

13.0 MATERIAL ASSETS

13.1 INTRODUCTION

This chapter prepared evaluates the potential impacts, from the proposed development on Material Assets, as defined in the EPA Guidelines 'Draft Guidelines on the information to be contained in Environmental Impact Assessment Reports (EPA, 2017), Advice Notes Draft Advice Notes for Preparing Environmental Impact Statements (EPA, 2015), and European Commission Guidance on Environmental Impact Assessment of Projects: Guidance on the preparation of the Environmental Impact Assessment Report (2017).

13.2 METHODOLOGY

The Directive 2011/92/EU defined Material Assets as '*resources that are valued and that are intrinsic to specific places; they may be of either human or natural origin*': this included architectural and archaeological heritage. The Directive 2014/52/EU included architectural and archaeological heritage as components of cultural heritage; this EIA report has done likewise within in Chapter 12 Archaeological, Architectural and Cultural Heritage.

The EPA Guidelines (2017) state that material assets are taken to mean "*built services and infrastructure, roads and traffic and waste management*". The EPA Advice Notes (2015) also gives examples of material assets including; assimilative capacity of air and water; ownership and access; and tourism and recreational infrastructure. The European Commission Guidance (2017) refers to a number of examples of material assets including buildings, other structures, mineral resources and water resources.

In this EIA Report, the impacts on some of the material assets described in the above guidance have already been considered in the following chapters and therefore these aspects will not be addressed in specific detail within this chapter.

- Chapter 4, Population and Human Health;
- Chapter 5, Land, Soils, Geology & Hydrogeology;
- Chapter 6, Hydrology;
- Chapter 8, Air Quality & Climate;
- Chapter 11, Cultural Heritage
- Chapter 12, Traffic & Transportation; and
- Chapter 14, Waste Management.
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This chapter assesses ownership and access, built services and infrastructure, which have not already been addressed elsewhere in this EIA Report. Section 13.3 addresses ownership and access. The subsequent sections address built services and infrastructure. The potential impacts on built services and infrastructure, if any, are assessed in terms of the following:

- Land Use, Property, and Access
- Power, Electrical, and Gas Supply;
- Telecommunications;
- Surface water infrastructure;
- Foul drainage infrastructure; and
- Water supply.

The proposed development will not impact on any other structures or water resources. The associated built services and infrastructure in the vicinity of the site are summarised in the

following sections; further detail is provided within the planning application documentation including details of consultation with utility suppliers.

The assessment of impact on utilities has been undertaken by confirmation of supply with the utility supplier, Clare County Council (CCC), Eirgrid, ESB Networks and Irish Water (IW). Mitigation measures are proposed where required.

13.3 RECEIVING ENVIRONMENT

The associated built services and infrastructure currently in the vicinity of the site are summarised in the following sections.

13.3.1 Land Use, Property, and Access

The proposed development site is under third party ownership. There currently exists an agreement between the Applicant and the owner of the site. A letter of consent, to apply for development on the lands from the site owner, is included with the planning application.

The proposed development footprint is c. 60 hectares (ha) and is located to the east of Ennis in the townland of Tooreen and Cahernalough with small sections extending west into the townlands of Ballymacahill and Knockanean. The lands are bordered to the south by the R352 (Tulla Road) and to the west by the M18. The lands are traversed by a gas pipeline and overhead powerlines connecting to the existing Ennis 110kv Substation that adjoins the western boundary.

The site is currently predominantly in agricultural use and comprises a series of irregularly shaped fields divided by hedgerows and ditches typical of its agricultural setting. The site contains a number of existing dwellings and farm outbuildings.

The land proposed for development have been identified by Clare Co Co (CCC) as zoned as suitable for Enterprise (ENT3). CCC Variation No.1 to the CCDP 2017-2023 states that “lands zoned *enterprise* shall be taken to include the use and development of land for high end research and development, business science and technology -based industry, financial services, call centres/telemarketing, software development, datacentres, enterprise and incubator units, small/medium manufacturing or corporate office in high quality campus/park type development”. The main existing access to the site is from Tulla Road along the southern boundary.

