffles as appropriate to minimise light spill.

In the case of birds and amphibians, measures have been proposed to prevent mortality during construction and infilling works. Residual impacts on fauna are considered to be reduced but will remain significant at a local level due to the loss of habitats as a result of the proposed development.

6.5 Cumulative Impacts

Cumulative effects have been considered, with no additional significant residual effects predicted following implementation of mitigation measures.

6.6 Residual Impact

Following the implementation of mitigation measures, residual impacts on bats are considered to be reduced but will remain significant at a local level. Following the implementation of mitigation and compensation measures to protect the remaining pieces of hedgerow, residual impacts on hedgerows are considered to be reduced but will remain significant at a local level.

As it is proposed to infill the drainage ditch, the proposed development will result in the permanent loss of wetland habitat from the site and permanent loss of potential amphibian breeding habitat. This is considered to be a significant residual impact at the local scale.

7 LAND, SOILS AND HYDROGEOLOGY

7.1 Existing Environment

Site investigations were undertaken in 2019 and drilling confirmed that the proposed site is underlain by > 8.0 metres of overburden. The overburden is composed predominantly of glacial tills (Boulder clay). No groundwater inflows were observed. No evidence of soil contamination or illegal dumping was indicated by analyses carried out as part of the Site Investigation.

The underlying bedrock is the Lucan Formation comprising dark shaley limestone known as Calp. The overall GSI aquifer classification is "Li" (locally important aquifer moderately productive only in local zones). The area is served by public water mains and therefore it is unlikely that there are any water supply wells in the area. The low permeability boulder clay deposits above the bedrock limits infiltration and restrict percolating water from reaching the bedrock aquifer. The GSI groundwater mapping website indicates that the vulnerability (is classified as being "low").

7.2 Impact Assessment

The only interactions with land and soils environment will be as a result of routine excavation. Soil will be routinely excavated to a depth of approx. 4.0 metres below ground level to build the underground car park and the site recontoured to accommodate the foundations and construction of the buildings. No dewatering will be required.

The design of the proposed development does not facilitate the beneficial re-use of suitable excavated material on site. Consequently, the excavated material constitutes a waste and will be recovered and/or disposed off-site at appropriately authorised waste facilities. However, under the Waste Hierarchy principals, the re-use of the excavated soils is preferred to the disposal to landfill. Consideration will be given to removal of soil off site for re-use as a by-product (in accordance with Article 27 of the European Communities (Waste Directive) Regulations 2011).

The disposal of excavated material is considered to have low importance and the magnitude of the impact on the environment is predicted to be neutral, temporary, negligible. The significance of the impact is imperceptible.

Accidental spillages could result in soil being contaminated.

Potential impacts during the construction and operational phase include the leakage or spillage of construction related materials and fuels and chemicals on site. However, the vulnerability classification of the underlying groundwater has been classified as "Low" based on site specific information.

The impact on groundwater water quality is predicted to be negligible in magnitude and imperceptible in significance, temporary in duration and unlikely.

The impact of accidental spillages on soils is negligible in magnitude and imperceptible in significance.

7.3 Mitigation Measures

As no significant impacts were predicted, no specific mitigation measures are proposed. However, in advance of work starting on site the works Contractor will prepare a Construction Environment Management Plan (CEMP). This CEMP and a Waste Management Plan will be implemented to ensure best practices.

7.4 Cumulative Impact

As the impacts are neutral and unlikely to interact with the impacts of other existing or permitted projects, there are no cumulative impacts predicted.

7.5 Residual Impact

The predicted overall residual impact of the proposed development on land, soils, geology and hydrogeology both during construction and operational stage will be neutral.

8 WATER AND HYDROLOGY

The assessment considered the impact of the proposed development on the receiving surface water environment in its vicinity.

The assessment was based on a desk study review of hydrological information, site visits, and the *Flood Risk Assessment (FRA)* provided as part of the planning application. Water quality data to establish baseline conditions was obtained from the EPA mapping website and catchments.ie

8.1 Existing Environment

The site is located within the upper catchment of the Santry River which has its origins at Harristown and Dubber, south of St. Margaret's. It flows to the west of Dublin Airport and parallel to the main runway. From there, it flows through Silloge, under the M50 Motorway at Ballymun, through Santry Demesne. It then passes under the M1/M50 Motorway at Santry, through Kilmore, Edenmore, Raheny and under the Dublin/Belfast railway line before discharging to Dublin Bay at North Bull Island. The river drains an area of approximately 1400 hectares.

