

10.0 BIODIVERSITY

10.1 Introduction

10.1.1 Assessment Brief

The aim of this chapter is to identify, quantify and evaluate the impacts of the proposed development on ecosystems and their components, including designated sites, habitats, flora and fauna. It has been prepared in accordance with the *Guidelines for Ecological Impact Assessment in the UK and Ireland* (2018), which are the primary resources used by members of the Chartered Institute of Ecology and Environmental Management (CIEEM). It has also been prepared having regard to the EPA *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports* (2022).

The purpose of this document is to:

- Provide an objective and transparent assessment of the potential ecological impacts of the proposed development for all interested parties, including planning authorities and the general public;
- Facilitate objective and transparent determination of the consequences of the development in terms of national, regional and local policies relevant to ecology; and
- Propose the steps that will be taken to adhere to legal requirements relating to designated sites and legally protected species (CIEEM 2018).

Although the above guidelines provide a framework for Ecological Impact Assessment (EIA), some processes rely on the professional judgement of an ecologist, e.g. survey design, valuation of ecological features and characterisation of impacts. An outline of the author's experience, training and accreditation is provided in the following section, which support his competency to make such judgements.

10.1.2 Statement of Authority

All surveying and reporting was carried out by Nick Marchant, the principal ecologist of NM Ecology Ltd. He has eighteen years of professional experience, including fifteen years as an ecological consultant, one year as a local authority biodiversity officer, and two years managing an NGO overseas. He provides ecological assessments for developments throughout Ireland and Northern Ireland, including wind farms, water infrastructure, and a range of residential and commercial developments.

He has an MSc in Ecosystem Conservation and Landscape Management from NUI Galway and a BSc in Environmental Science from Queens University Belfast. He is a member of the Chartered Institute of Ecology and Environmental Management and operates in accordance with their code of professional conduct.

10.2 Methods

10.2.1 Scoping

The assessment involved the following steps:

- Identification of designated sites within or connected to the site;
- A walkover survey incorporating the following elements:
 - Classification and mapping of habitats
 - A search for rare / protected flora and invasive non-native plant species (e.g. Japanese Knotweed)
 - A search for field signs of rare / protected fauna (e.g. badgers), and habitat suitability assessments for species that are shy, nocturnal or seasonal
- Valuation of ecological features, review of legal considerations, and identification of important ecological features;
- Assessment of impacts on important ecological features, development of appropriate mitigation strategies, and review of residual impacts.

10.2.2 Data Collection and Walkover Survey

A desk-based scoping study was carried out using data from the following sources:

- Plans and specifications for the proposed development
- Maps and details of designated sites from www.npws.ie
- Bedrock, soil, subsoil, ground water and surface water maps from the Geological Survey of Ireland webmapping service (www.gsi.ie/mapping.htm), and the Environmental Protection Agency web viewer (<http://gis.epa.ie/EPAMaps/>)
- The *Cork County Development Plan 2022 - 2028*, and details of permitted or proposed developments from the local authority's online planning records

The following resources were used for the walkover surveys:

- Habitat surveys were carried out in accordance with the *Best Practice Guidance for Habitat Survey and Mapping* (Smith et al 2011), and using the classification system of *A Guide to the Habitats of Ireland* (Fossitt 2000)
- Flora were identified using *Webb's An Irish Flora* (8th edition, Parnell & Curtis 2012), *Grasses, Sedges Rushes and Ferns of the British Isles and northwestern Europe* (Rose 1989) and *The Vegetation Key to the British Flora* (Poland & Clement 2009). Nomenclature follows the plant crib of the Botanical Society of the British Isles (BSBI 2007). The abundance and extent of species is described using the DAFOR scale (Dominant, Abundant, Frequent, Occasional, Rare)
- Fauna surveys followed the methods outlined in the *Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes* (NRA 2006), with reference to other species-specific methods as appropriate.

Desktop data from internet resources was accessed in October and November 2025. A site inspection was carried out on 12 May 2025, which involved surveys of habitats, flora, invasive species and protected fauna.

10.2.3 Valuation of Ecological Features

Based on the information collected during the desktop and walkover surveys, the ecologist assigns an ecological importance rating to each feature based on its conservation status at different geographical scales (Table 10-1). For example, a site may be of national importance for a given species if it supports a significant proportion (e.g. 5%) of the total national population of that species.

Table 10-1 The six-level ecological valuation scheme used in the CIEEM guidelines (2018).

Ecological importance	Geographical scale
International	Europe or worldwide
National	The island of Ireland
Regional	Munster or the southern coast of Ireland
County	County Cork
Local	Little Island and the surrounding area
Negligible	None, the feature is common and widespread

It is accepted that any development will have an impact on the receiving environment, but the significance of the impact will depend on the importance of the ecological features that would be affected. The following is outlined in the CIEEM guidelines: *“one of the key challenges in an EclA is to decide which ecological features (habitats, species, ecosystems and their functions/processes) are important and should be subject to detailed assessment. Such ecological features will be those that are considered to be important and potentially affected by the project. It is not necessary to carry out detailed assessment of features that are sufficiently widespread, unthreatened and resilient to impacts from the development, and that will remain viable and sustainable.”*

For the purposes of this report we have assessed impacts on ecological features that are of Local importance or higher (refer to Table 10-1), or those that receive legal protection. These features are termed ‘Important Ecological Features’ and are listed in section 10.4.6. Impacts on features of Negligible importance (e.g. agricultural grasslands) are not considered to be significant, so they are not included in the impact assessment.

10.2.4 Ecological Impact Assessment

Potential direct, indirect or cumulative impacts on ecological features may be described in relation to their magnitude, extent, duration, reversibility and timing / frequency, as outlined in the CIEEM (2018) guidelines. Depending on the type of impact and the sensitivities of the important ecological feature, the ecologist may determine that the impact would have a ‘significant effect’. The following definitions of a significant effect are provided in the CIEEM

guidelines: “A *significant effect* is simply an effect that is sufficiently important to require assessment and reporting so that the decision maker is adequately informed of the environmental consequences of permitting a project”. “For the purpose of EclA, a ‘significant negative effect’ is an effect that undermines biodiversity conservation objectives for ‘important ecological features’, or for biodiversity in general.”.

Where significant effects are identified, measures will be taken to avoid, minimise or compensate for them (where possible). The impact assessment is then repeated, and any residual impacts of the proposed development are described.

10.3 Characteristics of the Proposed Development

10.3.1 Overview of the Facility's Operations

The Facility processes *Ginkgo biloba* to generate extracts for pharmaceutical use. Raw-leaf input undergoes a sequence process steps including extraction with solvents, evaporation and purification. The final product is a bulk powdered herbal extract used as an active pharmaceutical ingredient (API). It is shipped to customers for formulation in medications for the treatment of circulation disorders and age-related physical / mental deterioration.

The 2023 Annual Environmental Report for the Facility (the latest available at the time of writing) states that total production for the year was 105.04 tonnes of *Ginkgo biloba* extract.

The current c. 8.6 ha site comprises 4 no. production related buildings, 3 no. warehouses, workshop/utilities, tank farms, admin and laboratory support and an onsite biological wastewater treatment plant (WWTP). A firewater retention pond is located to the northwest of the main site.

10.3.2 Industrial Emissions Licence

The Facility operates under Industrial Emissions Licence (IEL) P0017-02 issued by the Environmental Protection Agency (EPA). It covers all emissions from the Facility, including discharges to waters, discharges to sewers, emissions to air, noise, odour, waste and accidental leakages / spills.

The proposed masterplan will expand the Facility, but it is intended that it will continue to operate within the parameters of its IEL subject to an IEL review application being made to the EPA.

Emissions to sewer

Process wastewater in liquid form is treated in an on-site waste water treatment plant (WWTP), which provides pH adjustment, aeration and settlement. The effluent from this plant is discharged to a local authority foul sewer, which conveys it to the Carrigrennan (Cork City) Wastewater Treatment Plant for further treatment. Discharge to the sewer is monitored as part of the Facility's IEL, with Emission Limit Values (ELVs) for Biological Oxygen Demand, Chemical Oxygen Demand, Suspended Solids, Lead and Zinc.

The Carrigrennan WWTP is managed by Uisce Éireann, and thus is outside the control of the applicant. It processes foul water from the public foul sewer network in Cork City, and discharges treated effluent to Lough Mahon, which is part of the Lee Estuary / Cork Harbour.

In the 2024 Annual Environmental Report for the Carrigrennan WWTP (the latest available at the time of writing) the WWTP was reported to have an organic capacity is 413,200 Population Equivalent (PE), with a current loading of 298,001 PE and remaining capacity of 115,199 PE. It was not compliant with its ELVs for total Nitrogen, and an upgrade will be required to improve treatment processes. Nonetheless, the treated effluent was not having an observable impact on

water quality or Water Framework Directive status in the receiving waters of Cork Harbour. As noted above, the level of treatment provided by the WWTP is the responsibility of Uisce Éireann, as is the monitoring of potential impacts on receiving waters.

Emissions to water

As noted above, treated process waters from the Facility are discharged to sewer, not to surface water or groundwater.

Stormwater from gutters and sub-surface external storm drains around the Facility are attenuated in the firewater retention pond and discharged to transitional waters near the M8 / N25 interchange at Dunkettle via an existing Class 1 Full Retention Separator which captures hydrocarbons and silt. In general, the storm water runoff consists of unpolluted rainwater. However, it is possible that pollutants may enter storm drains from leaks or spills of products stored on external hard surfaces. To avoid this, an automated system monitors Total Organic Carbon and pH concentrations in storm water along with additional periodic sampling and monitoring for ammonia and visual inspection, and any samples that exceed trigger levels can be diverted and isolated.

Emissions to air

The IEL controls emissions to air from the following sources:

- TA Luft Class III Organics (volatile organic compounds) from Carbon Adsorption Units
- Total Organic Carbon from the Ammonium Sulphate Dryer Building
- Dust from the Production Buildings and Product Collection Chamber

All main emissions to air are from stacks or vents with appropriate emissions control solutions in place as per IEL requirements. Further details on the above referenced elements are detailed in relevant chapters elsewhere in this EIAR.

10.3.3 General Characteristics of the Proposed Development

The proposed development comprises various elements to be developed on a phased basis over a period of ten years. A proposed site layout drawing is presented in Drg. Ref. 5340-PLA-XXX-DR-DJF-AR-0010.

- 1) **Unit 1 Production Building** – Construction of a replacement, multi-storey Unit 1 Production building approx. 34m L x 23m W x 26m H (approx. 3,000m²).
- 2) **In Process Tank Farm Bund** – Modifications to the existing 'In Process Tank Farm' bund and ancillary plant and services related to same including pipe racks.
- 3) **Laboratory Gas Bottle Store** – Construction of a new Laboratory Gas Bottle Store approx. 4m L x 2m W x 4m H and ancillary plant and services related to same including pipe racks.
- 4) **Regenerative Thermal Oxidiser** – Provision of a new Regenerative Thermal Oxidiser, associated exhaust stack (approx. 10mAGL) and ancillary plant and services related to same including pipe racks.
- 5) **Process Cooling** – Provision of 1no. process cooling tower (approx. 5mAGL) to be installed to provide additional cooling for manufacturing processes and ancillary plant and services related to same including pipe racks.
- 6) **Combined Heat and Power Plant and Heat Recovery System** – addition of a new natural-gas fired containerised combined heat and power (CHP) plant (approx. 6 MW_{TH} Total Rated Thermal Input) and associated containerised waste heat boiler system with exhaust stack approx. 13mAGL and ancillary plant, kiosks and services related to same including pipe racks.
- 7) **Ethanol Storage Tank** – addition of a new ethanol storage tank (2.4m diameter x 7m H) in existing solvent tank farm bund and ancillary plant and services related to same including pipe racks.
- 8) **Car Park** – extension to existing car park including associated lighting to provide a net increase of additional 67no. permanent car parking spaces.
- 9) **Wastewater Treatment Plant (WWTP) Control and Blower Building** - Single storey building associated with WWTP expansion, approx. 11m L x 10m W x 4m H (approx. 90m²); and ancillary plant and services related to same including pipe racks.
- 10) **WWTP Chemical storage tanks and bund** – new concrete base and bund (approx. 45m²) with tanks approx. 3.5m H and ancillary plant and services related to same including pipe racks.
- 11) **WWTP Inlet works** – new screens, tanks up to approx. 9m H and ancillary plant and services related to same including pipe racks

- 12) **WWTP Dissolved Air Flotation tank** – new tank approx. 5m L x 2m W x 4m H and ancillary plant and services related to same including pipe racks.
- 13) **Site Works** – All associated site services, site development works and landscaping to facilitate the proposed development.

10.3.4 Other Nearby Developments (Potential Cumulative Effects)

The Site is located within the Little Island Industrial Estate to the east of Cork City. It is zoned for 'mixed / general commercial / industrial / enterprise uses' under the Cork County Development Plan 2022 - 2028.

The applicant received planning permission in 2025 (planning reference 255753) for the demolition of existing process building 1, other modifications to the Facility, and the retention of a number of small structures.

The applicant received planning permission in 2024 (planning reference 244648) for an extension to an existing firewater retention pond located to the north-west of the Site. A Natura Impact Statement was submitted as part of the application, which included pollution-prevention measures for the construction phase of the project. At the time of writing this development is under construction.

Live and recently-approved planning applications in the vicinity of the Site were reviewed on the online planning records of Cork County Council. There have been some recent applications at adjacent properties, which are summarised as follows:

- Planning references 244158, 245692: permission granted for extension and alterations to the DOSCO industrial facility to the south-west of the Site.
- Planning reference 225746: permission granted for electrical infrastructure associated with the former Mitsui Denman Site, including overhead wires alongside the eastern boundary of the Site
- Planning reference 255059: live retention application for various works at the EHS International facility to the east of the Site.

Screening for Appropriate Assessment was carried out by Cork County Council for all of these developments as part of the planning consent process. An Appropriate Assessment was carried out for planning reference 244648 (extension of the firewater retention pond), as mitigation measures were considered necessary to avoid impact on receiving waters. In all cases Cork County Council concluded that the proposed developments would not have adverse impacts on the integrity of any European sites. Ecological Impact Assessments were also carried out for some of the developments.

It is theoretically possible that some of these developments could act in combination with the proposed development to have cumulative ecological effects. This will be considered in greater detail in section 10.5.3.

10.4 Receiving Environment

10.4.1 Environmental Setting

10.4.1.1 *Site Location and Surroundings*

The Cara Partners pharmaceutical facility (hereafter referred to as 'the Facility') is located in the Little Island Industrial Estate. It consists of a range of industrial buildings and artificial surfaces that are used for storage, processing, distribution, administration and waste management. The proposed development site (hereafter referred to as 'the Site') is located almost entirely on these buildings and artificial surfaces.

