



Chapter 18

Material Assets

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18. Material Assets

18.1 Introduction

This chapter describes the material assets in the form of land use and utilities that could potentially be affected by the Proposed Development. Material assets in the form of resources are addressed in **Chapter 15, Resources and Waste**.

A detailed description of the Proposed Development including design, operation and decommissioning is provided in **Chapter 4, Description of the Proposed Development**. The construction methodology is described in **Chapter 5, Construction Strategy**.

18.2 Assessment Methodology

18.2.1 General

Material assets are defined in the Guidelines on the information to be contained in Environmental Impact Assessment reports (EIAR) (EPA, 2022) (hereafter referred to as the EPA guidelines) as *'built services and infrastructure'*.

Using the EPA guidelines and taking account of aspects which are covered separately in this EIAR, the material assets considered herein address built services and infrastructure (including electricity, gas, telecommunications, water supply infrastructure and foul and surface water drainage) and land use.

The purpose of this assessment is therefore to consider the potential significant impacts of the Proposed Development on material assets under the following headings:

- Electricity;
- Gas;
- Telecommunications;
- Foul and surface water drainage;
- Water supply infrastructure; and
- Land use.

The use of natural resources in the context of other environmental factors such as soil (**Chapter 17, Land, Soils, Geology and Hydrogeology**) and biodiversity (**Chapter 9, Biodiversity**) are addressed elsewhere in this EIAR. There are no quarries or mineral resources on, or adjacent to the site – refer to **Chapter 17, Land, Soils, Geology and Hydrogeology**. The impacts of the Proposed Development on land in the context of *'landscape and visual'* are addressed in **Chapter 8, Landscape and Visual**.

The potential impacts on water quality and the hydrological environment and the potential for flooding is discussed in **Chapter 16, Water**.

The EPA guidelines state the following issues should be noted in particular in the consideration of land use:

- Hotels and holiday accommodation;
- Tourism and recreational facilities and amenities;
- Economic activities such as visitor attractions based on cultural / historic or natural assets; and
- Other premises which although located elsewhere, may be the subject of secondary effects such as alteration of traffic flows or increased urban development, should also be considered.

18.2.2 Study area

The study area for this assessment is the Proposed Development site in its entirety and the area immediately adjacent. A detailed description of the existing environment of the study area is given in **Chapter 4, Description of the Proposed Development**.

18.2.3 Impact assessment methodology

The significance criteria used to categorise significant effects on material assets are set out in **Table 18.1** and have been developed based on the description of significant effects as outlined in the EPA guidance.

Table 18.1: 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

18.3 Baseline Environment

There are a range of different utilities and localised land uses within or adjacent to the boundary of the Proposed Development. The footprint of the Proposed Development is situated on both a greenfield site and a brownfield site. Some diversions and relocation of existing services will be required to facilitate the Proposed Development.

Refer to **Chapter 4, Description of the Proposed Development** for a detailed description of the Proposed Development.

The Cork County Development Plan 2022 – 2028 (CCC, 2022) indicates that the area in which the Proposed Development is located is zoned as ZU 18-15 Business and General Employment Areas. The objective of this land zone is: “*to facilitate opportunities for a wide range of compatible business and general employment uses.*”

18.3.1 Utilities

Figure 4.3 in **Volume 3** of this EIAR illustrates the various utilities within and around the Proposed Development site. These are described further below.

18.3.1.1 Electricity

ESB Networks maintains underground and overhead power lines within and around the Proposed Development site. ESB Network’s infrastructure in the immediate vicinity of the Proposed Development that is of relevance includes the following:

- Medium voltage (MV) (10kV) overhead line traversing the northern amenity park area in a north / south direction; and
- MV (10kV) underground line in the Eastgate Business Park, to the west of the Radisson Blu Hotel.

18.3.1.2 Gas

Gas Networks Ireland maintains pipelines in the immediate vicinity of the Proposed Development site. The following Gas Networks Ireland infrastructure is located nearby:

- 600mm 19 bar transmission pipeline traversing the northern amenity park area (west of the Proposed Development boundary) in a north / south direction under the N25 road to the Eastgate Business Park; and
- 180mm 4 bar Polyethylene (PE) distribution pipeline traversing the N25 road in a north / south direction between the Little Island train station and the Eastgate Business Park.

