

## 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 with O'Mahony Pike Architects, DBFL Consulting Engineers and PMP Consulting Engineers. 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 Architectural and Archaeological Heritage (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, Architectural and Cultural Heritage is assessed in Chapter 4 of this EIAR document.

Material Assets in 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:

*"The meaning of this factor is less clear than others. In Directive 2011/92/EU it included architectural and archaeological heritage. Directive 2014/52/EU includes those heritage aspects as components of cultural heritage. 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."*

### 12.2 STUDY METHODOLOGY

This chapter of the EIAR document has been prepared with reference to the specific criteria set out in the Guidelines on Information to be Contained in an Environmental Impact Statement (EPA 2002) and the Advice Notes On Current Practice (in preparation of Environmental Impact Statements) (EPA 2003). This chapter also has regard to EIA Directive 2014/52/EU and the Draft EPA guidelines published thereon in 2017, which will be updated upon the enactment of the directive into national law. These draft guidelines include information on the assessment of the effects of development on material assets, and advises 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 5, 7 and 8 respectively. As noted in Section 12.1 above, Cultural Assets of a Physical Type and Cultural Heritage of a Social Type are addressed in Chapter 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, traffic infrastructure, potable water supply, wastewater discharge, electricity supply, gas supply, telecoms and municipal waste.

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

- Urban Settlements
- Ownership & Access
- Transport Infrastructure (please also refer to the Traffic and Transport Assessment submitted with this application)
- Foul Water Disposal (also see Chapter 8)
- Potable Water Supply (also see Chapter 8)
- Surface Water Disposal (also see Chapter 8)
- Natural Gas Supply
- Electrical Supply
- Telecoms; and
- Municipal Waste

#### ***Urban Settlements***

The lands are currently undeveloped and comprise of a green-field site, which is zoned for residential development within the Dun Laoghaire Rathdown Development Plan. The lands are zoned primarily for residential use, with a small extent for open space use, in the Dun Laoghaire Rathdown County Development Plan 2016-2022.

This application relates to the Phase 2 landholding of c. 20.5 ha. The Phase 1 development, which is located to the northeast of the current application site comprises of 425 residential units including 163 no. houses and 262 no. apartments, along with a childcare facility and a significant quantum of high quality open space including an Eco Park.

The lands to the south and south west consist of residential development with a mix of houses, duplexes and apartments at Stepside Park and Cruagh Wood. There are undeveloped lands to the west zoned for residential development. Phase 1 of Clay Farm residential development is currently under construction on lands to the north of the proposed site. The Luas Green Line runs along Ballyogan Road and includes two stops, The Gallops and Leopardstown Valley, in close proximity to the subject site. Lands to the east consist

of Stepside Golf Club and a former landfill, proposed to be a new District Park for the area, to be known as Jamestown Park.

### ***Ownership & Access***

The lands comprising of the planning application site are fully in the ownership of the applicant, Viscount Securities.

Access to the site will be via a proposed bridged link road from Clay Farm Phase 1, which will extend through the Phase 2 lands to Stepside Park to the south. Clay Farm Phase 1 is accessed off Ballyogan Road opposite the entrance to Glenbourne and Leopardstown Valley Neighbourhood Centre. This access will be utilised as the primary vehicular access to the Phase 2 lands.

The bridged link road across the Eco Park to and through the Phase 2 lands will form part of the delivery of the overall Clay Farm Loop Distributor Road. Other sections of this road are subject to delivery by adjoining landowners.

The Traffic and Transport Assessment prepared by DBFL Consulting which is submitted with this application addresses the impact of the proposed development on the surrounding road network and concludes that the Phase 2 proposals will not result in a material deterioration of road conditions and as a result there are no significant traffic or transportation related reasons that should prevent the granting of planning permission for the proposed development.

