

Chapter 13:

**Material Assets**

## 13.0 MATERIAL ASSETS

### 13.1 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 P MEP 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 and Cultural Heritage is assessed in Chapter 4 of this EIAR document, while a separate chapter (Chapter 5 of the EIAR) is devoted to Architectural Heritage. A separate chapter was considered appropriate in respect of Architectural Heritage having regard to the existing structures of heritage value on the subject site and within the adjacent site containing the residence of the British Ambassador, Glencairn House.

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."*

### 13.2 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, a step which is required due to Ireland's dualist legal system.

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 6, 8 and 9 respectively. As noted in Section 12.1 above, Cultural Assets of a Physical Type and Cultural Heritage of a Social Type are addressed in Chapters 4 and 5 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.

### **13.3 EXISTING RECEIVING ENVIRONMENT**

#### **13.3.1 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.

#### **13.3.2 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 9)
- Potable Water Supply (also see Chapter 9)
- Surface Water Disposal (also see Chapter 9)
- Natural Gas Supply
- Electrical Supply
- Telecoms; and
- Municipal Waste

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

The subject lands are currently undeveloped and comprise a green-field site, which is zoned primarily for residential development under the 2016-2022 Dun Laoghaire Rathdown County Development Plan. A portion of the lands are also zoned for open space uses.

This application relates to a site of 9.59 hectares, which is located within the built up metropolitan area of Dublin. The site is bound on two sides by existing residential development, to the north by the M50 and to the west by the Luas line and Murphystown Way.

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.

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

The lands comprising of the planning application site are owned by the applicant, Castdale Limited. The red line boundary of the proposed development also takes in lands under the control of the Local Authority and TII, to facilitate access and infrastructure works to facilitate the proposed development. Letters of consent from both parties accompany the application.

Vehicular access and egress to and from the application site will be provided via access points off Murphystown Way, crossing the Luas lines at two no. points on the western boundary of the subject site.

It is further proposed as part of the SHD development to provide for pedestrian / cycle accesses to the subject site linking with the surrounding 'The Gallops' residential area located to the east and south of the subject site.

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.

### ***Transport Infrastructure***

The subject site is exceptionally well served by transport infrastructure, including a range of public and private transportation modes.

The location of the site provides for ease of access to the M50 via private car, and onward to the city centre. The site is located adjacent to the Glencairn Luas stop, and Murphystown Way (off which the subject site is located and accessed) is served by several bus routes, including the frequent no. 47 and 118 services to Dublin City Centre.

Murphystown Way also benefits from strong pedestrian and cycle infrastructure, with bike lanes on both sides. 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 150mm diameter foul sewer located in the adjacent residential development - Orby Avenue to the east of the site. This sewer continues through the existing development and ultimately discharges to the public sewer system in Murphystown Road.

There is also an existing 375mm diameter foul sewer located Orby Way to the south-east of the site, this sewer also continues through the existing Development and ultimately discharges to the public sewer system in Murphystown Road.

It is proposed to discharge foul water from the development to the existing 150 mm diameter foul sewer located Orby Way that will be upgraded to a 225 mm foul sewer. The existing foul septic tanks and percolation area located within the subject site, serving the Glencairn House and Gate lodge, will be removed to facilitate development of the site. Foul drainage from Glencairn House and Gate lodge will connect to the proposed drainage system to be constructed as part of this planning application.

Foul sewage within the site will be drained by a separate system. 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.

At the northern end of the site, adjacent to the M50 and located at the base of an escarpment

approximately 7m below the prevailing ground level of the site, is an open pond/wetland system which is along the line of the former Racecourse Stream. The open pond system consists of five separate linear channels/basins divided by weir walls. Each basin is at a different level and the system cascades from upstream to downstream before discharging to a culvert running under the M50 to the north-east of the site.

There is a surface water pipe system serving the existing Glencairn House and Gate lodge adjacent to the site, this drainage discharges to the open pond/wetland system at the base of the escarpment to the north of the site. It is proposed to use a sustainable urban drainage system (SuDS) approach to stormwater management throughout the site, the overall strategy aims to provide an effective system to mitigate the adverse effects of urban stormwater runoff on the environment by reducing runoff rates, volumes and frequency, reducing pollutant concentrations in stormwater, contributing to amenity, aesthetics and biodiversity enhancement and allow for the maximum collection of rainwater for re-use where possible. In addition, SuDS features should aim to replicate the natural characteristics of rainfall runoff for any site by providing control of run-off at source.