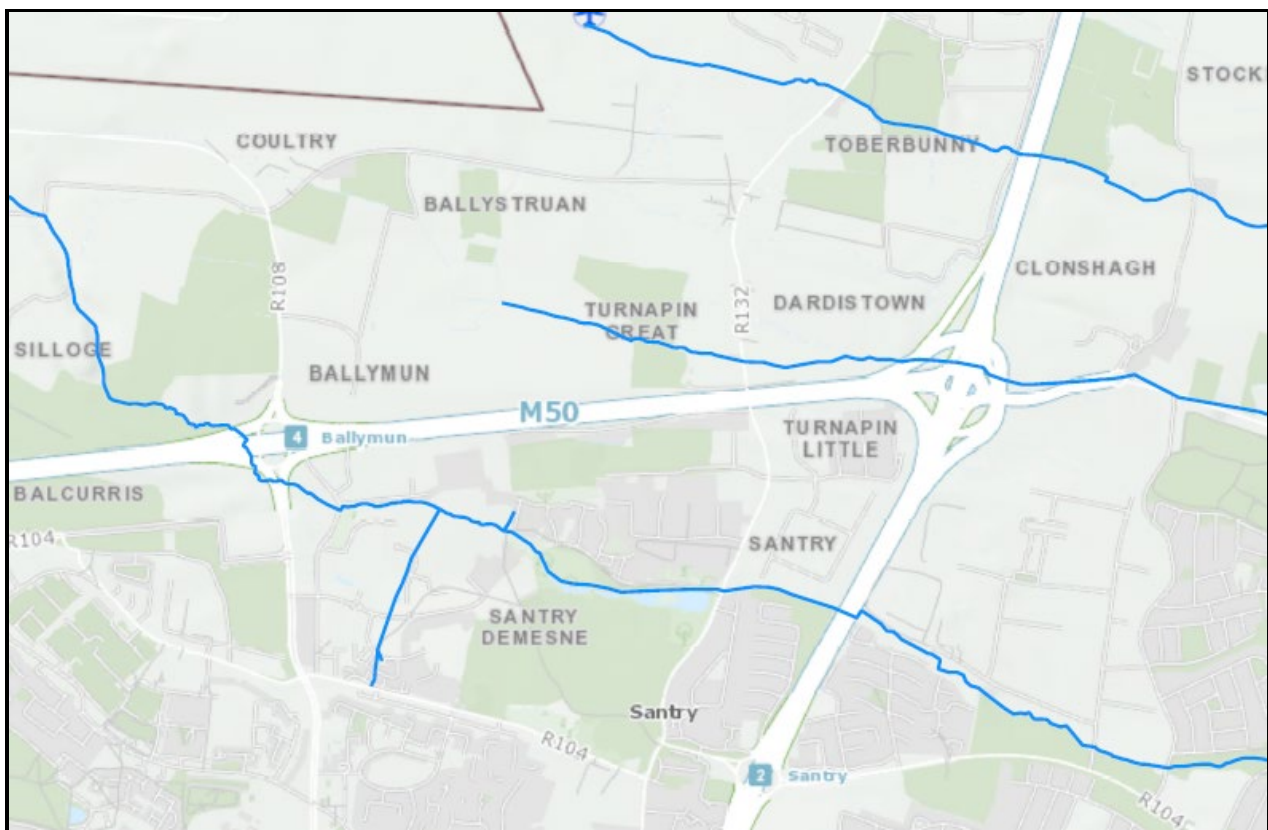


Figure 8-1: Local Rivers

The WFD Status for the Santry_010 River Water Body is “Poor” and “at risk” of not achieving “Good” status.

A Flood Risk Assessment was undertaken to accompany the planning application. The OPW preliminary flood risk assessment (PFRA) flood extent map and FCC strategic flood risk assessment (SFRA) Flood Map indicates that the existing site lies within Flood Zone C where the probability of flooding from rivers and the sea is low (less than 0.1% AEP or 1 in 1,000).

8.2 Impact Assessment

No water will be abstracted from streams in the vicinity of the proposed site. All wastewater will be directed to the public sewer. The water supply to the proposed development will from the public mains.

8.2.1 Flooding Impacts

The proposed surface water drainage will be designed to incorporate SuDS devices, in the form of permeable paving and a Green Roof system over 60% of the apartment roof and central courtyard areas to limit any potential pollutants in runoff prior to discharge to the Santry River. The drainage systems will be designed in accordance with the report entitled *The Planning System and FRM Guidelines for Planning Authorities* (2009).

Stormwater runoff from the development will drain via the Green Roof system to the proposed surface water network prior to discharge to the existing surface water infrastructure (including the existing attenuation tank) prior to discharging to the Santry River in the north-east corner of the existing development. The proposed permeable paving has storage (attenuation) capacity to cater for the 1:100-year critical storm event plus 20% for climate change with restricted outflows limited to 2l/sec to the surface water system if necessary. In addition, there is capacity in the existing Attenuation Tank to cater for the peak flow of 368.5l/sec generated from the 1 in 100 year + 20% for climate change from the proposed development ensuring that the runoff from the entire site including this phase of the development will be restricted to the required green field runoff rate.

The receiving water channel of the drainage ditch will not be altered.

The risk of flooding of the proposed site is minimal (located in Zone C). The attenuation measures and the lack of any alteration to the channel will result in no increase in risk of flooding of lands downstream and upstream of the site.

There are no flooding impacts predicted as a result of the proposed development.

8.2.2 Water Quality

Potentially the most serious source of contamination to a water course associated with the development are accidental spillages.

Potential impacts on water quality during the construction phase are considered negative, temporary, and imperceptible. This is the typical potential impact associated with construction projects. There are no potential impacts on water quality during the operational phase.

Chemical pollutants such as hydrocarbons and other chemicals may enter the surface waters in the event of accidental release and have implications down-stream of the proposed development. The volumes of hydrocarbons that could potentially spill during the operational phase will be small. Spills will gather on site rather than discharge directly to the water course. The magnitude of the impact is assessed to be "Small Adverse" on an attribute of "Medium" importance. The significance of this potential impact is "Slight", negative in quality and temporary in duration.

8.3 Mitigation Measures

8.3.1 Flooding Impacts

The proposed drainage designs will incorporate SUDS measures (embedded mitigation) to ensure the runoff from the site to the Santry River will not exceed greenfield runoff rates. Consequently, there will be no increase in risk of flooding in the receiving waters.