### ***Transport Infrastructure***

The site is easily accessible to pedestrians and cyclists and they will benefit from existing pedestrian/cyclists infrastructure throughout the Phase 1 development which is currently under construction and on Ballyogan Road. Furthermore the subject development proposals include the provision of pedestrian and cycle routes through the site which will link the proposed development to existing offsite pedestrian/cyclist facilities in the area. A pedestrian and cycle greenway is proposed along the eastern boundary of the Phase 2 lands, as required as a condition of the Phase 1 permission, and which is delivered

The subject site is highly accessible by public transport with two LUAS stops located within walking distance. The Leopardstown Valley Luas Stop is located to the south east along Ballyogan Road whilst The Gallops stop is located to the northwest of the Phase 1 development. Furthermore, Dublin Bus route number 63 is accessible with a bus interchange being within walking distance of the subject site on Ballyogan Road. Dublin Bus Route numbers 118, 44, and 47 are also accessible with interchange opportunities being also within walking distance of the subject site on Kilgobbin Road.

As outlined above, a full Traffic and Transport Assessment has been prepared by DBFL Consulting Engineers and is submitted as a standalone document with this application and has been utilised by other consultants where necessary in the preparation of this EIAR. The impact that the proposed development would have on the transportation infrastructure in the vicinity of the proposed development site has been fully assessed in the TTA.

### ***Foul and Surface Water***

There is an existing 375mm diameter foul sewer running south-west to north-east along the north-eastern boundary of the site. This sewer connects to a 525mm diameter sewer which runs in a south-easterly direction along the south side of the Ballyogan Stream.

Foul sewage within the site will be drained by a separate system. The site will be divided into a northern catchment and a southern catchment divided by the proposed Loop Road through the centre of the site. The northern catchment will discharge by gravity into the existing 525mm diameter sewer adjacent to the Ballyogan Stream. The southern catchment will drain to the existing 375mm diameter foul sewer along the south-eastern boundary of the site. Foul sewage in apartment blocks will be drained on separate systems via 150mm diameter pipes slung from the underside of basement roof slabs and adjacent to the basement walls. Service pipes from individual properties will project through ground floor slabs and connect into the slung drainage system.

Any surface water from the basement car park generated by incidental spillage only would drain through an underground system of collector pipes, gullies and ACO drains to collect water which will drain through a petrol interceptor prior to discharge into a foul pumping well under the basement slab. From the pumping well, basement water will be pumped via a 60mm ductile iron rising main which will connect into the gravity foul drainage system for the site at ground floor level in accordance with the requirements of the Greater Dublin Strategic Drainage Study (GDSDS).

There is no existing surface water sewer infrastructure within the site. The main freshwater watercourse within the vicinity of the proposed development site is the Ballyogan Stream which runs through Eco Park (to be constructed as part of Phase 1) separating the Phase 1 site and the Phase 2 development lands. The Ballyogan stream drains the Carrickmines Valley and joins with the Loughlinstown Stream to become the Shanganagh River before discharging to Killiney Bay at Shanganagh.

There is an open ditch system along the south-eastern boundary of the Phase 2 subject site which discharges to the Ballyogan Stream. It has been agreed with DLRCC (after submission of report 163056-rep-005) that this ditch serves as a land drain only and is not a watercourse. There is another ditch system traversing through the centre of the phase 2 lands which also discharges into the Ballyogan Stream, this ditch serves upstream lands (Stepaside Park).

SUDS will be utilised in the development including Filter Strips, Swales, Filter Drains, Permeable Pavement, Bioretention Areas, Cellular Attenuation Systems, Detention Basins and Petrol Interceptors. These SUDS included in the proposed scheme are further detailed in the DBFL Engineering Services Report.

Wastewater and drainage services serving the existing site and for the proposed development is discussed in greater detail in Chapter 8 of this EIAR and in the separate Engineering Services Report.

### ***Water supply***

There is currently no water supply infrastructure within the subject site. There is an existing 300mm diameter public watermain located on Ballyogan Road. As part of the Phase 1 works, a new 200mm diameter watermain will be constructed along the main access road through Phase 1 to the location of the proposed bridge to be constructed over the Ballyogan Stream as part of the Phase 2 works. Water supply serving the existing site and for the proposed development is discussed in greater detail in Chapter 8 of this EIAR and in the separate Engineering Services Report.