Elsewhere in the applicant's landholding there are patches of amenity grassland, wet grassland, ornamental shrubs and other undeveloped land throughout the Facility, some of which may be used for future expansion. There is also some woodland and treelines along the southern boundary. These habitats will not be affected by the proposed development other than where some improved supplementary planting with native species is proposed.

10.4.1.2 *Geology and Soils*

The underlying bedrock is massive unbedded (Waulsortian) limestone, which supports a regionally-important karstified aquifer. Soils are made ground in most places, with coarse loam in undeveloped areas. The Site is broadly level with no apparent topographical features, so it is expected that rainfall on green areas soaks to ground in situ.

10.4.1.3 *Hydrology*

No rivers, streams or other surface water features were identified within the Site.

The closest waterbody on the EPA database of rivers and streams is Lough Mahon, part of the River Lee Estuary, which is located approx. 400m south-west of the Site. It is part of Cork Harbour, a large natural harbour with multiple bays, islands and estuaries. There are extensive mudflats throughout the harbour in tidal areas.

10.4.2 Designated Sites

There are a number of designated sites associated with Cork Harbour. Those within the vicinity of the Site are shown on Figure 10-1, and details of relevant sites are provided in Table 10-2.

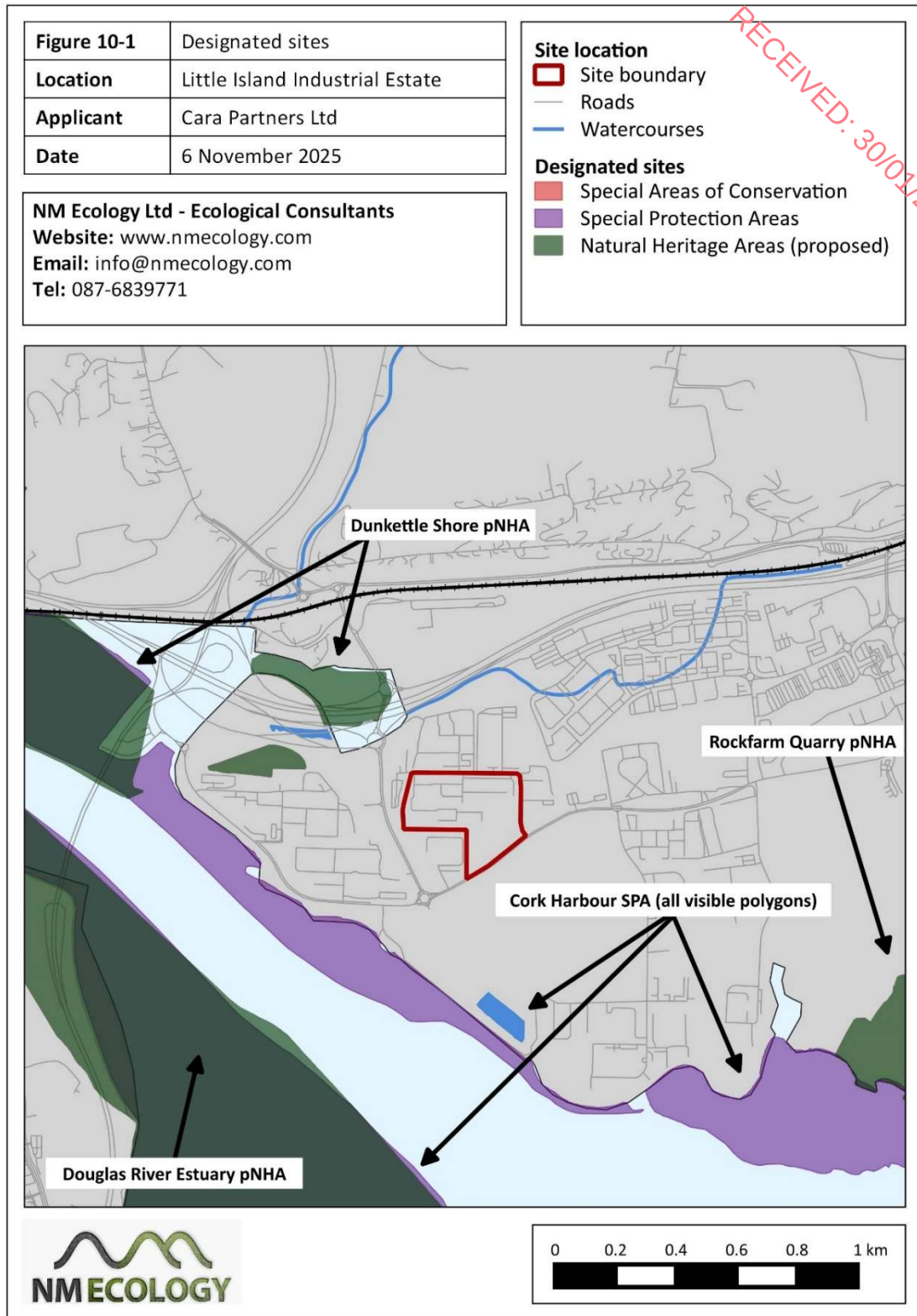


Table 10-2 Designated sites shown in Figure 10-1.

Site name	Distance	Reasons for designation
Dunkettle Shore pNHA (site code 1082)	160 m north-west	Not published
Cork Harbour SPA (4030)	400 m south-west	Key habitats: coastal wetlands Special conservation interests: little grebe, great crested grebe, cormorant, grey heron, shelduck, wigeon, teal, pintail, shoveler, red-breasted merganser, oystercatcher, golden plover, grey plover, lapwing, dunlin, black-tailed godwit, bar-tailed godwit, curlew, redshank, black-headed gull, common gull, lesser black-backed gull (overwintering populations), common tern (breeding population)
Douglas River Estuary pNHA (1046)	800 m south-west	Not published
Rockfarm Quarry, Little Island pNHA (1074)	1.3 km south-east	Former quarry with patches of species-rich calcareous grassland
Great Island Channel SAC (1058)	2.3 km east	Annex I habitats: mudflats and sandflats not covered by seawater at low tide, Atlantic salt meadows

There are no designated sites within or adjacent to the Site. Surface water from the Facility is attenuated in a firewater retention pond to the north-west of the Site, which discharges to an enclosed area of transitional water within the *Dunkettle Shore* pNHA. This waterbody also has a tenuous connection to the *Cork Harbour* SPA and *Great Island Channel* SAC. Potential impacts on these sites are assessed in section 0.

Emissions to air from the Facility are permitted as part of the Facility's Industrial Emissions Licence. Two aspects of the proposed development – the Regenerative Thermal Oxidiser and Combined Heat and Power Engine – will alter the air emissions of the Facility. This is considered in detail in section 0.

No other feasible pathways were identified to any other designated sites. While some sites are associated with Cork Harbour or the Lee / Douglas estuaries, the volume of water in these areas would dilute any pollutants to negligible concentrations. Groundwater and land pathways can all be ruled out due to distance. Therefore, no other designated sites are relevant to this assessment.

As noted in Table 10-2, site synopses for the *Dunkettle Shore* pNHA and *Douglas River Estuary* pNHA have not been published (as per the NPWS pNHA Site Synopsis Portfolio), so the reasons for designation are unclear. Both pNHAs cover coastal / intertidal mudflats along the sides of the Lee and Douglas Estuaries, including some enclosed transitional waterbodies around the M8 /

N25 Dunkettle Interchange. In the absence of published site synopses, it will be assumed that these pNHAs were designated to protect coastal / tidal habitats and associated bird populations.

10.4.3 Habitats and Flora

10.4.3.1 Habitats

Habitats within the Site were classified using *A Guide to Habitats in Ireland* (Fossitt 2000). A habitat map is not provided, because all habitats are readily apparent on aerial photography.

Almost all of the proposed development will take place on existing buildings and artificial surfaces (BL3) within the facility. These areas are unvegetated and of no ecological importance.

Lines of ornamental / non-native shrubs (WS3) have been planted around some of the structures, e.g. Rosaceae shrubs to the south of Production & Lab Building Unit 1. These species are not native to Ireland, and the habitat is of Negligible ecological importance.

All other development will take place on amenity grassland (GA2), including the car park in the east of the Site and the inlet works for the on-site wastewater treatment plant. These areas are regularly mowed throughout summer months, leaving a short sward. This habitat is dominated by Yorkshire-fog *Holcus lanatus* and / or perennial rye-grass *Lolium perenne*. There are locally-frequent patches of other plants, including creeping buttercup *Ranunculus repens*, red clover *Trifolium pratense*, selfheal *Prunella vulgaris*, thyme-leaved speedwell *Veronica serpyllifolia* and ragwort *Jacobaea vulgaris*. This habitat consists of common and widespread plant species and is of Negligible ecological importance.

Other habitats are located elsewhere in the applicant's landholding:

- The south-eastern section of the applicant's landholding consists of wet grassland (GS4) and mixed broadleaved woodland (WD1)
- A small patch of mixed broadleaved woodland (WD1) and a coniferous treeline (WL2) is located in the south-western corner
- Several short sections of treeline (WL2), individual broadleaf trees and ornamental non-native shrubs (WS3) are located throughout the Facility around buildings and roads

For the avoidance of doubt, the habitats listed above will not be affected by the proposed development, so they are not considered to be Important Ecological Features.

10.4.3.2 Rare or Protected Flora

No rare or protected plants were encountered during field surveys.

The National Parks and Wildlife Service's *Flora (Protection) Order 2022* Map Viewer was reviewed, and no records were identified in the vicinity of the Site. There are some historical records of protected plants from the surrounding hectad (W77), but none since 1900.

10.4.3.3 *Invasive Plant Species*

No invasive plant species listed on the third schedule of the EC (Birds and Natural Habitats) Regulations 2011 (as amended) were encountered.

10.4.4 *Protected Fauna*

10.4.4.1 *Terrestrial mammals*

No terrestrial mammals were observed during the survey, nor any characteristic field signs of protected mammals. The artificial surfaces and other man-made / highly-modified habitats within the Sites are unsuitable for any protected / rare mammal species.

Desktop records of protected mammals from the surrounding 10 km grid square (W77) were obtained from the National Biodiversity Data Centre. The following species were recorded: otter, badger, pine marten, stoat, hedgehog and pygmy shrew. The suitability of the surrounding area for these species is considered below.

Otters are primarily associated with freshwater and coastal habitats that contain sufficient prey resources (typically fish and shellfish). They are likely to forage throughout Cork Harbour, but the Site is unsuitable due to the lack of open waterbodies.

Badgers typically forage in grassland and woodland habitats. No badger setts or any other field signs were recorded within any of the surveyed areas.

Pine martens and red squirrels are primarily associated with woodland habitat. The patches of woodland within the applicant's landholding are too small and isolated from other similar habitats to support a viable population of either species.

Hedgehog and pygmy shrew typically favour scrub, woodland and grassland habitats with dense ground cover. The habitats within the footprint of the proposed development are low-quality foraging habitats for these species, so the Site is of negligible importance for them.

In summary, the habitats within the Site are unsuitable for any of the above species. The surrounding areas may provide foraging habitat for some species, but no high-value habitats were recorded. Therefore, the Site and surrounding areas are considered to be of Negligible importance for any mammals.

10.4.4.2 *Bats*

Potential roost features

Buildings within the Site are of standard industrial designs, with structures of metal, concrete and / or block, and renders of corrugated metal panels or pebbledash. Other structures include portacabins, metal tanks, and external surfaces of concrete or asphalt. All structures were considered to have Negligible suitability for roosting bats.

Artificial lighting illuminates internal roads, car parking areas and pedestrian paths. This would reduce the suitability of these areas for foraging / commuting bats. Overall, the footprint of the

proposed development is considered to have Negligible suitability for bats. For this reason, it was not considered necessary to carry out any bat surveys as part of this assessment.

The woodland along the southern boundary would provide suitable foraging habitat for bats, but it will not be affected (directly or indirectly) by the proposed development other than where supplementary planting of native species to buttress the existing flora is proposed.

10.4.4.3 Birds

Birds associated with SPAs

The *Cork Harbour* SPA is located approx. 0.4 km south-west of the Site. It was designated to protect internationally-important populations of a range of species associated with coastal wetlands: little grebe, great crested grebe, cormorant, grey heron, shelduck, wigeon, teal, pintail, shoveler, red-breasted merganser, oystercatcher, golden plover, grey plover, lapwing, dunlin, black-tailed godwit, bar-tailed godwit, curlew, redshank, black-headed gull, common gull, lesser black-backed gull, and common tern.

The primary habitats for these species are intertidal and coastal habitats within the SPA boundary, but some species also use secondary habitats outside the SPA boundary. This is commonly observed in a number of waders (e.g. oystercatcher, black-tailed godwit, curlew), which fly inland to feed on soil invertebrates on playing fields and areas of marshy ground. These species typically favour large open areas that provide a good field of view of potential predators, and are usually only recorded on sites measuring at least the size of a football pitch (approx. 0.7 ha).

The applicant's landholding contains some small patches of amenity grassland, but the largest is approx. 0.3 ha, so it is of low suitability for any SPA species. There is a larger patch of overgrown grassland in the south-east of the Site, but the vegetation structure is unsuitable and fields of view are too restricted for it to be used by SPA birds.

Some herring gulls were observed during the site inspection, and black-headed gulls are likely to be present at times. However, gulls are generalist species that can readily adapt to anthropogenic environments, and they will continue to use the Site following the construction of the proposed development, so the proposed development will have no impact on them.

Therefore, the Site is considered to be of no importance for any of the birds associated with the *Cork Harbour* SPA.

Other birds

Very few birds were observed during the site inspection: small numbers of herring gulls and jackdaw were in flight above buildings, landing briefly on railings and around roads.

Other common suburban birds may use other parts of the Site, including species such as woodpigeon, rook, jackdaw, magpie, blackbird and wren. All of these species are common and

widespread in Ireland, and the Site is of Negligible importance for them. Habitats are unsuitable for any species of conservation concern.

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10.4.4.4 *Fish and Other Aquatic Fauna*

The Site does not contain any waterbodies, so it has no suitability for any aquatic fauna.

10.4.4.5 *Reptiles and Amphibians*

No reptiles or amphibians were observed during the survey. There are no ponds or other suitable breeding sites for amphibians in the surrounding area. Therefore, the Site is considered to be of Negligible importance for these taxa.

10.4.4.6 *Terrestrial Invertebrates*

The Site consists mainly of man-made / artificial habitats of Negligible importance for any terrestrial invertebrates.

10.4.5 Potential Limitations and Information Gaps

The site inspection was carried out at a suitable time of year for surveys of all relevant ecological features, so the assessment does not have any limitations or information gaps.

10.4.6 Identification of Important Ecological Features

Table 10-3 provides a summary of all ecological features identified in the Sites and surrounding areas, including their valuation and legal/conservation status. For the purposes of this impact assessment, any features that are of Local importance, or that receive legal protection, are considered to be 'Important Ecological Features', and will be addressed in the impact assessment.

Table 10-3 Identification of 'Important Ecological Features'.