18.3.1.3 Telecommunications

BT Ireland maintain infrastructure within and around the Proposed Development site. Infrastructure of relevance includes a cable duct running from the Little Island train station, along the off ramp to Little Island and across the existing bridge into Eastgate Business Park.

Aurora Telecom maintain a duct running parallel to the railway line, between the railway line and the N25 road.

E-Net maintain a duct that runs through the median of the N25 road and travels into the Eastgate Business Park.

Eir maintain ducts that cross under the N25 road between the Little Island train station and the Eastgate Business Park.

18.3.1.4 Surface water and foul water

The Kilcoolishal Stream drains the wetland area that encroaches the Proposed Development site to the north of the N25 before discharging to Cork Harbour. The stream is completely culverted south of the N25 within the Eastgate Business Park car park.

The existing drainage system at the Proposed Development site is serviced by Uisce Eireann surface water and sewer drainage networks. Flows are typically collected in standard gullies and routed via a culvert system to its outfall at Cork Harbour. There are no SuDS / attenuation features within the existing drainage system.

Refer to **Chapter 16, Water** for further details on surface water and foul water.

18.3.1.5 Water supply

Uisce Eireann maintain infrastructure within and around the Proposed Development site. Uisce Eireann's infrastructure in the immediate vicinity of the Proposed Development that is of relevance includes the following:

- Gravity foul main pipeline traversing through the northern amenity park area, under the N25 road to a pumping station within the Eastgate Business Park; and
- 750mm diameter ductile iron water main running north / south under the proposed north embankment ramp; and
- 700mm diameter asbestos water main pipeline running east / west across the northern amenity park area and subsequently under the N25 road to the Eastgate Business Park.

18.3.2 Land use

The Proposed Development site is bounded by the L3004 Glounthaune Road to the north, with an amenity park area located in the northern part of the site. This amenity area slopes from north to south along the southern Irish Rail boundary. The Dunkettle to Carrigtwohill pedestrian and cycle route also travels in a west to east direction to the north of the site. The site is bounded by the Eastgate Business Park to the south.

The Proposed Development is located in an urban setting, approximately 10km to the east of Cork City. The footprint of the Proposed Development is situated on both a greenfield site and a brownfield site. The

Proposed Development footprint area is categorised as ‘Artificial Surfaces’ for urban fabric and ‘Artificial Surfaces’ for industrial, commercial and transport units, according to the EPA’s Corine land cover viewer (EPA, 2023). The Proposed Development is also surrounded by other land use zonings, such as zoned ‘Agricultural areas’ including pastures and arable land to the north of the Proposed Development site.

The Proposed Development will cross the following areas from north to south:

- Northern amenity park area;
- Cork City to Middleton / Cobh Irish Rail line;
- N25 national road dual carriageway;
- Wooded area, south of the N25; and
- Radisson Blu Hotel and Eastgate Business Park car parks.

Refer to **Image 18.1** for a map illustrating the neighbouring land uses.