### ***Natural Gas Supply***

The Phase 1 development (currently under construction) includes a linkage with the existing gas network. It is intended that a gas distribution network will be extended by Gas Networks Ireland from their existing gas supply network in the area to supply gas to the proposed residential development. This will be achieved via a 180 4 bar GNI (gas network Ireland) mains pipe which will be brought over the proposed bridge linking the Phase 1 and Phase 2 lands.

### **Electrical Supply**

The current electricity facilities near the site of the proposed development are supplied by Electricity Supply Board Networks (EBSN) through a ring network. There is an underground 110kv ESB line running through the southern part of the Phase 1 lands. There is an existing underground 220KV running through the eastern part of the Phase 2 lands. These power lines were undergrounded at considerable costs to landowners in the area, including the applicant, to facilitate future residential development on these lands. There is an overhead 10kv to the west and an underground 10kv running along the northern boundary of the Phase 1 lands.

### **Information and Communications Technology (ICT)**

The main access roads and internal corridors within the development shall contain ducting / cable ways and chambers as deemed necessary for the ICT utility providers in this area. Postal services to the area are provided by An Post.

### **Waste**

A Construction and Operational Waste Management Plan has been prepared by BECL and is included as a standalone report with this planning application. This includes information on the predicted waste arising from the construction phase of the proposed development. During the operational stage the houses will be served by the waste collectors operating in this area.

## **12.4 CHARACTERISTICS OF THE PROPOSED DEVELOPMENT**

Consideration of the Characteristics of the Proposed Development allows for a projection of the 'level of impact' on any particular aspect of the proposed environment that could arise. For this chapter the potential impact on Material Assets is discussed.

A full description of the proposed development is provided in Chapter 2 of this EIAR document. In summary, the Phase 2 proposal is for a residential development of 927 no. residential units and a childcare facility of 607 sq.m. and two no. retail units each with a GFA of 85 sq.m, and includes vehicular access from the Phase 1 development lands via a proposed bridge over the Ballyogan Stream and Eco Park, all associated site and infrastructural works, on a site area of approximately 20.5 hectares.

The residential component of the development consists of 365 no. houses and 562 no. apartments, to be provided as follows:

- 9 no. 3 bed two storey terraced houses with a GFA of 125.5 sq.m (Type B1);
- 33 no. 3 bed two storey terraced houses with a GFA of 107.5 sq.m (Type B2);
- 2 no. 3 bed two storey terraced houses with a GFA of 119.4 sq.m (Type B3);
- 201 no. 4 bed three storey terraced houses with a GFA of 169.5 sq.m (Type C1);
- 76 no. 3 bed two storey terraced houses with a GFA of 112 sq.m (Type C2);
- 3 no. 4 bed three storey terraced houses with a GFA of 146.3 sq.m (Type C3);
- 34 no. 4 bed three storey terraced houses with a GFA of 171.8 sq.m (Type D1);
- 7 no. 3 bed two storey terraced houses with a GFA of 121.9 sq.m (Type D2);
- 7 no. apartment blocks ranging from three to six no. storeys in height, over undercroft car parking, and which contain a total of 113 no. 1 bed apartments with a GFA of 51 sq.m and 383 no. 2 bed apartments with a GFA of 88 sq.m. The apartment blocks also contain 48 no. 3 bed duplex / own door apartment units ranging in size from 110 sq.m to 114 sq.m GFA. 18 no. 3 bed duplex / own door apartment units are located at the neighbourhood centre ranging in size from 110 sq.m to 115 sq.m in a two to four storey building (which also contains the childcare facility and retail units).

The proposed development comprises the second phase of the overall development of the applicant's c. 34 ha landholding at this location.

The key elements of the proposed development with respect to Material Assets include:

### ***Economic Assets of Human Origin***

- Provision of a direct vehicular, cycle and pedestrian access points to the site from the Ballyogan Road through the Phase 1 lands via a new bridge across the Ballyogan Stream and the permitted Eco park which forms part of the Phase 1 development.
- Provision of high quality public open space, including play and activity areas, pocket parks and a landscaped buffer of open space which provides a green edge along the site boundary.
- Increased loading (see DBFL Consulting Engineers Services report) on the existing Regional Sewerage Scheme;
- Increased demand on the public water supply, natural gas supply network, electrical supply (including substations), telecoms; and, municipal waste collection and disposal services.

