Chapter 12

Material Assets

12.0 MATERIAL ASSETS

12.1 INTRODUCTION

John Spain Associates, Chartered Planners and Development Consultants, undertook the preparation of this section of the Environmental Impact Assessment Report (EIAR), in association and consultation with PCOT Architects, Waterman Moylan Consulting Engineers, and AWN Consulting. This chapter of the EIAR was prepared by Luke Wymer, BA, MRUP, Dip. Planning & Environmental Law, Dip PM, Prof. Cert. Environmental Management, MIPI, of John Spain Associates, Planning & Development Consultants and reviewed by Paul Turley, BA, MRUP, Dip Environmental & Planning Law, MIPI of John Spain Associates.

Resources that are valued and that are intrinsic to specific places are called 'material assets'. They may be of either human or natural origin and the value may arise for either economic or cultural reasons. The assessment objectives vary considerably according to the type of assets, those for economic assets being concerned primarily with ensuring equitable and sustainable use of resources. Assessments of cultural assets are more typically concerned with securing the integrity and continuity of both the asset and its necessary context.

The EIA Directive requires that Archaeological and Cultural Heritage is assessed as part of Material Assets. However, such is the importance of this issue in Ireland, EIA best practice has established that it is important to address this issue separately and not as an adjunct to the Material Assets section in the EIAR document. Accordingly, Archaeology and Cultural Heritage is assessed in Chapter 4 of this EIAR document.

This chapter considers physical resources in the environment which may be of human origin, as those of a natural origin are addressed elsewhere in the EIAR. The objective of the assessment is to ensure that these assets are used in a sustainable manner, so that they will be available for future generations, after the delivery of the proposed development.

With regard to Material Assets, the August 2017 Draft EIAR Guidelines published by the EPA state:

> *"Material assets can now be taken to mean built services and infrastructure. Traffic is included because in effect traffic consumes roads infrastructure. Sealing of agricultural land and effects on mining or quarrying potential come under the factors of land and soils."*

Having regard to this definition, the current chapter provides an assessment of material assets including urban settlements, ownership and access, foul and surface water, water supply, electricity supply, information and communications technology, and waste. A separate chapter (Chapter 13 of this EIAR) deals specifically with traffic / transport and the impact of the development on roads infrastructure.

12.2 STUDY METHODOLOGY

This chapter of the EIAR document has been prepared with reference to the specific criteria set out in European Commission, Guidance on the preparation of the Environmental Impact Assessment Report (2017) and the Draft EPA guidelines published in 2017, both of which reflect the requirements of Directive 2014/52/EU.

These guidance documents include information on the assessment of the effects of development on material assets and guidance on the nature of the material assets which should be examined as part of the preparation of an EIAR. The following Material Assets are assessed in this Chapter of the EIAR Document:

- Economic Assets of Natural Origin
- Economic Assets of Human Origin

Economic assets of natural origin, which include biodiversity, land & soil and water, are addressed elsewhere in this EIAR, in particular Chapter 6, 7 and 8. Cultural Assets of a Physical Type and Cultural Heritage of a Social Type are addressed in Chapters 4 of this EIAR Document.

Economic assets of human origin are considered in this chapter. A desktop study was carried out on existing material assets of human origin associated with the site of the proposed development. Projections of resource use were undertaken for both the construction and operational phases of the proposed development, and the impacts assessed. Mitigation measures are proposed where appropriate.

12.3 EXISTING RECEIVING ENVIRONMENT

12.3.1 Introduction

In describing the receiving environment, the context, character, significance and sensitivity of the baseline receiving environment into which the proposed development will fit is assessed. This takes account of any other proposed developments that are also likely to proceed in the short to medium term.

12.3.2 Economic Assets of a Human Origin

This sub-section considers the key aspects relating to material assets of the proposed development site and the surrounding area, namely urban settlements, ownership and access, potable water supply, wastewater discharge, electricity supply, telecoms and municipal waste. It is noted that Chapter 13 of this EIAR deals specifically with the impact of the development on traffic and transport.

The following aspects of the proposed development will affect material assets within the vicinity of the proposed development site:

- Urban Settlements
- Ownership & Access
- Foul Water Disposal (also see Waterman Moylan Engineering Assessment Report)
- Potable Water Supply (also see Waterman Moylan Engineering Assessment Report)
- Surface Water Disposal (also see Waterman Moylan Engineering Assessment Report)
- Electrical Supply (also see Waterman Moylan Energy Statement which includes details in relation to utilities)
- Telecoms (also see Waterman Moylan Engineering Assessment Report); and
- Municipal Waste (also see Resource and Waste Management Plan and Operational Waste Management Plan prepared by AWN Consulting)

Urban Settlements

The subject site is zoned ‘Residential Area’ under the Fingal Development Plan 2017-2023 and forms the southern part of the Fosterstown Masterplan area. Prior to the adoption of the Fosterstown Masterplan in 2019, the lands formed the southern section of the Fosterstown Local Area Plan which has now been superseded. Further details on consistency with the Fingal Development Plan and the Fosterstown Masterplan is set out in the Statement of Consistency and Planning Report.

The site is in an accessible location, with high frequency public transport in close proximity to the site, and further public transport enhancements proposed adjacent to the site including Metrolink and Bus Connects. The site is also in close proximity to several employment areas and Swords town centre.

Swords is at the top of the county settlement hierarchy and is designated as a Metropolitan Town with the Fingal Development Plan (FDP)(as amended under Variation 2). This reflects the RSES which identified Swords as

one of the three 'Key Towns' in the Metropolitan Area Strategic Plan (MASP) area, alongside Bray and Maynooth. These Key Metropolitan Towns are important in a regional and a county context and the FDP identifies they have capacity and future potential to accommodate above average growth in the Region. The FDP sets out that Swords currently provides for a significant employment base, reflecting its location proximate to the M1, M50 and Dublin Airport. The Development Strategy for the town is consolidation, active land management, employment generation and residential development centred around regeneration of the town centre and high quality public transport in the form of Metrolink and Bus connects.

The subject site is c. 4.635 hectares (including FCC lands) and it is currently greenfield, surrounded by low hedgerows, trees and boundary fencing. The existing access to the subject site is via the Dublin Road / R132.

The subject site is bounded to the north by additional greenfield lands which are within the overall Masterplan area. The lands to the north are under separate ownership. The land to the north is separated from the subject site by an existing field boundary and an existing stream (Gaybrook Stream) along the northern boundary.

The site is bound to the east by the Dublin Road (R132), with Airside Retail Park adjacent. To the south and the west of subject site is the Boroimhe residential area and public open space, which consists of a range of two storey detached, semi-detached and terraced residential housing units.