SuDS are a requirement of Dun Laoghaire Rathdown County Council under their 'Regional Code of Practice for Drainage Works' and 'The Greater Dublin Strategic Drainage Study'. Additionally, these systems are recommended under the 2009 guidelines, 'The Planning System and Flood Risk Management'.

There are a number of SuDS features proposed which have been designed in accordance with CIRIA documents C697 and C609, including filter strips, swales, filter drains, permeable pavement, green roofs, cellular attenuation systems and petrol interceptors.

Wastewater and drainage services serving the existing site and for the proposed development are discussed in greater detail in Chapter 9 of this EIAR and in the separate Engineering Services Report prepared by DBFL Consulting Engineers.

### ***Water supply***

There is currently no water supply infrastructure within the subject site. There are existing 100mm and 150mm diameter public watermains located on Murphystown Road adjacent to the site. The existing gate lodge and Glencairn House (adjacent to the site) have independent water services connections.

There is also an existing 200mm diameter watermain located in the residential development 'Orby Way' to the south of the site.

A pre-connection enquiry was made to Irish Water, and it has been confirmed that subject to agreement, the connection of the development to the Irish Water network can be facilitated.

Water supply serving the existing site and for the proposed development is discussed in greater detail in Chapter 9 of this EIAR and in the separate Engineering Services Report prepared by DBFL Consulting Engineers.

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

There is an existing 180 4 bar GNI (Gas Network Ireland) main pipe along the Murphystown road. A connection has been installed from the existing gas main to the site entrance and is capped at the site entrance. High pressure gas mains will be brought into the development and terminate in a district regulating installation (DRI) unit.

From the DRI unit, low pressure gas main will be distributed throughout the development. The houses will have GNI meters positioned on the external walls and apartment blocks will have centralised meter locations. These centralised meter locations shall be located in basement areas or at ground level within dedicated meter rooms

### ***Electrical Supply***

Provision for 6 no. 125mm red MV duct has been provided at the site entrance. ESB services will be brought from the site entrance and terminate in the ESB sub-stations within the proposed development. 3 no. ESB substations are proposed to serve the development, located near the northeast, southeast, and southwest corners of the development.

A 125mm ESB duct will be provided from the sub-stations to the ESB mini-pillars and client meter cabinets as indicated on the site services drawing (refer to dwg P014-PMEP-00-00-DR-ME-01). Services to the home will be from a local mini-pillar (1 no mini-pillar serves up to 10 No homes). ESB services shall terminate within the meter cabinet positioned on the external wall of each house.

An ESB cabinet will be provided at each apartment block to include an ESB cut-out point. Services will be ducted from the cabinet to centralised meter locations within the basement areas.

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

Provision for 8 no. communication ducts have previously been installed at the site entrance and will be distributed within the proposed development.

EIR services will comprise of JB4 chambers and ducting. All chambers will be suitably traffic rated for the area in which they are being installed. A 36mm EIR duct will be provided from the nearest chamber to the home (a maximum of 12No houses per chamber). EIR Services will terminate within the EIR ETU box positioned on the external walls of each house.

EIR cabinets will be provided within each apartment block and EIR services will be brought into the basement and terminate within the EIR distribution unit and distributed to each apartment from these locations.

Virgin Media services comprise of FW3 chambers, Node cabinets and ducting. Node cabinets are required to amplify the signal within the development. Each node pillar requires a 15amp LV supply. All chambers will be suitably traffic rated for the area in which they are being installed. A 50mm Virgin Media duct will be provided from the nearest chamber to the home (a maximum of 10No houses per chamber). Virgin Media Services will terminate within the Virgin Media ETU box positioned on the external walls of each house.

Virgin Media cabinets will be provided for each apartment block with services distributed to each apartment.

### ***Waste***

A Construction and Operational Waste Management Plan has been prepared by Byrne Environmental Consulting Ltd (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.