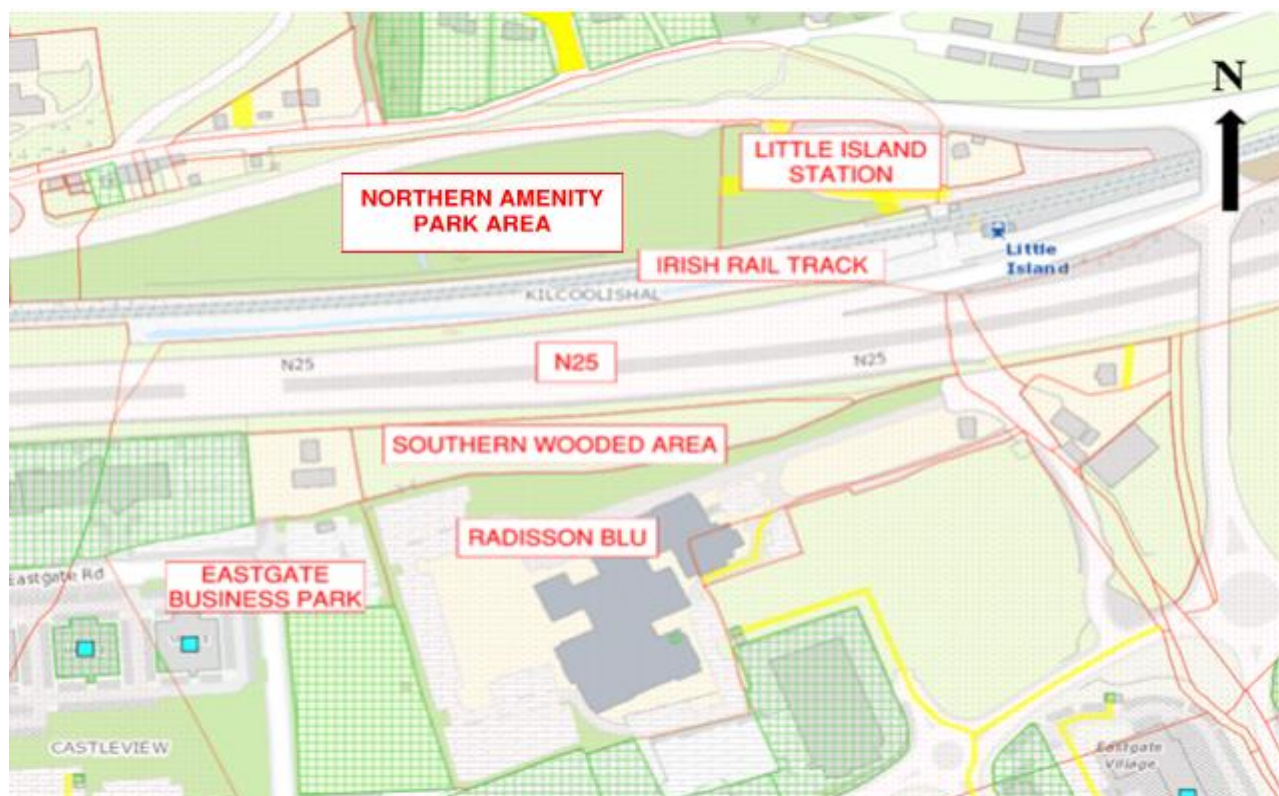


Image 18.1: Neighbouring land uses. Not to scale.

18.4 Potential Impacts

18.4.1 Do-Nothing Scenario

In the 'Do -Nothing' scenario, where the Proposed Development does not proceed as planned, none of the impacts as set out in this chapter would occur. Under the 'Do-Nothing' scenario, the baseline as presented in Section 18.3 would persist and no significant impacts would arise.

18.4.2 Construction Phase

18.4.2.1 Utilities

18.4.2.1.1 Electricity

Subject to discussions with ESB Networks, it is proposed that the existing MV overhead lines traversing through the northern amenity park area in a north / south direction be slightly re-routed by moving a single electricity pole and moving connecting overhead lines. This will allow for bridge assembly and erection to take place from the bridge assembly area with suitable protection measures in place. Refer to **Image 18.2**.

