

7. The Landscape

7.1 Introduction

The purpose of this section of the EIS Scoping Report is to describe the scope of work and methods to be applied in the identification and assessment of landscape and visual impacts associated with the proposed development. Landscape and Visual Impact Assessment (LVIA) is a tool used to identify and assess the significance of effects of change resulting from development on both the landscape as an environmental resource in its own right and on people's views and visual amenity.

7.1.1 Policy & Plan Context

The European Landscape Convention promotes the protection, management and planning of European landscapes and organises European co-operation on landscape issues. The Convention was adopted on the 20th October 2000 and came into force on the 1st March 2004. The Convention was ratified by Ireland in 2002. As one of the obligations under the convention, a draft National Landscape Strategy was issued for public consultation by the Department of Arts, Heritage and the Gaeltacht in July 2014. Following consideration of submissions, The 'National Landscape Strategy for Ireland 2015 – 2025' was published in mid-2015 by the Department of Arts, Heritage and the Gaeltacht (now the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs). The aim of this Strategy is to inform and assist in the resolution of challenges that exist arising from competing interests in the landscape, such as infrastructure provision versus landscape protection or local versus national objectives. This document will be considered to ensure compliance with the European Landscape Convention and to establish principles aimed at protecting the landscape as part of the impact assessment.

One of the key objectives of the National Landscape Strategy, and a requirement of the European Landscape Convention, is to prepare a National Landscape Character Assessment (LCA). However, this is not likely to be prepared prior to the submission of an EIS for this proposed development. On this basis, available county-based Landscape Character Assessments are likely to remain the principle mechanism for administering project level landscape policy.

The most relevant landscape and visual policies with regard to the proposed development are contained within the County Development Plans for each of the counties from which the main proposed site infrastructure components may be seen.

7.1.2 Study Area

This proposed project covers an extensive study area that extends from Parteen Basin on the River Shannon, directly south of Lough Derg in County Tipperary, through Tipperary and the midland counties of Offaly and Kildare, and terminating in the vicinity of Peamount Reservoir and environs in South County Dublin. The extent of the project, particularly the c.170km treated water pipeline component, requires crossing a significant section of the country.

The main study area, from a landscape and visual perspective, is within the surrounding regions of the main above ground development infrastructure - namely at the abstraction site and the water treatment plant in the vicinity of the Parteen Basin. Additional infrastructure such as valve/kiosk arrangements, the location of the break pressure tank in the Midlands and at the termination point reservoir in the vicinity of Peamount Reservoir and environs in South County Dublin will also be included within the study area. It is anticipated that the LVIA will encompass an area up to a 5km from the location of the proposed infrastructure. The entirety of the study area will require sensitivity in the siting and design process due to the potential for proximity to a range of sensitive receptors.

7.2 Baseline Information

7.2.1 Desktop Study

Extensive work has been completed to date in order to identify the location of the proposed infrastructure sites and preferred pipeline corridor. This was completed as part of the options appraisal which initially supported the Preliminary Options Assessment Report (POAR) and subsequently the Final Options Appraisal Report (FOAR) and assessed proposed sites and proposed pipeline corridors against a range of environmental criteria including landscape and visual constraints.

A desktop review of all available data regarding the landscape and visual impacts over the study area has been undertaken and will be supplemented with any additional information to support the development of the EIS. A wide range of landscape and visual constraints such as designated views and routes, views from settlements, motorways and dwellings and national walking routes have been investigated in the development of the FOAR. Key items of note related to:

- At the Parteen Basin location, the twin settlements of Killaloe and Ballina which are important tourist and amenity areas were noted. There are a number of landscape and visual constraints/ elements in the northern part of the Parteen Basin location with comparatively fewer in the southern reaches.
- At the Termination Point Reservoir, in the vicinity of Peamount Reservoir and environs, the existing environment is generally rural in terms of landscape zoning and no distinctive landscape elements were identified other than the Grand Canal corridor, which is relatively enclosed along this section.
- There were marginal differences in terms of the landscape and visual context across the pipeline corridors that were considered as part of the FOAR, with generally low- very low levels of constraints identified.