## **13.4 CHARACTERISTICS OF THE PROPOSED DEVELOPMENT**

As set out in greater detail within Chapter 2 of the EIAR, the proposal is for the demolition of an existing house on the subject site and the construction of 341 no. residential units, a childcare facility and all associated site and infrastructural works.

The 243 no. apartments are proposed to be provided within 6 no. apartment buildings of 4 and 5 no. storeys in height, including undercroft basements, 1 no. 4 storey apartment building (with childcare facility at ground floor level) and adjacent surface car parking, and a 2 no. storey apartment building with adjacent surface parking.

The houses consist of 2 and 3 storey terraced, semi-detached and detached dwellings. Bin and cycle storage areas are proposed within the apartment blocks and bin stores are proposed for the houses. A recycling bring bank, 3 no. electricity sub-stations and a DRI unit for gas services are proposed for the site.

The proposal seeks to relocate the entrance portal (including the entrance railings, piers, archways and gates), from the existing location at the entrance to the site, to a new location within the site in closer proximity to the permitted new entrance to Glencairn House (new entrance and boundary wall to Glencairn House permitted under Reg. Reg.: D17A/0913). A new entrance arrangement is to be provided at the existing entrance portal location. The proposal includes landscaping, car parking, and boundary treatments within the curtilage of the existing gate lodge (no works proposed to gate lodge building). The application site includes the ruins of Murphystown Castle (Recorded Monument Ref. No. DU023-025), which are located towards the western boundary of the site, and which are to be incorporated into an open space amenity area.

A total of 519 no. car parking spaces are proposed, which includes 289 no. basement and 230 no. surface level spaces. A total of 24 no. motorcycle parking spaces are proposed. The development provides a total of 530 no. cycle parking spaces. The associated site and infrastructural works include tie-ins to existing infrastructure, foul and surface water drainage, attenuation tanks, open space including playground, cycle stores / spaces, hard and soft landscaping, boundary treatments, internal roads, cyclepaths and footpaths. The proposal includes for access to and improvements to the greenway to the south and to Murphystown Way to the west of the application site.

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

### **13.5.1 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.

### **13.5.2 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 proposal will result in the provision of an additional 341 no. residential units and childhood facility along with open space and recreational areas.

The proposal is in accordance with the zoning objectives pertaining to the site.

### **13.5.3 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 development will provide for easy access to Murphystown Way to the west, the Luas line, along with new pedestrian links with The Gallops to the south.

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.

### **13.5.4 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 Traffic and Transportation Assessment (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 and models the impacts of the proposed development on surrounding road infrastructure. It concludes that the SHD proposal will not result in any material deterioration of local road conditions.

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 10 and 11.

### **13.5.5 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 the Engineering Services Report prepared by DBFL.

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

### ***Construction Phase***

The proposal will involve providing new connections to the existing 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 9 and the Engineering Services Report.

#### **13.5.7 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 9 and the Engineering Services Report and suitable mitigation measures are recommended.

#### **13.5.8 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.

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

### **13.5.10 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.

### **13.5.11 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 potential impact from the construction phase on municipal waste disposal is likely to be short-term and moderate. Please refer to the BECL Construction and Demolition Waste Management Plan for further details.

#### ***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.

### 13.6 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. Much of the area surrounding the proposed development site accommodates existing residential development, in particular the lands to the east and south. Development is permitted under Reg. Ref.: D17A/0913 for the provision of a new curtilage for the adjacent Glencairn House, and for the construction of a new dwelling within the existing walled garden, along with associated works. In the context of the proposed SHD development, this adjacent development is not considered to contribute significantly to any impact on material assets when considered cumulatively.

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 will have positive cumulative effects on urban settlements, access and transport infrastructure by improving permeability and allowing movement through a previously impermeable area.

The cumulative effects of development on foul and surface water disposal, potable water supply, natural gas supply, electrical supply, telecoms and municipal waste are anticipated to be negligible.

### 13.7 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.

### 13.8 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 and environmental 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, EIR, 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.

## **13.9 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.

## **13.10 MONITORING**

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

### **13.11 REINSTATEMENT**

N/A

### **13.12 INTERACTIONS**

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

### **13.13 DIFFICULTIES ENCOUNTERED IN COMPILING**

No significant difficulties were encountered in completing this section.

### **13.14 REFERENCES**

N/A