8.3.2 Water Quality

All surface water discharge from the proposed site will pass through suitably sized hydrocarbon interceptors. The incorporation of hydrocarbon interceptors will ensure that any spill is contained before reaching the Santry River.

Following implementation of mitigation, the significance of the impact on water quality will be imperceptible

A *Construction Environmental Management Plan* (CEMP) will be implemented to ensure good construction management practices are employed.

Following the implementation of mitigation measures the residual impacts of the construction and operation of the proposed development will be neutral and imperceptible.

8.4 Cumulative Impact

The stormwater attenuation system is designed to accommodate both phases of the development. As the impacts are imperceptible and unlikely to interact with the impacts of other existing or permitted projects, there are no cumulative impacts predicted.

8.5 Residual Impacts

No significant residual Impacts are predicted.

9 AIR QUALITY AND CLIMATE

The Air Quality and Climate Chapter considers the potential impacts on local air quality, regional air quality and climate associated with the proposed development.

9.1 Existing Environment

In terms of the existing air quality environment, data available from similar environments indicates that levels of nitrogen dioxide (NO₂), carbon monoxide (CO), particulate matter less than 10 microns (PM₁₀) and less than 2.5 microns (PM_{2.5}) and benzene are generally well below the National and European Union (EU) ambient air quality limit values.

9.2 Impact Assessment

The greatest potential impact on air quality during the construction phase is from construction dust emissions, PM₁₀ and PM_{2.5} emissions. In order to minimise dust emissions during construction, a series of mitigation measures have been recommended. When the dust minimisation measures set out within this EIAR are implemented, the impact of fugitive emissions of dust from the site on nearby receptors will be short-term and not significant. 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 ambient air quality legislative limit values and, therefore, the impact will be short-term and imperceptible with respect to human health.

Due to the size and nature of the development, the impact of the construction phase of the proposed development on national greenhouse gas emissions is predicted to be short-term and imperceptible in terms of Ireland's obligations under the EU 2020 target.

The dust minimisation measures outlined for the proposed development should be implemented throughout the construction phases for all developments within 350m of the site to avoid any nuisance dust impacts occurring. Once these minimisation measures are in place, the cumulative impact to air quality is considered short-term and not significant.

The operational impact of the development was assessed based on emissions of the pollutants NO₂, CO, PM₁₀, PM_{2.5} and benzene using the UK Design Manual for Roads and Bridges (DMRB) screening model which is a recommended screening model for assessing the impact of traffic on air quality. The inputs to the air dispersion model consist of information on road layouts, receptor locations, annual average daily traffic movements, annual average traffic speeds and background concentrations. The climatic impact based on greenhouse gas (GHG) emissions of CO₂ was also assessed using the Design Manual for Roads and Bridges screening model.

Based on the modelling results, the impact of the proposed development on ambient air quality and climate is predicted to be long-term and imperceptible. The assessment demonstrates that the impact of the operational phase of the development complies with all ambient air quality legislative limit values which are based on the protection of human health and, therefore, the impact will be long-term and imperceptible with respect to human health.

The local air quality impact assessment, regional air quality impact assessment and climate impact assessment conducted using the DMRB model for the proposed development have all been based on traffic data which was based on conservative growth rates which account for growth in the surrounding area as a worst-case in order to ensure a robust assessment. As the outcomes of the assessments concluded that impacts will be long-term and imperceptible with respect to air quality and climate, no further cumulative impact assessment is required for the proposed development.

9.3 Mitigation Measures

No additional mitigation measures are required during the operational phase of the proposed development as it is predicted to have an imperceptible impact on ambient air quality and climate.

9.4 Monitoring Measures

Monitoring of construction dust deposition at the site boundary and / or at nearby sensitive receptors during the construction phase of the proposed development is recommended to ensure the mitigation measures are providing adequate dust minimisation.

There is no monitoring required for the operational phase of the development as impacts to air quality and climate are predicted to be imperceptible.

9.5 Cumulative Impact

The cumulative impact to air quality and climate during construction and operation is considered to be imperceptible or not significant.

9.6 Residual Impact

The impact of fugitive emissions of dust from the site during construction will be short-term and not significant. All other climate and air quality impacts are imperceptible.

10 NOISE AND VIBRATION

10.1 Impact Assessment

The existing noise climate has been surveyed during both daytime and night-time periods and has been found to be typical of an suburban area. Prevailing noise levels are primarily due to local road traffic movements with some contribution from aircraft operations associated with Dublin Airport.

The potential noise and vibration impact on the nearest noise sensitive locations were assessed for the short-term construction phase and the longer-term impact of the operational phase once the scheme is in operation.

Subject to good working practice during the construction phase and not exceeding any limits proposed within the EIAR, it is anticipated that noise and vibration will not cause any significant impact or noise and vibration nuisance. During the operational phase, the key potential noise sources including increased in road traffic and mechanical plant noise emissions have been assessed and commented upon. The assessment has indicated that subject to the implementation of the mitigation measures proposed within the EIAR, none of these will increase the existing noise climate sufficiently so as to be likely to cause a disturbance. Noise levels during the operation of the proposed scheme is predicted to nominally remain unchanged when compared to the existing scenario and are all within the recommended noise criterion for day and night-time periods.