The proposed development will integrate fully with the surrounding area and the adjacent developments and is considered an appropriate form of development on the subject site which is currently underutilised. The site currently consists of greenfield lands in agricultural use, notwithstanding their existing zoning which provides for the nature of development now proposed.

Ownership & Access

The lands comprising of the planning application site are primarily in the ownership of the applicant, J. Murphy (Developments) Limited. The eastern edge of the application site also takes in part of the public road and footpath, which is under the control of the Local Authority, where works are required to facilitate access and infrastructure for the proposed development. The application site extends to c. 4.635 hectares in total, including the portion under the ownership of the Local Authority. The appropriate consent is provided for by the Local Authority and a letter of consent detailing this has been included as part of the planning application.

It is proposed to construct a temporary left in/left out junction to access from the R132 which can be closed off when the roads infrastructure set out in the Fosterstown Masterplan is constructed and access via this infrastructure is available to connect to the public roads.

Vehicles exiting the proposed development who wish to travel southbound towards Dublin will be able to turnaround at the Pinnock Hill Roundabout to access the southbound side of the R132. In the event that this junction is upgraded to a signal-controlled junction (currently proposed by Fingal County Council) those wishing to travel southbound can turn right in to airside and travel through Airside to the R132 at Boroimhe. Vehicles arriving from the north will turn left at Pinnock Hill roundabout and travel through Airside.

There is a strip of land to the west of the application site which is not within the applicant's control and which militates against providing connections to the Boroimhe development, however, connections are proposed up to the site boundary and the Planning Authority could deliver under their powers.

Further details are set out in the Traffic Impact Assessment (TIA) prepared by OCSC / Waterman Moylan, and the Engineering Assessment Report and associated drawings by Waterman Moylan. The reports demonstrate that the proposed access will operate well within normal capacity limits under a left in / left out junction layout, associated with the pedestrian crossing, and there will be no negative impact on the operation of the local road network or the future BusConnects or Metrolink proposals.

Sufficient sight lines are provided, and the development will be compliant with the Design Manual for Urban Roads and Streets as confirmed in information prepared by Waterman Moylan.

As noted, the proposed access from the R132 will be temporary and can be closed following the completion of the Fosterstown Link Road and associated road infrastructure to service the site via the lands to the north, as identified in the Fosterstown Masterplan (May 2019). The Site Layout Plan includes the internal road to the northern site boundary, which could facilitate future access to the adjoining residential zoned lands to the north. This is also illustrated on the engineering drawing and the landscape masterplan includes details of how the proposals relate to the emerging scheme to the north.

The site is within a 10 minute drive of the M1, M50, Dublin Airport and the Port Tunnel. The site is also in close proximity to several employment intensive areas, including Dublin Airport and Airside Business Park.

The site has access to high frequency public transport, in the form of the Swords QBC on the adjacent Dublin Road. We refer to the TIA and Car Parking Rationale for further detail. In summary, at present the lands benefit from access to Swords Express bus services, with c. 5-10 minute frequency at peak times, providing for a high capacity and frequency service to the city centre. The lands also have access to a range of Dublin Bus routes including the 33, 33a, 33e, 41, 41b, 41d, 41x and 101 routes within a c. 10 minute walking distance at present, providing direct links with Dublin Airport, Dublin City Centre, and UCD. There is also a Bus Eireann stop within Swords.

Future proposals for public transport in the area include the MetroLink. The preferred route for MetroLink was published for public consultation on the 26th of March 2019. The MetroLink line will run along a corridor linking Swords, Dublin Airport and the City Centre, and will terminate at Charlemont. A MetroLink stop is proposed on the opposite side of the R132/Dublin Road, north of and partially within the footprint of Airside Retail Park, and adjacent to the subject site at Fosterstown as set out within the preferred route details published.

Bus Connects aims to introduce ‘next generation’ bus services and corridors in Dublin. With the aim of significantly cutting existing journey times and ensuring that services are predictable and reliable. A section of the Core Bus Corridor 2 preferred route passes directly by the site to the east, along the R132 / Dublin Road. These corridors will have continuous bus priority, along with segregated cycle lanes where possible. The route will run service to the City Centre running every 10-15 minutes.

Foul and Surface Water

The following in relation to foul and surface water is based on the reports (submitted under separate cover) prepared by Waterman Moylan Consulting Engineers.

A confirmation of feasibility and statement of design acceptance has been received from Irish Water for the proposed development which confirms, that subject to agreement, the connection of the development to the Irish Water sewer network can be facilitated.

As part of the Confirmation of Feasibility received from Irish Water on 17 February 2021 (submitted as part of the application), Irish Water has noted that upgrades are required to the surrounding wastewater network as noted below:-

“*Upgrades required for the connection:*

- *Approximately 230m of network extension from the SO17469004 manhole (see figure below) to the Site and;*

- *Approximately 750m of the existing 300 mm ID gravity sewer upgrade to 450mm ID in R132 Road, from the SO17469004 manhole to the existing 600mm gravity sewer…* "

the proposed upgrade works will be undertaken by or on behalf of Irish Water under their exempted development rights and will be funded by the applicant, but do not form part of the subject application. There are foul sewers in the vicinity of the site. An existing 300mm diameter foul sewer to the east located in the R132 and an existing 300mm diameter foul sewer to the south of the proposed development located in Boroimhe Willows. As part of the development, it is proposed to connect the foul water drainage by gravity to the existing foul sewer in R132 via two new connections.

With respect to surface water, there is an existing watercourse to the north of the subject site, the Gaybrook Stream. The site currently drains unrestricted to this watercourse. Surface water for the proposed development will be discharged at a restricted rate to the existing watercourse mimicking the existing greenfield run-off rates or 2ℓ/s/ha as outlined in the Fosterstown Masterplan. Attenuation will be provided to restrict surface water runoff from the proposed development to the required runoff rate.

The Fosterstown Masterplan stipulates that the post-development run-off rates are limited to 2ℓ/s/ha for the site. Therefore, as the total site area is 4.635 Ha, the proposed design is based on a maximum outflow limit of 9.27 ℓ/s (= 4.635 Ha x 2 ℓ/s/ha).

Drainage for the existing site and proposed development is discussed in greater detail in the separate Waterman Moylan Engineering Assessment Report. Calculations estimating the demand generated are included within that report.

Water supply

Waterman Moylan Consulting Engineers confirm that there is an existing 225mm dia. watermain in Boroimhe Willows to the south of the development and an existing 225mm dia. watermain in the R132 to the east of the subject site. It is proposed to connect the development to the existing watermain in the R132.

Waterman Moylan Consulting Engineers confirm that it is proposed to service the development via a 200mm diameter PE watermain laid in a loop around the building blocks and within the internal road and footpath arrangement. Two connections will be made onto the existing watermain within the R132, one on the south at the entrance to the development, and one on the north. Each connection will include provision for an Irish Water Bulk Meter.

