

SECTION 16: Material Assets

16.1 Introduction

This section describes the likely significant effects of the Proposed Development on material assets. Material assets are defined as: “Resources that are valued and that are intrinsic to specific places” Whilst the current draft EPA Guidelines state that Material Assets: “Can now be taken to mean built services and infrastructure”

The purpose of this assessment is therefore to consider the likely significant effects of the Proposed Development on existing services and infrastructure, including:

- Land Use and Properties;
- Electricity;
- Telecommunications;
- Gas;
- Water Supply Infrastructure; and
- Foul and Surface Water Drainage.

Material assets of natural origin are addressed separately in various other Sections of this EIAR. **Section 4** provides a full description of the Proposed Development and **Section 5** describes the construction strategy for the Proposed Development. The following aspects are particularly relevant to the material assets assessment:

Design - Proximity of the Proposed Development to existing material assets.

Construction - Diversions required to undertake construction activities in the vicinity of existing material assets and intrusive construction activities occurring in proximity to existing material assets.

Operation - Operational demand requirements of the Proposed Development.

16.2 Assessment Methodology

16.2.1 General

This Section has been prepared having regard to the overarching EIA guidance as described in **Section 1**. The significance of effects has been determined based on the severity of potential disturbance to existing material assets.

16.2.2 Guidance and Legislation

The significance criteria used to categorise significant effects on material assets is set out in Table 16.1 and has been developed based on the description of significant effects as outlined in the guidance.

Table 16.1: Significance criteria for likely significant effects on material assets

Significance Level	Criteria
Imperceptible	An effect capable of measurement but without significant consequences.
Not significant	An effect which causes noticeable changes in the character of the environment but without significant consequences.
Slight Effects	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
Moderate Effects	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.

Significant Effects	An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.
Very Significant	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment.
Profound Effects	An effect which obliterates sensitive characteristics.

For the purpose of this assessment, likely significant effects on material assets are considered to be those effects that are categorised as significant, very significant or profound.

16.2.3 Categorisation of the Baseline Environment

In order to determine the existing utilities and services within the Proposed Development site, a desk study and site visits were undertaken to provide the data to compile the description of the existing material assets. These survey findings reconciled with the relevant utility records at the time.

In 2022 the design team obtained the following utility records:

- Eir – maps downloaded 31st August 2022
- ESB Networks – 5th September 2022
- Gas Networks Ireland – maps downloaded 31st August 2022

No consultation with utility providers, with the exception of Uisce Éireann, was undertaken as it was not deemed necessary. Due to the nature of the project, wastewater sewers and infrastructure are located within the Proposed Development site. This infrastructure is recorded on previous as-constructed drawings. A potable water supply is also connected to the site. Figure 16-1 shows the utility records obtained for the assessment.



Figure 16-1: Utilities in vicinity of Proposed Development

16.2.4 Impact Assessment Methodology

A desk study has been carried out to identify the existing material assets associated within the site and determine the likely significant effects of the construction and operation of the Proposed Development on those material assets.

Having regard to **Sections 4 and 5**, the likely significant effects of the Proposed Development on existing material assets have been assessed in the context of the significance criteria set out in Table 16.1.

16.3 Baseline Conditions

16.3.1 Land-use and Property

The existing land use is described in detail in **Section 2**. The Proposed Development is located on land adjacent to the University of Limerick campus. The site is bounded by the Lower River Shannon to the north. The development site is connected to the public road network via an access road owned by Limerick City and County Council.

16.3.2 Electricity

ESB maintains both underground and overhead power lines within and around the site. ESB's infrastructure of relevance to the Proposed Development includes the following:

Underground ESB LV/MV cables running along the south west boundary of the site crossing beneath the access road into the site.

Overground ESB HV cables running to the west of the Limerick City and County Council access road to the development site. These cables cross the Lower River Shannon between Castletroy WWTP and the University of Limerick Boat House.

16.3.3 Telecommunications

There are telecommunications cable of relevance to the Proposed Development at the following locations within and around the site:

- Telecommunication cables running along Plassey Park Road.
- Telecommunication cables running through the University of Limerick campus.
- Telecommunication cables running to the University of Limerick Boat House and Proposed Development site.

16.3.4 Gas

There are gas mains of relevance to the Proposed Development at the following locations near the site:

- A 180mm diameter medium pressure gas main which runs through the University of Limerick campus from Plassey Park Road to Clonard Road.
- A 180mm diameter low pressure gas main which runs internally through the University of Limerick campus.

16.3.5 Water Supply Infrastructure

There is water supply infrastructure of relevance to the Proposed Development at the following locations within and around the site:

- A 100mm diameter HDPE distribution main located along the Limerick City and Council access road to the site and connects into the Castletroy WWTP plant.
- A 100mm diameter uPVC pipe branch which runs to the University of Limerick Boat House.

- Distribution pipework ranging from 100mm to 250mm in diameter located throughout the University of Limerick campus.