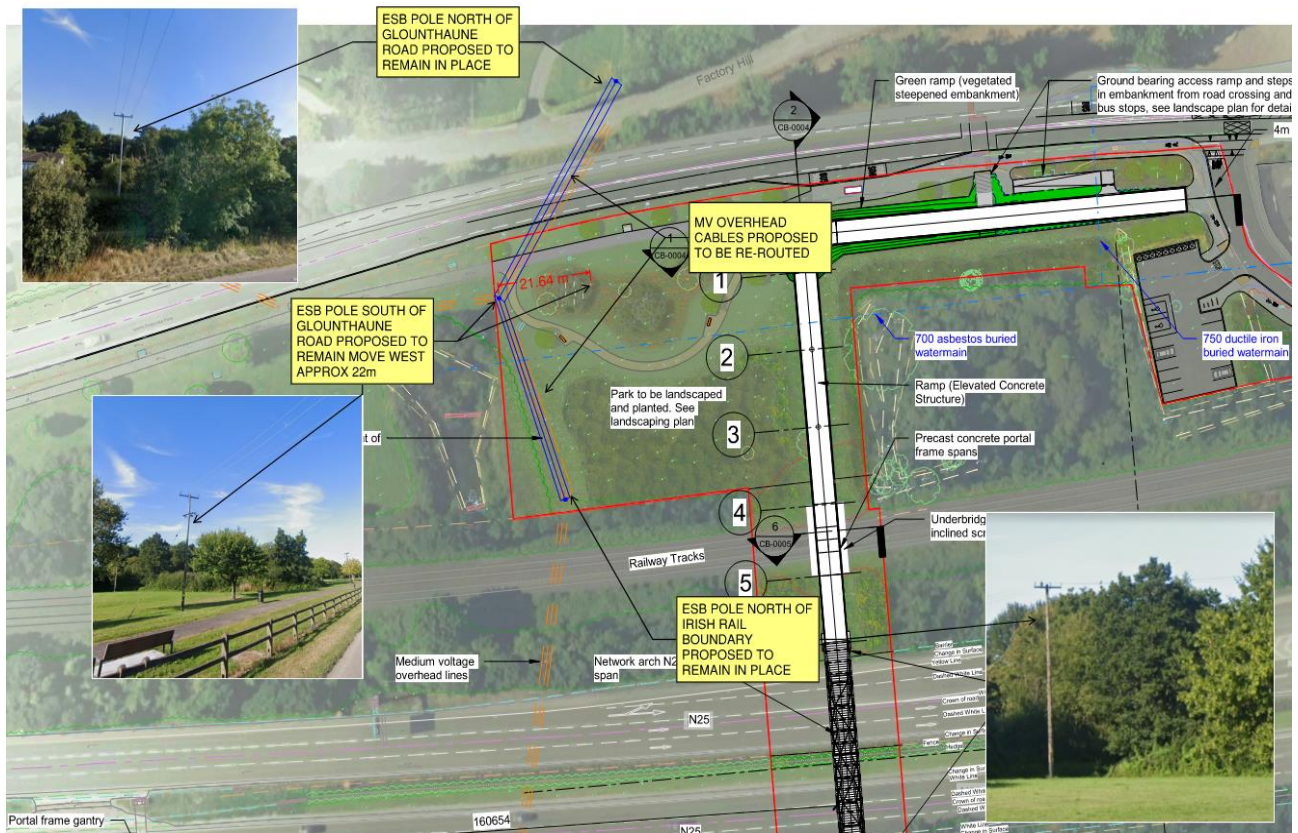


Image 18.2: Proposed re-routing of ESM MV overhead lines

During the Construction Phase of the Proposed Development, mains power will be used where possible, with temporary generators used in cases where mains power is not available. Lighting of the working areas will typically be provided by tower mounted 1000W metal halide floodlights that will be cowled and angled downwards to minimise spillage to surrounding properties. Lighting will be powered off during night-time hours to minimise the additional light spillage onto surrounding properties. There is sufficient capacity available to accommodate the likely increase in demand on power supply during the Construction Phase.

It is predicted that there will be an imperceptible, temporary, negative impact on electricity supply associated with the construction of the Proposed Development.

18.4.2.1.2 Gas

There will be no impact on gas services and no gas connections are required during the Construction Phase of the Proposed Development.

18.4.2.1.3 Telecommunications

There will be no impact on telecommunication infrastructure and no telecommunication connections are required during the Construction Phase of the Proposed Development.

18.4.2.1.4 Surface water and foul water

Foul water will be contained, managed and appropriately disposed of by the construction contractor using temporary tanks. Temporary site drainage will be provided to collect surface water runoff, which will be directed into the existing drainage network.

No significant negative impacts on surface water or foul water are predicted during the Construction Phase of the Proposed Development.

18.4.2.1.5 Water supply

Subject to discussions with Uisce Eireann, it is proposed that the 700mm asbestos water main pipeline remains in place with suitable protection measures and easements implemented to allow piling works and bridge assembly / protection works to take place. Refer to **Image 18.33**.