A confirmation of feasibility and statement of design acceptance has been received from Irish Water for the proposed development which confirms, that subject to agreement, the connection of the development to the Irish Water network can be facilitated.

Water supply for the existing site and proposed development is discussed in greater detail in the separate Waterman Moylan Engineering Assessment Report. Calculations estimating the demand generated are included within this report.

Electrical Supply

The site is served by existing ESB infrastructure.

The Waterman Moylan Energy Statement confirms that there is extensive ESB Networks infrastructure in the vicinity of the site and it is expected that there will be sufficient capacity to cater for this new development.

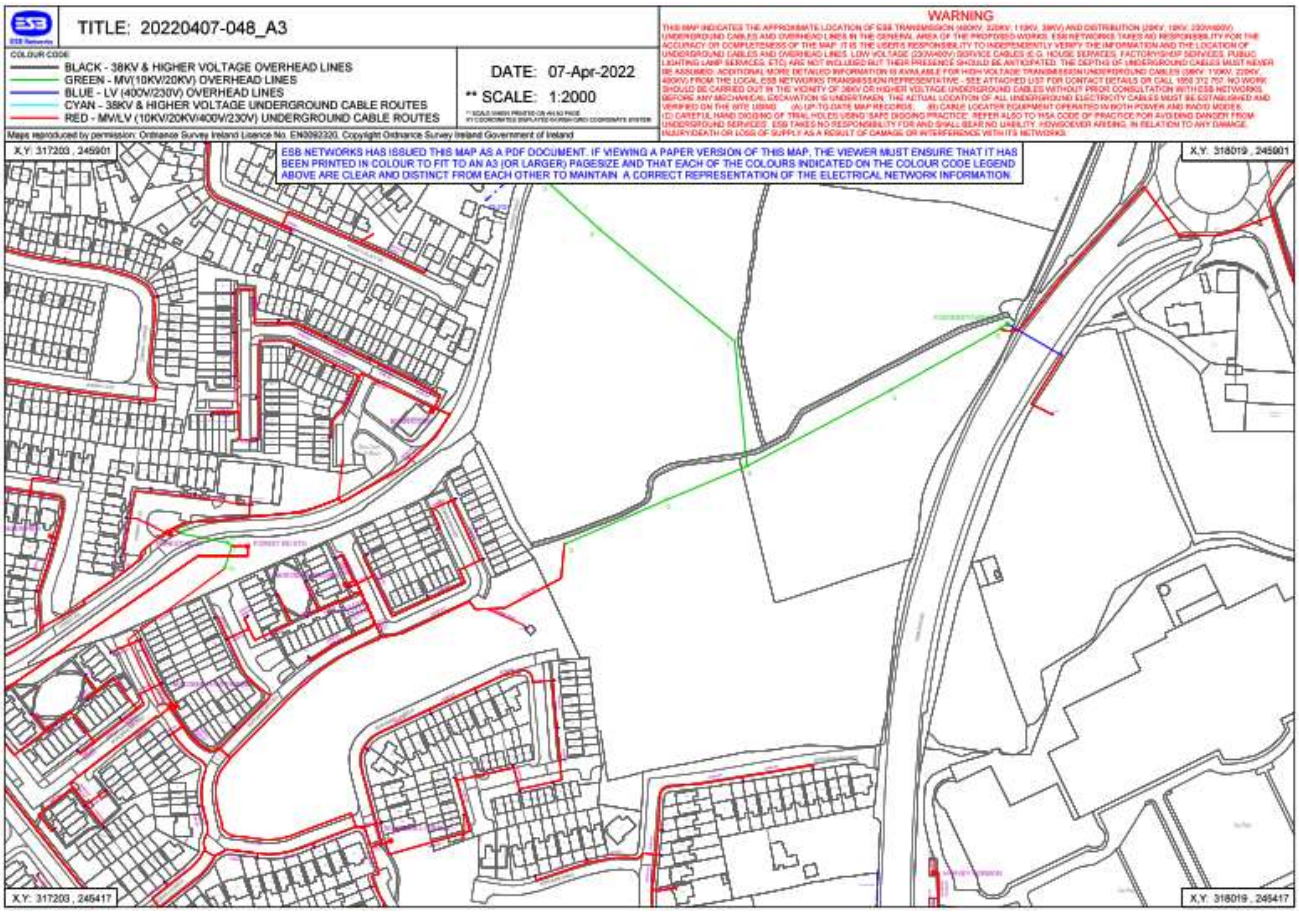

Figure 12.1: ESB services in the vicinity of the subject site

Information and Communications Technology (ICT)

The Waterman Moylan Energy Statement submitted along with the application details that the subject site is served by existing ICT (internet and phone) services from various providers including EIR and Virgin Media. Postal services to the area are provided by An Post. The Waterman Moylan Energy Statement sets out that EIR and Virgin Media will provide agreement of the most appropriate connection points following connection application.