16.3.6 Sewer Network and Drainage Infrastructure

There is existing sewer infrastructure within the site, as well as sewer and drainage infrastructure located within the University of Campus and surrounding land. Wastewater infrastructure of relevance to the Proposed Development is identified as follows:

- A 1,100mm diameter sewer connecting into the inlet pumping station which conveys flows from the collection network to Castletroy WWTP. Two sewers connect into the 1,100mm diameter pipe upstream of the inlet pumping station. The 'west' sewer travels from Groody Roundabout and along the west of the Limerick City and County Council access road before entering the site. The 'east' sewer travels through the University of Limerick campus to the IDA Business Park on McLaughlan Road.
- An internal sewer and drainage network within the university of Limerick campus.
- Internal wastewater pipework interconnecting treatment processes within the Castletroy WWTP site.

16.4 Likely Significant Effects

16.4.1 Do-nothing Scenario

In the scenario where the Proposed Development does not proceed as planned, the existing land and material assets in the study area will remain as currently identified in the desk study, site visits and site-specific investigations.

The existing wastewater treatment plant will continue to operate in its current state. The plant will however be unable to cater for the projected agglomeration growth and loadings. Refer to **Section 1.2 and Section 3.3** for more information.

16.4.2 Assessment of Effects During Construction

Land-use and Property

Construction of the Proposed Development will be undertaken within the existing wastewater treatment plant boundary. No additional land will be permanently or temporarily acquired to facilitate the upgrade works.

No permanent wayleaves and/or right of ways will be required for the Proposed Development. Temporary access for construction traffic will be required through the University of Limerick campus.

There will be no negative and long-term effect on the land to be developed within the existing site boundary. The land can only be developed for the purpose of the wastewater treatment plant.

There will be a slight, negative and short-term effect on the University of Limerick campus due to limited construction traffic using the road network over the duration of the construction period.

Electricity

The works will not interact with electricity infrastructure. Should the event of unplanned or prolonged disturbance occur, a negative, temporary effect is predicted. The contractor will be obliged to put measures in place to ensure that there are no interruptions to existing utilities and services unless this has been agreed in advance with the relevant service provider.

Telecommunications

The works will not interact with telecommunications infrastructure. Should the event of unplanned or prolonged disturbance occur, a negative, temporary effect is predicted. The contractor will be obliged to put measures in place to ensure that there are no interruptions to existing utilities and services unless this has been agreed in advance with the relevant service provider.

Gas

The works will not interact with gas infrastructure. Should the event of unplanned or prolonged disturbance occur, a negative, temporary effect is predicted. The contractor will be obliged to put measures in place to ensure that there are no interruptions to existing utilities and services unless this has been agreed in advance with the relevant service provider.

Water Supply Infrastructure

The works will not interact with potable water infrastructure. Should the event of unplanned or prolonged disturbance occur, a negative, temporary effect is predicted. However, the contractor will be required to consult with Uisce Éireann in advance of any works and it is anticipated that the service provider will arrange the diversion and consult with the relevant affected premises as required. The contractor will be obliged to

put measures in place to ensure that there are no interruptions to existing utilities and services unless this has been agreed in advance with the relevant service provider.

Sewer Network and Drainage Infrastructure

Proposed wastewater and drainage infrastructure will be constructed offline and will not impact on the existing plant process until such time the connections are to be made. At this stage, the contractor will have a methodology agreed with Uisce Éireann for temporary operational shutdowns to facilitate the new connections. The likely effect of the Proposed Development on the wastewater process will be long-term and positive.

Cumulative

As outlined in **Section 2**, relevant developments have been considered in relation to cumulative effects.

Given the nature and scale of the developments identified, no cumulative effects on material assets is predicted to occur if any one, or all of these developments occur concurrent to the construction of the Proposed Development.

16.4.3 Assessment of Effects during Operation

Land-Use and Property

No land acquisition, permanent wayleaves and right of ways will be required for the Proposed Development. While temporary access for construction traffic will be required through the University of Limerick campus, no such access will be required during the operation of the Proposed Development.

The Limerick City and County Council access road is currently used for plant traffic, and no change will be required following construction of the Proposed Development. The likely effect of the Proposed Development on land-use will be long-term and neutral.

Electricity

There will be no effect on existing underground ESB or GE cables during the operation of the Proposed Development. The Proposed Development will be connected to the existing ESB distribution network. The maximum demand estimated for the WwTP is currently estimated at 1,000kVA.

The Proposed Development will therefore increase demand on the electricity network in Castletroy. It is expected that the network has capacity to accommodate the Proposed Development. Some demand will be

offset through the provision of the PV installation on the primary treatment building, however, this will be minor relative to the overall power requirements.

Therefore, the likely effect of the Proposed Development on the existing electricity network is considered to be permanent, but not significant.

Telecommunications

The Proposed Development will utilise an existing telecommunications connection to facilitate operational activities at the WwTP site.

The likely effect of the Proposed Development on the existing telecommunications network is therefore considered to be neutral.