Ecological feature	Importance	Legal status*	Important feature?
<i>Cork Harbour SPA</i>	International	HR	Yes
<i>Great Island Channel SAC</i>	International	HR	Yes
<i>Dunkettle Shore pNHA</i>	National	WA	Yes
Buildings and artificial surfaces (BL3)	None	-	No
Ornamental / non-native shrubs (WS3)	Negligible	-	No
Amenity grasslands (GA2)	Negligible	-	No

Ecological feature	Importance	Legal status*	Important feature?
Rare flora	None	-	No
Invasive species	None	-	No
Terrestrial mammals	Negligible	-	No
Bats	Negligible	-	No
Birds	Negligible	-	No
Reptiles and amphibians	Negligible	-	No
Invertebrates	Negligible	-	No

* HR – ecological features protected under the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended). WA – species protected under the Wildlife Act 1976 (as amended).

In summary, the only Important Ecological Features identified in this assessment are the Dunkettle Shore pNHA, Cork Harbour SPA and Great Island Channel SAC.

10.5 Potential Impacts

10.5.1 Construction Impacts

10.5.1.1 Designated sites

Potential indirect effects: changes in water quality

Construction works typically generate a range of pollutants, particularly suspended sediments, concrete / cement residues and hydrocarbons. Many components of the proposed development will take place on or adjacent to artificial surfaces with storm drains, so it is possible that these pollutants could enter the Site's storm drainage network and be discharged to transitional waters within the *Dunkettle Shore* pNHA. This waterbody is also connected to the *Cork Harbour* SPA and *Great Island Channel* SAC. This is considered to be a tenuous pathway, but is included in accordance with the precautionary principle.

An existing automated system monitors pollutants in storm water, and any samples that exceed trigger levels are diverted for isolation and further treatment. However, some of the pollutants (e.g. excessive suspended sediments) generated during construction work may not trigger the monitoring system, so they could be discharged into transitional waters.

An assessment of potential pollution incidents is complex, because any potential impacts would vary depending on a number of variables that cannot be predicted, e.g. the type of pollutant, the quantity released, the time of year. It is likely that small pollution events would be diluted in receiving waters before they could affect the qualifying interests of the pNHA, SPA or SAC. However, if a precautionary approach is adopted (as stipulated in the legislation), it is possible that an extreme or sustained pollution event could cause significant impacts on the pNHA, SPA or SAC.

Potential indirect effects: changes in air quality

The only potential air emissions during construction would be dust. Guidance from the Institute of Air Quality Management (IAQM, 2024) is that construction dust tends to be deposited within 250 m of a construction site, with the majority of deposition occurring within the first 50 m. No designated sites are within this 50 m zone, so the risk of impacts from dust can be ruled out.

10.5.2 Operational Impacts

10.5.2.1 Designated sites

Potential indirect effects: changes in water quality

The existing stormwater management system will continue to operate during the operation of the proposed development. Pollutants associated with construction work (e.g. excessive suspended sediments) will no longer be present. The existing control and monitoring arrangements will be maintained.

Therefore, stormwater discharged from the system will consist of uncontaminated stormwater. Any trace quantities of pollutant would be diluted to negligible concentrations before reaching the pNHA / SPA / SAC, so it poses no risk of negative impacts.

Potential indirect effects: changes in air quality

A detailed assessment of air emissions from the proposed development is presented in Chapter 6 – Air Quality and Odour. It was prepared by Dr. Jovanna Arndt, a Principal Environmental Consultant in the Air Quality & Climate section of AWN Consulting. The findings of the assessment are summarised below, but full technical results are presented in the EIAR chapter.

Existing operational emissions (i.e. the do-nothing scenario) are covered by the Facility's Industrial Emissions Licence. The proposed development will result in the following changes to air emissions:

- Nitrogen Oxides (NOx) from a new Combined Heat and Power (CHP) engine
- NOx from a new regenerative thermal oxidiser (RTO)
- Total volatile organic compounds (TVOCs) from the new RTO (replacing existing Carbon Absorption Units)
- Removal of all existing lead-based processing onsite
- Relocating Unit 1 dust emission points (with stricter dust emission limit values)

Potential ecological impacts of these emissions are considered in Chapter 6 of the EIAR under the following headings: 'NOx', 'Nitrogen Deposition' and 'Acid Deposition (as N)'. Air dispersion modelling was used to determine whether these emissions could affect nearby designated sites.

NOx emissions from the Facility will reach the *Cork Harbour* SPA in detectable levels, but when considered cumulatively with other emissions the Predicted Environmental Concentration (PEC) of NOx would be at most 26% of the annual limit value for the site. In simple terms, the cumulative NOx levels were substantially below the levels that could potentially have an effect on the Special Conservation Interests of the SPA, so impacts can be ruled out.

Potential effects of Nitrogen Deposition and Acid Deposition on European sites were considered to be unlikely, either when considered in isolation or cumulatively.

In summary, it has been confirmed by a specialist air quality consultant that the air emissions of the proposed development will not be likely to have significant effects on any designated sites, either alone or in combination. No mitigation measures are required.

10.5.3 Cumulative Impacts

A number of live planning consents were identified in the vicinity of the Site, as outlined in section 10.3.4. Two are associated with the Facility: an enlargement of the Facility's firewater retention pond (planning reference 244648), and the demolition of existing process building 1, other modifications to the Facility, and the retention of a number of small structures (planning reference 255753).

It is very difficult to predict the potential magnitude or extent of any potential cumulative impacts from these developments, because it is not known which, if any, will be constructed concurrently. On a precautionary basis it is considered possible that in-combination effects are possible, and that mitigation measures related to water quality will be required to prevent them.

As noted previously, the air emissions assessment in Chapter 6 – Air Quality and Odour considered the emissions from the proposed development both in isolation and cumulatively, and likely significant effects were ruled out.

10.6 “Do-Nothing” Scenario

If the development does not proceed, all ecological features will remain in their baseline condition. There would be no risk of pollution to the pNHA, SPA or SAC.

10.7 Mitigation Measures

10.7.1 Pollution-Prevention Measures (Construction Phase)

Cara Partners has engaged DJF Engineering Services Ltd. to prepare an Outline Construction Environmental Management Plan (CEMP) for the proposed development (see Appendix 2-A), which sets out a range of environmental considerations / measures for the construction phase of the proposed development. These measures, along with any additional mitigation measures or planning conditions imposed by the planning authority, will be brought forward into a final CEMP prepared by the construction contractor.

The requirements of the existing IEL (or any future amendment thereof) will continue to apply.

Stormwater monitoring / diversion

It is established in section 10.5.1 that the stormwater drainage network could potentially provide a pathway between the Site and the pNHA / SPA / SAC. The following mitigation measures are in place:

- All stormwater discharging to Lough Mahon passes through an existing Class 1 Full Retention Separator.
- The existing drainage system passes through a monitoring chamber where it is tested for Total Organic Content (TOC), pH and Ammonia and is subject to visual inspection. If the storm water is within acceptable trigger values, it continues and is discharged via the outfall. If the storm water is not within acceptable trigger values, it is diverted into the adjacent Fire Water Retention Pond, from where it may be further tested and treated if necessary.
- Diversion of the storm water flow into the Fire Water Retention Pond may occur by automatic detection and / or manual override. This method of management ensures that the discharge to the outfall is closely monitored and maintained within approved parameters.
- The above method of management will continue in place during the construction phase, and on completion of the development.

Pollution-prevention measures

A Resource Waste Management Plan has been prepared and identifies waste material that may be generated during the construction of the proposed development and addresses its storage and appropriate removal from the site.

The following measures will apply to fuels / lubricants:

- Chemicals used will be stored in sealed containers.
- Chemicals shall be applied in such a way as to avoid any spillage or leakage.
- Fuelling and lubrication of equipment shall be carried out in bunded areas only which are located as far as possible away from any other drainage outfall.
- All refuelling, oiling and greasing will take place above drip trays or on an impermeable surface which provides protection to underground strata and watercourses and away from

drains and watercourses as far as reasonably practicable. Vehicles will not be left unattended during refuelling.

- Storage areas, machinery depots and site offices will be located within the site boundary
- Spill kits will be made available, and all staff will be properly trained on correct use.
- All fuels, lubricants and hydraulic fluids required to be stored on site will be kept in secure containers within it.
- Containers will be properly secured to prevent unauthorised access and misuse. An effective spillage procedure will be put in place with all staff properly briefed. Any waste oils or hydraulic fluids will be collected, stored in appropriate containers and disposed of offsite in an appropriate manner.
- All plant shall be well maintained with any fuel or oil drips attended to on an ongoing basis. Any minor spillage during this process will be cleaned up immediately.
- Should any incident occur, the situation will be dealt with and coordinated by the nearest supervisor who will be responsible for instructions by the Local Authority.
- Fuels, lubricants and hydraulic fluids for equipment used on the construction site shall be carefully handled to avoid spillage, properly secured against unauthorised access or vandalism, and provided with spill containment according to current best practice (Enterprise Ireland BPGCS005).
- Any spillage of fuels, lubricants or hydraulic oils shall be immediately contained and the contaminated soil removed from the site and properly disposed of.
- Oil booms and oil soakage pads shall be kept on site to deal with any accidental spillage.
- Waste oils and hydraulic fluids shall be collected in leak-proof containers and removed from the site for disposal or recycling.
- Existing outfall monitoring chamber to be visually checked regularly for any evidence or indications of contaminants or water pollution e.g.
 - Change in water colour
 - Changes in water transparency
 - Oily sheen to water surface
 - Floating detritus
 - Scums and foams

The following measures will apply to concrete and related substances:

- Disposal of raw or uncured waste concrete will be controlled to ensure that Cork Harbour will not be impacted.
- Best practice in bulk-liquid concrete management addressing pouring and handling, secure shuttering / form-work, adequate curing times will be implemented.
- Washing of concrete equipment such as cleaning ready mix concrete lorries and mixers will not be permitted onsite.

The following measures relate to dust and air quality:

- Vehicles carrying loose aggregate and workings will be covered at all times.
- Material stockpiles (stored onsite pending removal off site) and exposed surfaces will be dampened down using a water spray to minimise the potential for wind pick-up.
- Regular inspection of access roadways to inspect for dust deposits will be undertaken and, if necessary, cleaning of access roadways and site boundaries will be undertaken.

- Where practicable, stockpiles of soils and materials will be located as far as possible from sensitive properties and ecological receptors, taking account of prevailing wind directions and seasonal variations in the prevailing wind.
- All construction plant and equipment is maintained in good working order and not left running when not in use.

10.7.2 Pollution-Prevention Measures (Operational Phase)

The existing pollution prevention measures will continue to operate including:

- Continued operation of Class 1 Full Retention Separator.
- Continued operation stormwater sampling and monitoring including the operation of the diversion and retention system as required.
- Continued implementation of spill management plan.
- Appropriate storage and bunding of potentially polluting substances as required.
- Compliance with any other relevant measures detailed in the current and revised IEL.

10.8 Residual Impacts

Pollution-prevention measures will be implemented during the construction of the proposed development to avoid impacts on the *Dunkettle Shore* pNHA, *Cork Harbour* SPA or *Great Island Channel* SAC. They are best practice measures that are regularly implemented at construction sites in Ireland, so there is high confidence in their effectiveness.

Air emissions of the proposed development will not affect any designated sites, either alone or in combination. No mitigation measures were required in this regard.

Potential impacts on the *Cork Harbour* SPA, *Great Island Channel* SAC and other European sites have also been considered in a Natura Impact Statement that accompanies the application. Subject to the implementation of mitigation measures (the same measures presented above), it was concluded that the proposed development will not adversely affect the integrity of the *Great Channel Island* SAC, *Cork Harbour* SPA or any other European site, either alone or in combination with other plans or projects.

Subject to the successful implementation of these measures, it can be concluded that the proposed development will not cause any significant negative impacts on designated sites, habitats, legally protected species, or any other features of ecological importance.

10.9 References

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11.0 LANDSCAPE AND VISUAL ASSESSMENT

11.1 Introduction

The purpose of this chapter is to assess the landscape and visual impacts associated with the proposed development. The assessment begins with a description of the existing landscape setting and visual resources to establish baseline conditions. The proposed development is then applied to the baseline, and the impacts of that upon the existing landscape setting and visual resources are then assessed.

This Chapter has been prepared by Ian Russell of ACSU. Ian Russell is a licenced Senior Archaeologist with Archaeological Consultancy Services Unit Ltd having joined the company in 1998. He holds a B.A. (1996) and an M.A. (1998) from University College Dublin.

Ian is an expert landscape archaeologist, photographer, 3D artist, visual impact and built heritage specialist and has conducted numerous visual and landscape impact assessments all over Ireland, including many in the World Heritage Site at Bru na Boinne.

11.2 Assessment Methodology

The structure for assessing the Landscape and Visual Impact (LVIA) of the proposed development is based on the following guidelines:

- Environmental Protection Agency (EPA) publication, *Guidelines on the Information to be contained in Environmental Impact Assessment Reports*, May 2022.
- Landscape Institute and the Institute of Environmental Management and Assessment publication, *Guidelines for Landscape and Visual Impact Assessment* (2013)
- Sites and Monuments Record (SMR)
- Record of Monuments and Places (RMP)
- National Monuments
- Archaeological sites included in the National Monuments Service Historic Environment Viewer
- Sites reported in the Excavations Database
- Any previously unrecorded sites
- A list of protected monuments
- A list of architectural heritage structures (NIAH)
- A list of Protected Structures (*Cork County Development Plan 2022–2028*)
- Reports on archaeological assessments of the site carried out to date

The development of this VIA involved desktop studies and fieldwork, comprising professional evaluation by qualified and experienced landscape, environmental, and cultural heritage managers.

The desktop study included:

- Establishing an appropriate study area from which to examine the landscape and visual effects of the proposed development.

- Identifying the viewpoints on mapping, which indicates areas from which the development is potentially visible in relation to the terrain within the study area.
- Review of Natural Heritage Areas (NHA) and proposed Natural Heritage Areas (pNHA) held by the National Parks & Wildlife Service and detailed in the current *Cork County Development Plan 2022-2028*, particularly regarding the sensitive landscape and scenic views/route designations.
- Selection of potential viewpoints for images to be investigated during fieldwork for actual visibility and sensitivity.

The field survey included:

- Recording the description of the landscape elements and characteristics within the study area from the identified viewpoints.
- Selecting a refined set of viewpoints for assessment. This included the capture of panoramic photography and grid reference coordinates for each viewpoint location to prepare existing views and photomontages.

Report production included:

- Description of the geographic location and landscape context of the proposed development site. General landscape description concerning essential landscape character and salient features of the study area, discussed with respect to landform and drainage, vegetation and land use, centres of population and houses, transport routes and public amenities and facilities.
- Consideration of design guidance, the planning context, and relevant landscape designations.
- Assessment of predicted landscape impacts.
- Assessment of predicted visual impacts.
- Production of photomontages prepared from selected viewpoints.
- Discussion of mitigation measures.