13.3.2 Power, Electrical, and Gas Supply

The availability of power is a key consideration in site selection. The lands are traversed by a gas pipeline and overhead power lines connecting to the existing Ennis 110kV Substation that adjoins the western boundary. There is a high pressure gas main running north/south to the east side of the site.

13.3.3 Telecommunications

A variety of providers including Aurora, BT, ESB and PiPiper are available in the locality of the site and discussions are ongoing to create at least three fibre entries to provide resilience.

13.3.4 Surface Water Infrastructure

Stormwater currently discharges to ground and the Ballymacahill River which borders the west of the site.

13.3.5 Foul Drainage Infrastructure

There is an existing 225 mm diameter foul drain that forms part of an existing foul drainage network that services the existing Knockanean area southwest of the proposed development along the existing Tulla Road. This existing foul drain discharges to the existing pumping

station at Gort Na mBlath located c. 550 m further west from the proposed development. The wastewater ultimately discharges to Ennis North (Clonroadmore) WWTP Reg D0048.

13.3.6 Water Supply

A 450mm diameter mains runs along Tulla road and has capacity to supply adequate water for the proposed development.

13.4 CHARACTERISTICS OF THE PROPOSED DEVELOPMENT

This section describes the built services and infrastructure for the proposed development during both construction and operation are described below.

13.4.1 Land Use, Property, and Access

The proposed data storage facility and energy centre covers an area of 60 hectares and of the total land area, 10 ha of the lands are retained as buffer zones. The land proposed for development have been identified by Clare Co Co (CCC) as zoned as suitable for Enterprise (ENT3). CCC Variation No.1 to the CCDP 2017-2023 states that "lands zoned *enterprise* shall be taken to include the use and development of land for high end research and development, business science and technology -based industry, financial services, call centres/telemarketing, software development, datacentres, enterprise and incubator units, small/medium manufacturing or corporate office in high quality campus/park type development".

A number of the existing dwellings and farm outbuildings will be retained and some (one house and eight farm buildings) will be demolished as part of the proposed site redevelopment. Details on demolition are included in the demolition report provided with this planning submission and also addressed in Chapter 13 (Waste) and the Construction Environmental Management Plan (CEMP).

The main access to the proposed development site will be off the Tulla Road along the southern boundary, with a secondary access and egress for emergency use only, off the Tulla road to the west of the main entrance. These entrances will connect to an internal road network that will serve two purposes public 24/7 access to the Vertical Farm, Substations, Energy Centre, and Gas AGI; and to provide a secure private road network circumnavigating the Data Centres for staff access, connection between buildings and for the delivery of equipment and materials. There is good visibility on approach to both access points as detailed in Chapter 12 (Traffic and Transportation).

13.4.2 Power, Electrical, and Gas Supply

During construction, contractors will require power for heating and lighting of the site and their on site construction compound. The power requirements will be relatively minor and will be provided by a temporary power supply.

During operation, the six data storage facilities will require up to 200 MW IT load. The data halls equipment, including servers and the air handling plant require energy to maintain server availability and the necessary environmental conditions. As detailed in Chapter 2 (Description of the Development) it is proposed to construct an energy centre in the east of the site. This energy centre and connection to the electricity grid with an additional onsite substation will service the power needs of the data storage facilities.

It is envisaged that phase 1 (80MW) will be provided by electrical power from the grid. It is proposed to underground two existing overhead 110kV circuits to the Ennis substation as they come onto the site on the east side. A new substation will be created on the east site, partly for extending Eirgrid's substation (the existing has no additional space) and for transforming

to 10kV / 20kV for distribution to the data centres. Dual feeders will be provided to each data centre via a set of underground ducts that will be created in the service roads.

Connecting to the Eirgrid network gives the opportunity to use low carbon energy that is now generated across the island of Ireland through wind generation and photo voltaic solar farms. These renewable sources of energy currently provide up to 40% of the total supply at any one time. This will increase significantly over the next decade or so as more and more renewable capacity is added to the network. The additional phases (120 MW) will be powered by the on-site gas powered energy centre or a combination of both. The Applicant intends to construct the energy centre in order to respond flexibly to the evolving energy market and to ensure the capacity to have future security of supply and also to respond to any future grid capacity constraints.