## **12.5 POTENTIAL IMPACT OF THE PROPOSED DEVELOPMENT**

### **12.5.1 Introduction**

This section provides a description of the specific, 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. 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. These localised impacts are addressed in the relevant Chapters of this EIAR document.

#### ***Operational Phase***

The proposed development will result in the provision of an additional 927 residential units, as the second phase of development of the Clay Farm lands, along with a childcare facility, 2 no. retail units, a bridge link to the Phase 1 development, roadways, paths and associated open space. The proposal is in accordance with the residential zoning objectives pertaining to the site.

### **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 management plan included as a standalone report with this

planning application. The details of the deliveries and access to the construction site will be decided on prior to construction commencing and will be subject to agreement with the Planning Authority as part of the Construction Management Plan, including traffic management. Any alterations to the local road network are likely to have a short term negative impact on road users.

### **Operational Phase**

The proposed access for Phase 2 is from the Phase 1 development via a proposed bridge, connecting to the main circulation route through the Phase 1 development which links with the Ballyogan Road to the north. The traffic and transport impact of the proposed development is assessed within the Traffic and Transportation Assessment report prepared by DBFL Consulting Engineers which is submitted with this planning application, see below also.

#### **12.5.4 Transport Infrastructure**

### **Construction Phase**

The increased volume of construction vehicles has the potential to impact negatively on the integrity of the local road network and an increased risk of soil, dust and other construction materials being deposited thereon resulting in a potential traffic hazard. The potential impact of the proposed development on transportation infrastructure is likely to be short-term and low. The TTA includes a section which addresses likely construction phase traffic impacts and recommends mitigation measures to negate against impact on the local road network.

### **Operational Phase**

The operational phase of the proposed development will result in increased volumes of traffic using the local road network. The Traffic and Transportation Assessment assesses the anticipated levels of traffic generated by the proposed development, the existing and future road infrastructure and the information and analysis summarised in the TTA. It concludes that the proposals will not result in a material deterioration of road conditions and as a result there is no significant traffic or transportation related reasons that should prevent the granting of planning permission for the proposed development. The proposed traffic and transport arrangements will ensure the viability and operational functionality of the local road system prior to the completion of the loop road which runs through the Phase 1 and 2 lands in its entirety.

The conclusion of the Traffic and Transport Assessment Report states *inter alia*:

- *“The proposed residential development complies fully with the sites landuse zoning as detailed within the DLRCC Development Plan*
- *The proposed scheme deliver’s the strategically important Clay Farm Loop Road, and associated bridge structure, through the applicant’s lands as per the long-standing objectives of the DLRCC Development Plan and earlier Stepside Action Plan.*
- *The subject site benefits from excellent accessibility levels for pedestrians and cyclists as they can utilise existing available infrastructure on Ballyogan Road. Furthermore, the subject development proposals include the provision of pedestrian and cycle routes through the site, including the Clay Farm Greenway; which will link the proposed development to the existing off-site pedestrian/cyclist facilities in the area and adjoining residential and open space lands.*
- *The subject site is highly accessible by public transport with two LUAS stops located within convenient walking distance. The Leopardstown Valley LUAS stop is approximately 300m to the north east on*

*Ballyogan Road whilst The Gallops stop is located 400m to the northwest. Furthermore, Dublin Bus route number 63 is accessible with a bus interchange being within 400m of the subject site on Ballyogan Road. Dublin Bus route numbers 44,47,63 and 118 are also accessible with interchange opportunities being within 650m of the subject site on Kilgobbin Road.*