In line with current best practice a detailed inward noise impact assessment on the proposed residential units within the development has also been completed with a particular focus on aircraft noise. Based on the best practice guidance, i.e. Professional Guidance on Planning & Noise (ProPG), the assessment outlines measures that have be incorporated into the design, including glazing sound insulation requirements, provision and location of amenity areas etc. that assist in the provision of an appropriate level of amenity in terms of noise.

10.2 Mitigation Measures

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. This includes guidance on several aspects of construction site mitigation measures, including, but not limited to:

- selection of quiet plant;
- noise control at source;
- screening, and;
- liaison with the public.

During the operational phase of the development, noise mitigation measures with respect to the outward impact of the development are not deemed necessary.

10.3 Monitoring Measures

Monitoring of construction noise and vibration levels at the site boundary during the construction phase of the proposed development is recommended during works stages that have the potential to general elevate levels of noise and vibration.

10.4 Cumulative Impact

It is considered that additional traffic introduced onto the local road network due to the construction and operational phases associated with the development, as outlined in the relevant sections of this EIAR will not result in a significant noise impact.

10.5 Residual Impact

During periods when construction works are occurring at distances of up to 30m from the nearest noise sensitive locations to the site boundary, there is potential for temporary, negative, moderate to significant noise impacts to occur.

Assuming the operational noise levels do not exceed the adopted design goals, the resultant residual noise impact from this source will be of neutral, imperceptible, long term impact.

11 CULTURAL HERITAGE

The subject development lands form part of the townland of Santry Demesne, in the barony of Coolock and the civil parish of Santry. The lands formed part of the former Santry Court Estate, owned by the Barry family, Barons of Santry, from at least the mid-seventeenth century to the mid-eighteenth century. Subsequent to this they were inherited by the Compton Domville family, who retained the estate until the late-nineteenth century when they were inherited by the Pöe family who were relatives of the Domville's by marriage. Much of the estate, including the area of the proposed development, was acquired by Dublin Corporation in the early 1930s and largely remained in agricultural use until more recent years, when they were privately developed for commercial and residential use.

11.1 Impact Assessment

Research undertaken with respect to the Cultural Heritage chapter of the EIAR (**Volume 2 Chapter 11**) indicates that there are no significant historical events associated with the proposed development lands which have the ability to be impacted upon by the proposed development.

There are no previously identified archaeological monuments/features located within, or in the immediate environs of, the subject development lands, the nearest being approx. 700m to the east-southeast (CH-1; Santry Court / Santry House; SMR Ref: DU014-030). No features of archaeological potential were noted by cartographic and aerial photographic research and no surface features/traces of archaeological potential were noted by the surface reconnaissance survey.

There are no structures listed in the Record of Protected Structures (RPS) of the *Fingal Development Plan 2017 – 2023* as being located within, or in the immediate environs of, the subject proposed development lands. The RPS of the *Dublin City Development Plan 2016 – 2022* lists two structures of interest – CH-2 (Former Church; St. Pappin's) & CH-3 (Former Domville House) – at distances of 500m and 600m respectively to the south of the subject development lands. The National Inventory of Architectural Heritage (NIAH) has not identified any structures within, or in the immediate environs of, the subject development lands. Given the locations of the identified structures of architectural heritage interest with respect to the subject development lands, it is not predicted that any impacts to such structures will occur during the construction phase of the development.

11.2 Mitigation Measures

In general, ground reductions associated with a development of this kind, in areas of previous generally undisturbed ground, have the ability to uncover and disturb hitherto unrecorded subsurface features, deposits, structures and finds of archaeological interest and potential. Without the adoption and implementation of a suitable mitigation strategy, any subsurface archaeological features or artefacts that might be located within the site during the construction phase of the development might not be identified and recorded. Consequently, it is proposed that all topsoil stripping onto the surface of the underlying subsoils, required of the development, be monitored by an archaeologist.

11.3 Cumulative Impact

It is not envisaged that any negative cumulative effects will occur with respect to Cultural Heritage assets as a result of the project proceeding as proposed.

11.4 Residual Impact

It is not envisaged that any negative residual effects will occur with respect to Cultural Heritage assets as a result of the project proceeding as proposed.

12 LANDSCAPE AND VISUAL

12.1 Impact Assessment

The proposed development has the potential to result in impacts including the following:

Visual impacts due to the introduction of new structures, changes in ground levels and earthworks;

- Change of character due to the change in use.
- Landscape and visual impacts due to planting, lighting and hard surfacing.

12.1.1 Visual impact assessment from specific locations

View 1 – From the junction of the Old Ballymun Road and Northwood Avenue

Visual impact of proposed development during construction

The proposed development will result in a visual impact on this view during construction. The impact of the proposals during construction on the view from this location would be considered negative, moderate in magnitude, and temporary in duration.

Visual impact of proposed development during operation

The nature of the proposed development will result in an alteration to the existing view that would be considered negative in nature. The level of the visual impact is mitigated due to the number of large buildings in the local landscape most notable the Swift Square Office Park to the right of this view. This development would therefore be considered as consistent with existing and emerging trends in the area. The magnitude of the negative visual impact on this view would be considered moderate to slight and long-term in duration.

View 2 – From the roundabout at the junction of Northwood Avenue and Northwood Road

Visual impact of proposed development during construction

The proposed development will result in a visual impact on this view during construction. The impact of the proposals during construction on the view from this location would be considered negative, moderate in magnitude, and temporary in duration.