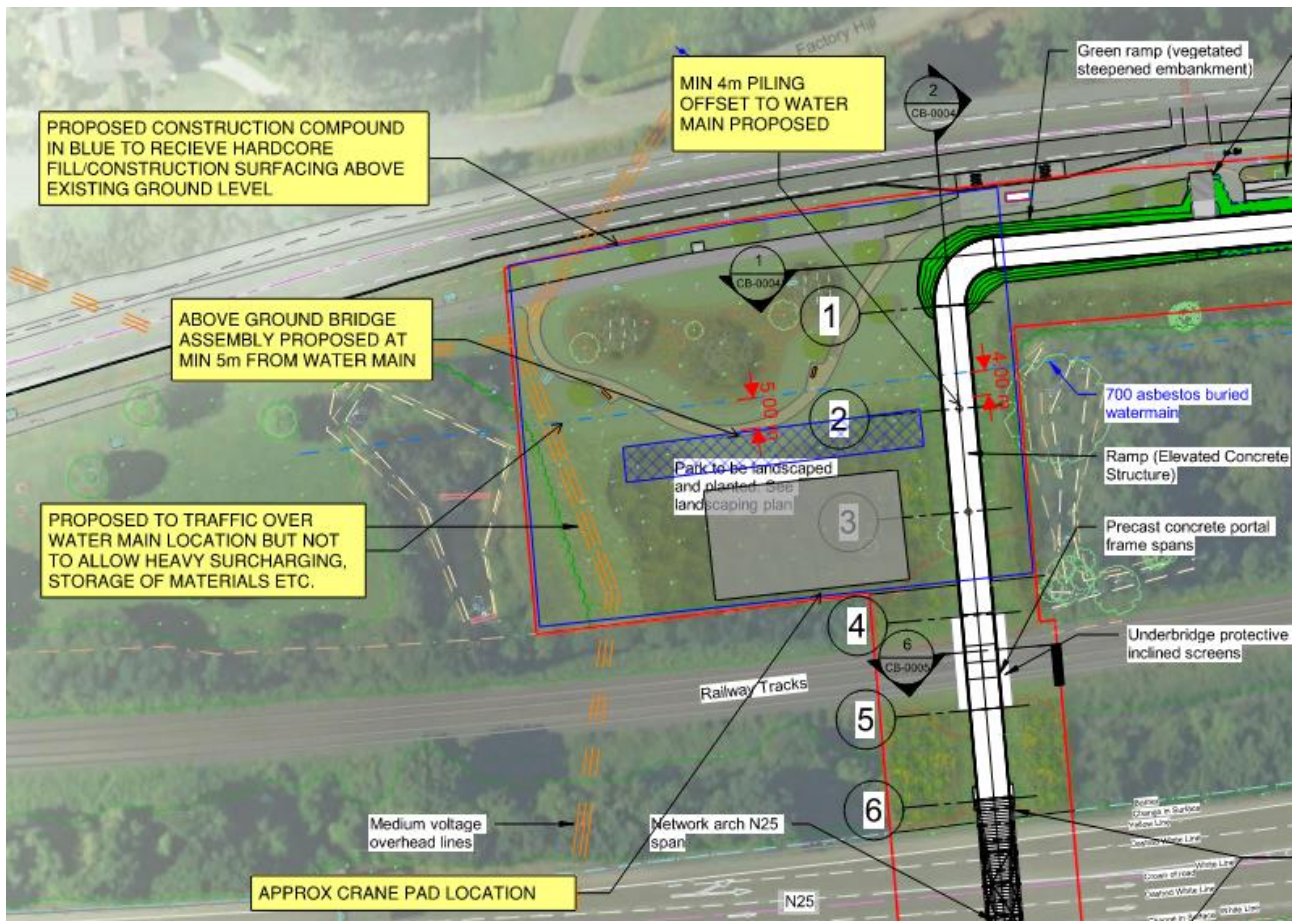


Image 18.3: Proposed easement to underground water main running through bridge assembly area

Where the 750mm water main pipeline passes under the north embankment ramp of the proposed bridge, it is proposed that it will be protected using an in-situ concrete structure. Refer to **Image 18.44**.