11.3 Assessment Criteria

11.3.1 Quality of Effects

An effect can be positive, negative, or neutral:

Positive Effects	A change which improves the quality of the environment (for example, by increasing species diversity, or improving the reproductive capacity of an ecosystem, or by removing nuisances or improving amenities).
Neutral Effects	No effects or effects that are imperceptible, within normal bounds of variation, or within the margin of forecasting error.
Negative/Adverse Effects	A change which reduces the quality of the environment (for example, lessening species diversity or diminishing the reproductive capacity of an ecosystem, or damaging health or property, or causing nuisance).

11.3.2 Describing the Significance/Sensitivity of the Existing Environment

Imperceptible	An effect capable of measurement but without significant consequences.
Not Significant	An effect that causes noticeable changes in the character of the environment, but without significant consequences.
Slight Effects	An effect that 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.

11.3.3 Description of Effects

The description of the effect considers the character, magnitude, duration, probability, and consequence of the effect under the following criteria:

High:	Change that would be more limited in extent and scale, with the loss of significant landscape elements and features, that may also involve the introduction of new, uncharacteristic elements or features that contribute to an overall change of the landscape in terms of character, value, and quality.
Medium:	Changes that are modest in extent and scale involve the loss of landscape characteristics or elements that may also involve the introduction of new, uncharacteristic elements or features that would lead to changes in landscape character and quality.
Low:	Changes affecting small areas of landscape character, together with the loss of some less characteristic landscape elements or the addition of new features or elements.
Negligible:	Changes affecting small or very restricted areas of landscape character. This may include the limited loss of some elements or the addition of some new features or elements that are characteristic of the existing landscape or are hardly perceivable.

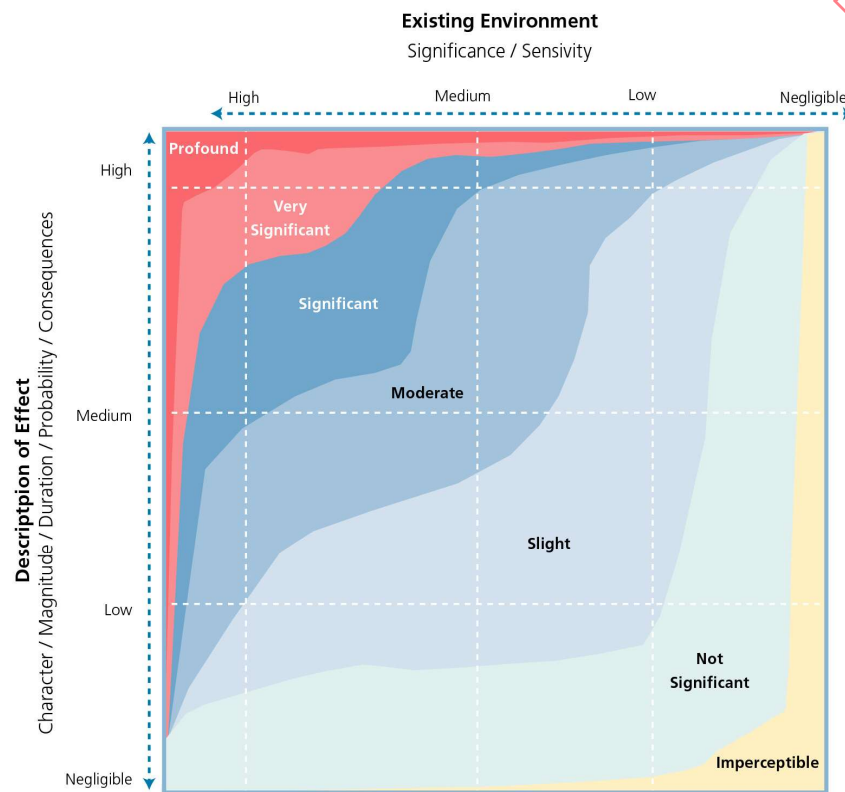
11.3.4 Degree of Effect Significance

The significance of the effects is achieved by comparing the character of the predicted effect to the sensitivity of the receiving environment, by assessing the Significance/Sensitivity of the Existing Environment (high, medium, low, or negligible) with the character, magnitude, duration, probability, and consequence of the Description of Effect (high, medium, low, or negligible). The comparison determines the degree of the effect's significance based on the criteria with reference to the graph scale below:

Imperceptible:	An effect capable of measurement but without significant consequence.
Not Significant:	An effect that causes noticeable changes in the character of the environment, but without significant consequences.
Slight Effects:	An effect that 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 the most sensitive aspects of the environment.

Profound Effects:

An effect that obliterates sensitive characteristics.



11.3.5 Zone of Visual Influence

The assessment can be assisted using a Zone of Visual Influence (ZVI), or an area within which views of the proposed development, during construction and operation, can be obtained. The extent of the ZVI is determined primarily by local topographical factors and is a tool used to determine the study area for the landscape and visual impact assessment, and does not represent a prediction of impacts.

The ZVI is refined by field studies to indicate where relevant buildings, woodland, field boundaries, roads, and other local features obscure visibility from the main roads, local viewpoints, settlements, etc. and can be used as a prediction of visual impacts.

Consequently, a series of viewpoints was determined surrounding the proposed development to illustrate typical views anticipated during construction and operation. These photomontages have been prepared to assist the landscape and visual impact assessment of the proposed development by illustrating what it might look like from key vantage points.

11.4 Baseline Environment

11.4.1 Site Context and Description

The proposed development is located within an existing pharmaceutical premises within the centre of Little Island, a locality which is zoned for industry and contains a large number of commercial and industrial premises.

11.4.2 Industry

A number of Cork's pharmaceutical companies are based on the island. The main drainage wastewater treatment plant for Cork City was also opened in the area in 2004.

Since the 1990s, development has grown, with retail and commercial spaces opened at Little Island Business Park and East Gate Retail Park. As of 2017, the Little Island Business Association reported that there were approximately one thousand businesses operating in the area. Over seven thousand people were employed in the area, which was described as one of Ireland's "industrial powerhouses" as of April 2018. Cork Golf Club and Leaside A.F.C. are also based on the island.

11.4.3 The Development Site

The site of the proposed development is located within Little Island, a locality which is zoned for industry and contains a large number of commercial and industrial premises. The site of the proposed development is located virtually in the middle of the island and is surrounded by similar, but larger-scale developments or industrial premises.

11.4.4 Landscape Planning and Land Use

11.4.4.1 *Cork County Development Plan 2022–2028: Landscape.*

The following landscape planning designations are detailed in the *Cork County Development Plan 2022–2028, Chapter 14.8*, (hereafter referred to as 'the Plan'), where the Landscapes & Natural Environment sections have the following policies and objectives:

14.8.1 The Government's Draft Guidelines for Landscape and Landscape Assessment (2000) recommended a particular approach to ensuring the preservation of the character of Cork's landscapes, which is 'Landscape Character Assessment'.

14.8.2 Based on the Guidelines, Cork County Council prepared a Draft Landscape Strategy in 2007. The Landscape Character Assessment (LCA) of County Cork established a set of 76 landscape character areas reflecting the complexity and diversity of the entire County. Due to the expanse and variety of Cork County's landscape, the character areas have been amalgamated into a set of 16 landscape character types based on similarities evident within the various areas. These landscape character types provide a more general categorization of the County's landscape.

- 14.8.3 *The LCA methodology involved an evaluation of each landscape character type in terms of its Landscape Value, Sensitivity, and Importance. The Value of each landscape character type is defined as the environmental or cultural benefits, including services and functions, which are derived from various landscape attributes. Value is evaluated using criteria ranging from Very High to Low...*
- 14.8.4 *The Sensitivity of each character type is defined as the ability to accommodate change or intervention without suffering unacceptable effects to its character and values. Sensitivity is evaluated using criteria ranging from Very High to Low. A highly sensitive landscape is likely to be vulnerable to change, whereas a landscape with low sensitivity is likely to be less at risk of change.*
- 14.8.5 *In order to indicate the correlation between the sensitivity of a landscape and the degree to which it can be changed by development, the Draft Landscape Strategy has categorised sensitivity as follows;*
- **Low-sensitivity landscapes** *are robust landscapes that are tolerant to change and that can accommodate development pressure.*
 - **Medium sensitivity landscapes** *can accommodate development pressure, but with limitations in scale and magnitude. In this rank of sensitivity, landscape elements can accept some changes, while others are more vulnerable to change.*
 - **High-sensitivity landscapes** *are vulnerable landscapes with the ability to accommodate limited development pressure. In this rank, landscape quality is at a high level, and landscape elements are highly sensitive to certain types of change. If pressure for development exceeds the landscape's limitations, the character of the landscape may change.*
 - **Very high sensitivity landscapes** *are extra vulnerable landscapes (e.g., seascape areas with national importance), which are likely to be fragile and susceptible to change.*
- 14.8.6 *The importance of a landscape character type is rated as Local, County, or National. The LCA will inform decision-making in relation to the protection of the environment, natural resources, and heritage, and will be used to guide development.*
- 14.8.7 *The Table and Map in Appendix F Landscape Character Assessment attached, lists and shows the 16 Landscape Character Types and indicates their Landscape Value, Sensitivity, and Importance.*
- 14.8.8 *Landscape Character Types which have a very high or high landscape value and high or very high landscape sensitivity and are of county or national importance are considered to be our most valuable landscapes and therefore are designated as High Value Landscapes (HVL), highlighted in green in the Table in Appendix F Landscape Character Assessment attached and shown in Figure 14.2.*
- 14.8.9 *Within these High Value Landscapes, considerable care will be needed to successfully locate large-scale developments without them becoming unduly obtrusive. Therefore, the location, siting, and design of large-scale developments within these areas will need careful consideration, and any such developments should generally be supported by an*

assessment, including a visual impact assessment, which would involve an evaluation of visibility and prominence of the proposed development in its immediate environs and in the wider landscape.

14.8.10 The key role of the Draft Landscape Strategy of Cork County is to assist in the achievement of sustainable development by promoting an approach to landscape planning and management, which links objectives and recommendations for landscape character to existing planning policies. To recognise that the landscapes are dynamic and continuously evolving, the objectives do not attempt to prevent new uses or changes but to manage the change, ensuring that the past remains visible for future generations.

14.8.11 The capacity of each landscape character type to absorb new development will largely depend on the sensitivity of the landscape type. Developments which are likely to create a significant environmental and particularly visual impact will best be absorbed in areas where the landscape is robust, i.e., has the capacity to absorb development without significantly changing its character. All developments should be assessed on a site-by-site basis to avoid, minimise, or mitigate any potential environmental or visual impact.

14.8.12 Seascape Assessment is an extension of landscape character assessment, and with 1,100km of coastline, the seascape is a crucial element of the County's history, identity, and culture. Several changes have been occurring along coastlines, including the need for coastal protection works, upgrading and proposals for new ports, marinas, proposals for aquaculture schemes, and investigation of wind energy and other renewable energy projects offshore. It would be premature to consider the feasibility of carrying out a seascape assessment for County Cork until the preparation of a National Landscape Characterisation has been completed and legislation on the future management of foreshore development has been enacted.

GI-14.9: Landscape.

- a. Protect the visual and scenic amenities of County Cork's built and natural environment.*
- b. Landscape issues will be an important factor in all land use proposals, ensuring that a proactive view of development is undertaken while protecting the environment and heritage, generally in line with the principle of sustainability.*
- c. Ensure that new development meets high standards of siting and design.*
- d. Protect skylines and ridgelines from development.*
- e. Discourage proposals necessitating the removal of extensive amounts of trees, hedgerows, and historic walls or other distinctive boundary treatments.*

GI-14.10: Draft Landscape Strategy.

Ensure that the management of development through the County will have regard for the value of the landscape, its character, distinctiveness and sensitivity as recognised in the Cork County Draft Landscape Strategy and its recommendations, to minimise the visual and

environmental impact of development, particularly in areas designated as High Value landscapes where higher development standards (layout, design, landscaping, material use) will be required.

GI-14.11: Draft Landscape Strategy, Land Use Plans, and Policy Guidelines.

Have regard to the Draft Cork County Landscape Strategy (2007) in the preparation of plans and other policy guidance being prepared during the lifetime of the plan.

Renew and update the Draft Cork County Development Strategy as soon as is practicable, following the publication of a National Landscape Character Assessment, as well as taking into account any associated guidelines.

Whilst advocating the protection of such scenic resources, the Plan also recognises the fact that all landscapes are living and changing and therefore in principle it is not proposed that this should give rise to the prohibition of development along these routes, but development, where permitted, should not hinder or obstruct these views and prospects and should be designed and located to minimise their impact. This principle will encourage appropriate landscaping and screen planting of developments along scenic routes.

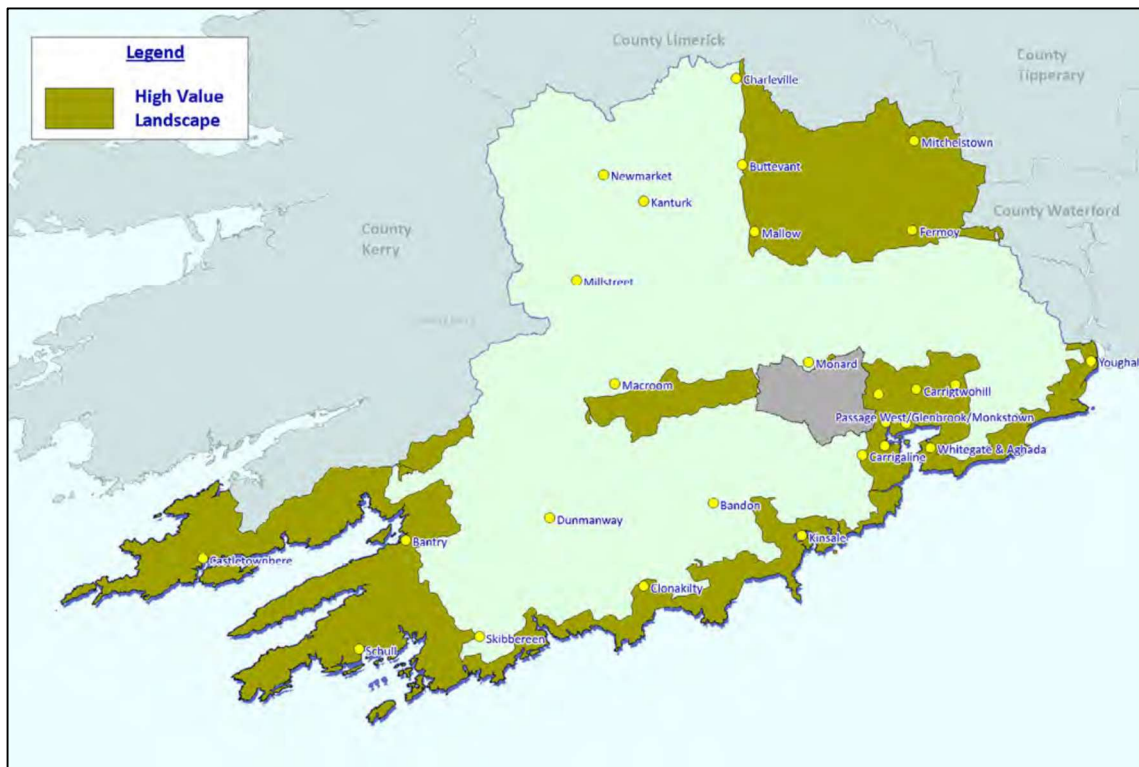


Figure 11-1 High value landscapes in Cork (excerpt from Fig.14-2 of Cork County Development Plan 2022).