Moving forward with the EIS, particular regard will be given to the progress with implementing the aforementioned '*National Landscape Strategy for Ireland 2015 – 2025*' as this document will present an overview of landscape and visual issues at a national and regional scale, which is of particular importance to a project of this national scale.

The desk study will involve a review of highly sensitive landscape designations and designated scenic viewpoint locations, topographical mapping, aerial photography and prominent tourism and walking route websites to inform the field work stage and identify potential viewpoints from which to undertake the visual impact assessment. Collaboration with the project heritage specialist will also be undertaken to identify a register of national monuments and historic parks and gardens, particularly those that also represent relevant landscape and visual receptors. Collaboration with project planning specialists will also ensure that tourist assets are appropriately considered in the landscape and visual impact assessment.

Using a combination of terrain data supplied by Ordnance Survey Ireland (OSi) and a detailed topographical survey of areas relevant to the proposed development, Zone of Theoretical Visibility (ZTV) maps will be produced. These will show from where in the surrounding landscape the main aboveground infrastructure will be potentially visible and is the starting point for selecting relevant viewpoints from which to undertake the visual impact assessment. A ZTV map is 'theoretical' because it is based on a 'bare-ground' visibility scenario and not one involving screening by vegetation or buildings.

Photomontages accurately represent the way in which a future development will appear within a particular view by superimposing a photo-realistic model of it into an existing photograph that represents the view in question. Photomontages are generally prepared from locations (viewpoints) that represent views experienced by sensitive receptors of above ground elements within the surrounding landscape. Such receptors are people and groups of people and might include local residents, recreationalists or passing motorists.

The location and number of these viewpoints will be confirmed following the siting of the proposed infrastructure locations as set out within the FOAR.

7.2.2 Future Survey Needs

The landscape and visual appraisal of the proposed development will require fieldwork within the surrounding landscape to undertake a detailed analysis of the salient landscape features and patterns that contribute to the landscape character of the study area. Fieldwork will also be used to confirm and refine the location of preselected viewpoints, developed from the desk study, for the visual impact assessment. 360 degree photography will be captured at each of the viewpoint locations for later use in preparation of photomontages of the proposed aboveground built elements.

Whilst viewpoint locations are generally selected within the public realm (in accordance with Guidelines for Landscape and Visual Impact Assessment (GLVIA)-2013), locations that are open to the public such as, in this instance, golf courses and stately houses, may also be used following the grant of access permission. Duplicate sets of summer and winter photomontages are likely to be necessary, as there are particular elements of the final proposal (particularly above ground structures) where it is considered prudent to screen from view. Therefore the completion of summer and winter photomontages will allow the effectiveness of foliage screening to be analysed, in detail, across the seasons.

7.2.3 Consultation

It is considered that consultation on the landscape and visual impact assessment will be undertaken in the vicinity of the proposed development and is likely to include, but not limited to, the following Local Authorities:

- Clare County Council;
- Limerick City and County Council;
- Tipperary County Council;
- Offaly County Council;
- Laois County Council;
- Kildare County Council; and
- South Dublin County Council.

Landscape and visual related comments arising during consultation will be reviewed and considered within the EIA as relevant.

7.3 Potential Impacts

7.3.1 Potential Construction Phase Impacts

The following is a list of potential construction phase impacts relevant to the Landscape and Visual assessment;

- Visual impacts from the movement of traffic and machinery along site access points and haul roads at the designed abstraction point, the specified c.170km treated water supply pipeline route corridor;
- Landscape and visual impacts arising from the movement of construction materials;
- Landscape and visual impacts arising from ancillary construction requirements; for example, water drainage, power and lighting, site facilities, etc.;
- The duration of landscape and visual impacts from construction; and
- Visual impacts arising from temporary construction site lighting.

