

10.0 LANDSCAPE & VISUAL IMPACT

10.1 ASSESSMENT METHODOLOGY

The assessment involved visiting the site and surrounding area; a review of statutory planning and other documentation in order to ascertain local and wider significance; review of mapping and aerial photography, and layout and construction details of the proposed development.

This assessment has regard to the EPA Draft ‘*Guidelines on the information to be contained in Environmental Impact Assessment Reports*’ (2017) and ‘*Draft Advice Notes for preparing Environmental Impact Statements*’ (2015). The landscape and visual impact assessment for the proposed development takes account of the character and nature of the existing site and its surrounds, the location of sensitive landscapes and visual receptors, the sensitivity and significance of the site, and its vulnerability to change.

Classification of significance of effects or impacts as set out in Table 1 below has been derived from the EPA’s Draft *Guidelines on information to be contained in EIA Reports*; from the UK Landscape Institute’s *Guidelines for Landscape and Visual Impact Assessment (3rd Edition)*; and from the experience of the author in carrying out landscape and visual assessments for over 25 years.

Table 1: Classification of Significance of Effects (Impacts)					
		Existing Environment			
		Significance / Sensitivity			
		High	Medium	Low	Negligible
Description of Impact Character / Magnitude / Duration / Probability / Consequences	High	Profound	Very Significant	Significant / Moderate	Moderate / Slight
	Medium	Very Significant / Significant	Significant / Moderate	Moderate	Slight / Not Significant
	Low	Significant / Moderate	Moderate / Slight	Slight / Not Significant	Not Significant / Imperceptible
	Negligible	Slight / Not Significant	Not Significant	Not Significant / Imperceptible	Imperceptible

These effects, which in nature may be positive, neutral or negative/adverse, are described as follows:

- Imperceptible:** An effect capable of measurement but without noticeable consequences.
- Not significant:** An effect which causes noticeable changes in the character of the environment but without noticeable consequences.
- Slight:** An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
- Moderate:** An effect that alters the character of the environment in a manner that is consistent with existing and emerging trends.
- Significant:** 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 majority of a sensitive aspect of the environment.

Profound: An effect which obliterates sensitive characteristics.

In terms of duration effects are considered as follows:

Momentary: lasting seconds to minutes.
Brief: lasting up to one day.
Temporary: lasting up to one year.
Short-term: lasting one to seven years.
Medium-term: lasting seven to fifteen years.
Long-term: lasting fifteen to sixty years.
Permanent: lasting over sixty years.

Further aspects of effects including their **magnitude** (i.e. extent, frequency, and context); **probability** (i.e. likely, indeterminable); and **type** (i.e. cumulative, interaction (synergistic), residual, indirect, etc.) are also considered in the assessment, where appropriate.

10.1.1 Nature of Impacts

Impacts on landscape arise in two distinct but closely related aspects. The first is impact on the character of the landscape arising from the insertion of new development or the alteration of elements within an existing context. The second aspect is visual impact, which arises as a result of changes or insertions within a view. The impact on the view depends on the degree and nature of the change and such changes may rise from either 'visual intrusion' (i.e. alteration without appreciable blocking) or 'visual obstruction' (i.e. alteration with a notable extent or full blocking).

It is recognised that as with all landscape and visual considerations, impacts will be influenced and informed, to some degree, by subjective perceptions of how the overall change(s) matter to any given individual.

The assessment of landscape and visual impacts includes:

- Direct impacts upon specific landscape elements within and adjacent to the site
- Effects on the overall pattern of the landscape elements which give rise to the character of the site and its surroundings
- Impacts upon any special interests in and around the site
- Direct impacts of the scheme upon views, and
- Overall impact on landscape character and visual amenity

10.2 SITE CONTEXT AND RECEIVING ENVIRONMENT

The proposed development is for an underground double circuit 110kV transmission cable installation from the existing Belcamp 220kV and 110kV Substation to a permitted 110 kV Substation (Darndale Substation) located on the former Diamond Innovations site (Unit 1C), Clonshaugh Business & Technology Park and adjacent lands.

The wider area has a substantially industrial character and includes additional lands zoned for industrial development. The area also comprises significant road infrastructure including the grade separated M1/M50 motorway interchange and the

R139 regional road, and is also adjoined by residential areas, open space and public parks accessed via local road networks.

The proposed grid connection development will be constructed in a number of existing land uses, including industrial estate lands, open scrub fields, the R139 carriageway corridor, and open grassland.

In that context, along the proposed alignment, substantial tree and hedgerows are located principally along both sides of the R139 corridor, and smaller areas of open scrub fields, woodland and grass are located towards either end of the proposed development. The Mayne River lies to the north of the R139, and the proposed grid connection will cross the river close to the Belcamp Substation.

10.2.1 Landscape Planning Context

The Industrial Estate is located within the northern extent of the Dublin City administrative area, and within lands **Zoned Z6: Employment/Enterprise** in the Dublin City Development Plan, with the objective *...to provide for the creation and protection of enterprise and facilitate opportunities for employment creation*. Outside of the Industrial Estate to the east and south, the lands are predominantly **Zoned Z1: Sustainable Residential Neighbourhoods** *...to protect, provide and improve residential amenities*, and **Z9 Amenity / Open Space Lands / Green Network** *...to preserve, provide and improve recreational amenity and open space and green networks, and with small localised pockets of Z4 Mixed Services Facilities, Z3 Neighbourhood Facilities, and Z15 Institutional, Educational, Recreational, Community Gain, Infrastructure and Health in the wider setting*.

The Belcamp Substation is located within the Fingal County administrative area and immediately north of the R139, and within lands **Zoned HT:** *...to provide for office, research and development of high technology/high technology manufacturing type employment in a high quality built and landscape environment*.

