

CHAPTER 10

Landscape and Visual

Shannon LNG Limited
August 2021

Shannon Technology and Energy Park
Environmental Impact Assessment Report

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10. Introduction

This chapter identifies and assesses the likely significant effects of the Proposed Development (as presented in Chapter 02 – Project Description) on the landscape and visual resource of the study area. It identifies mitigation and compensation measures that will be implemented to prevent, reduce, or offset potential adverse landscape and visual effects or enhance potential beneficial effects, where possible.

The Landscape and Visual Impact Assessment (herein referred to as LVIA) considers how:

- Landscape effects associated with the Proposed Development relate to changes to the fabric, character, and quality of the landscape resource and how it is experienced; and
- Visual effects relate closely to landscape effects, but concern changes in existing views.

Landscape and visual effects are interrelated with other environmental effects but are assessed separately. Whilst elements of the built heritage such as Listed Buildings and Conservation Areas are important elements of the landscape and contribute to its character and influence its quality and value, effects on the significance of these designated features and their setting do not form part of this assessment. Those are the subject of assessment in Chapter 12 – Cultural Heritage.

The LVIA is supported by the following technical documents, which are enclosed in the following documents:

- Figure F10-1, Vol. 3 – Landscape Designations;
- Figure F10-2, Vol. 3 – Seascape Character Areas; and
- Appendix A10-1, Vol. 4 – Booklet of 15 Photomontages.

10.1 Competent Expert

Joerg Schulze has over 16 years' professional experience working for clients in the private and public sectors. He has a comprehensive track record in developing and managing landscape and visual impact assessments of large industrial, commercial, residential, infrastructural, renewable energy, tourism and civic developments throughout the island of Ireland. He has extensive experience in all stages of the planning, design, tender and implementation process, contract management and as consultant for Part 8 applications for road schemes and EIA processes. He has prepared residential visual impact assessments, manages the production of photomontages and the preparation of zones of theoretical visibility and theoretical visual intensity mapping.

10.2 Relevant Legislation, Planning Policies and Guidance

10.2.1 International

The Council of Europe Landscape Convention (Treaty No. 176) (as amended) provides guidelines for managing landscapes/ landscapes. The Convention is not an EU Directive. Countries that sign and ratify the Convention make a commitment to upholding the principles it contains within the context of their own domestic legal and policy frameworks. The convention was ratified by Ireland in March 2002 and came into effects in Ireland in 2004. The European Landscape Convention requires '*landscape to be integrated into regional and town planning policies and in cultural, environmental, agricultural, social and economic policies, as well as any other policies with possible direct or indirect impacts on Landscape*'.

10.2.2 National

10.2.2.1 National Landscape Strategy

The National Landscape Strategy (NLS) for Ireland 2015-2025 was launched in May 2015 and is to be implemented by the Government in the future. The NLS promotes the sustainable protection, management and planning for the landscape/ landscape. The NLS states that the '*National Landscape Strategy will be used to ensure compliance with the European Landscape Convention and to establish principles for protecting and enhancing the landscape (landscape) while positively managing its change.*

It will provide a high-level policy framework to achieve balance between the protection, management and planning of the landscape by way of supporting actions.’ It also states that ‘The Strategy sets out Ireland’s high-level objectives and actions with regard to landscape (landscape). It also positions landscape in the context of existing Irish and European strategies, policies and objectives, and outlines methods of ensuring co-operation at a sectoral and at a European level by the State.’

10.2.2.2 Regional Seascape Character Assessment for Ireland

The Regional Seascape Character Assessment for Ireland 2020, Draft Consultation Report has been prepared for the Marine Institute.