- *The subject site represents an important infill development which, through the implementation of the proposed developments internal streets and greenways; has the potential to integrate existing external urban settlements, via attractive and shorter walk / cycle linkages on-site including both north-south linkages and east-west linkages.*
- *The design and internal layout of the proposed development has actively sought to provide real viable opportunities for future permeable connections to be provided to neighbouring lands including existing residential areas and future development areas (by others).*
- *The developments 'Loop Road' has been designed to maximise its 'place making' function in addition to performing two different but yet equally important 'movement' functions. Accordingly, whilst the Loop Road design has sought to respect fully the principles, approaches and standards set out in DMURS, the design approach has also actively considered its role as a strategic pedestrian / cycle / vehicle access route enabling the development of both the subject Phase 2 site and the neighbouring third party lands to progress.*
- *The proposed developments operational assessment (2019, 2024 and 2034) demonstrates that the proposed mitigation strategy, and associated recently implemented junction upgrades to the Loop Roads 'eastern' junction; ensure that the additional demand generated by the scheme proposals do not result in a material deterioration of the networks operational performance.*
- *Accordingly, it is concluded that;*
  - *the proposals will not result in a material deterioration of road conditions and as a result there are no significant traffic or transportation related reasons that should prevent the scheme advancing to submission of planning*
  - *the construction of the critical Loop Road by the applicant as part of an early delivery of the subject development proposals; will deliver significant benefits to existing neighbouring lands, with overall accessibility levels improving through the provision of an appropriately designed pedestrian / cycle / vehicle routes to the south."*

The proposal provides for vehicular and pedestrian / cycle connections to Cruagh Wood and Stepside Park. The connections will need to be made by the Planning Authority / adjoining landowners. However, these connections will bring significant benefits for existing residents through increasing connectivity to existing services on Ballyogan Road including the Luas stops, Leopardstown Valley Neighbourhood Centre, Samuel Beckett Civic Campus and local schools.

It should be noted that the traffic impact of the proposed development was utilised to inform the Air Quality and Climate and Noise and Vibration sections of this EIAR, which are included as Chapter 9 and 10.

### **12.5.5 Foul Water Disposal (also see Chapter 8)**

#### **Construction Phase**

The proposal will involve providing new connections to the existing foul water network. There is potential for some short term impacts due to these works however the potential impact from the construction phase of the proposed development on the local surface water 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. These issues are discussed in greater detail in Chapter 8 and the Engineering Services Report.

#### **12.5.6 Potable Water Supply (also see Chapter 8)**

### ***Construction Phase***

The proposal will involve providing new connections to the existing DLRCC potable water supply network. There is potential for some short term impacts by way of disruption in water supply due to these works however it is likely that the potential impact from the construction phase of the proposed development on the local water network is likely to be neutral.

### ***Operational Phase***

The potential impact from the operational phase on the water infrastructure is likely to be long term and moderate. These issues are discussed in greater detail in Chapter 8 and the Engineering Services Report.

#### **12.5.7 Surface Water Disposal (also see Chapter 8)**

### ***Construction Phase***

The proposal will involve providing new connections to the existing surface water network. There is potential for some short term impacts due to these works, however, it is likely that the potential impact from the construction phase of the proposed development on the local surface water network will be neutral.

### ***Operational Phase***

The impact on the surface water drainage is addressed in detail in Chapter 8 and the Engineering Services Report and suitable mitigation measures are recommended.

#### **12.5.8 Natural Gas Supply**

### ***Construction Phase***

The supply of gas to the proposed development site will not be operational during the construction phase. The potential impact from the construction phase of the proposed development on the local gas supply network is likely to be neutral.

### ***Operational Phase***

The development will be connected to the Gas Networks Ireland national gas supply network. The impact of the operational phase of the proposed development on the gas supply network is likely to be to increase the demand on the existing supply. The potential impact from the operational phase on the gas supply network is likely to be long term and moderate.

For further information pertaining to natural gas, please see the standalone Utilities and Energy Report prepared by PMEP which forms a part of this application.