Visual impact of proposed development during operation

The nature of the proposed development will result in an alteration to the existing view that would be considered negative in nature. The level of the visual impact is mitigated due to the number of large buildings in the local landscape most notable the Bridgefield Apartments immediately to the north of this scheme. This development would therefore be considered as consistent with existing and emerging trends in the area. The magnitude of the negative visual impact on this view would be considered moderate and long-term in duration. As the trees planted as screening mature the magnitude of this impact will be reduced.

View 3 – From the entrance to the Santry Sports Injury Clinic

Visual impact of proposed development during construction

The proposed development will result in a visual impact on this view during construction. The impact of the proposals during construction on the view from this location would be considered negative, slight in magnitude, and temporary in duration.

Visual impact of proposed development during operation

The nature of the proposed development will result in an alteration to the existing view that would be considered negative in nature. The level of the visual impact is mitigated due to the number of large buildings in the local landscape most notably the Swift Square Office Park to the left of the view. This development would therefore be considered as consistent with existing and emerging trends in the area. The magnitude of the negative visual impact on this view would be considered moderate and long-term in duration.

View 4 – From the formal gardens at Santry Park

Visual impact of proposed development during construction

The proposed development will not result in any impact on this view during construction. The construction process, machinery, storage of materials, built structures will be screened from view by the existing vegetation.

Visual impact of proposed development during operation

The building proposed in this development will have no impact on the view from this location. The new building will not be visible due to the distance from the viewpoint, the built development and level of existing vegetation between the viewpoint and the proposed building.

View 5 – From the direction of the Santry River Amenity Walk

Visual impact of proposed development during construction

The proposed development will result in a visual impact on this view during construction. The impact of the proposals during construction on the view from this location would be considered negative, slight in magnitude, and temporary in duration.

Visual impact of proposed development during operation

The nature of the proposed development will result in an alteration to the existing view that would be considered negative in nature. The building is mostly screened by the existing hedgerow trees and by the boundary wall and Bridgefield Apartments building. The level of the visual impact is mitigated due to the number of large buildings in the local landscape and the distance of the viewpoint from the building. This development would be considered as consistent with existing and emerging trends in the area. None of the visual sensitivities of views from this location would be affected by this development. The magnitude of the negative visual impact on this view would be considered not significant and long-term in duration.

12.2 Mitigation Measures

The following measures will be taken during the construction process to mitigate negative landscape and visual impacts:

- Construction compounds, materials storage, car parking, lighting and hoarding will be designed and located sensitively to limit negative visual impacts on the surrounding lands.
- Adequate tree protection measures will be put in place and monitored by a qualified arborist to ensure the existing mature trees are not impacted by the construction processes.

Having regard to the Masterplan measures included within the design as listed below, no further mitigation will be required:

- The architectural design of the building aims to reduce the visual mass through its form and choice of materials.
- The retention of the belt of large mature trees will assist the visual integration of the building into the landscape and mitigate the visual impact.

- The landscape proposals include green links, trees and woodland, seating and play features. These elements will assist the visual integration of the building into the landscape and mitigate the visual impact.

12.3 Cumulative Impact

The development would be considered an infill development in that it is surrounded by built developments on all sides. The massing scale and form of the proposed development would be similar to the scheme under construction directly to the north of the subject lands. The landscape scheme is designed to integrate this scheme with the surrounding landscape and serves to link together some of the currently unconnected circulation routes and landscape links.

While the scheme will alter the views and visual amenity in the area it would be consistent with existing and emerging trends in the area. Therefore, the cumulative impact of this scheme and the surrounding recent developments would not significantly affect the fabric of the landscape or the existing landscape type.

12.4 Residual Impact

The operational phase of this development will give rise to a noticeable change in the landscape character. The development will not have a negative impact on the more sensitive aspects of the landscape character, the stand of large trees along the ditch. The main impact on the landscape character will be the transformation of the area to the west of the trees from a construction compound and an area of grass to a built development. However, the landscape of this section of the site would be considered of no aesthetic value and the wider environment would be considered a transitional landscape. As the proposed landscape scheme matures the new landscape spaces will become more appreciated by the users for their inherent values. This will reduce the magnitude of negative impact felt from the loss of 'green' space to build the scheme.

The landscape proposals include the retention of the large trees and the creation of additional native trees, hedgerows and ecological corridors. The proposed landscape treatment combined with the architectural treatment of the building will reduce the visual mass of the development and mitigate its visual impact. As the new trees mature the magnitude of the visual impacts will be reduced further.

13 MATERIAL ASSETS: TRAFFIC AND TRANSPORT

13.1 Existing Environment

The existing site is a part greenfield and part temporary car park site which is often used for construction workers car parking from surrounding developments. Vehicular access is currently provided from Northwood road and through the existing Gulliver's Retail Park itself off Northwood Avenue.

The land uses surrounding the development site are a mix of commercial and residential (comprising both individual dwellings and larger residential apartment blocks), all of which benefit from access to and from Northwood Avenue

The pedestrian and cycle facilities within Northwood Park are of a good quality. All pedestrian routes leading to / from the development benefit from the provision of street lighting in addition to good quality pedestrian footways. There are numerous pedestrian crossing facilities available along Northwood Avenue just south of the development. Additionally, off road cycle tracks are provided throughout Northwood Park and on the external road network. Ballymun Road has an off-road cycle track while Swords Road has an On-Road cycle track. The off-road cycle lane along Northwood Avenue branches out at numerous locations along the route providing additional cycle facilities throughout Northwood Park. In relation to the Proposed Cycle Network, much of the alignment for the Santry River Greenway is already in place throughout Northwood Park.