10.2.2.3 National Marine Planning Framework (NMPF)

The NMPF is a national plan how to use Ireland’s seas over a 20-year horizon. The NMPF sits at the top of the hierarchy of plans and sectoral policies for the marine area. The plan has been informed by existing sectoral plans and will, in turn, be used to inform future cycles of those plans in an ongoing feedback loop. It provides a coherent framework in which those sectoral policies and objectives can be realised. It will become the key decision-making tool for regulatory authorities and policy makers into the future in a number of ways, including decisions on individual authorisation applications, which will have to secure the objectives of the plan, similar to the way that terrestrial plans form part of the decision-making tool-kit in the on-land planning process.

10.2.2.4 Strategic Integrated Framework Plan for the Shannon Estuary

This plan has been developed by an interjurisdictional steering group to produce a land and marine based framework to guide the future development and management of the Shannon Estuary.

In terms of Marine Related Industry, the Tarbert-Ballylongford Land Bank, Co. Kerry has been considered as an areas of interest for a wide range of small scale commercial to major commercial developments. This area is already designated as a strategic zone for development. The framework plan provides a range of guidance including guiding principles, objectives and mitigation measures for development in this zone.

In terms of landscape and visual impact mitigation measures it states the following:

‘L MM 5: To mitigate the minimal impact, any construction should be designed to minimise visual impacts during the detailed design phase, perhaps including landscape screening elements’.

10.2.3 Regional

10.2.3.1 Kerry County Development Plan 2015- 2021 (KCDP) / Draft Kerry County Development Plan 2022-2028

This is the main strategic planning policy document which guides the future renewal and development of Co. Kerry to 2021 and beyond. The Proposed Development is located within the jurisdiction of the KCDP.

The Proposed Development is located within the Tarbert / Ballylongford Landbank area, which is zoned for ‘Industry’. Relevant landscape designations are illustrated in Figure 11.1, which is included in the Appendix.

The review of the current County Development Plan has commenced and is at Stage 1: Pre-Draft at the time of writing this LVIA (July 2021). The release and consultation period for the Draft County Development Plan is planned at Stage 2: Draft Development Plan, and anticipated for later in 2021.

10.2.3.2 Clare County Development Plan 2017- 2023 (CCDP)

This is the main strategic planning policy document which guides the future renewal and development of Co. to 2023 and beyond. The Proposed Development is not located in Co. Clare, however, given its prominent location along the River Shannon Estuary, the Proposed Development will result in landscape and visual effects when seen from the viewpoints located in Co. Clare. Relevant landscape designations are illustrated in Figure F10-1, which is included in Volume 3.

10.2.3.3 Limerick County Development Plan 2010-2016/ Draft Limerick Development Plan 2022-2028

In accordance with a decision made in 2014, the Limerick County & City Development Plans will not be reviewed and therefore continue to have effect until a new Development Plan for Limerick City and

County is prepared in accordance with the requirements of section 10B of the Planning and Development Acts 2000, as amended.

At the time of writing this assessment (July 2021), the Limerick County Development Plan 2010-2016 is still valid. A Draft Limerick County Development Plan 2022-2028 has been prepared but the review and approval process has not been completed yet. Changes between the current and the draft county development plan will be stated in the assessment herein where required.

10.3 Methodology

10.3.1 Guidance and Other Information used in the Landscape and Visual Impact Assessment

The following sources and guidelines were used in the assessment:

- European Commission Guidance on the preparation of the Environmental Impact Assessment Report, 2017;
- EPA “Guidelines on the information to be contained in Environmental Impact Assessment Reports”, Draft, August 2017;
- EPA “Guidelines on the information to be contained in Environmental Impact Statements”, 2002
- EPA “Advice Notes on Current Practice (in the preparation of EIS)”, 2003
- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment, Government of Ireland, 2018
- ‘Guidelines for Landscape and Visual Impact Assessment’ (GLVIA), 3rd Edition, 2013, Landscape Institute (UK) & IEMA;
- ‘Visual Representation of Development Proposals’, Landscape Institute, Technical Guidance Note 06/ 19, 17 September 2019;
- National Parks and Wildlife Service (NPWS), <http://www.npws.ie/>;
- Walking Routes, <https://www.sportireland.ie/outdoors/find-your-trails>;
- Ordnance Survey Ireland, 1:50,000 Discovery Mapping;
- Kerry County Development Plan 2015 – 2021;
- Landscape Character Assessment prepared for the Renewable Energy Strategy 2012, Kerry County Council (KCC) Planning Policy Unit, November 2012;
- Clare County Development Plan 2017-2023;
- Landscape Character Assessment of County Clare, ERM, March 2004;
- Limerick County Development Plan 2010-2016;
- National Marine Planning Framework, Department of Housing, Local Government and Local Heritage, June 2021; and
- Regional Seascape Character Assessment for Ireland 2020.