There is a high pressure gas main running north/south to the east side of the site. In conjunction with Gas Networks Ireland, a pressure reduction station (AGI) will be installed to provide delivery of gas for the generators to be located in the energy centre. The initial provision of generation on site will be based on using Natural Gas from Gas Networks Ireland (GNI). GNI have announced that they are already looking at injecting green or blue hydrogen into their network to improve their carbon impact, as per their Vision 2050. The graph below shows how the use of natural gas will reduce to 0% by 2050. The engines on-site will be specified to work on Natural Gas or Hydrogen or any mix in between in order to future proof the plant and to take the opportunity to reduce the carbon impact.

In the event of a loss of power to the site, diesel-powered back-up generators will be activated to provide power pending restoration of mains power. Based on experience of many other datacentre developments, the back-up generators will rarely be used.

13.4.3 Telecommunications

Telecommunications including fibre required during the construction phase will be provided via a mobile connection or temporary connection to the nearby telephone network.

A variety of providers including Aurora (running long the gas line), BT, ESB and PiPiper are available in the locality of the site and discussions are ongoing to create at least 3 fibre entries to provide resilience.

A fibre optic cable distribution network will be installed with a separate incoming fibre infrastructure and provided to each building via underground fibre ducts. There are existing underground carrier ducts adjacent to the site that will be utilised for the development. The connection into the wider telecommunications network will be undertaken by a statutory telecommunications operator.

The installation of a new fibre optic cable network on the site will be carried out in accordance with best practice standards. Consultation with the providers has confirmed there is sufficient capacity in the network for the proposed development.

13.4.4 Surface Water Infrastructure

During construction run-off into excavations/earthworks cannot be prevented entirely and is largely a function of prevailing weather conditions. Earthwork operations will be carried out such that surfaces, as they are being raised, shall be designed with adequate drainage, falls and profile to control run-off and prevent ponding and flowing along with mitigation measures in place to ensure that any impacts on surface water is minimised at source. Any discharge water will be treated using a silt-buster or similar to removed suspended solids prior to discharge.

The proposed surface water drainage service to the development comprises various drainage components including positive stormwater networks, attenuation systems and several Sustainable Drainage Systems (SuDS) elements. The proposed surface water drainage was designed in accordance with the SuDS Manual 2015.

The developed area of the site is 17.3 ha and attenuation has been designed on site for the 1:100 yr. flood event including consideration of a 20 % allowance for climate change. An overflow subsurface pipeline will discharge at current discharge rates (greenfield) to the Ballymacahill River. Drainage will be from a single lined attenuation pond.

Rainwater run-off from the roofs of the six datacentres will be collected and will feed water harvesting tanks with any excess overflow into the common road drainage network. This water will be available as cooling water. Other SuDS measures will include permeable paving and swales. These drains and swales will discharge to a surface water attenuation pond where the discharge will be controlled using a "Hydrobrake Optimum" vortex flow control device to limit the maximum discharge to 50 l/s during the 1/100 year storm (the calculated Qbar value attributed to the site is 61l/s). The attenuation pond to be constructed to retain a constant volume of water to promote settling and reduce conveyance of suspended solids and other particles to the receiving waters. An attenuation volume of 9293 m³ is designed as part of the proposed development. A Class (I) bypass separator with a suitable capacity will be installed downstream of the proposed hydrobrake. The function of the separator is to intercept pollutants (any petroleum /oil) and prevent their entry to the Ballymacahill River. As such there is no potential for increase or flooding or impact on water quality as a result of the proposed development. Further details are provided in Chapter 7 of the EIAR and within the CSEA engineering report prepared for planning.

13.4.5 Foul Drainage Infrastructure

Welfare facilities will be provided for the contractors via portable sanitary facilities within the construction compound site during the construction works. It is anticipated that initially, waste collected by means of a temporary sealed storage tank, with all wastewater being tankered off-site to an appropriately licensed facility for disposal. The site contractor may wish to establish temporary connections to the existing services established to provide service and utilities subject to relevant applications and approvals.