10.2.2 Landscape and Visual Significance and Sensitivity

The route of the proposed transmission cable connection route is substantially within the R139 roadway corridor, with the western portion leading to the Darndale Substation leading through an area of open scrub woodlands, and the eastern portion connecting to the Belcamp Substation across predominantly open grassland and crossing the Mayne River.

Landscape character and fabric of the proposed route corridor includes:

1. Industrial estate lands;
2. Open scrub fields (Industrial zoning) south of the R139;
3. Culverted section of Mayne River south of the R139;
4. The existing roundabout carriageway and verges at the Clayton Hotel;
5. The R139 carriageway;
6. Open grassland (Industrial zoning), and Santry River crossing between the R139 and the Belcamp Substation.

Landscape sensitivity along the route is low sensitivity being existing road carriageway and industrially zoned lands. There are no designated landscapes or important viewpoints in the vicinity of the proposed transmission cable connection route.

Visual receptors along the route include:

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1. Road users along the R139 and leading to adjoining local roads including the Clonshaugh Road; and
 2. Employees and visitors to the area, including industrial facilities and the Clayton Hotel.

Visual sensitivity along the route corridor is low and relates primarily to road users along the R139. It is noted that the route alignment and underground nature of proposed development, is such as to be remote from existing residential properties, and as such there are no sensitive residential visual receptors.

10.3 Characteristics of the Proposed Development

The proposed transmission cable connection development is an underground grid connection, approximately 2.1km in total length, running from the existing Darndale Substation to the existing Belcamp Substation.

Travelling away from the approved Darndale 110kV substation the underground cable follows the periphery of the greenfield site, initially north for a distance of approximately 180m, before realigning east for a further distance of approximately 430m. From here it enters the road reserve on the west side of the roundabout adjacent to the Clayton Hotel. The proposed route then turns eastwards and runs along the M50/R139 before entering the Belcamp Substation site from the south.

Full details of the proposed development are included in Chapter 2.

10.4 POTENTIAL IMPACT OF THE PROPOSED DEVELOPMENT

The nature of the proposed development, being an underground transmission cable, is such that potential landscape and visual effects will predominantly be associated with the construction stage and will be temporary in nature. The proposed transmission cable route is substantially within an existing road carriageway and open scrub or grassed fields, and with localised traversing of existing tree and hedgerows and the Mayne River.

10.4.1 Do-Nothing Scenario

In the scenario where the proposed development did not proceed as planned, it is likely that the project area will remain substantially unchanged in the short to medium term, or until such time as another development might be proposed.

10.4.2 Construction Phase

During construction, landscape and visual impacts are related to the visual and physical disruption arising from temporary and short-term works; general construction site activity; localised hoarding, clearance and excavation, and use of construction vehicles and equipment, including lighting.

Potential construction impacts will arise from:

- Establishment of site enclosures and construction traffic access routes;

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- Soil stripping, localised removal of vegetation, excavation and laying of grid connection infrastructure;
 - Construction vehicular activity, site lighting, and temporary traffic management regimes.

Potential construction stage impacts will be slight, negative and temporary.

The existing soft and hard landscape, including field, grass verge and carriageway surfaces, will be reinstated as the trench is closed, and re-seeding and planting will be implemented as appropriate to reinstate existing vegetation, returning the transmission cable route corridor to its pre-construction condition for the operational stage.

10.4.2 Operational Phase

Upon completion, the full extent of the transmission cable connection trench will have been reinstated to its pre-construction condition, and potential operational stage impacts will generally be imperceptible and neutral. Where new trees are planted to reinstate existing roadside tree screening, impacts will be locally slight and short term as the trees establish in the early years.

10.4.3 Avoidance, Remedial and Mitigation Measures

The proposed transmission cable route was determined through a process of route option selection and multi-criteria assessment.

In relation to landscape in particular, the proposed route avoids impact on sensitive landscape and receptors such as residential areas, open spaces and public parks, and also limits direct impacts on any mature tree and hedgerow vegetation to two localised areas of roadside tree screening.

The proposed route is substantially within an existing road carriageway that can readily be reinstated to its pre-construction condition, and the limited and localised impacts on vegetation will be replanted following construction and will quickly restore the integrity of the tree screening.

10.5 PREDICTED IMPACTS OF THE PROPOSED DEVELOPMENT

10.5.1 Visual Impacts

Given the underground nature of the proposed development, the temporary nature of construction, and the proposed reinstatement of soft landscaping, visual impacts will be imperceptible and neutral.

10.5.2 Landscape Impacts

Given the nature and low sensitivity of the receiving environment along the grid connection corridor, and the proposed reinstatement of soft landscaping, landscape impacts will be imperceptible/short term and neutral.

10.5.3 Cumulative Impacts

Given the infrastructural nature and the proposed development, and its location underground, the cumulative impacts of the development in combination with other permitted and planned developments will be Not Significant and Neutral.

10.6 RESIDUAL IMPACTS

The underground nature of the proposed development, together with the low sensitivity receiving environment and the existing land use and land use zoning, is such that residual landscape and visual impacts are considered to be imperceptible and neutral.

10.7 CONCLUSION

The nature and extent of the proposed development, together with the low sensitivity of the receiving landscape environment and visual receptors, is such that the proposed development, of itself or cumulatively with other permitted and planned developments, will not have significant adverse effects on the landscape and is consistent with proper planning and sustainable development.

10.8 REFERENCES

- Dublin City Development Plan, 2016-2022
- Fingal County Development Plan, 2017-2023
- The Landscape Institute/Institute of Environmental Management and Assessment, *Guidelines for Landscape and Visual Impact Assessment (GLVIA, 3rd Edition)* (2013)