10.3.2 Landscape and Visual Impact Assessment Criteria

This assessment has been prepared based on the Environmental Protection Agency (EPA) Draft guidance document ‘Guidelines on the Information to be contained in Environmental Impact Assessment Reports, 2017, EPA guidance documents. Best practice guidance, such as the ‘Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA3), 2013, Landscape Institute (UK) & IEMA’ provide specific guidelines for landscape and visual impact assessments. Therefore, a combination of the draft EPA guidelines, the Landscape Institute guidelines and professional experience has informed the methodology for the assessment herein. The Landscape Institute guidelines require the assessment to identify, predict and evaluate the significance of potential effects to landscape

characteristics and established views. The assessment is based on an evaluation of the sensitivity to change and the magnitude of change for each landscape or visual receptor. For clarity, and in accordance with best practice, the assessment of potential effects on landscape character and visual amenity, although closely related, are undertaken separately.

The assessment acknowledges that landscape and visual effects change over time as the existing landscape external to the Proposed Development evolves and proposed planting establishes and matures.

The significance of an effect or impact is determined by two distinct considerations:

1. The **Nature** of the receptor likely to be affected, namely:
 - The value of the receptor.
 - The susceptibility of the receptor to the type of change arising from the Proposed Developments; and
 - The sensitivity to change is related to the value attached to the receptor.

2. The **Magnitude** of the effect likely to occur, namely:
 - The size and scale of the landscape and visual effect (for example, whether there is a complete or minor loss of a particular landscape element);
 - The geographical extent of the areas that will be affected;
 - The duration of the effect and its reversibility; and
 - The quality of the effect – whether it is neutral, positive or negative.

The table below provides the definition of the duration of both landscape and visual effects.

Table 10-1 Definition of Duration of Effects

Duration	Description
Temporary	Effects lasting one year or less
Short Term	Effects lasting one to seven years
Medium Term	Effects lasting seven to fifteen years
Long Term	Effects lasting fifteen to sixty years
Permanent	Effects lasting over sixty years

The quality of both landscape and visual effects is defined in the table below:

Table 10-2 Definition of Quality of Effects

Quality of Effects	Description
Neutral	This will neither enhance nor detract from the landscape character or view
Positive (Beneficial)	This will improve or enhance the landscape character or view
Negative (Adverse)	This will reduce the quality of the existing landscape character or view

10.3.3 Assessment Process

The assessment is undertaken based on the following key tasks and structure:

- Establishment of the Baseline or receiving environment;
- Appreciation of the Proposed Development; and
- Assessment of effects.

10.3.4 Establishment of the Receiving Environment

A baseline study has been undertaken through a combination of desk-based research and site appraisal in order to establish the existing conditions of the landscape and visual resources of the study area. Desk based research has involved a review of mapping and aerial photography, relevant planning and policy documents, the relevant Landscape Character Assessments and other relevant documents and publications.

10.3.5 Appreciation of the Proposed Development

In order to be able to accurately assess the full extent of likely effects on landscape character and visual amenity it is essential to develop a thorough and detailed knowledge of the Proposed Development. This includes a comprehensive understanding of its location, nature and scale and is achieved through a review of detailed descriptions of the Proposed Development and drawings (see Planning Application Drawings accompanying the application) and an onsite appraisal.

The landscape and visual impact assessment has considered all elements of the Proposed Development.