A temporary trench excavation along the Tulla road will be undertaken to facilitate pipe laying for connection with the existing pumping station of Gort Na mBlath located approximately 550 m west of the main site. The wastewater ultimately discharges to Ennis North (Clonroadmore) WWTP Reg D0048.

There is no trade effluent proposed for this development. Consultation with CCC has confirmed that sufficient wastewater capacity is available and a pre-connection enquiry PCE application form has been submitted to Irish Water (IW). A review of the most recent Annual Environmental Report (2019) for the receiving IW wastewater treatment plant and confirmation with IW and CCC confirms there is no capacity issues.

Table 13.1 2019 AER Confirming available capacity for Receiving WWTP.**2.1.4.2 Treatment Capacity Report Summary - ENNIS NORTH WWTP**

Treatment capacity is an assessment of the hydraulic (flow) and organic (the amount of pollutants) load a treatment plant is designed to treat versus the current loading of that plant.

ENNIS NORTH WWTP	
Peak Hydraulic Capacity (m ³ /day) - As Constructed	16272
DWF to the Treatment Plant (m ³ /day)	6784
Current Hydraulic Loading - annual max (m ³ /day)	20495
Average Hydraulic loading to the Treatment Plant (m ³ /day)	13132
Organic Capacity (PE) - As Constructed	31500
Organic Capacity (PE) - Collected Load (peak week) ²⁰¹⁸	23980
Organic Capacity (PE) - Remaining	7520
Will the capacity be exceeded in the next three years? (Yes/No)	No

Nominal design capacities can be based on conservative design principles. In some cases assessment of existing plants has shown organic capacities significantly higher than the nominal design capacity. Accordingly plants that appear to be overloaded when comparing a collected peak load with the nominal design capacity can be fully compliant due to the safety factors in the original design.

The designed Dry Weather Flow DWF of the development is 20.9 m³/day. The proposed foul drainage service will incorporate a foul pumping station and associated rising main which will also include a 24-hour emergency storage tank (in the unlikely event that the proposed foul pump malfunctions).

13.4.6 Water Supply

During construction, a water source will be required for the duration of the works for welfare facilities, dust suppression and general construction activities. Initially, water supply will be provided by tankered water and bottled water to the site. A temporary connection to the existing existing watermain will be established to provide service and utilities subject to relevant applications and approvals. The water demand during the construction phase will not be significant enough to affect existing pressures.

A 450mm diameter mains runs along the Tulla Road and following a proposed upgrade for connection (within the existing road), has capacity to supply adequate water for the proposed development. Peak daily usage will be 48 l/s and average demand 11.2 l/s (Adiabatic Cooling System) during high temperature condition), plus 1.2 l/s for domestic use. On the rare occasions that evaporative cooling is required (temperature of 27°C the requirement is 1,000 m³ /day for the whole site.

13.5 POTENTIAL IMPACTS OF THE PROPOSED DEVELOPMENT

13.5.1 Construction Phase

Land Use, Property, and Access

During the construction phase there are potential short-term nuisances such as dust, noise, as well as the potential for pollution of groundwater or the existing drainage ditches associated with demolition, excavations and construction. To minimise nuisance for neighbours, the contractor will be required to operate in compliance with the Construction Environmental Management Plan (CEMP). The potential impact associated with land use and property for the construction phase will be *localised, negative, not significant and short term*.

Power, Electrical, and Gas Supply

During construction, contractors will require power for heating and lighting of the site and their onsite accommodation. In addition, some on site equipment/plant will require power.

A construction compound and temporary power supply will be installed for the construction of the proposed development. The contractor compound and car parking for contractors will move as the development proceeds through the different phases. Planned locations are outlined in the CEMP and drawing ART-ARC-SP-00-DR-A-004. No off site parking is required. The power requirements for the construction phase will be relatively minor and therefore the power demand for the construction phase will have a *short term imperceptible* impact.

Excavations within the vicinity of existing electrical services will be carried out in consultation with EBS Networks to ensure there is no impact on existing users. There are no potential impacts associated with power supply for the proposed development for the construction phase.