Water Supply Infrastructure

An existing potable water supply into the site currently supplies parts of the development including the administration building and sludge dewatering building. A ground water source is also utilised to provide wash water to a number of treatment processes.

Increased wash water will be required for the Proposed Development and will largely utilise ground water abstracted via the existing borehole. A storage tank is proposed to allow borehole water meet peak wash water demands during operation of the plant.

Potable water will be required to feed new safety showers installed at various locations. Wash-down hose reels and process equipment will utilise the borehole supply.

The Proposed Development will increase demand on the water supply network in Castletroy, however it is expected that the network has capacity to accommodate the Proposed Development. Therefore, the likely effect of the Proposed Development on the existing water supply network is considered to be not significant.

Sewer Network and Drainage Infrastructure

Drainage infrastructure will be provided for all buildings on the WwTP site. This will include for the provision for drainage from all equipment. Rainwater collection from the roofs of the various structures will be discharged directly to drain.

Therefore, the likely effect of the Proposed Development on the existing drainage infrastructure is considered to be permanent, but not significant.

The nature of the Proposed Development will provide a robust wastewater treatment plant for the agglomeration that is capable of accommodating population growth and will reduce in as far as reasonable possible, the annual spills of untreated effluent into the Lower River Shannon.

Therefore, there will be a significant, positive long-term and permanent effect on the wastewater network during the operation of the Proposed Development.

Cumulative

There are no cumulative effects identified during the operation of the Proposed Development.

16.5 Mitigation Measures and Monitoring

16.5.1 Mitigation

Mitigation During Construction

Wherever possible, mitigation by avoidance of negative effects on property was a priority during the design of the Proposed Development. Liaison with the University of Limerick and Limerick City and County Council will be undertaken to minimise disruption on the road network.

The contractor will be obliged to put measures in place to ensure that there are no interruptions to existing utilities and services unless this has been agreed in advance with the relevant service provider. All proposed works will be located within the existing Castletroy WwTP site boundary and should not impact services outside of the site.

Any shutdowns required to connect into existing water and wastewater infrastructure will be agreed in advance with Uisce Éireann and the Local Authority. This will minimise the disruption to the operation of the existing plant and network.

Surface water management measures will be adopted along the entire site. The contractor will be required to prepare and maintain a detailed CEMP during the construction phase of the Proposed Development. The appointed contractor will be required to comply with the Outline CEMP. Effective implementation of the CEMP will ensure that disruption and nuisance are kept to a minimum throughout the construction of the Proposed Development. The detailed CEMP will be required to have regard to the guidance and industry best practice. The CEMPs will be effective throughout construction and the contractor will be required to review and update the CEMP as construction progresses.

In addition to the CEMP, it is anticipated that the contractor will prepare relevant management plans and Works Method Statements in advance of any works commencing on site. Every effort will be made to ensure that any significant effects on material assets will be avoided, prevented or reduced during the construction of the Proposed Development.

Mitigation During Operation

No mitigation measures will be required during Operation. Works within the plant will be carried out in accordance with Uisce Éireann or Contractor Standard Operating Procedures to ensure the safe undertaking of tasks. The plant will be designed robustly with fail safes to ensure no disruption to the wastewater collection network outside of the site.

16.5.2 Monitoring

Monitoring During Construction

Construction phase mitigation measures have been proposed to ensure that significant negative effects on material assets will be avoided, prevented or reduced during the construction of the Proposed Development. As such, no monitoring measures are proposed during the construction phase.

Monitoring During Operation

As no significant, negative operational effects of the Proposed Development on material assets are identified, no operational monitoring measures have been proposed.

16.6 Residual Effects

16.6.1 Residual Effects during Construction

No permanent or temporary land acquisition will be required for the Proposed Development. No wayleaves or right of ways will be required for infrastructure outside of the site boundary.

Following implementation of mitigation measures outlined previously, it is anticipated that the residual effects of the Proposed Development on electricity, telecommunications, gas, water supply, sewer network and drainage infrastructure during construction is not considered to be significant.

16.6.2 Residual Effects during Operation

The development on green space areas within the development site is a slight negative, however the provision of vital infrastructure for the Castletroy area is considered to be a significant positive long-term residual effect.

Following implementation of mitigation measures outlined previously, it is anticipated that the residual effects of the Proposed Development on electricity, telecommunications, gas, water supply, sewer network and drainage infrastructure during operation are not considered to be significant.

The Proposed Development will result in a permanent, positive residual effect on the wastewater network by providing a robust and reliable wastewater treatment plant that is capable of accommodating anticipated population growth in the Castletroy area.

16.7 References

CIRIA (2015) Environmental Good Practice on Site Guide, 4th Edition

EPA (2017) Guidelines on Information to be contained in Environmental Impact Statements

EPA (2015a) Revised Guidelines on the information to be contained in Environmental Impact Statements Draft

EPA (2015b) Advice Notes for Preparing Environmental Impact Statements Draft.

EPA (2003) Advice Notes on Current Practice in the preparation of Environmental Impact Statements