11.4.4.2 Cork County Development Plan 2022–2028: Views and Prospects

There are no views or prospects listed in the Cork County Development Plan 2022–2028 that will be affected by the proposed development (Plate 11).

However, it is noted that there are two views located 1776m to the north at S41: Road from Dunkettle to Glanmire and eastwards to Caherlag and Glounthane, and at S42: Road at Cashnagarriffe, northwest Carrigtwohill, and Westwards to Caherlag. There are also two located 4094m to the southeast at S54: Road between Passage West and Ringaskiddy and at S53: Road between Cobh and Belvelly.

The Landscapes Views and Prospects section of the Plan (section 14.9) has the following policies and objectives:

- 14.9.1 *The County contains many vantage points from which views and prospects of great natural beauty may be obtained over both seascape and rural landscape. This scenery and landscape are of enormous amenity value to residents and tourists and constitute a valuable economic asset. The protection of this asset is therefore of primary importance in developing the potential of the County. Therefore, the Plan identifies specific Scenic Routes consisting of important and valued views and prospects within the County.*
- 14.9.2 *Each of the scenic routes was examined individually, and their location related to the landscape character type traversed, and some of the features lending themselves to the attractive nature of these particular routes were identified. Scenic routes highlight the quality of the overall environment and landscape experienced within Cork County. It is important to protect the character and quality of those particular stretches of scenic routes that have special views and prospects, particularly those associated with High Value Landscapes.*
- 14.9.3 *All proposals should be assessed on their merits, taking into account the overall character of the scenic route, including the elements listed in **Volume 2 Heritage and Amenity Chapter 5 Scenic Routes** of the Plan and the Landscape Character Type through which the route passes. A map showing the location of each scenic route referred to in this Plan is shown on the County Development Plan Map Browser accessible through www.corkcoco.ie.*

GI 14-12: General Views and Prospects.

Preserve the character of all important views and prospects, particularly sea views, river or lake views, views of unspoilt mountains, upland or coastal landscapes, views of historical or cultural significance (including building and townscapes), and views of natural beauty as recognised in the Draft Landscape Strategy.

GI 14-13: Scenic Routes.

Protect the character of those views and prospects obtainable from scenic routes and, in particular, stretches of scenic routes that have very special views and prospects identified in this Plan. The scenic routes identified in this plan are shown on the scenic amenity maps in the CDP Map Browser and are listed in Volume 2 Heritage and Amenity Chapter 5 Scenic Routes of this plan.

GI 14-14: Development on Scenic Routes.

- a. Require those seeking to carry out development in the environs of a scenic route and /or an area with important views and prospects, to demonstrate that there will be no adverse obstructions or degradation of the views towards and from vulnerable landscape features. In such areas, the appropriateness of the design, site layout, and landscaping of the proposed development must be demonstrated, along with mitigation measures to prevent significant alterations to the appearance or character of the area.*
- b. Encourage appropriate landscaping and screen planting of developments along scenic routes.*

GI 14-15: Development on the Approaches to Towns and Villages.

Ensure that the approach roads to towns and villages are protected from inappropriate development, which would detract from the setting and historic character of these settlements.

11.4.4.3 Cork County Development Plan 2022–2028: Heritage

Cork County Development Plan (2022-2027): This Plan sets out an overall strategy for the proper planning and sustainable development of Cork County over 6 years. The Heritage section of the Plan (section 16) has the following policies and objectives:

16.1.5 The County's national heritage is protected by a number of different pieces of legislation. The National Monuments Acts (1930-2004) provide for the protection of our archaeological heritage. Our buildings, townscapes, and landscapes are protected under the Planning and Development Acts. In addition, there are a number of international conventions and agreements relating to our heritage, which Ireland has ratified, including the Environmental Impact Assessment Directive, which clearly requires that Environmental Impact Assessment (EIA) includes consideration of impact on archaeological heritage.

16.1.6 Heritage Ireland 2030 has replaced the National Heritage Plan (2002) with updated national policy priorities in relation to the protection and management of our national heritage (built, cultural, and natural). These documents are underpinned by the core principle that heritage belongs to us all and we all share a responsibility to protect it.

16.1.7 The responsibility of Local Authorities in relation to the care and protection of heritage is also identified in the National Heritage Plan. Key actions in these plans include the

requirement of Local Authorities to prepare and implement Local Heritage Plans in partnership with the main stakeholders in the area. The Cork County Heritage Plan was adopted in 2005 and is currently in its implementation phase. Actions arising from the current Plan include 8 heritage publications which focus on a range of issues, including guidance on the protection of areas of special cultural interest (Múscraí Heritage Plan), a detailed publication on the county's archaeological resource, and guidance on specific elements of built heritage value, including shopfronts and works within Architectural Conservation Areas.

- 16.1.7 A series of beautifully illustrated historic maps has also been produced for a selection of County Towns to aid education and awareness of the County's rich urban heritage. This process is ongoing.*
- 16.1.8 The Plan also recognises the overlapping policy themes that Built and Cultural Heritage shares with other Chapters within the Plan. At a site level, for example, there is potential for negative impacts for biodiversity, flora, and fauna where older building stock provides habitat for roosting bats, owls, etc., and is refurbished without mitigation measures being implemented. The Plan therefore recommends consultation with Chapter 15 Biodiversity and Environment in this instance and supports the requirement for an ecological assessment (where appropriate).*

County Development Plan Objective HE 16-1: County Heritage Plan

Continue to implement the current County Heritage Plan (2005) in partnership with relevant stakeholders and any successor to this document.

County Development Plan Objective HE 16-2: Protection of Archaeological Sites and Monuments

Secure the preservation (i.e., preservation in situ or in exceptional cases preservation by record) of all archaeological monuments and their setting, included in the Sites and Monuments Record (SMR) (see www.archaeology.ie) and the Record of Monuments and Places (RMP) and of sites, features, and objects of archaeological and historical interest generally.

In securing such preservation, the planning authority will have regard to the advice and recommendations of the Development Applications Unit of the Department of Housing, Local Government and Heritage, as outlined in the Frameworks and Principles for the Protection of the Archaeological Heritage policy document or any changes to the policy within the lifetime of the Plan.

County Development Plan Objective HE 16-3: Underwater Archaeology

Protect and preserve the archaeological value of underwater archaeological sites and associated underwater and terrestrial features. In assessing development proposals, the development will take account of the potential underwater archaeology of rivers, lakes,

wetlands, intertidal and sub-tidal environments through appropriate archaeological assessment by a suitably qualified archaeologist.

County Development Plan Objective 16-4: Zones of Archaeological Potential in Historic Towns and Settlements

Proposed development works in Historic Towns and settlements, Zones of Archaeological Potential, Zones of Notification, and the general historic environs in proximity to the zones, should take cognisance of the impact potential of the works, and all appropriate archaeological assessments employed to identify and mitigate the potential impacts

County Development Plan Objective HE 16-5: Zones of Archaeological Potential Protect the Zones of Archaeological Potential

(ZAPs) located within historic towns, urban areas, and around archaeological monuments generally. Any development within the ZAPs will need to take cognisance of the upstanding and potential for subsurface archaeology, through appropriate archaeological assessment.

County Development Plan Objective HE 16-6: Industrial and Post Medieval Archaeology

Protect and preserve industrial and post-medieval archaeology and long-term management of heritage features such as mills, limekilns, forges, bridges, piers and harbours, water-related engineering works and buildings, penal chapels, dwellings, walls and boundaries, farm buildings, estate features, military and coastal installations. There is a general presumption for retention of these structures and features. Proposals for appropriate redevelopment, including conversion, should be subject to an appropriate assessment and record by a suitably qualified specialist/s.

County Development Plan Objective HE 16-7: Battlefield, Ambush and Siege Sites and Defensive Archaeology

Protect and preserve the defensive archaeological record of County Cork, including strategic battlefield, ambush and siege sites, and coastal fortifications and their associated landscape, due to their historical and cultural value. Any development within or adjoining these areas shall undertake a historic assessment by a suitably qualified specialist to ensure development does not negatively impact on this historic landscape.

County Development Plan Objectives HE 16-8: Burial Places

Protect all historical burial places and their setting in County Cork, and encourage their maintenance and care in accordance with appropriate conservation principles.

County Development Plan Objectives HE 16-9: Archaeology and Infrastructure Schemes

All large-scale planning applications (i.e., development of lands on 0.5 ha or more in area or 1km or more in length) and Infrastructure schemes and proposed roadworks are subjected to an archaeological assessment as part of the planning application process, which should comply with the Department of Arts, Heritage and the Gaeltacht's codes of practice. It is recommended that the assessment is carried out following a pre-planning consultation with the County Archaeologist, by an appropriately experienced archaeologist to guide the design and layout of the proposed scheme/development, safeguarding the archaeological heritage in line with Development Management Guidelines.

County Development Plan Objectives HE 16-10: Management of Monuments within Development Sites

Where archaeological sites are accommodated within a development, it shall be appropriately conservation/protected with provision for a suitable buffer zone and long-term management plan put in place all to be agreed in advance with the County Archaeologist.

County Development Plan Objectives HE 16-11: Archaeological Landscapes

To protect archaeological landscapes and their setting where the number and extent of archaeological monuments are significant and, as a collective, are considered an important archaeological landscape of heritage value.

County Development Plan Objectives HE 16-12: Raising Archaeological Awareness

As part of the Heritage Plan it is an objective to develop a management plan, if resources allow, for the archaeology of County Cork, which could include an evaluation of the Historic Character Assessment of Cork County helping to identify areas for tourism potential, and strategic research while also promoting best practice in archaeology and encouraging the interpretation, publication and dissemination of archaeological findings from the development application process.

County Development Plan Objectives HE 16-13: Undiscovered Archaeological Sites

To protect and preserve previously unrecorded archaeological sites within County Cork as part of any development proposals. The Council will require preservation in situ to protect archaeological monuments discovered. Preservation by record will only be considered in exceptional circumstances.

County Development Plan Objectives HE 16-14: Record of Protected Structures

(a) The identification of structures for inclusion in the Record will be based on criteria set out in the Architectural Heritage Protection Guidelines for Planning Authorities (2011).

(b) Extend the Record of Protected Structures to provide a comprehensive schedule for the protection of structures of special importance in the County during the lifetime of the Plan as resources allow.

(c) Seek the protection of all structures within the County, which are of special architectural, historical, archaeological, artistic, cultural, scientific, social, or technical interest. In accordance with this objective, a Record of Protected Structures has been established and is set out in Volume Two Heritage and Amenity, Chapter 1 Record of Protected Structures.

(d) Ensure the protection of all structures (or parts of structures) contained in the Record of Protected Structures.

(e) Protect the curtilage and attendant grounds of all structures included in the Record of Protected Structures.

(f) Ensure that development proposals are appropriate in terms of architectural treatment, character, scale, and form to the existing protected structure and not detrimental to the special character and integrity of the protected structure and its setting.

(g) Ensure high-quality architectural design of all new developments relating to or which may impact on structures (and their settings) included in the Record of Protected Structures.

(h) Promote and ensure best conservation practice through the use of specialist conservation professionals and craft persons.

(i) In the event of a planning application being granted for development within the curtilage of a protected structure, the repair of a protected structure should be prioritised in the first instance, i.e., the proposed works to the protected structure should occur, where appropriate, in the first phase of the development to prevent endangerment, abandonment, and dereliction of the structure.

County Development Plan Objectives HE 16-15: Protection of Structures on the NIAH

Protect, where possible, all structures which are included in the NIAH for County Cork, that are not currently included in the Record of Protected Structures, from adverse impacts as part of the development management functions of the County.

County Development Plan Objectives HE 16-16: Protection of Non-Structural Elements of Built Heritage

Protect non-structural elements of the built heritage. These can include designed gardens/garden features, masonry walls, railings, follies, gates, bridges, shopfronts, and street furniture. The Council will promote awareness and best practice in relation to these elements.

County Development Plan Objectives HE 16-17: Areas of Special Planning Control

Establish areas of special planning control within Architectural Conservation Areas where appropriate. These areas will include a scheme setting out objectives for the conservation and

enhancement of the special character of the area, and will be based on an Architectural Appraisal of each town.

County Development Plan Objectives HE 16-18: Architectural Conservation Areas

Conserve and enhance the special character of the Architectural Conservation Areas included in this Plan. The special character of an area includes its traditional building stock, material finishes, spaces, streetscape, shopfronts, landscape, and setting. This will be achieved by;

- (a) Protecting all buildings, structures, groups of structures, sites, landscapes, and all other features considered to be intrinsic elements to the special character of the ACA from demolition and non-sympathetic alterations.*
- (b) Promoting appropriate and sensitive reuse and rehabilitation of buildings and sites within the ACA and securing appropriate infill development.*
- (c) (c) Ensure new development within or adjacent to an ACA respects the established character of the area and contributes positively in terms of design, scale, setting, and material finishes to the ACA.*
- (d) Protect structures from demolition and non-sympathetic alterations.*
- (e) Promoting high-quality architectural design within ACAs.*
- (f) Seek the repair and re-use of traditional shopfronts and, where appropriate, encourage new shopfronts of a high-quality architectural design.*
- (g) Ensure all new signage, lighting, advertising, and utilities to buildings within ACAs are designed, constructed, and located in such a manner that they do not detract from the character of the ACA.*
- (h) Protect and enhance the character and quality of the public realm within ACAs. All projects that involve work within the public realm of an ACA shall undertake a character assessment of the said area, which will inform a sensitive and appropriate approach to any proposed project in terms of design and material specifications. All projects shall provide for the use of suitably qualified conservation architects/ designers.*
- (i) Protect and enhance the character of the ACA and the open spaces contained therein. This shall be achieved through the careful and considered strategic management of all signage, lighting, artworks/pieces/paintings, facilities, etc, to protect the integrity and quality of the structures and spaces within each ACA. Utilities.*
- (j) Ensure the protection and reuse of historic street finishes, furniture, and features which contribute to the character of the ACA.*

County Development Plan Objectives HE 16-19: Vernacular Heritage

(a) Protect, maintain and enhance the established character, forms, features and setting of vernacular buildings, farmyards and settlements, and the contribution they make to our architectural, archaeological, historical, social and cultural heritage and to local character and sense of place.