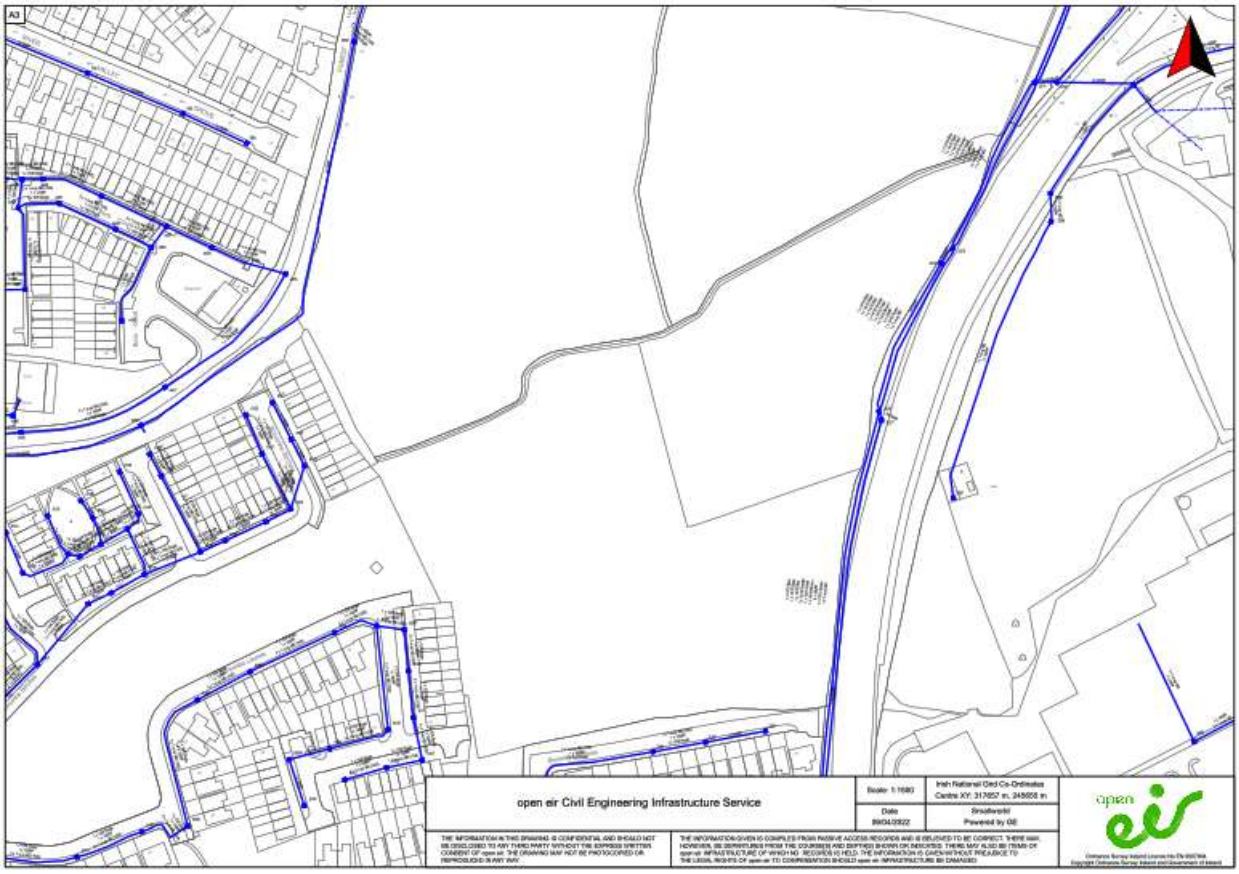

Figure 12.2: OpenEir infrastructure in the vicinity of the subject site

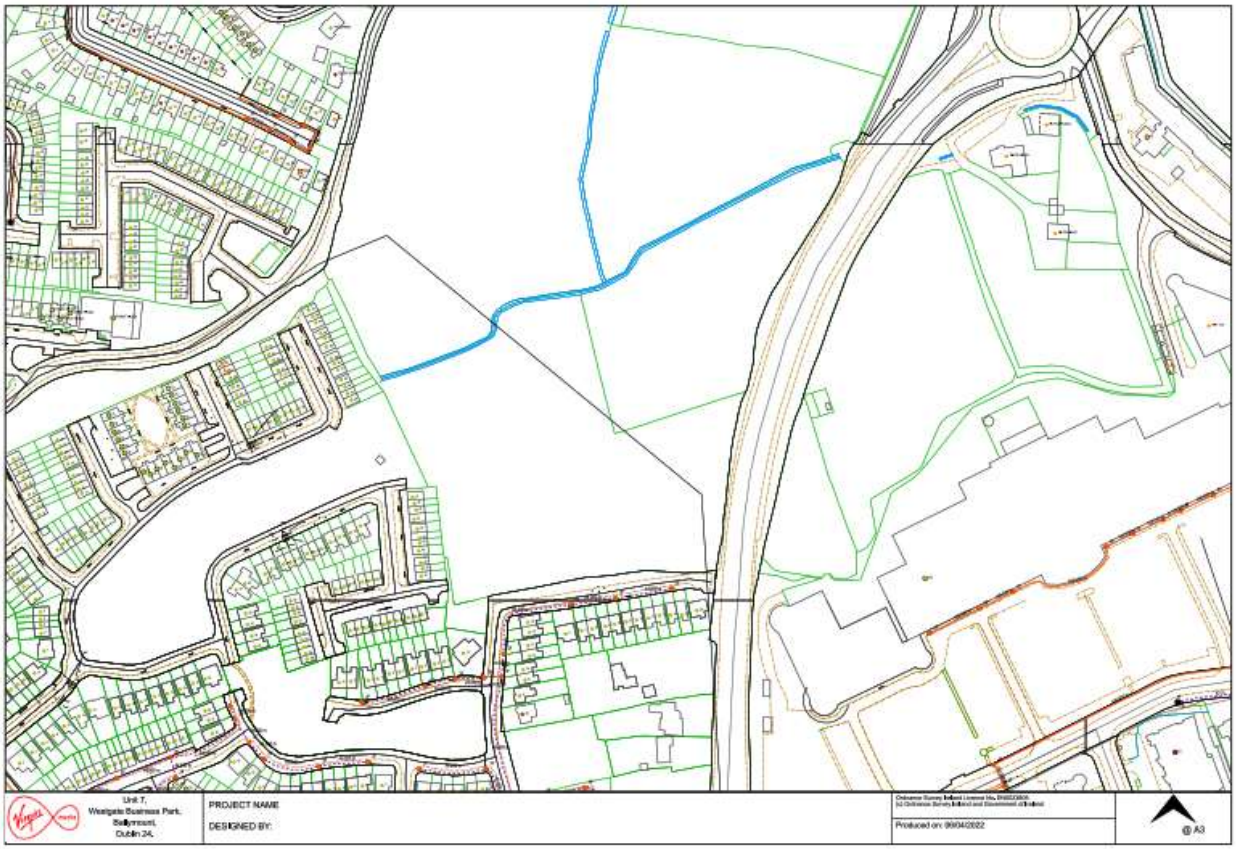

Figure 12.3: Virgin Media infrastructure in the vicinity of the subject site

Waste

A Resource and Waste Management Plan and an Operational Waste Management Plan have been prepared by AWN for the proposed development, detailing how waste will be managed both during the construction phase and the operational phase of the development. This includes information on the predicted waste arising from the construction phase of the proposed development. During the operational stage the development will be served by existing waste collectors in the area, with waste generated held in designated storage areas.

The Resource and Waste Management Plan notes that waste materials will be generated from site clearance and excavation works. During the construction phase, there may also be waste arising from surpluses of construction materials. Waste will also be generated from construction workers, including organic and non-organic waste. There is no demolition as part of the proposed development.

The Operational Waste Management Plan states that various contractors offer waste collection services for the in the Fingal County Council region. Details of waste collection permits (granted, pending and withdrawn) for the region are available from the NWCPO.

As outlined in the regional waste management plan, there is a decreasing number of landfills available in the region. Only three municipal solid waste landfills remain operational and are all operated by the private sector. There are a number of other licensed and permitted facilities in operation in the region including waste transfer stations, hazardous waste facilities and integrated waste management facilities. There are two existing thermal treatment facilities, one in Duleek, Co. Meath and a second facility in Poolbeg in Dublin.

There is a FCC recycling centre (Estuary Recycling Centre) c.3.3km to the north east of the development, which can be utilised by the residents of the development for certain household waste streams as covered in section 5.4 of the OWMP. The closest bottle/bring bank is located c. 890m to the Northwest at the River Valley Shopping Centre and can be used to deposit cans, class and textiles.