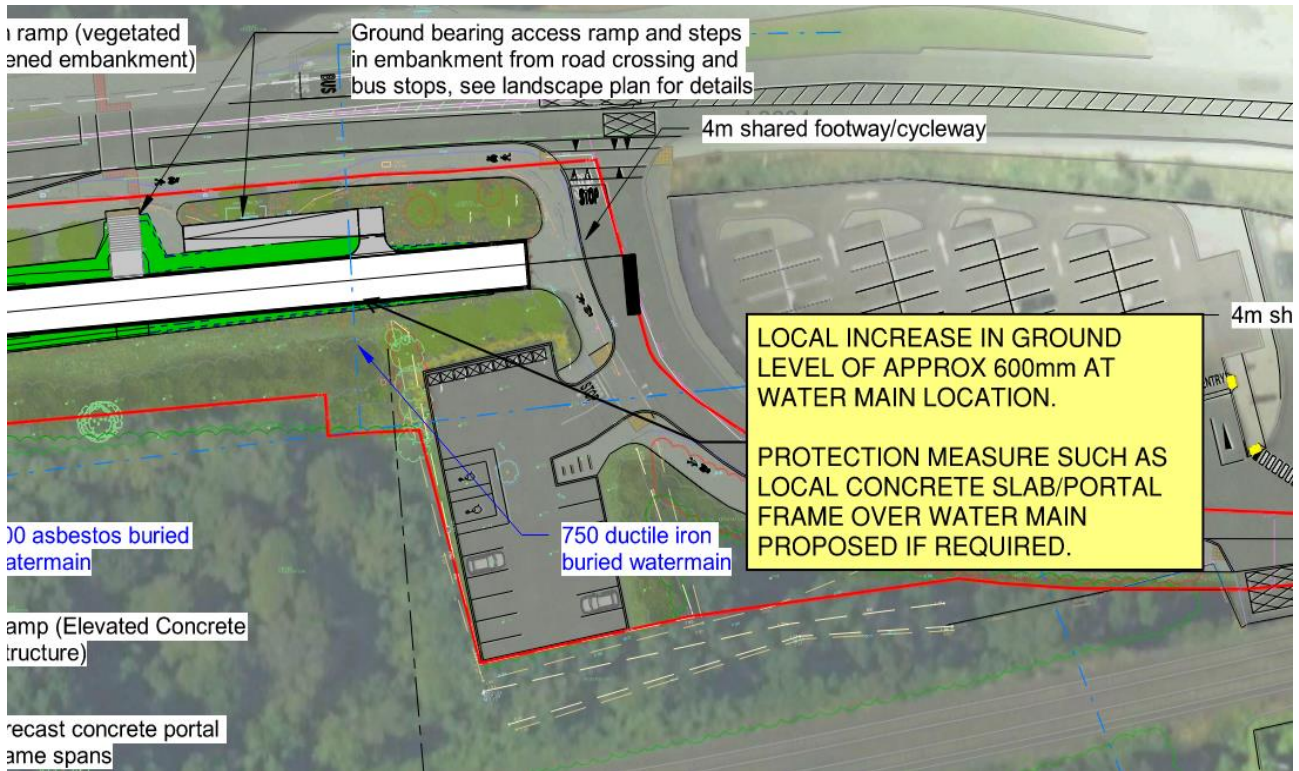


Image 18.4: Proposed protection measure to water main under north embankment

As a result of the protection and easement measures to be implemented above, no significant impacts on water supply are predicted as a result of the construction of the Proposed Development.

18.4.2.2 Land use

The construction of the Proposed Development will require both temporary and permanent land take. **Figure 4.5** in **Volume 3** of this EIAR illustrates the areas required for temporary and permanent land take. Further details are provided below.

Temporary land take will be required during the Construction Phase to accommodate two construction compounds; one compound adjacent to the Little Island train station car park and one compound in the Radisson Blu Hotel car park area to the south of the N25. A designated area for the bridge assembly will also be required in the northern amenity park area. Refer to **Image 18.55**.