The site is serviced by a comprehensive range of Dublin Bus and Transport for Ireland (TFI) Go Ahead bus connections. Dublin Bus and TFI operate numerous routes along Swords Road and Ballymun Road and Santry Avenue. These bus services operate on a daily basis and offer relatively frequent schedules. Bus Connects proposes 16 No. Core Bus Corridors extending radially from Dublin City Centre to the surrounding suburbs. Dublin Bus Connects proposes to introduce numerous new bus routes in close proximity to the site.

A MetroLink stop is currently proposed at Northwood in close proximity to the proposed development. MetroLink is the proposed high-capacity, high-frequency rail line running from Swords to Charlemont, linking Dublin Airport, Irish Rail, DART, Dublin Bus and Luas services, creating a fully integrated public transport service in the Greater Dublin Area. The proposed Northwood Metro Link stop will likely be located west of the proposed development at the junction of the Ballymun Road (R108)/Northwood Avenue. The exact location is yet to be confirmed. The proposed development will also include a new green route pedestrian walkway through Gulliver's Retail Park, providing direct access to the MetroLink stop.

13.2 Impact Assessment

13.2.1 Construction Stage

All construction activities will be governed by a construction Traffic Management Plan (TMP) the details of which will be agreed with FCC's Roads Department prior to the commencement of the Construction Phase. The principal objective of the TMP is to ensure that the impacts of all building activities generated during the Construction Phase upon both the public (off-site) and internal (on site) workers environments, are fully considered and proactively managed / programmed respecting key stakeholders' requirements.

During the construction works there will be additional HGV movements to/from the Site. Traffic will be generated by the disposal of surplus subsoil from the Site, deliveries of construction materials and equipment and of course private vehicles owned and driven by construction workers and staff

13.2.2 Operation Phase

Traffic counts were undertaken at seven junctions which were agreed with Fingal County Council and this data was used to model a number of junctions. It was determined that junctions at Ballymun Road (R108) / Northwood Avenue, Santry Ave/Northwood Road and Northwood Ave/Swords Road (R138) were the key junctions to be modelled, as they provide access to/from the public road network. The junction of Northwood Ave/Northwood Road, whilst fully contained within the private area of Northwood, would experience the largest increase from trips generated by the development and therefore would also be modelled.

Traffic analysis for the operational phase in both 2021/2022 and 2036 was undertaken using survey results. Analysis indicates that two junctions, Ballymun Road/Northwood Avenue and Santry Avenue/Northwood Avenue will not operate efficiently in either the “without” and “with” the development scenarios. The Northwood Ave arm of the Ballymun Road/Northwood Avenue will exceed the design threshold, but it is envisaged that the implementation of SCATS by Fingal County Council at the Northwood Avenue/Old Ballymun Road junction will alleviate problems at these junctions.

The Santry Avenue/Northwood Avenue junction will operate within the normal design threshold during the morning peak hour but exceed the normal design threshold during the evening peak hour. However, the proposed development will have an insignificant impact on this junction.

13.3 Mitigation Measures

13.3.1 Construction Phase

In advance of work starting on site the works Contractor will prepare a detailed construction management plan and traffic management plan to be submitted to FCC for approval. The following mitigation measures have been identified which will form part of a plan:

- Good construction management practices will be employed such as fencing the site off from the public and neighbouring sites, adequate external/internal signage, secure internal site offices, dedicated construction access points all to ensure the safety construction staff and the public.
- Appropriate levels of staff parking and compounding will be provided to ensure no potential overflow or haphazard parking in the area. The Site will be able to accommodate employee and visitor parking throughout.
- Set construction traffic routes to and from the site will be agreed with FCC prior to the commencement of constructions activities onsite. The time of day permissible for such routes will also be agreed upon and outside of the morning/evening peak hours.

Wheel wash facilities will be provided on site to ensure that construction debris will not have an impact on the quality of roads in the Northwood area.

13.3.2 Operational Phase

The following proposals have been identified and subsequently form an integral part of the subject development;

- Whilst FCC Development Plan (Objective DMS116) does not specify the requirement for a Mobility Management Plan (MMP) for an apartment block, a development of this nature would lend itself to an MMP.
- A set-down area at the childcare facility has been provided and a number of parking spaces are allocated north of the facility to facilitate servicing, short duration parking and pickup/drop off.
- Refuse collections will be managed to ensure there is no conflict with drop off and collection times.
- Three no. car parking spaces for a private car sharing company will reduce the need to own a private car thereby contributing to reducing the overall number of vehicle trips generated by the proposed Project.

It was agreed with FCC that a sustainable approach to parking would be incorporated into the development. The car parking strategy proposes to provide one car parking space per apartment. If any more car parking spaces were introduced, it may encourage an over reliance on single occupancy vehicles, resulting in a negative impact on traffic in the surrounding area. Provision of less than one car space per apartment may lead to haphazard and unofficial parking in the surrounding area.

Non-residents, utilising the retail area will also be able to avail of the car parking provided in the Gulliver's Retail Park car park. Non-residents using the retail park will also be able to utilise the visitor parking bicycle spaces located next to the commercial areas on the ground floor.

A set-down area has also been provided and 5 no. parking spaces are allocated north of the childcare facility at surface level to facilitate servicing, short duration parking and childcare facility pickup / drop off.

Charging points for electric vehicles will be provided at 3 No. surface car parking spaces and provision made for future connections to all surface car parking spaces.