A copy of all CORs and waste permits issued by the Local Authorities are available from the NWCPO website and all Waste / Industrial Emissions Licenses issued are available from the EPA.

12.4 CHARACTERISTICS OF THE PROPOSED DEVELOPMENT

A full description of the proposed development is provided in Chapter 2 of this EIAR.

The proposed development comprises a Strategic Housing Development of 645 no. residential units (comprising 208 no. 1 bedroom units, 410 no. 2 bedroom units, and 27 no. 3 bedroom units), in 10 no. apartment buildings, with heights ranging from 4 no. storeys to 10 no. storeys, including undercroft / basement levels (for 6 no. of the buildings). The proposals include 1 no. community facility in Block 1, 1 no. childcare facility in Block 3, and 5 no. commercial units (for Class 1-Shop, or Class 2- Office / Professional Services or Class 11- Gym or Restaurant / Café use, including ancillary takeaway use) in Blocks 4 and 8. A seven year permission is sought for the proposed development, due to the scale of the proposed development and the intended phasing od development.

The development includes a total of 363 no. car parking spaces (63 at surface level and 300 at undercroft / basement level). 1,519 no. bicycle parking spaces are provided at surface level, undercroft / basement level, and at ground floor level within the blocks / pavilions structures. Bin stores and plant rooms are located at ground floor level of the blocks and at undercroft / basement level. The proposal includes private amenity space in the form of balconies / terraces for all apartments. The proposal includes hard and soft landscaping, lighting, boundary treatments, the provision of public and communal open space including 2 no. playing pitches, children's play areas, and an ancillary play area for the childcare facility.

The proposed development includes road upgrades, alterations and improvements to the Dublin Road / R132, including construction of a new temporary vehicular access, with provision of a new left in, left out junction to the Dublin Road / R132, and construction of a new signalised pedestrian crossing point, and associated works to facilitate same. The proposed temporary vehicular access will be closed upon the provision of permanent vehicular access as part of development on the lands to the north of the Gaybrook Stream. The proposal includes internal roads, cycle paths, footpaths, vehicular access to the undercroft / basement car park, with proposed infrastructure provided up to the application site boundary to facilitate potential future connections to adjoining lands.

The development includes foul and surface water drainage, green roofs and PV panels at roof level, 5 no. ESB Substations and control rooms (1 no. at basement level and 4 no. at ground floor level within Blocks 2, 4, 7 and 8), services and all associated and ancillary site works and development.

The site at present represents an opportunity to provide for a high quality development at a suitable location which is readily accessible by public transport and adjacent to a host of employment and social opportunities.

The overall development would allow for an appropriately sited land parcel to be development to a high density to meet the levels of housing demand currently existing within Dublin County as a whole. The proposal includes a large childcare facility at accessible ground floor location where it can be readily utilised by those living within the development in addition to those who live nearby, while delivering wider improvements to public realm and amenities in accordance with national and local planning policy objectives, which advocates for higher densities at appropriate locations.

12.5 POTENTIAL IMPACTS OF THE PROPOSED DEVELOPMENT

12.5.1 Introduction

This section provides a description of the potential direct and indirect impacts that the proposed development may have during both the construction and operational phases of the proposed project. This is provided with reference to both the Characteristics of the Receiving Baseline Environment and Characteristics of the Proposed Development sections while also referring to the (i) magnitude and intensity, (ii) integrity, (iii) duration and (iv) probability of impacts. Impact assessment addresses direct, indirect, secondary, cumulative, short, medium and long-term permanent, temporary, positive and negative effects as well as impact interactions.

12.5.2 Urban Settlements

Construction Phase

The construction phase of the proposed development is likely to have some temporary impacts on the existing urban settlement in the vicinity of the site, in the absence of consideration of mitigation measures. This would be due to disturbance during the construction phase and some additional minor and temporary additions to the local population which may arise out of the construction activity.

However, with the implementation of the proposed mitigation measures, the predicted residual impacts are as set out in the relevant Chapters of this EIAR.

Operational Phase

The proposal will result in the provision of an additional 645 no. residential units, childhood facility, and commercial units along with open space, recreational areas and infrastructural upgrades.

The proposal is in accordance with the zoning objective pertaining to the site and will result in an increase in the local population and residential density.

As set out in greater detail within Chapter 3 of this EIAR (population and human health), the provision of 645 new housing units will have a positive impact on urban settlements, through the delivery of new homes to meet established housing need and demand. This represents an intrinsically positive impact in the context of the long-standing and severe housing shortage in the state and the Dublin area. The additional residential accommodation will play a role in the support of projected population growth in the area, while the population of the proposed development itself will assist in the realisation of the critical mass required to support existing and permitted facilities in the surrounding area and existing and planned public transport infrastructure.

12.5.3 Ownership & Access

Construction Phase

The subject lands are not developed at present. There will be some temporary disturbance during construction to the surrounding area, however, this will be minimised as best as possible through appropriate mitigation measures as set out in the construction and environmental management plan included as a standalone report with this planning application.

Operational Phase

The proposed development will significantly enhance the connectivity and permeability of the site and its surrounding area. A pedestrian / cycle way is provided along the northern boundary, and also along the eastern boundary with the R132. The proposals allow for a pedestrian crossing to the future MetroLink station.

The proposals also allows for potential future links with the adjoining residential development to the west and to the adjoining lands to the north is proposed to increase the accessibility of the lands. The public realm strategy also focuses on prioritising pedestrians and cyclists throughout the site.

The proposals for future pedestrian and cycle connectivity to the existing Boroimhe residential estate to the west cannot be delivered by the applicant as there is an area of land not in the applicant's ownership between the subject site and the Boroimhe estate, which militates against providing the connections into this adjoining development. The applicant understands that this area of lands is in the ownership of a third party and it is not within their gift to make the connections to Boroimhe. However, the proposed development includes for cycle and footpath infrastructure up to the application site boundary to facilitate potential future connections to the adjoining lands, that will need to be delivered by the Planning Authority through their statutory powers.

It is proposed to construct a temporary left in/left out junction to access from the R132 which can be closed off when the roads infrastructure set out in the Fosterstown Masterplan is constructed and access via this infrastructure is available to connect to the public roads.

Vehicles exiting the proposed development who wish to travel southbound towards Dublin will be able to turnaround at the Pinnock Hill Roundabout to access the southbound side of the R132. In the event that this junction is upgraded to a signal-controlled junction (currently proposed by Fingal County Council) those wishing to travel southbound can turn right into airside and travel through Airside to the R132 at Boroimhe. Vehicles arriving from the north will turn left at Pinnock Hill roundabout and travel through Airside.

Further details are set out in the Traffic Impact Assessment (TIA) prepared by OCSC / Waterman Moylan, and the Engineering Assessment Report and associated drawings by Waterman Moylan.