Telecommunications

Telecommunications including fibre required during the construction phase will be provided via a mobile connection. There are no potential impacts associated with telecommunications for the proposed development for the construction phase.

Surface Water Infrastructure

The contractor will be required to manage surface water as outlined in the construction surface water management plan included in the Construction Environmental Management Plan (CEMP). The design and control measures will ensure that run-off water containing silt or potential construction contaminants (oil and alkaline water from cement) will be contained on site and treated. Run off will be managed to greenfield run-off rates and as such there is no potential for off-site flooding.

As detailed in Chapter 6, the potential impacts associated with surface water run-off for the proposed development during the construction phase is *short term, neutral and imperceptible*.

Foul Drainage Infrastructure and Water Supply

Welfare facilities (canteens, toilets etc.) will be required for the construction crew. Portable toilets will be provided onsite for construction staff.

There are no potential impacts on the existing infrastructure associated with wastewater management for the proposed development for the construction phase.

Water will be supplied via a connection to the existing mains along the Tulla road, which will serve the construction compound, welfare facilities and any other construction activities for the duration of construction works on the proposed development. Consultation with CCC and IW has been undertaken to confirm availability of supply requirement and a Pre Connection Enquiry (PCE) has been submitted to IW. A copy is included in the engineering report provided with planning documentation.

It is concluded the potential impacts associated with wastewater and water supply for the proposed development for the construction phase are *short-term, neutral and imperceptible*.

13.5.2 Operational Phase

Land Use, Property, and Access

During the operational phase the Proposed Development is not anticipated to generate significant air (including odour), noise or water emissions during normal operating conditions; these have been discussed further in the respective EIA chapters, Chapter 6 (Hydrology), Chapter 8 (Air Quality & Climate) and Chapter 9 (Noise and Vibration) Chapters.

The proposed development represents a loss of agricultural land however in the overall context of Ireland's available agricultural land the loss is negligible. There is no net loss of soil from the site. Due to the zoning of these lands for development, the overall potential impact associated with land use and property for the operational phase will be a localised *neutral, slight, and long term*.

Power, Electrical, and Gas Supply

A 200 MW IT Load in total will be required for the operation of the 6 no. data storage facilities). The data halls equipment, including servers and the air handling plant require energy to maintain server availability and the necessary environmental conditions. This energy will be provided by electrical power from the grid and onsite gas-powered engines located in the energy centre, or a combination of both.

To facilitate connection with the grid, construction of an additional on-site substation is required. The latter will form part of a separate application to An Bord Pleanála but is assessed within this EIAR.

The data storage facility will also have diesel powered back-up generators, as a contingency power measure in the event of a loss of electrical power/gas supply loss. These diesel generators will be located in three external plant compounds. In addition, a back-up generator will be located in the energy centre building.

The Applicant is within the standard process of consent with EirGrid and Gas Networks Ireland. Based on these discussions with Eirgrid, and Gas Networks Ireland as well as Eirgrid's All-Island Generation Statement 2020-2029, there is a *long-term, neutral, not significant* effect on power and electrical supply during the operational phase of the Proposed Development.

Telecommunications

The proposed development will not make a connection to public network, a dedicated direct connection to services will be provided, and therefore there is no perceptible impact on the existing telecommunications infrastructure.

There is sufficient capacity available within a number of networks to accommodate the development, so there are no potential impacts associated with telecommunications for the Proposed Development for the operation phase.

Surface Water Infrastructure

The operational phase of the development represents an increase in hardstanding area that has the potential to cause an increase in surface water run-off and flooding offsite and downstream of the development site. As the design incorporates management of run-off to greenfield run off rate and in compliance with GSDS requirements there is no perceptible impact on receiving surface water infrastructure. The design incorporates measures for management of hydrocarbons and mitigation for any leaks and spills through interceptors (see Chapter 6 Hydrology).

Foul Drainage and Water Supply Infrastructure

Consultation has been undertaken with CCC with regard to available capacity and required upgrades to sewers. A PCE was submitted to IW which addressed water demand (and wastewater) for the proposed development (ref: Engineering report - CSEA). The overall water demand and wastewater discharge associated with the proposed development is in accordance with the water demand outlined in the PCE.