7.3.2 Potential Operational Phase Impacts

The following is a list of potential operational phase impacts relevant to the proposed development:

- Landscape and visual impact arising from permanent buildings / structures;
- Landscape and visual impacts arising from permanent way-leaves along the pipeline corridor;
- Visual impacts arising from ancillary site utilities such as lighting, signage, and car parking; and
- Landscape and visual impacts – both positive and negative – arising from the implementation of any landscaping screening proposals such as at the point of abstraction and along the specified route corridor; and
- Visual impacts arising from operational stage Project activity, such as the requirements for maintenance.

7.4 Proposed Methodology & Assessment Scope

The landscape and visual impact assessment will be based on the EPA's current EIS guidance documents and the following guidelines:

- Landscape Institute and the Institute of Environmental Management and Assessment publication entitled Guidelines for Landscape and Visual Impact Assessment (GLVIA-2013).

In line with the above guidance, the assessment will cover potential impacts from a landscape and visual perspective and will describe the existing conditions and the likely potential impacts associated with the construction and operation of the proposed development. The impact assessment process will involve:

- Assigning the receptor sensitivity;
- Identifying and characterising the magnitude and significance of any potential impacts;
- Incorporating measures to avoid and mitigate (reduce) these impacts; and
- Assessing the significance of any residual effects after mitigation.

The assessment will include three main elements and these are outlined below;

7.4.1 Data Collection, Research and Baseline Establishment

- Review of relevant County Development Plans, particularly in relation to the county Landscape Character Assessment (LCA) and designated scenic routes and views.
- The study area from which to examine the landscape and visual impacts of the proposed development will be determined on the extents of likely visibility of the various aspects.
- Identify sensitive visual receptors potentially affected by the proposed development.
- Develop a project specific landscape character assessment (generally at a finer scale than county based LCA).
- Review of ZTV map, which indicate areas from which the proposed development is potentially visible in relation to the terrain within the study area.
- Selection of potential Viewshed Reference Points (VRPs) from key visual receptors to be investigated during fieldwork to determine actual visibility and sensitivity.
- Preparation of an initial VRP selection map.

7.4.2 Fieldwork, Viewshed Reference Point Selection and Photo Capture

- Investigate potential VRP locations selected at the desk study stage and confirm those that are to be used for the visual impact appraisal.
- Prepare a Viewshed Reference Point (VRP) selection report, which will outline the rationale for selecting or rejecting every VRP that was investigated during fieldwork. This will be used for consultation with the planning authorities to ensure they are satisfied with the final set of VRPs to be used for the appraisal.

- Capture of high resolution, panoramic photography with grid reference coordinates for all VRP locations to be used for the preparation of photomontages.
- Record site notes in relation to the general landscape within the study area and in relation to the views afforded from each VRP.

7.4.3 Appraisal of Landscape and Visual Impacts

- Description of the geographic location and landscape context of the Project.
- 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
 - Tourism, heritage and amenity and facilities.
- Discussion of any design guidance as well as the planning context and relevant landscape designations.
- Appraisal of the significance of predicted landscape impacts (physical impacts on landform and land cover as well as impacts on landscape character). This will be done using professional judgement and in accordance with the 'Guidelines for Landscape and Visual Impact assessment (2013)'. Significance is determined on balance of receptor sensitivity versus the magnitude of landscape impact.
- Appraisal of predicted visual impacts using the ZTV map and the photomontages prepared from each of the selected VRP locations. Again, this will be done using professional judgement and in accordance with the 'Guidelines for Landscape and Visual Impact assessment (2013)'. Significance is determined on balance of receptor sensitivity versus the magnitude of visual impact.
- Description and discussion of proposed mitigation measures.
- Appraisal of residual landscape and visual impacts following the implementation and establishment of mitigation measures.
- Appraisal of cumulative impacts in relation to any existing or future developments within the study area that might be relevant to the Project. This will be done using professional judgement and in accordance with the 'Guidelines for Landscape and Visual Impact Assessment (2013)'. Significance is determined on balance of receptor sensitivity versus the magnitude of cumulative impact.