The traffic and transport impact of the proposed development is assessed within the next chapter of this EIAR, which has been prepared by Waterman Moylan Consulting Engineers to assess the impact of the proposed development on Traffic and Transportation. Further details are also provided within the Traffic Impact Assessment report prepared by OCSC Consulting Engineers which is submitted with this planning application.

12.5.5 Foul Water Disposal

Construction Phase

There is potential for some short term impacts due to the works to connect the proposed development to the foul sewer network in the absence of mitigation however the potential impact from the construction phase of the proposed development on the foul network is likely to be neutral.

Operational Phase

During the operational phase there will be an increase in the foul discharge from the proposed development therefore reducing the capacity of the public foul sewer. The public foul sewer, however, does have sufficient spare capacity to cater for the proposed development as per the confirmation of feasibility received from Irish Water. The wastewater from the proposed development will be treated within the Swords wastewater treatment plant, which has recently been upgraded to handle a population equivalent load of 90,000 persons. The WWTP has spare capacity for over 10,000 persons.

12.5.6 Potable Water Supply

Construction Phase

The Engineering Assessment Report states that it is proposed to service the development via a 200mm diameter PE watermain laid in a loop around the building blocks and within the internal road and footpath arrangement. Two connections will be made onto the existing watermain within the R132, one on the south at the entrance to the development, and one on the north. Each connection will include provision for an Irish Water Bulk Meter.

The provision of potable water connections will primarily comprise trench excavations conducted in parallel with the other services. The potential adverse impact on the local public water supply network would be short term and imperceptible in the absence of mitigation which is set out below.

Operational Phase

The impact of the operational phase of the proposed development on the public water supply is likely to be to increase the demand on the existing supply. As such additional water quantities would need to be treated and supplied through the existing network to the site. The potential adverse impact of the proposed development on the public water supply network is likely to be long term and minimal.

12.5.7 Surface Water Disposal

Construction Phase

The installation of the surface water sewers and attenuation tanks for the development will be conducted in parallel with the other services. This will mainly involve construction of pipes and manholes using trench excavation. The potential adverse impact of the proposed development on the Gaybrook Stream during the construction phase of the development is addressed in detail within the Water and Biodiversity chapters of this EIAR, with mitigation provided to ensure that the watercourse if protected from impacts during the construction

phase. Further mitigation is set out within the Waterman Moylan Consulting Engineers CEMP, and within the Natura Impact Statement prepared by EnviroGuide. Therefore, the proposed development is unlikely to have any significant effect on the existing material asset in terms of surface water disposal during the construction phase.

Operational Phase

Adequate capacity exists in the Gaybrook Stream to cater for discharge from development of the subject lands, given the fact that the site will be attenuated and the discharge to the stream will be limited to greenfield run-off rates. In the absence of the SUDs measures proposed to be implemented on site, increased impermeable areas would reduce local ground water recharge and potentially increase surface water flow to the stream. However, as the proposed development will entail the limiting of discharge to the stream to greenfield run-off rates, the impact arising from surface water disposal will be negligible.

12.5.8 Electrical Supply

Construction Phase

Construction related activities will require temporary connection to the local electrical supply network. The potential impact from the construction phase of the proposed development on the local electrical supply network is likely to be short-term and negligible.

Operational Phase

The impact of the operational phase of the proposed development on the electricity supply network is likely to be to increase the demand on the existing supply.

The potential impact from the operational phase on the electricity supply network is likely to be long term and negligible.

12.5.10 Telecoms

Construction Phase

Fixed telecoms will not be operational during the construction phase. The construction phase is likely to give rise to the requirement to divert existing fixed telecom lines. If not undertaken in accordance with best practice procedure, this has the potential to impact on local telecoms connectivity. The potential impact from the construction phase of the proposed development on the local telecoms network is likely to be short-term and low.

Operational Phase

The impact of the operational phase of the proposed development on the telecoms network is likely to be a marginal increase in demand. A telecommunications assessment is included within the Energy Statement prepared by Waterman Moylan.

The assessment reviews the development and finds that due to its height and scale it will not have any impact on any current microwave telecommunication channels in the vicinity. The potential impact from the operational phase on the telecoms network is likely to be long term and neutral.

12.5.11 Municipal Waste

Construction Phase

The construction phase of the proposed development will give rise to the requirement to remove or to bring on to the site quantities of material. Construction related waste will also be created on the proposed development site. This has the potential to impact on the local municipal waste disposal network. The following comprises a summary of the pertinent points from the Resource and Waste Management Plan prepared by AWN Consulting. The RWMP should be referred to for further detail in relation to waste management during the construction phase of the project.

There will be topsoil and subsoil excavated to facilitate construction of the new building foundations, installation of services and basements for apartment blocks. The volume of material to be excavated has been estimated by the project engineers (Waterman Moylan) at c. 10,000m3 of topsoil and 56,000 m3 of subsoil.

Any suitable excavated material will be reused on site, where possible, however it is anticipated that there will be limited chances to reuse on site and all of the excavated material will be required to be removed offsite for appropriate reuse, recycling or disposal.

The Resource and Waste Management Plan also addresses all other expected waste types, which are set out in the figure below which is an extract from the AWN Resource and Waste Management Plan.

Waste Material	LoW/EWC Code
Concrete, bricks, tiles, ceramics	17 01 01-03 & 07
Wood, glass and plastic	17 02 01-03
Treated wood, glass, plastic, containing hazardous substances	17-02-04*
Bituminous mixtures, coal tar and tarred products	17 03 01*, 02 & 03*
Metals (including their alloys) and cable	17 04 01-11
Soil and stones	17 05 03* & 04
Gypsum-based construction material	17 08 01* & 02
Paper and cardboard	20 01 01
Mixed C&D waste	17 09 04
Green waste	20 02 01
Electrical and electronic components	20 01 35 & 36
Batteries and accumulators	20 01 33 & 34
Liquid fuels	13 07 01-10
Chemicals (solvents, pesticides, paints, adhesives, detergents etc.)	20 01 13, 19, 27-30
Insulation materials	17 06 04
Organic (food) waste	20 01 08
Mixed Municipal Waste	20 03 01

Figure 12.4: Extract from Resource and Waste Management Plan indicating typical waste types generated

As set out within the Resource and Waste Management Plan prepared by AWN, waste materials generated will be segregated on site, where it is practical. Where the on-site segregation of certain waste types is not practical, off-site segregation will be carried out. There will be skips and receptacles provided to facilitate segregation at source where feasible. All waste receptacles leaving site will be covered or enclosed. The appointed waste contractor will collect and transfer the wastes as receptacles are filled. There are numerous waste contractors in the Fingal County Council Region that provide this service.