The cycle parking strategy equates to 1 bicycle parking space per residential unit bed space with an additional 70 visitor bicycle parking spaces to be provided on surface level.

During consultation with FCC, it is noted that Fingal plan to upgrade the junction of Northwood Avenue/Old Ballymun Road to incorporate SCATS. Upgrading this junction to SCATS will allow the junction to control the traffic arriving from Northwood to the Ballymun Road. The junctions will better calculate and adapt the timing of traffic signals in the network allowing the junction to operate efficiently and increasing the capacity of the junction.

13.4 Cumulative Impacts

The TII traffic growth rates will account for any increase in traffic as a result of other developments in the area such as Bridgefield, Cedarview and other potential developments in the future. Consequently, all impacts assessed are inherently cumulative impacts.

13.5 Residual Impacts

13.5.1 Construction Phase

Having consideration for the mitigation measures outlined above, any impacts during the construction phase will be negligible. All construction related traffic will be outside the morning and evening peak hours and will not have a significant impact the operation of the adjoining junctions.

13.5.2 Operational Phase

The traffic analysis demonstrated that a number of junctions will not operate efficiently in either the "without" and "with" the development scenarios. Any future traffic growth, irrespective of the subject development, will therefore result in an impact to the operation of the junction. However, the proposed development will have an insignificant impact on the junctions.

The residual impacts from both the proposed development and background traffic growth will be mitigated with the improvements of the public transport network (MetroLink and Bus Connects) and cycling infrastructure throughout Dublin. The proposed development will provide adequate pedestrian and cycle linkages to both existing and future sustainable travel facilities and modes which will encourage a greater number of Northwood residents to choose sustainable transport modes.

14 MATERIAL ASSETS: BUILT SERVICES

Material Assets are taken to mean built services and infrastructure, namely:

- Potable Water Supply
- Wastewater Services
- Electricity
- Gas
- Telecommunications

The impact on other material assets are assessed in various chapters of the EIAR:

- **Chapter 7:** Land, Soils and Hydrogeology
- **Chapter 8:** Water and Hydrology
- **Chapter 11:** Cultural Heritage
- **Chapter 12:** Landscape and Visual
- **Chapter 13:** Material Assets: Traffic and Transport

A *Water Services Report* prepared by J.B. Barry and Partners Limited has been submitted as part of the planning application. A Pre-connection application to Irish Water in respect of water supply and wastewater disposal for the proposed development was submitted on the 25th January 2019. Irish Water advised in their Confirmation of Feasibility Statement, dated 8th March 2019 that their water supply network and wastewater infrastructure could cater without upgrades for the proposed development. A copy of the Confirmation of Feasibility Statement along with the Irish Water Statement of Design Acceptance dated 29th October 2019 is included in Appendix 1 of the Water Services Report.

14.1 Impact Assessment

14.1.1 Water Supply and Wastewater Services

During the connection works which will require the water supply being shut down within the overall development for a short period of time there is potential for a temporary slight adverse impact.

The water supply requirements of the construction phase will be from a temporary connection to the watermain. The impact on the water supply network is considered be slight and short term.

The temporary on-site toilet and washing facilities for construction workers will be connected to existing foul sewer via the internal sewer network. The significance of the potential impact on the existing foul infrastructure is considered “imperceptible” and temporary adverse in duration

Occupancy of the entire Development will occur around the same time. This will lead to an increase in demand on the water supply network and increased foul effluent flows to the wastewater infrastructure. Irish Water have confirmed in their Confirmation of Feasibility Statement that water supply to the proposed development is feasible without upgrades. Similarly, Irish Water have confirmed, in their Confirmation of Feasibility Statement, that there is capacity in their Wastewater Infrastructure to cater for this Development. The potential impacts on the Potable Water Supply Network and Wastewater Infrastructure is considered to be imperceptible.

14.1.2 Surface Water Disposal

The impacts of surface water drainage are described in **Volume 2 Chapter 9** and the *Water Services Report* prepared by JB Barry & Partners Consulting Engineers.

14.1.3 Electricity

To cater for the extent of accommodation at the proposed development a double ESB sub station is proposed. It is our experience is that the ESB are looking to strengthen the network and cater for the changes in load profile associated with e car charging and moves away from non-renewable heat sources. Mains cables from the substation will circle the site and there will be a mini pillar at each core. Prior to entering the building line, including the basement, a cabinet will be provided that will accommodate the ESB cut out and meters for the core apartments. From this cabinet, metered supplies will be ducted into the apartments.

14.1.4 Gas

On the proposed development site there is not an existing gas networks connection but adjacent to the boundary there is a high pressure Gas Networks Ireland main. As part of previous developments nearby a pressure reducing station has been installed. The capacity of the pressure station allows for the potential demand associated with the proposed scheme.

The proposed development will have a district heating scheme and this will centralise the heat generation plant and therefore gas will only be required into the basement (natural ventilated). A single local meter will be mounted local to the plantroom and feed the boilers and CHP plant therein.

14.1.5 Telecommunications

In the Santry demesne area, which the proposed development is within, there are dedicated ducting network installed by Virgin and Eir. Within the scheme itself we will be catering for both networks and have contacted the suppliers about supply and capacity on to the scheme, neither of which will be an issue.

The infrastructure around the subject site has been laid in relatively recent times and there is good record information available.

14.2 Mitigation Measures

The proposed water supply network, including water conservation measures, will be designed strictly in accordance with the Irish Water Code of Practice for Water Infrastructure, Dec 2017 (Revision 1). The proposed wastewater pipelines will be designed strictly in accordance with the Irish Water Code of Practice for Wastewater Infrastructure, Dec 2017 (Revision 1).