(b) Cork County Council encourages best conservation practice in the renovation and maintenance of vernacular buildings, including thatched structures, through the use of specialist conservation professionals and craft persons. Development proposals shall be

accompanied by appropriate documentation compiled by an experienced conservation consultant.

(c) There will generally be a presumption in favour of the retention of vernacular buildings and encouragement of the retention and re-use of vernacular buildings, subject to normal planning considerations, while ensuring that the reuse is compatible with environmental and heritage protection.

County Development Plan Objectives HE 16-20: Historic Landscapes

(a) Recognise the contribution and importance of historic landscapes and their contribution to the appearance of the countryside, their significance as archaeological, architectural, historical, and ecological resources.

(b) Protect the archaeological, architectural, historic, and cultural elements of the historic/heritage landscapes of the County of Cork.

(c) All new development within historic landscapes should be assessed in accordance with and giving due regard to Cork County Council's Guidance Notes for the Appraisal of Historic Gardens, Demesnes, Estates and their Settings, or any other relevant guidance notes or documents issued during the lifetime of the Plan.

County Development Plan Objective HE 16-21: Design and Landscaping of New Buildings

(a) Encourage new buildings that respect the character, pattern, and tradition of existing places, materials, and built forms and that fit appropriately into the landscape.

(b) Promote sustainable approaches to housing development by encouraging new building projects to be energy efficient in their design and layout.

(c) Foster an innovative approach to design that acknowledges the diversity of suitable design solutions in most cases, safeguards the potential for exceptional innovative design in appropriate locations, and promotes the added economic, amenity, and environmental value of good design.

(d) Require the appropriate landscaping and screen planting of proposed developments by using predominantly indigenous/local species and groupings and protecting existing hedgerows and historic boundaries in rural areas. Protection of historical/commemorative trees will also be provided for.

County Development Plan Objectives HE 16-22: Village Design Statements

Facilitate the preparation and implementation of village design statements and other community-led projects and plans to enhance village environments whilst ensuring that such initiatives are consistent with other Plan policies.

County Development Plan Objectives HE 16-23: Cultural Heritage

Protect and promote the cultural heritage of County Cork as an important economic asset and for its intrinsic value to the identity of the place and the well-being of people within the County.

County Development Plan Objectives HE 16-24: Naming of New Developments

Promote and preserve local place names, local heritage, and the Irish language by ensuring the use of local place names or geographical or cultural names which reflect the history and landscape of their setting in the naming of new residential and other developments. Such an approach will be a requirement of planning permissions for new developments.

11.4.5 Sensitivity of Landscape

In landscape terms, the site is located within a dense commercial area landscape occupied not only by the existing pharmaceutical plant but also by many varied commercial properties that lie adjacent.

The Historic Environment Viewer lists three monuments within the site: a horizontal watermill (RMP No. CO075-052----); a graveyard (RMP No. CO075-020001-); and a church (RMP No. CO075-020002-) listed in the Historic Environment Viewer. However as Cork County Council is aware, one of these (horizontal watermill (RMP No. CO075-052----) is incorrectly recorded as being within the site when in fact it is located to the southwest of the site and is outside the site boundary.

The site contains one Protected Structure, as listed in the *Cork County Development Plan 2022–2028*. The Church (RPS No. 00495) is located within the overall site boundary but is not affected by the proposed development as it is located within a separately fenced off area screened by trees and vegetation and designated within the County Development Plan as Green Infrastructure.

The site also lies within a landscape classified as a High Value Landscape in the Cork County Development Plan 2022-2028.

11.4.6 Viewer Sensitivity

The visual receptors have great potential to change within the landscape, but in the case of the proposed development, they are reduced by the following factors:

- The site of the proposed development is located within a substantial existing pharmaceutical plant within a location also dominated by industrial or commercial activity.
- There are no protected views or sites within or within proximity to the proposed development.
- The site does contain one Protected Structure, as listed in the *Cork County Development Plan 2022–2028*, Church (RPS No. 00495), in addition to two archaeological monuments graveyard (RMP No. CO075-020001-) and a church (RMP No. CO075-020002-). Though both are located within the overall site boundary, they are not affected by the proposed development as they are located within a separately fenced off area screened by trees and vegetation, and designated within the County Development Plan as Green Infrastructure.

- A landscape management plan has been prepared in response to a request for further information (No. 1) issued by Cork County Council in relation to planning application 25/05753, in which it is proposed to enhance the visual amenity and biodiversity of the graveyard by -
 - Plant and establish a new native hedgerow inside the perimeter fence from the road junction to the side entrance to the commercial premises. This will be maintained at 1.8m high, to increase biodiversity and maintain a dense vegetative boundary to the site. Planting species will include: Holly (*Ilex aquilifolium*), Hazel (*Corylus avellana*), Blackthorn (*Prunus spinosa*), Whitethorn (*Crataegus monogyna*)
 - The existing access gates to the Graveyard will be replaced with new welded mesh gates and a historic information sign/plaque fixed to the fence adjacent to the gate.
 - The existing mesh wire fence and posts are to be replaced with a new welded mesh fence to the same height and new posts.
 - Existing poplar trees along the internal boundary are to be retained and protected. A group of evergreen pine trees will be planted along the edge of the internal roadway and will give additional screening and, in time, become the climax species of the planting area. A low mounding to be provided 1m high with shrub planting, to avoid interference with existing tree roots.

Consequently, the sensitivity to visual receptors is considered as low, and the magnitude of visual change would be considered as low (minor loss or alteration to key elements/features/characteristics of the existing landscape or view and/or introduction of elements that may not be uncharacteristic when set within the attributes of the receiving landscape/view) and/or no change (very minor loss or alteration to key elements/features/characteristics of the existing landscape or view and/or introduction of elements that are not uncharacteristic when set within the attributes of the receiving landscape/view).

11.5 Characteristics of the Proposed Development

11.5.1 General Characteristics of the Proposed Development

The proposed development comprises various elements to be developed on a phased basis over a period of ten years. A proposed site layout drawing is presented in Drg. Ref. 5340-PLA-XXX-DR-DJF-AR-0010 (see Plates 12-16 for further).

1. **Unit 1 Production Building** – Construction of a replacement, multi-storey Unit 1 Production building approx. 34m L x 23m W x 26m H (approx. 3,000m²).
2. **In Process Tank Farm Bund** – Modifications to the existing 'In Process Tank Farm' bund and ancillary plant and services related to same including pipe racks.
3. **Laboratory Gas Bottle Store** – Construction of a new Laboratory Gas Bottle Store approx. 4m L x 2m W x 4m H and ancillary plant and services related to same including pipe racks.
4. **Regenerative Thermal Oxidiser** – Provision of a new Regenerative Thermal Oxidiser, associated exhaust stack (approx. 10mAGL) and ancillary plant and services related to same including pipe racks.
5. **Process Cooling** – Provision of 1no. process cooling tower (approx. 5mAGL) to be installed to provide additional cooling for manufacturing processes and ancillary plant and services related to same including pipe racks.
6. **Combined Heat and Power Plant and Heat Recovery System** – addition of a new natural-gas fired containerised combined heat and power (CHP) plant (approx. 6 MW_{TH} Total Rated Thermal Input) and associated containerised waste heat boiler system with exhaust stack approx. 13mAGL and ancillary plant, kiosks and services related to same including pipe racks.
7. **Ethanol Storage Tank** – addition of a new ethanol storage tank (2.4m diameter x 7m H) in existing solvent tank farm bund and ancillary plant and services related to same including pipe racks.
8. **Car Park** – extension to existing car park including associated lighting to provide a net increase of additional 67no. permanent car parking spaces.
9. **Wastewater Treatment Plant (WWTP) Control and Blower Building** - Single storey building associated with WWTP expansion, approx. 11m L x 10m W x 4m H (approx. 90m²); and ancillary plant and services related to same including pipe racks.
10. **WWTP Chemical storage tanks and bund** – new concrete base and bund (approx. 45m²) with tanks approx. 3.5m H and ancillary plant and services related to same including pipe racks.

11. **WWTP Inlet works** – new screens, tanks up to approx. 9m H and ancillary plant and services related to same including pipe racks
12. **WWTP Dissolved Air Flotation tank** – new tank approx. 5m L x 2m W x 4m H and ancillary plant and services related to same including pipe racks.
13. **Site Works** – All associated site services, site development works and landscaping to facilitate the proposed development.

11.5.2 Specific Characteristics of the Proposed Development

A number of landscape-related drawings accompany the planning application and are presented in Appendix 11-A.

11.6 Potential Impacts

11.6.1 General

The potential impacts are the impacts that the proposed development could have within considering landscape mitigation. Impacts are considered under the following headings:

Short-term impacts	Construction phase of up to 7 years.
Medium-term impacts	Operational phase from 7 to 15 years.
Long-term impacts	Operational phase from 15 to 60 years.

These effects have been compiled to identify any areas where the proposed development may have an injurious effect on the scenic and/or visual character of the area and represent the potential impact rather than an actual long-term effect. This enables the recognition of potential, rather than actual, impacts, which facilitates the identification of suitable landscape mitigation measures.

11.6.2 Construction Phase: Landscape

The landscape would undergo a slight change during the proposed construction works, which would involve some site clearance necessary to remove existing commercial premises and prepare the area for construction. Such clearance would be relatively small-scale in nature, however, and as it will occur within an industrial/commercial zone, it would not affect the adjacent landscape.

Any potential negative effects would be short-term in duration and only occur during the construction phase.

11.6.3 Construction Phase: Visual

During the construction works, the following elements could have the potential to cause visual effects:

- Construction work entrances or movement of plant.
- Temporary site works, i.e., hoarding, plant, storage areas, compounds, etc.
- Construction site traffic, dust, emissions.
- Demolition and site clearance.
- Groundworks and site deliveries.

11.6.4 Operational Phase: Landscape

Following construction, the main landscape effect would be the very slight change of use from one existing commercial structure to a larger one. This would only be slightly noticeable given its siting within the existing pharmaceutical premises and commercial landscape.

11.6.5 Operational Phase: Visual

During operation, the only elements that have the potential to give rise to a visual effect are:

- New structures, fencing, lighting, and pathways.
- Proposed landscaping plan.

11.6.6 Do Nothing Scenario

The 'Do Nothing' scenario refers to potential impacts should the development not proceed. In relation to the subject site, if the proposed Unit 1 structure was constructed (Plates 15-16) without the implementation of the proposed landscape management plan (Plates 13-14), then there would be some slight impacts.

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11.7 Mitigation Measures

11.7.1 General

Consideration was given to the avoidance of effects wherever possible during the design of the proposed developments. Mitigation and avoidance measures have been designed within the proposed developments to reduce the potential adverse landscape effects. However, some degree of effect is inevitable, and wherever possible, measures have been proposed to mitigate any possible adverse effects.

11.7.2 Landscape Aims and Objectives

As outlined in Policy GI-14 of the Cork County Development Plan 2022–2028, the principal objective is to protect the built and natural environment and the archaeological landscape (GI-16).

11.7.3 Construction Phase

During construction, site hoarding may be erected as a health and safety precaution. Hours of work will be restricted according to the local authority and local requirements.

Visual effects will be mitigated during the construction phase through appropriate site management and work practices to ensure site deliveries are effective, all internal and external roads are kept clean, dust and noise are kept to a minimum, and the site is kept tidy and rubbish-free. Site lighting will be kept to a minimum where utilised.

11.7.4 Operational Phase

Mitigation measures during the operational phase may be as follows:

- The landscape management plan (Plates 13-14) will be implemented to reduce the impact of the proposed development on the surrounding natural and archaeological environments.
- All lighting will be according to design specifications.
- The design, finish, colour, and texture of the completed structures will be in keeping with their surroundings and be sympathetic to the surrounding environment in minimising any visual impact.

11.8 Predicted Impacts of the Development

11.8.1 Construction Phase

During construction, the predicted impact would be the operation and use of the plant, plant entering and exiting the site, the use of site hoarding, the use of a temporary site compound, as well as demolition, excavation, and casting operations.

11.8.2 Operational Phase

The operational phase will involve the use of the various structures.

For this assessment, a total of eight viewpoints within the surrounding landscape were selected to assess the development's potential visual impacts on the overall landscape. Photographs of the site were taken, and the proposed development was added digitally to provide a visual aid in assessing the development's proposed appearance within the landscape (Plates 1 and 5).

This section of the assessment provides written descriptions of landscape views, and accompanying annotated photographs, of the proposed development from specified locations within the overall landscape. As part of the assessment, each viewpoint is described, and potential visual impacts are assessed and scored.

The potential impacts are assessed under the following criteria:

- Landscape Sensitivity.
- Impact Significance.
- Magnitude of Impact.

11.8.2.1 Viewpoint 1

Viewpoint 1 is a view from the Castle (CO075-021) looking west towards the site of the Church & graveyard (CO075-020001-002, Plate 2) and proposed development beyond (Plate 2). The existing view shows how the site of the church is surrounded on three sides (north, south, and west) by mature field boundaries of native trees and hedgerows. The site is currently fenced with a green mesh fence with a grass verge between it and the roadway's edge.

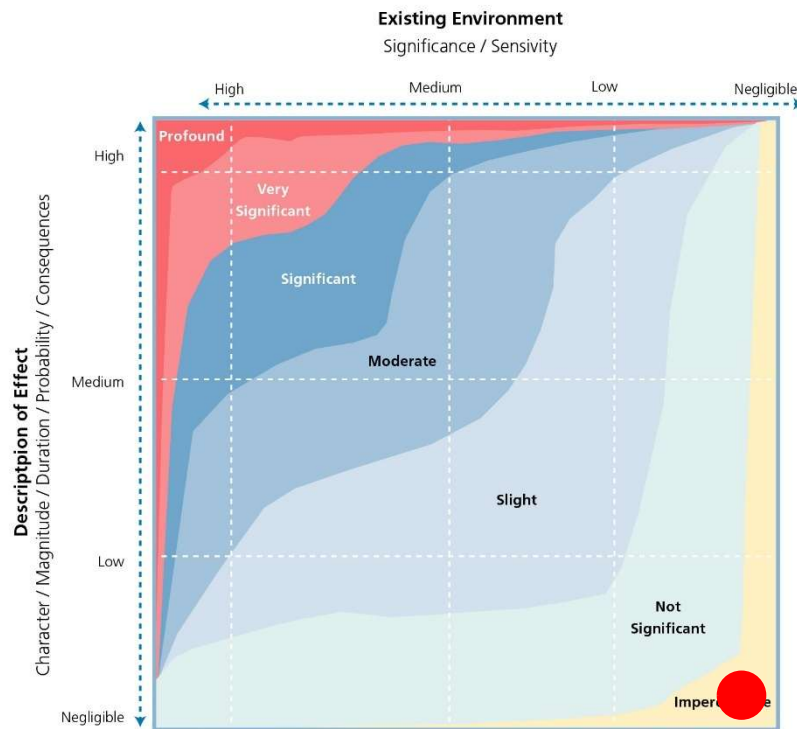
The proposed landscape plan (Plates 13-14) shows the previously permitted plans (ref. 25/05753) to plant and establish a native hedgerow on the inside of the fenceline to integrate this boundary into the overall landscape. Additional hedgerow and trees will also be planted within the southern fenceline of Cara Partners as part of the proposed development to enhance the existing woodland.