AWN state that all waste arisings will be handled by an approved waste contractor holding a current waste collection permit. All waste arising's requiring disposal off-site will be reused, recycled, recovered or disposed of at a facility holding the appropriate registration, permit or licence, as required.

Written records will be maintained by the contractor(s) detailing the waste arising throughout the C&D phases, the classification of each waste type, waste collection permits for all waste contactors who collect waste from the site and COR/permit or licence for the receiving waste facility for all waste removed off site for appropriate reuse, recycling, recovery and/or disposal

Dedicated bunded storage containers will be provided for hazardous wastes which may arise such as batteries, paints, oils, chemicals etc, if required.

Topsoil and Subsoil

In terms of topsoil and sub soil generated from the construction stage, the Resource and Waste Management Plan sets out that the Waste Management Hierarchy states that the preferred option for waste management is prevention and minimisation of waste, followed by preparing for reuse and recycling/recovery, energy recovery (i.e. incineration) and, least favoured of all, disposal. It is intended to export some excavated material onsite so the preferred option of prevention can nor be accommodated.

The Resource and Waste Management Plan states the following in relation to the management of waste during the construction phase:

When this material is removed off-site it could be reused as a by-product (and not as a waste), if this is done, it will be done in accordance with Article 27 of the European Communities (Waste Directive) Regulations 2011. Article 27 requires that certain conditions are met and that by-product notifications are made to the EPA via their online notification form. Excavated material should not be removed from site until approval from the EPA has been received. The potential to reuse material as a by-product will be confirmed during the course of the excavation works, with the objective of eliminating any unnecessary disposal of material.

The next option (beneficial reuse) may be appropriate for the excavated material pending environmental testing to classify the material as hazardous or non-hazardous in accordance with the EPA Waste Classification – List of Waste & Determining if Waste is Hazardous or Non-Hazardous publication. Clean inert material may be used as fill material in other construction projects or engineering fill for waste licensed sites. Beneficial reuse of surplus excavation material as engineering fill may be subject to further testing to determine if materials meet the specific engineering standards for their proposed end-use.

Any nearby sites requiring clean fill/capping material will be contacted to investigate reuse opportunities for clean and inert material. If any of the material is to be reused on another site as a by-product (and not as a waste), this will be done in accordance with Article 27. Similarly, if any soils/stones are imported onto the site from another construction site as a by-product, this will also be done in accordance with Article 27. Article 27 will be investigated to see if the material can be imported onto this site for beneficial reuse instead of using virgin materials.

If the material is deemed to be a waste, then removal and reuse/recovery/disposal of the material will be carried out in accordance with the Waste Management Acts 1996– 2011 as amended, the Waste Management (Collection Permit) Regulations 2007 as amended and the Waste Management (Facility Permit & Registration) Regulations 2007 as amended. Once all available beneficial reuse options have been exhausted, the options of recycling and recovery at waste permitted and licensed sites will be considered.

In the event that contaminated material is encountered and subsequently classified as hazardous, this material will be stored separately to any non-hazardous material. It will require off-site treatment at a suitable facility or disposal abroad via Transfrontier Shipment of Wastes (TFS).

Bedrock
It is not anticipated that bedrock will be encountered during the excavation phase of this development. However, if encountered it is envisaged that all bedrock will be removed offsite and will not be crushed onsite unless the appropriate waste permit, obtained from FCC.

Silt & Sludge
During the construction phase, silt and petrochemical interception should be carried out on runoff and pumped water from site works, where required. Sludge and silt will then be collected by a suitably licensed contractor and removed offsite.

Concrete Blocks, Bricks, Tiles & Ceramics
The majority of concrete blocks, bricks, tiles and ceramics generated as part of the construction and demolition works are expected to be clean, inert material and should be recycled, where possible.

Hard Plastic
As hard plastic is a highly recyclable material, much of the plastic generated will be primarily from material off-cuts. All recyclable plastic will be segregated and recycled, where possible.

Timber
Timber that is uncontaminated, i.e. free from paints, preservatives, glues etc., will be disposed of in a separate skip and recycled off-site.

Metal
Metals will be segregated into mixed ferrous, aluminium cladding, high grade stainless steel, low grade stainless steel etc., where practical and stored in skips. Metal is highly recyclable and there are numerous companies that will accept these materials.

Plasterboard
There are currently a number of recycling services for plasterboard in Ireland. Plasterboard from the demolition and construction phases will be stored in a separate skip, pending collection for recycling. The site manager will ensure that oversupply of new plasterboard is carefully monitored to minimise waste.

Glass
Glass materials will be segregated for recycling, where possible.

Waste Electrical and Electronic Equipment (WEEE)
Any WEEE will be stored in dedicated covered cages/receptacles/pallets pending collection for recycling.

Other Recyclables
Where any other recyclable wastes such as cardboard and soft plastic are generated, these will be segregated at source into dedicated skips and removed off-site.

Non-Recyclable Waste
C&D waste which is not suitable for reuse or recovery, such as polystyrene, some plastics and some cardboards, will be placed in separate skips or other receptacles. Prior to removal from site, the non-recyclable waste skip/receptacle will be examined by a member of the waste team (see Section 9.0) to determine if recyclable materials have been placed in there by mistake. If this is the case, efforts will be made to determine the cause of the waste not being segregated correctly and recyclable waste will be removed and placed into the appropriate receptacle

Other Hazardous Wastes

On-site storage of any hazardous wastes produced (i.e. contaminated soil if encountered and/or waste fuels) will be kept to a minimum, with removal off-site organised on a regular basis. Storage of all hazardous wastes on-site will be undertaken so as to minimise exposure to on-site personnel and the public and to also minimise potential for environmental impacts. Hazardous wastes will be recovered, wherever possible, and failing this, disposed of appropriately.

It should be noted that until a construction contractor is appointed it is not possible to provide information on the specific destinations of each construction waste stream. Prior to commencement of construction and removal of any construction waste offsite, details of the proposed destination of each waste stream will be provided to FCC by the project team.

Operational Phase

In relation to the operational phase of the development, the accompanying Operational Waste Management Plan sets out detailed proposals for the management of waste arising.

Dedicated communal Waste Storage Areas (WSAs) have been allocated within the development design for the residential units. These shared residential WSAs are located on the basement/ undercroft level of the development.

Two shared WSAs have been allocated for the commercial units at basement / undercroft level of the development. The location of the WSAs can be viewed on the drawings submitted with the planning application and are set out in further detail at section 5 of the accompanying Operational Waste Management Plan prepared by AWN Consulting.

The Operational Waste Management Plan confirms that the WSAs have been sized and designed to meet the projected operational waste requirements of the proposed development.

The Operational Waste Management Plan confirms that space will be provided in the residential units to accommodate 3 no. bins to facilitate waste segregation. The waste storage areas have also been designed to accommodate the projected waste arising from the local shop, gym and childcare facility proposed as part of the development.