Regarding natural gas, the PMEP report states:

*“Provision for a 180 4 bar GNI (gas network Ireland) mains pipe shall be brought from phase 1 across the bridge to serve the phase 2 development. It is envisaged that 1No district regulating installation (DRI) unit is required. The high pressure gas mains shall terminate within the DRI unit, a provisional location has been selected (refer to dwg. No P010-ME0100).*

*From the DRI unit low pressure gas shall be distributed throughout the development. The houses shall have GNI meter positioned on the external party walls and apartment shall have a centralised meter location in the basement areas.”*

### **12.5.9 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 low.

#### ***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 above-mentioned standalone report prepared by PMEP provides information relating to the electricity supply for the proposed development during its operational phase. The PMEP report states:

*“Provision for 2No 125mm red duct shall be provided to allow for ESB services to be brought from phase 1 across the bridge to serve clay farm phase 2 development. It is envisaged that 3No ESB sub stations is sufficient to serve the development. Each sub-station shall be centrally located to the surrounding areas to limit ESB runs. A 125mm ESB duct shall be provided from the sub-station to the ESB mini-pillars and cabinet location. Services to the home shall be via a mini-pillar, 1 no minipillar serves up to 10No homes. Services shall terminate within the ESB meters positioned on the external party walls of each house. An ESB cabinet shall be provided at each apartment block to include an ESB cut-out point. Services shall be ducted from the cabinet to a centralised meter location within the basement areas.”*

Provision will be made within each home for ducting from the distribution board to an external box; this will allow the homeowner the option of future installation of an e-car charging point.

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

### **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. The potential impact from the operational phase on the telecoms network is likely to be long term and low.

#### **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 significant 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. Accordingly a Construction and Operational Waste Management Plan has been prepared and is included as a standalone report with this application. The potential impact from the construction phase on municipal waste disposal is likely to be short-term and moderate.

### ***Operational Phase***

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 moderate.

## **12.6 POTENTIAL CUMULATIVE IMPACTS**

The proposed development must be considered in the context of the wider area, and in particular the Phase 1 development located immediately to the North in order to ascertain the potential cumulative impact of the development on conjunction with other developments in the area.

The combined Phase 1 and Phase 2 developments will lead to the building-out of an overall site with combined area of c. 34 hectares. The combined Phase 1 and Phase 2 developments at Clay farm will lead to a further overall demand on material assets including electricity, natural gas, telecoms, transport and water related infrastructure. Each chapter of this EIAR has considered the cumulative effect of the proposed development in its broader context.

It is considered that the cumulative effect of the proposed Phase 2 development will be long term and moderate in relation to foul sewerage, waste disposal, gas and electricity supply.

The cumulative effect of the development in respect of telecoms is likely to be long term and low. Other impacts of a cumulative nature are described in the other relevant chapters of this EIAR as referenced above where relevant.

## **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 AVOIDANCE, REMEDIAL AND 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:** The proposed development should comply with the provisions of the Construction and Operational Waste Management Plan with respect to construction waste.

**MA CONST 2:** A construction management plan, including traffic management, should be implemented by the contractor for the construction stage to protect local amenities and the integrity and operation of the local road network during the construction phase.

**MA CONST 3:** Provision of utilities should be carried out in accordance with the recommendations of the relevant statutory bodies (ESB, Gas Networks Ireland, Irish Water, Eircom, DLRCC etc.)

**MA CONST 4:** Water Metering should 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**

If unregulated, predicted 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 would ensure that there is unlikely to be any significant residual impact during the construction phase. Therefore impacts are likely to be temporary and neutral.

### **Operation 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. Traffic movements associated with the proposed

development are likely to have a long-term and neutral impact on the operation of the local road network subject to the recommendations of the Traffic and Transport Assessment being implemented.

The predicted waste water generation of the proposed development will be adequately accommodated in the local foul sewer network. Residual predicted impacts on this infrastructure are likely to be long-term and neutral.

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.

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

### ***'Worst Case' Impacts***

The EPA Guidelines (2002) provide that the "Worst Case" impacts should be described only where the failure of the project, or its mitigation measures, could lead directly to profound, irreversible or life-threatening consequences. 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**

No significant difficulties were encountered in completing this section.

## **12.12 INTERACTIONS**

Interactions between Material Assets and other environmental topics are outlined throughout this EIAR document.

## **12.13 DIFFICULTIES ENCOUNTERED IN COMPILING**

No significant difficulties were encountered in completing this section.

## **12.14 REFERENCES**

N/A