The site of the proposed development cannot be viewed from this viewpoint, either existing or proposed. It should be noted that the adjacent commercial premises to the north, Intelligent Security Solutions, can clearly be seen from this viewpoint due to the lack of natural screening, whereas the Cara Premises can only be partly seen in the existing view and will be completely screened following the proposed landscape management plan.

Impacts/Values

The quality of the development's effects would be considered as Neutral, as there is no effect, or imperceptible effects, given the presence of the existing boundaries and proposed landscape plan. The effect on the significance/sensitivity of the existing environment would be considered as Negligible (changes affecting small or very restricted areas of landscape character). This may include the limited loss of some elements or the addition of some new features or elements that are characteristic of the existing landscape or are hardly perceivable, and the consequence of that effect would also be considered negligible. The significance of the effect would, therefore, be considered as Imperceptible, or an effect capable of measurement but without significant consequence.

Criteria	Status
Significance/sensitivity on Existing Environment	Negligible
Consequence of Effect	Negligible
Significance of Effect	Imperceptible



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11.8.2.2 Viewpoint 2

Viewpoint 2 is a view from the public road adjacent to the church and graveyard (CO075-020001-002) looking north (Plate 3). The castle (CO075-021) can be seen to the east. The existing view shows how the site of the church is surrounded on three sides (north, south, and west) by mature field boundaries of native trees and hedgerows. The site is currently fenced with a green mesh fence with a grass verge between it and the roadway's edge. Large stones are also placed on the grass verge to prevent unlawful parking. The site of the Cara commercial premises cannot be viewed from this viewpoint due to the natural screening already in existence.

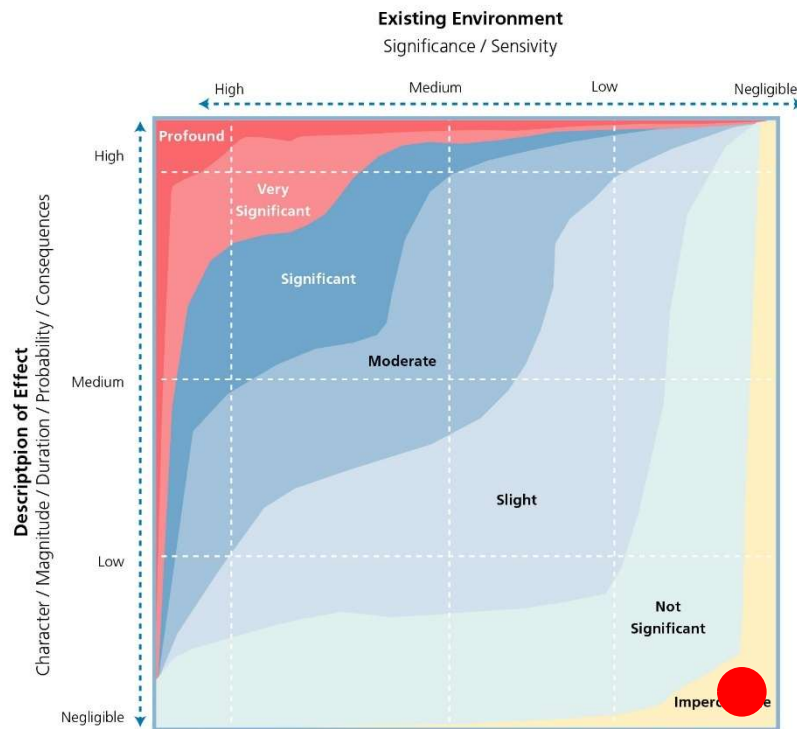
The proposed landscape plan (Plates 13-14) shows the previously permitted plans (ref. 25/05753) to plant and establish a native hedgerow on the inside of the fenceline to integrate this boundary into the overall landscape. Additional hedgerow and trees will also be planted within the southern fenceline of Cara Partners as part of the proposed development to enhance the existing woodland.

The site of the proposed development cannot be viewed from this viewpoint, either existing or proposed, but the new fence and hedge will enhance the green space surrounding the graveyard and church.

Impacts/Values

The quality of the development's effects would be considered as Neutral, as there is no effect, or imperceptible effects, given the presence of the existing boundaries and proposed landscape plan. The effect on the significance/sensitivity of the existing environment would be considered as Negligible (changes affecting small or very restricted areas of landscape character). This may include the limited loss of some elements or the addition of some new features or elements that are characteristic of the existing landscape or are hardly perceivable, and the consequence of that effect would also be considered negligible. The significance of the effect would, therefore, be considered as Imperceptible, or an effect capable of measurement but without significant consequence.

Criteria	Status
Significance/sensitivity on Existing Environment	Negligible
Consequence of Effect	Negligible
Significance of Effect	Imperceptible



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11.8.2.3 Viewpoint 3

Viewpoint 3 is a view from across the public road to the east of the church and graveyard (CO075-021001-002), looking west towards the site of the church and Cara Partners (Plate 4). The existing view shows how the site of the church is surrounded on three sides (north, south, and west) by mature field boundaries of native trees and hedgerows. The site is currently fenced with a green mesh fence with a grass verge between it and the roadway's edge. Large stones are also placed on the grass verge to prevent unlawful parking. Mature trees are also visible on the grounds of Cara Partners along an internal roadway, which aids in screening the Cara premises.

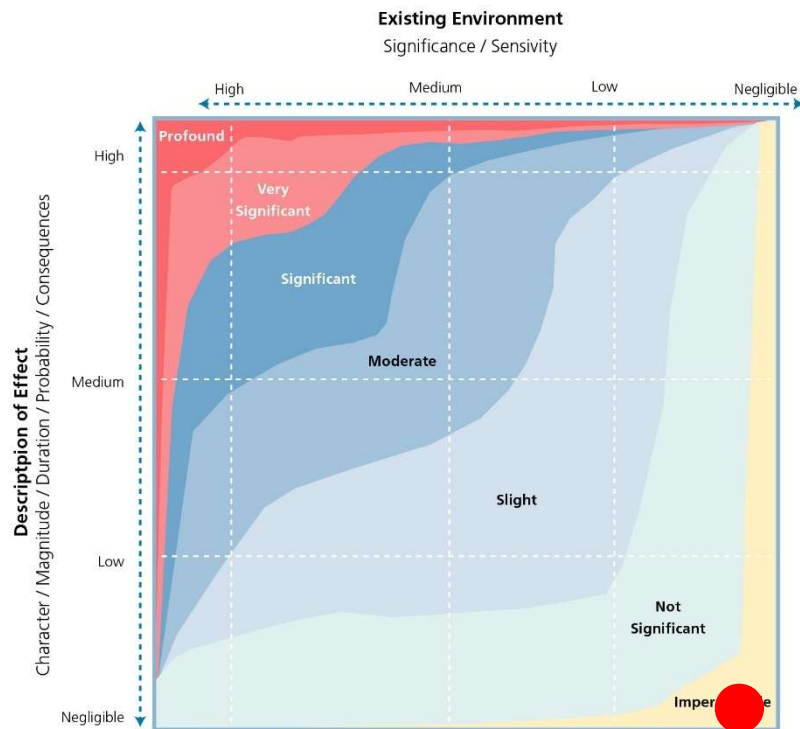
The proposed landscape plan (Plates 13-14) shows the previously permitted plans (ref. 25/05753) to plant and establish a native hedgerow on the inside of the fenceline to integrate this boundary into the overall landscape. Additional hedgerow and trees will also be planted within the southern fenceline of Cara Partners as part of the proposed development to enhance the existing woodland.

The site of the proposed development cannot be viewed from this viewpoint, either existing or proposed.

Impacts/Values

The quality of the development's effects would be considered as Neutral, as there is no effect, or imperceptible effects, given the presence of the existing boundaries and proposed landscape plan. The effect on the significance/sensitivity of the existing environment would be considered as Negligible (changes affecting small or very restricted areas of landscape character). This may include the limited loss of some elements or the addition of some new features or elements that are characteristic of the existing landscape or are hardly perceivable, and the consequence of that effect would also be considered negligible. The significance of the effect would, therefore, be considered as Imperceptible, or an effect capable of measurement but without significant consequence.

Criteria	Status
Significance/sensitivity on Existing Environment	Negligible
Consequence of Effect	Negligible
Significance of Effect	Imperceptible



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11.8.2.4 Viewpoint 4

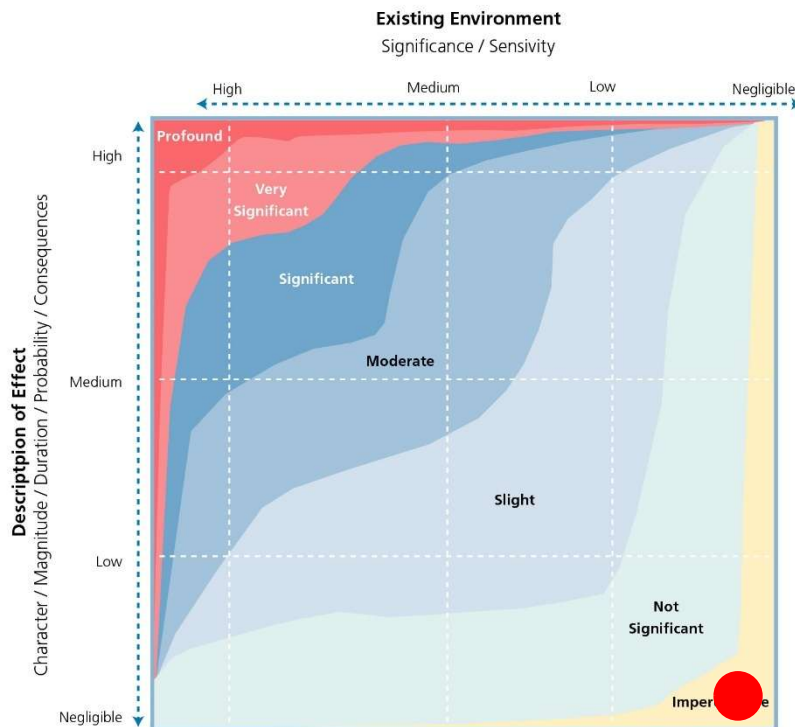
Viewpoint 4 is a view from across the public road to the northeast of the proposed development site, alongside the L3004 looking southwest across the Certa petrol station car park (Plate 6). This view is characterised by the existing roadway and tall roadside fencing with mature trees and hedgerows behind.

The site of the proposed development cannot be viewed from this viewpoint, either existing or proposed.

Impacts/Values

The quality of the development's effects would be considered as Neutral, as there is no effect, or imperceptible effects, given the presence of the existing boundaries and proposed landscape plan. The effect on the significance/sensitivity of the existing environment would be considered as Negligible (changes affecting small or very restricted areas of landscape character). This may include the limited loss of some elements or the addition of some new features or elements that are characteristic of the existing landscape or are hardly perceivable, and the consequence of that effect would also be considered negligible. The significance of the effect would, therefore, be considered as Imperceptible, or an effect capable of measurement but without significant consequence.

Criteria	Status
Significance/sensitivity on Existing Environment	Negligible
Consequence of Effect	Negligible
Significance of Effect	Imperceptible



11.8.2.5 Viewpoint 5

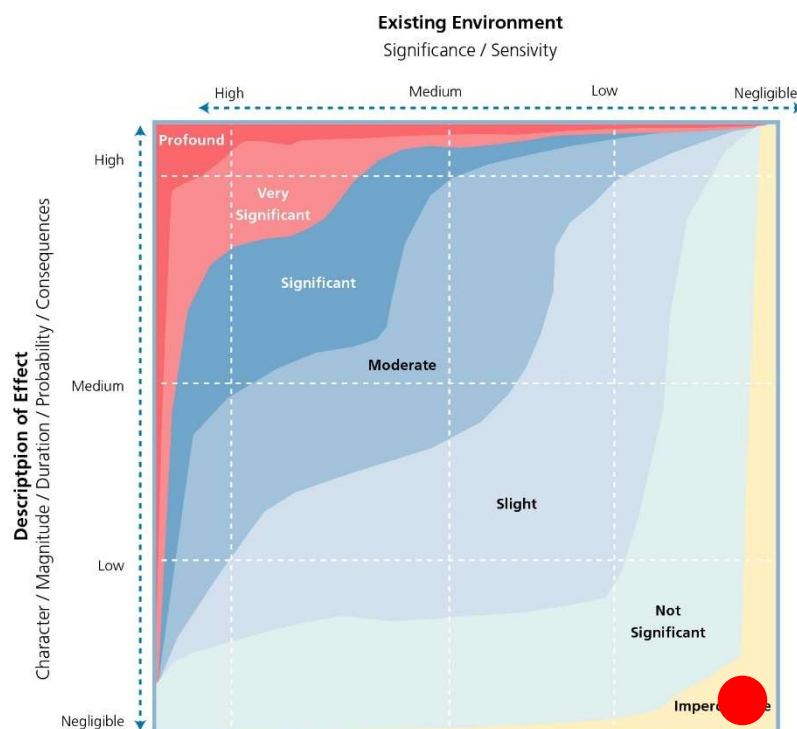
Viewpoint 5 is a view from the junction of the L2998 and Factory Hill looking southeast towards the site of the proposed development (Plate 7). The landscape is characterised by several local and national roads, including the N25 and the Dunkettle interchange, which is partly visible. A large number of commercial premises within the Northeast Business Park are visible, as are some commercial premises which are partly visible on Little Island. Local screening, mature trees, and field boundaries are also visible to the south and southeast.

The site of the proposed development cannot be viewed from this viewpoint, either existing or proposed, due to the nature of the existing topography, local and national roads, and tree screening.

Impacts/Values

The quality of the development's effects would be considered as Neutral, as there is no effect, or imperceptible effects, given the presence of the existing boundaries and proposed landscape plan. The effect on the significance/sensitivity of the existing environment would be considered as Negligible (changes affecting small or very restricted areas of landscape character). This may include the limited loss of some elements or the addition of some new features or elements that are characteristic of the existing landscape or are hardly perceivable, and the consequence of that effect would also be considered negligible. The significance of the effect would, therefore, be considered as Imperceptible, or an effect capable of measurement but without significant consequence.