There is no trade effluent proposed for this development. Consultation with CCC has confirmed that sufficient wastewater capacity is available and a pre-connection enquiry PCE

application form has been submitted to Irish Water (IW). The designed Dry Weather Flow DWF of the development is 20.9 m³/day. The proposed foul drainage service will incorporate a foul pumping station and associated rising main which will also include a 24-hour emergency storage tank (in the unlikely event that the proposed foul pump malfunctions).

A 450mm diameter mains runs along the Tulla Road and following a proposed upgrade for connection (within the existing road), has capacity to supply adequate water for the proposed development. Peak daily usage will be 48 l/s and average demand 11.2l/s (Adiabatic Cooling System) during high temperature condition). plus 1.2 l/s for domestic use. On the rare occasions that evaporative cooling is required (temperature of 27°C the requirement is 1,000 m³ /day for the whole site.

13.6 REMEDIAL AND MITIGATION MEASURES

13.6.1 Construction Phase

Construction of the proposed development will require connections to water supply and drainage infrastructure, power and telecommunications.

Ongoing consultation with CCC, Irish Water, EirGrid, ESB Networks, Gas Networks Ireland and other relevant service providers within the locality and compliance with any requirements or guidelines they may have will ensure a smooth without disruption to local and business community.

The works contractor will be obliged to put best practice measures in place to ensure that there are no interruptions to utilities considered above, unless this has been agreed in advance.

Power and Electricity Supply

The power demand for the construction phase will be relatively minor and the connection works are almost entirely within proposed site boundaries with grid works within the road alignment (Tulla Road), so it is not anticipated that this would have any significant potential offsite impact. As such, no remedial or mitigation measures are required in relation to power supply for the construction phase.

Telecommunications

Telecommunications including fibre required during the construction phase will be provided via a mobile connection prior to connecting to existing networks along existing roads to accommodate the proposed development by the relevant network companies. No remedial or mitigation measures are required in relation to telecommunications.

Surface Water Infrastructure

During the construction phase, surface water management will be in accordance with a specific surface water management plan (SWMP) developed for the site (see CEMP). Any surface water run-off collecting in excavations or from exposed soil will likely contain a high sediment load. This will be diverted for appropriate settlement and will not be allowed to directly discharge directly to the existing lakes/springs or Ballymacahill River. Buffer zones adjacent to open water areas will be applied. The SWMP will incorporate specific measures for managing run-off water quality.

Foul Drainage Infrastructure

Portable toilets will be provided for construction staff. Once operational, the new pumping station to the foul drainage network which runs along the R147 with pipe upgrades in accordance with the requirements of IW and CCC. A temporary connection will be established.

Foul drainage for the proposed development will be in accordance with the Building Regulations Technical Guidance Document H for design and construction.

Strict quality control measures will be undertaken while laying pipes to minimise or eradicate infiltration and ex-filtration.

Water Supply

A connection will be put in place for the construction of the proposed development. This will be fed from the existing 450mm diameter mains along the R147. The works contractor will be obliged to put best practice measures in place to ensure that there are no interruptions to the water supply, unless this has been agreed in advance.

Strict quality control measures will be undertaken while laying pipes to minimise or eradicate infiltration and ex-filtration.

13.6.2 Operational Phase

Power and Electricity Supply

The data halls equipment, including servers and the air handling plant require power to maintain server availability and the necessary environmental conditions. The data halls equipment, including servers and the air handling plant require energy to maintain server availability and the necessary environmental conditions. It is envisaged that this energy will be provided by electrical power from the grid, or onsite gas-powered engines located in the energy centre, or a combination of both. The Applicant intends to construct the energy centre for reasons of commercial need in order to respond flexibly to the evolving energy market and to ensure the capacity to have future security of supply and also to respond to any future grid capacity constraints.

The proposed development includes a number of sustainable measures to minimise energy use on site through building design and use of solar panels and waste heat. These are outlined in Chapter 2 Description of the Proposed Development and the Energy and Sustainability Report provided with the planning application documentation. The waste heat will be used for a vertical farm to be located on site.