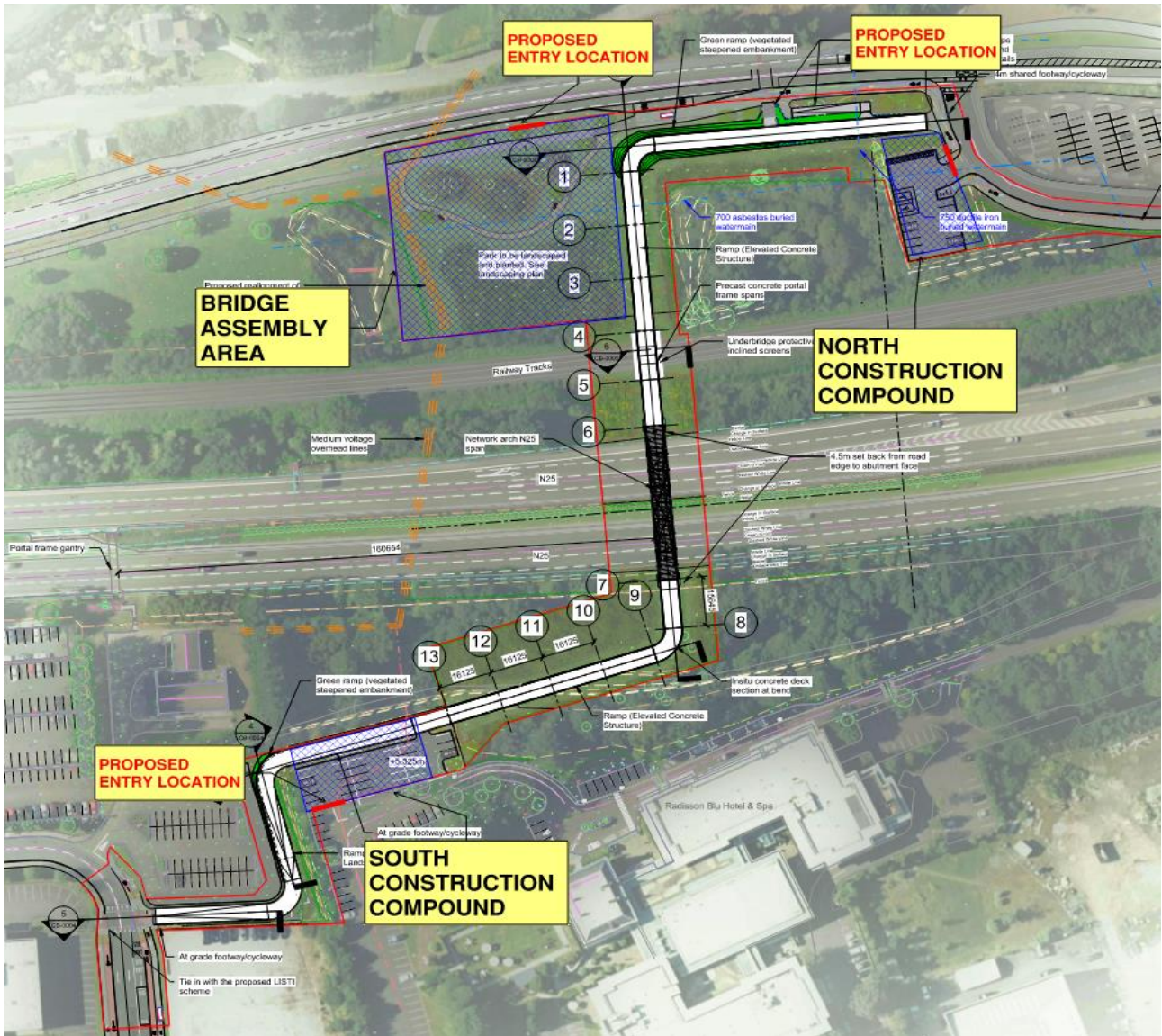


Image 18.5: Proposed construction compounds and bridge assembly area

Permanent land take will be required in the following areas for the construction of bridge abutments / piers and embankments:

- Little Island train station area;
- Northern amenity park area;
- Irish Rail tracks and adjacent land;
- Land adjacent to the N25 (north and south);
- Southern woodland area;
- Radisson Blu Hotel car park; and
- Eastgate Business Park car park.

The current categorisation of the Proposed Development footprint area as ‘*Artificial Surfaces*’ as per the EPA’s Corine land cover viewer (EPA, 2023) will remain unchanged as a result of the construction of the Proposed Development. However, the land use within some areas of the Proposed Development footprint will change to use as a construction site. As a result of this change in land use, a temporary, slight, negative impact on land use is predicted during the Construction Phase.

18.4.3 Operational Phase

18.4.3.1 Utilities

18.4.3.1.1 Electricity

Lighting of the proposed structure will be integrated into the parapets with additional architectural lighting also installed for the main N25 span arch. There will be sufficient electricity capacity for the operation of the Proposed Development, and no negative impacts on electricity supply or infrastructure are predicted.

18.4.3.1.2 Gas

No new gas connections are required for the operation the Proposed Development. No significant impacts on gas supply or infrastructure are predicted as a result of the operation of the Proposed Development.

18.4.3.1.3 Telecommunications

No new telecommunication connections are required for the operation of the Proposed Development. No significant impacts on telecommunication infrastructure are predicted as a result of the operation of the Proposed Development.

18.4.3.1.4 Surface water and foul water

Surface water runoff from the Proposed Development during the Operational Phase will be directed into the existing drainage network. Refer to **Chapter 16, Water** for further details of proposed Operational Phase surface water management, mitigation and controls.

No foul water will be generated as a result of the operation of the Proposed Development.

No significant impacts on surface water or foul water are predicted as a result of the operation of the Proposed Development.