Criteria	Status
Significance/sensitivity on Existing Environment	Negligible
Consequence of Effect	Negligible
Significance of Effect	Imperceptible



11.8.2.6 Viewpoint 6

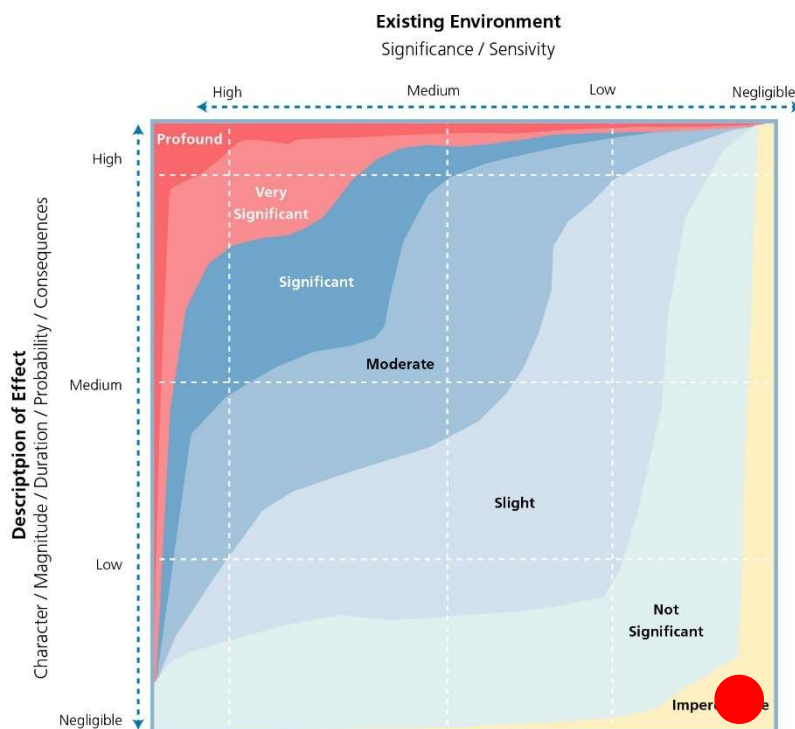
Viewpoint 6 is a view from the Cork Harbour Greenway at Blackrock Castle looking east across the harbour and estuary towards Little Island and the site of the proposed development (Plate 8). The landscape is dominated by the estuary and mature field boundaries and trees along the western edge of Little Island. The N25 and the Dunkettle interchange are partly visible.

The site of the proposed development cannot be viewed from this viewpoint, either existing or proposed, as it is shielded by the local topography and the dense tree cover along the western edge of Little Island.

Impacts/Values

The quality of the development's effects would be considered as Neutral, as there is no effect, or imperceptible effects, given the presence of the existing boundaries and proposed landscape plan. The effect on the significance/sensitivity of the existing environment would be considered as Negligible (changes affecting small or very restricted areas of landscape character). This may include the limited loss of some elements or the addition of some new features or elements that are characteristic of the existing landscape or are hardly perceivable, and the consequence of that effect would also be considered negligible. The significance of the effect would, therefore, be considered as Imperceptible, or an effect capable of measurement but without significant consequence.

Criteria	Status
Significance/sensitivity on Existing Environment	Negligible
Consequence of Effect	Negligible
Significance of Effect	Imperceptible



11.8.2.7 Viewpoint 7

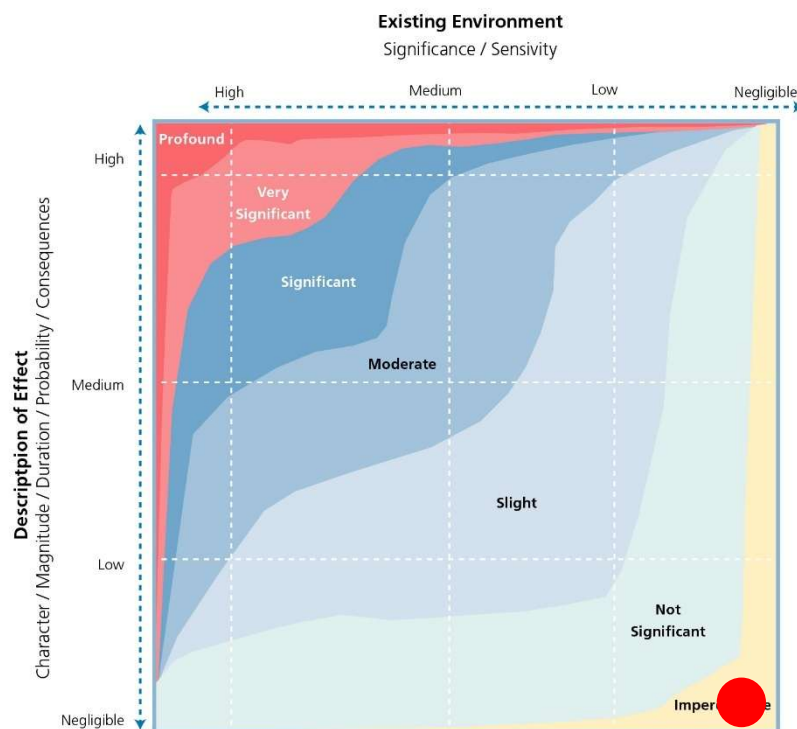
Viewpoint 7 is a view from the Cork Harbour Greenway at Hartys Quay looking northeast across the estuary towards Little Island and the site of the proposed development (Plate 9). The landscape is dominated by the open estuary and Hop Island to the east. Little Island is visible to the northeast, where a large number of commercial premises and chimneys are clearly visible.

The site of the proposed development cannot be viewed from this viewpoint, either existing or proposed, as it is shielded by the local topography and the large-scale commercial properties along the southern edge of Little Island and the waterfront business park.

Impacts/Values

The quality of the development's effects would be considered as Neutral, as there is no effect, or imperceptible effects, given the presence of the existing boundaries and proposed landscape plan. The effect on the significance/sensitivity of the existing environment would be considered as Negligible (changes affecting small or very restricted areas of landscape character). This may include the limited loss of some elements or the addition of some new features or elements that are characteristic of the existing landscape or are hardly perceivable, and the consequence of that effect would also be considered negligible. The significance of the effect would, therefore, be considered as Imperceptible, or an effect capable of measurement but without significant consequence.

Criteria	Status
Significance/sensitivity on Existing Environment	Negligible
Consequence of Effect	Negligible
Significance of Effect	Imperceptible



11.8.2.8 Viewpoint 8

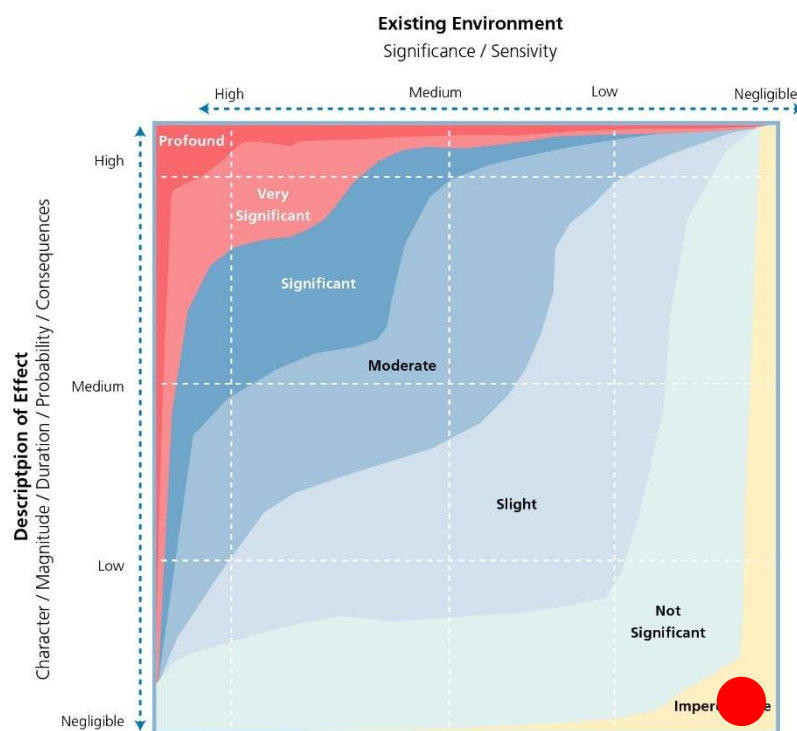
Viewpoint 8 is a view from the Passage West Greenway looking north across the estuary towards Little Island and the site of the proposed development (Plate 10). The landscape is dominated by the open estuary and Hop Island to the east. Little Island is visible to the north, where a large number of commercial premises and chimneys are clearly visible.

The site of the proposed development cannot be viewed from this viewpoint, either existing or proposed, as it is shielded by the local topography and the large-scale commercial properties along the southern edge of Little Island and the waterfront business park.

Impacts/Values

The quality of the development's effects would be considered as Neutral, as there is no effect, or imperceptible effects, given the presence of the existing boundaries and proposed landscape plan. The effect on the significance/sensitivity of the existing environment would be considered as Negligible (changes affecting small or very restricted areas of landscape character). This may include the limited loss of some elements or the addition of some new features or elements that are characteristic of the existing landscape or are hardly perceivable, and the consequence of that effect would also be considered negligible. The significance of the effect would, therefore, be considered as Imperceptible, or an effect capable of measurement but without significant consequence.

Criteria	Status
Significance/sensitivity on Existing Environment	Negligible
Consequence of Effect	Negligible
Significance of Effect	Imperceptible



11.9 Cumulative Impacts

Based on the results of the baseline data and assessment, there is a low risk of cumulative impacts arising from the development. The surrounding lands are zoned for industrial use, and the existence of a large-scale pharmaceutical plant on the site already dominates the views and landscape. Accordingly, given this existing character and the future industrial development of the surrounding lands, the proposed development is not predicted to cause any adverse landscape or visual impacts and is unlikely to give rise to a negative cumulative impact.

This assessment concluded that the proposals would have an effect that is considered to be imperceptible.

11.10 Residual Impacts

It was determined that the proposed developments would have a negligible effect, or an effect capable of measurement but without significant consequence (negligible).

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Appendix 11-A

LVIA Plates

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Plate 1: Location of Viewpoints 1-3.



Viewpoint 1: Existing.



Viewpoint 1: Proposed.

Plate 2: Viewpoint 1: Existing and Proposed.



Plate 3: Viewpoint 2: Existing and Proposed.



Viewpoint 3: Existing.



Viewpoint 3: Proposed.

Plate 4: Viewpoint 3: Existing and Proposed.



Plate 5: Location of Viewpoints 4-8.



Plate 6: Viewpoint 4 Existing and Proposed.



Plate 7: Viewpoint 5 Existing and Proposed.



Plate 8: Viewpoint 6 Existing and Proposed.



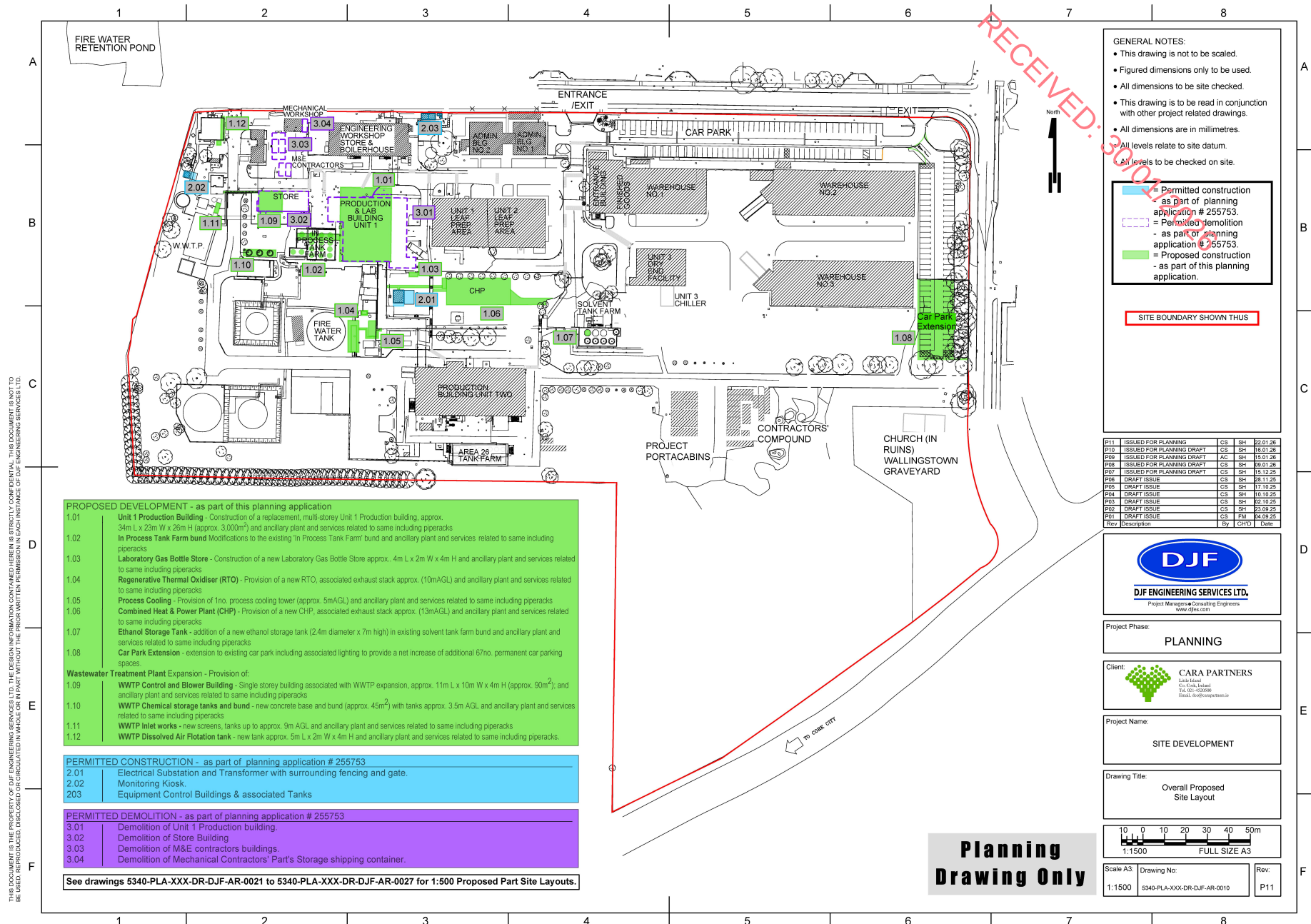
Plate 9: Viewpoint 7 Existing and Proposed.

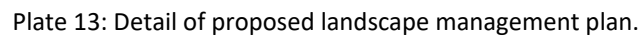


Plate 10: Viewpoint 8 Existing and Proposed.



Plate 11: Plan of Scenic Routes listed in the Cork County Development Plan 2022-2028.







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Plate 15: Completed render of proposed Unit 1 structure.

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Plate 16: Completed render of proposed Unit 1 .