It is further confirmed that the strategy set out within the Operational Waste Management Plan will ensure that waste management in the development is carried out in accordance with the relevant requirements of the Local Authority and applicable bye-laws.

The impact of the operational phase of the proposed development on municipal waste disposal will result in an increase in demand. The potential impact from the operational phase on municipal waste disposal is likely to be long term and imperceptible.

12.6 POTENTIAL CUMULATIVE IMPACTS

The cumulative effects of development on material assets have been assessed taking other planned, existing and permitted developments in the surrounding area into account. The other chapters of this EIAR set out the cumulative impacts relevant to each environmental topic.

The proposed development has been considered in the context of other relevant development in the vicinity of the subject site, including *inter alia* ABP Ref.: 310145-21 (R132 Connectivity Project - Road alterations works along the R132 between Lissenhall Interchange and Pinnock Hill Junction), which was subject to a grant of permission by An Bord Pleanála on the 20th of January 2022, ABP Ref.: 308366-20 (SHD permission on the Fosterstown Masterplan lands to the north of the subject site, comprising 278 no. apartments, a childcare facility, retail unit and associated site works, which was subject to a grant of permission on the 3rd of February 2021

(currently subject to a Judicial Review). Other permitted developments considered include Reg. Ref.: F19A/0386 and Reg. Ref.: F18A/0306, which relate to a hospital / healthcare facility, and a 36 unit residential development respectively.

Cumulatively with other surrounding, permitted, planned and existing development, it is predicted that the proposed development will contribute to the improvement of the overall urban structure and grain, will benefit the surrounding area through improvements to the public realm and both cyclist and pedestrian infrastructure, while providing a local population at a suitable location that minimises dependencies on car use, where public transport is frequent and accessible. Therefore, there will be a positive and permanent impact cumulatively on urban settlements.

The cumulative effects of development on electrical supply, telecoms and municipal waste are anticipated to be negligible.

12.7 DO NOTHING IMPACT

In order to provide a qualitative and equitable assessment of the proposed development, this section considers the proposed development in the context of the likely impacts upon the receiving environment should the proposed development not take place.

If the proposed development does not proceed there would be no additional demand or loading on material assets of natural or human origin.

12.8 MITIGATION MEASURES

Remedial, mitigation and avoidance measures describe any corrective or mitigative measures that are either practicable or reasonable, having regard to the potential impacts. This includes avoidance, reduction and remedy measures as set out in Section 4.7 of the Development Management Guidelines 2007 to reduce or eliminate any significant adverse impacts identified. It should be noted that a number of mitigation measures proposed in the other EIAR Chapters are also of relevance to material assets but will not be repeated here.

Construction Phase

The following mitigation measures are proposed for the construction phase of the proposed development with reference to Material Assets:

MA CONST 1: Resource & Waste Management Plan

The proposed development will comply with the provisions of the Resource and Waste Management Plan with respect to construction waste.

MA CONST 2: Construction and Environmental Management Plan

A construction and environmental management plan, including measures for construction traffic management, has been submitted with the EIAR and will be implemented in order to protect local amenities and the integrity and operation of the local road network during the construction phase.

MA CONST 3: Provision of Utilities

Provision of utilities will be carried out in accordance with the recommendations of the relevant statutory bodies and providers (ESB, Gas Networks Ireland, Irish Water, EIR, Fingal County Council etc.)

MA CONST 4: Water Metering

Water Metering will be included in each unit to record consumption.

Operational Phase

No mitigation measures are considered necessary during the operational phase.

12.9 PREDICTED IMPACTS OF THE PROPOSED DEVELOPMENT

This section allows for a qualitative description of the resultant specific direct, indirect, secondary, cumulative, short, medium and long-term permanent, temporary, positive and negative effects as well as impact interactions which the proposed development may have, assuming all mitigation measures are fully and successfully applied. It should be noted that in addition to remedial and mitigation measures, impact avoidance measures have also been built in to the EIAR and project design processes through the assessment of alternatives described in Chapter 2 of this EIAR document.

Construction Phase

In the absence of mitigation, potential impacts associated with the construction phase of the proposed development would be expected to include potential disruption to local natural and human material assets resulting in both short-term and long-term impacts. The implementation of the mitigation measures set out in this Chapter and other Chapters of the EIAR document will ensure that there will not be any significant residual impact during the construction phase. Therefore, impacts are likely to be temporary and neutral.

Operational Phase

The proposed development will have a positive impact on the existing urban environment by creating high quality residential units to cater for the needs of a growing population and responding to a significant housing need and demand in the locality and the region, while occupying a presently underutilised site at an appropriate location for sustainable development. Traffic movements associated with the proposed development are addressed in the next chapter of this EIAR.

The predicted waste water generation of the proposed development will be adequately accommodated in the local foul sewer network, subject to upgrades as confirmed in the Confirmation of Feasibility from Irish Water. The connection to the public sewer together with the upgrade of the existing pipework will be carried out by Irish Water under the Connection Agreement that will be entered into with Irish Water. In this regard the normal procedure for any works within the public roadways in respect of Irish Water infrastructure (proposed or existing) is undertaken by Irish Water.

The proposed development is designed to comply with the provision of SUDS and is therefore unlikely to have any residual impacts in terms of the impact on surface water drainage. While water supply is proposed from an existing water main along the R132 adjacent to the subject site. The calculations demonstrating the operational water use and waste water production are included as part of the standalone Engineering Assessment Report prepared by Waterman Moylan Consulting Engineers which is submitted as part of this application.

The proposed development is unlikely to have any significant impact on the local water or electricity supply and the overall impact with respect to these utilities can be described as long-term and neutral.

'Worst Case' Impacts

The European Commission EIAR Guidelines (2017) suggest that different future scenarios including a worst-case scenario should be described. However, systematic risk assessments are only employed only where the "worst case" impacts pose significant threats to the environment and/or human health. It is important to note that this is not applicable in the case of the proposed development and the likelihood of such a scenario occurring in respect of the proposed development is negligible.

12.10 MONITORING

Monitoring measures will be in accordance with provisions outlined elsewhere in this EIAR document.

12.11 REINSTATEMENT

N/A

12.12 INTERACTIONS

Interactions between Material Assets and other environmental topics are outlined throughout this EIAR document. The likely interactions between Material Assets and other environmental factors include interactions between the proposed drainage and wastewater arrangements and the water chapter of the EIAR. There is an interaction between Municipal Waste and Land and Soils in terms of the quantity of material to be removed from the site. There is also an interaction between Urban Settlements and Ownership and Access and Transportation.

12.13 DIFFICULTIES ENCOUNTERED IN COMPILING

No significant difficulties were encountered in completing this section.

12.14 REFERENCES

N/A