18.4.3.1.5 Water supply

No water supply or water pipeline connections are required for the operation of the Proposed Development. No significant impacts on water supply are predicted as a result of the operation of the Proposed Development.

18.4.3.2 Land use

The Proposed Development will result in the loss of some trees and areas of vegetation. However, a robust landscape plan, including areas of new tree planting, will be implemented which incorporates natural features into the design of the Proposed Development. Refer to **Chapter 8, Landscape and Visual** for further details. A long-term, slight, positive impact is predicted.

18.4.4 Decommissioning Phase

As outlined in **Chapter 4, Description of the Proposed Development**, the design life of the proposed new pedestrian and cyclist bridge is 120 years. During the potential future decommissioning works, the main bridge span and approach spans will be decommissioned by cutting the concrete decking and steel spans into a number of large sections. This will be done either *in situ* or at ground level, with the decking and spans being lifted out by a mobile crane and moveable gantry.

No significant impacts on utilities are predicted as a result of the decommissioning of the Proposed Development.

Temporary land take will be required to accommodate the removal of the proposed bridge during the Decommissioning Phase. As a result, a temporary, slight, negative impact on land use is predicted during the Decommissioning Phase.

18.5 Mitigation and Monitoring

18.5.1 Mitigation

18.5.1.1 Construction Phase

Impacts during the Construction Phase will be temporary in nature and last only for the duration of the construction works.

The contractor will be obliged to put measures in place to ensure that there are no interruptions to existing services and that all services and utilities are maintained, unless this has been agreed in advance with the relevant service provider and local authority. Where connections are required, the contractor will apply to the relevant utility company for a connection permit and adhere to their requirements.

All works near existing services and utilities will be carried out with ongoing consultation with the relevant utility company or local authority and will follow any requirements or guidelines they may have.

Strict controls will be maintained and implemented at all working areas to prevent Construction Phase impacts on the existing surface water and groundwater. Refer to **Chapter 16, Water** and **Appendix 5.1, CEMP** in **Volume 4** of this EIAR for further details on the proposed Construction Phase surface water management, mitigation and controls. The measures to be implemented will prevent any silt-laden run-off, including that from temporary stockpiles, entering nearby watercourses. Silt traps and interceptor ditches will be constructed in advance of main earthworks to collect, treat and discharge all surface water run off during construction. Collection systems will be used to prevent any contaminants from entering surface water drains, watercourses or groundwater, or draining onto the land.

18.5.1.2 Operational Phase

As the Proposed Development will result in no significant impacts on material assets during the Operational Phase, no mitigation measures are required.

18.5.1.3 Decommissioning Phase

As the Proposed Development will result in no significant impacts on material assets during the Decommissioning Phase, no mitigation measures are required.

18.5.2 Monitoring

18.5.2.1 Construction Phase

Construction Phase mitigation measures have been proposed to ensure that significant negative impacts on material assets will be avoided, prevented or reduced during the construction of the Proposed Development.

Service providers will be consulted throughout the design and construction process. Requirements for each service will be agreed with the respective provider and a representative of the service provider will be present on site as necessary during the works for monitoring purposes.

18.5.2.2 Operational Phase

As the Proposed Development will result in no significant impacts on material assets during the Operational Phase, no monitoring measures are required.

18.5.2.3 Decommissioning Phase

As the Proposed Development will result in no significant impacts on material assets during the Decommissioning Phase, no monitoring measures are required.

18.6 Cumulative Impacts

A review of Cork County Council (CCC), An Bord Pleanála (ABP) and Department of Housing, Local Government and Heritage (DHLGH) online planning records has indicated that other projects have been permitted or proposed within the surrounding area that may give rise to cumulative impacts in combination

with the impacts of the Proposed Development. The list of projects is included in **Chapter 20, *Cumulative and Interactive Impacts***.

There is predicted to be no cumulative effects on material assets associated with the Construction, Operation or Decommissioning of the Proposed Development in combination with the projects listed in **Chapter 20, *Cumulative and Interactive Impacts***.

18.7 Residual Impacts

No significant negative residual impacts on material assets are predicted as a result of the Proposed Development.

18.8 References

Cork County Council (CCC) (2022). Cork County Development Plan 2022 – 2028.

EPA (2022). Guidelines on the information to be contained in Environmental Impact Assessment Reports.

EPA (2023). EPA Maps – Corine Land Cover 2018.