As no significant impacts were predicted, no specific mitigation measures are proposed. However, in advance of work starting on site the works Contractor will prepare a CEMP which will be implemented to ensure best practices.

14.3 Cumulative Impact

The Confirmation of Feasibility Statement issued by Irish Water confirm that there is adequate capacity in their water supply network and wastewater systems to accommodate the proposed development. Consequently, there are no cumulative impacts predicted.

14.4 Residual Impacts

No negative residual impacts are predicted.

15 POPULATION AND HUMAN HEALTH

Human Beings comprise an important aspect of the environment to be considered. Any significant impact on the status of humans, which may be potentially caused by a development proposal, must therefore be comprehensively addressed as part of the Environmental Impact Assessment.

15.1 Impact Assessment

The construction phase of the proposed development is likely to result in a positive net improvement in economic activity. The proposed development will result in a construction period of approximately 24 months. Thus, the construction phase is likely to enhance economic activity in the construction sector. It is anticipated that a substantial number of jobs will be created directly on site. The construction of this development would also support job creation in building supply companies as well as have a positive impact for local businesses associated with the increase in spending on goods and services in the area.

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, possible nuisances associated with construction activity and noise impact.

Mitigation of these potential impacts through construction management (such as methods employed, hours of operation) is an established approach. Such impacts will be short term. Some temporary additional local populations may arise out of construction activity. However, these impacts are imperceptible, temporary in nature and therefore not considered significant.

The completed scheme will have long-term beneficial impacts for local businesses, and the wider economy through the provision of acutely required additional housing in an area well served by public transport. The proposed development will bring a new population to the area. This will support existing schools, shops, public transport and the local community and has the potential to raise falling birth rates, stabilize rents through increased supply. It is considered that the effects on population and human health will be moderate, positive and long term.

15.2 Mitigation Measures

Construction shall adhere to good practice and legal requirements. The Outline CEMP for the project, which will be submitted with the planning application, sets out the basic measures to be employed in order to mitigate potential negative effects during construction.

15.3 Cumulative Impact

A *Daylight and Sunlight Assessment* on the proposed development has been undertaken by Geraghty Engineers and is submitted as part of the application documentation. This report assessed sunlight access and daylight access to neighbouring dwellings with the proposed development in place. The report concludes that sunlight levels at 29 no. relevant neighbouring dwellings to the north within the Pappan Grove/Bridgefield development will be largely unaffected. The calculations show that all relevant dwellings will comfortably exceed the guidelines and continue to receive excellent levels of direct sunshine throughout the year. With regard to daylight levels in the relevant neighbouring dwellings to the north, the majority (18 no.) will continue to receive daylight (ADF) levels above the minimum guidelines, 9 no. will fall only marginally below the threshold while 2 no. are well below. The impact of the development on those units below the recommended ADF would be considered negative, slight in magnitude and long-term in duration. However, having regard to the largely unaffected sunlight penetration and to the need to achieve the appropriate density in the proposed scheme, this limited shortfall is considered to be acceptable.

The overall cumulative impact of the proposed development will therefore be long term and positive with regard to population and 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 existing high frequency public transport modes and the planned Metro Link.

15.4 Residual Impacts

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.

16 CUMULATIVE EFFECTS AND ENVIRONMENTAL INTERACTIONS

The EIA Directive and its transposing regulations requires that in addition to assessing impacts on population & human health, biodiversity, land & soils, water, air, climate, landscape, material assets and cultural heritage on the environment, the inter relationship between these factors must be considered.

The potential interaction between environmental aspects, arising from within the development were considered, to ensure that the combination of impacts was correctly examined, and any required mitigation measures included.

Each technical chapter of the EIAR details, individual environmental baseline information and identifies the significant potential and residual construction and operational effects/impacts of the proposed development. In addition, the potential for other environmental interactions are identified and the relevant impact either on, or from, these other aspects is analysed via data exchange between and assessment review by the relevant experts.

Table 16-1 is a matrix table indicating the significant interactions that are likely to occur between the various environmental disciplines regarding the proposed scheme. Where a tick exists in a box in a table, this indicates that a relationship exists between the two environmental areas. The purpose of the table is to allow interaction between two various disciplines to be recognised, although the level of interaction will vary in each case. It is assumed in presenting this table that an environmental discipline has a potential inter relationship during either the construction or operational phase of the scheme, or both.

REPORT

Table 16-1: Interactive / Cumulative Effect on Receptors

Interactive / Cumulative Effect on Receptors	Biodiversity	Land, Soils and Hydrogeology	Water and Hydrology	Air Quality and Climate	Noise and Vibration	Cultural Heritage	Landscape and Visual	Material Assets: Traffic and Transport	Material Assets: Built Services	Material Assets: Waste Management	Population and Human Health
Biodiversity		✓	✓		✓		✓				
Land, Soils and Hydrogeology	✓			✓	✓	✓		✓		✓	✓
Water and Hydrology	✓										
Air Quality and Climate		✓						✓			✓
Noise and Vibration	✓	✓						✓	✓		✓
Cultural Heritage		✓									
Landscape and Visual	✓				✓						
Material Asset: Traffic and Transport		✓		✓	✓						✓
Material Assets: Built Services					✓						
Material Assets: Waste Management		✓									
Population and Human Health		✓		✓	✓			✓			