No remedial or mitigation measures are required in relation to power and electricity.

Telecommunications

There is sufficient capacity available in the network to accommodate the development, and as such there are no potential impacts associated with telecommunications for the proposed development for the operational phase. No remedial or mitigation measures are required in relation to telecommunications.

Surface Water Infrastructure

The stormwater system has been designed to collect rainwater runoff from the impermeable areas of the site, roofs and road/car park and directed to an appropriate SuDS and attenuation system. The allowable greenfield runoff rate has been established by the project engineers, CSEA, using the methodology set out in the *Engineering Services Report*.

The drainage design for the proposed development includes a Class 1 full retention separators downstream of the fuel unloading areas and a Class 1 bypass interceptor upgradient of the attenuation basin to ensure the quality of surface water discharge is controlled prior to attenuation and discharge offsite. In addition, a hydrodynamic solid separator is provided within the drainage network to screen rubbish, debris and sediment from the surface water runoff before it enters the attenuation basin. A shut off valve is included in the design to ensure that site discharges can be shut off in the event of a fire or other form of significant surface water contamination event. No remedial or mitigation measures are required.

Foul Drainage and Water Supply Infrastructure

IW have agreed in principal that the wastewater requirements for the development can be accommodated, subject to application. The PCE form to IW his included in the engineering report provided with planning. No remedial or mitigation measures are required in relation to foul drainage or water supply infrastructure.

13.7 PREDICTED IMPACTS OF THE PROPOSED DEVELOPMENT

13.7.1 Construction Phase

The works contractor will be obliged to follow best practice measures to ensure that there are no interruptions to service from the existing telecommunications network, watermain, sewer and electrical grid. Any planned interruptions will be agreed in advance with the utilities suppliers. Strict quality control measures will be undertaken while laying pipes to minimise or eradicate infiltration and ex-filtration.

The implementation of mitigation measures within each chapter, and detailed in Section 13.6.1 will ensure that the predicted impacts of the proposed development on material assets will be *neutral, imperceptible, and short-term* for the construction phase.

13.7.2 Operational Phase

The implementation of mitigation measures within each chapter and detailed in Section 13.6.2 will ensure that the predicted impacts on the material assets during the operational phase will be *neutral, not significant and long term*.

13.8 RESIDUAL IMPACTS

The Proposed Development requires electrical power, gas usage, water supply and wastewater treatment. Consultations have been undertaken with CCC, Irish Water, Eirgrid and Gas Networks Ireland, respectively, and confirmed availability of supply. These entities in considering future connection take into consideration the environmental impacts of planned developments within the wider network. The provision of a combined gas and electric power provides additional resilience in the network. As such, there will therefore be no significant impact on material assets to the wider economy or environment. The overall predicted impact of the Proposed Development can be classed as *long-term, neutral and not significant* with respect to material assets.

13.9 CUMULATIVE IMPACT ASSESSMENT

The following considers the cumulative impacts of the proposed development and proposed and permitted and operating facilities in the surrounding area in relation to Material Assets and Waste.

13.9.1 Construction Phase

The construction of the Proposed Development and other surrounding proposed and permitted developments considered, which are identified in Chapter 3 and Appendix 3.1 require site clearance, excavations and levelling which will generate localised requirement for soil removal and/or import, power and water supply and wastewater discharge. However, provided standard mitigation measures set out in the EIA Reports for these developments or where EIA does not apply, provided that planning conditions are implemented, the cumulative impact will be short term negative and imperceptible.

13.9.2 Operational Phase

The Proposed Development and all permitted developments considered, which are identified in Chapter 3 and associated appendices are required to engage with Irish Water, Gas Ireland and Eirgrid to ensure that there is sufficient capacity to cater for the increase in water and wastewater, gas and electricity requirements. Based on known current and known future developments there is adequate capacity of supply available within the local environs. . In developing long term plans for security of supply, these National Authorities for water and energy supply are required to develop resources in compliance with sustainable environmental planning.

The cumulative impacts associated with material assets will be *long-term negative and not significant*.

Interactions are presented in Chapter 15.