10.3.6 Assessment of Effects

The landscape and visual impact assessment seeks to identify, predict and evaluate the significance of potential effects to landscape characteristics and established views. The assessments are based on an evaluation of the sensitivity to change and the magnitude of change for each landscape or visual receptor.

The assessment acknowledges that landscape and visual effects change over time as the existing landscape internal and external to the Proposed Development evolves. The assessment therefore reports on potential effects during both construction/ operation and completion of the Proposed Development. The prominence of the Proposed Development in the landscape or view will vary according to the existing screening effects of local topography, intervening existing vegetation and building structures.

GLVIA3 requires that a clear distinction is drawn between landscape (which includes the urban landscape) and visual effects:

- Landscape effects relate to the degree of change to characteristics or physical components of an urban area, which together form the character of that landscape, e.g. topography, streets, buildings and open space.
- Visual effects relate to the degree of change to an individual receptor's or a receptor group's view of that landscape, e.g. local residents, users of public open space, footpaths or motorists passing through the area.

As mentioned in the scope above, construction and operational stages of the Proposed Development are assessed separately. Distinctions may be drawn between temporary and permanent effects, with permanent effects typically being of greater importance. Residual effects are those likely to arise from the Proposed Development taking into account all embedded measures.

The assessment forms part of an iterative process where, as potentially significant effects are identified, these inform the design of the Proposed Development. Mitigation of the development has been considered throughout the process, including site selection, consultation and design development. This process and the considerations, which informed it, are described within the Design Statement included in the planning submission package.

When considering the potential effect of changes that a future development may have on the landscape and visual resource it is necessary to identify those key elements of the landscape which make it distinctive. These can be seen as layers which overlay each other and vary in dominance from place to place. These layers mainly comprise of the buildings, structures and spaces which influence the pattern of uses, activity and movement in a place and the experience of those who visit, work and live there.

Cumulative effects arise from changes brought about by one development in conjunction with another of similar character. Cumulative effects are considered where the presence of developments of a similar type or scale, that have planning consent but are not constructed, or that are the subject of undetermined applications may have a combined effect on the perception of landscape character and visual amenity.

10.3.7 Scope

10.3.7.1 Study Area

A study area radius of 7 km has been determined from the boundary of the Proposed Development for the assessment of landscape and visual effects. The extent of the study area is based on initial findings of the desktop study later verified onsite during fieldwork survey.

It is acknowledged that the Proposed Development may be visible from locations beyond the study area, and as such it is important to note that the study area defines the area within which potential effects could be significant, rather than defining the extent of visibility.

10.3.7.2 Effects Scoped Out

For the purposes of this assessment, the Proposed Development is assumed to become a permanent feature in the landscape following the completion and the implementation of landscape mitigation measures. The assessment takes account of this in the determination of residual landscape and visual effects.

10.3.8 Landscape Effects (and Seascape Effects)

Landscape effects describe the impact on the fabric or structure of a landscape or landscape character. In this case, the landscape character also includes seascape character considering the location along the Shannon Estuary. Definitions for landscape effects can therefore be equally be used as a guidance

for seascape effects herein. The assessment of landscape effects firstly requires the identification of the components of the landscape. The landscape components are also described as landscape receptors and comprise the following:

- Individual landscape elements or features;
- Specific aesthetic or perceptual aspects; and
- Landscape character, or the distinct, recognisable and consistent pattern of elements (natural and man-made) in the landscape that makes one landscape different from another.

The assessment will identify the interaction between these components and the Proposed Development during construction and operational phases. The condition of the landscape and any evidence of current pressures causing change in the landscape will also be documented and described.

10.3.8.1 Landscape Value

Landscape value is frequently addressed by reference to international, national, regional and local designations, determined by statutory and planning agencies. However, absence of such a designation does not necessarily imply a lack of quality or value. Factors such as accessibility and local scarcity can render areas of nationally unremarkable quality, highly valuable as a local resource. The quality and condition is also considered in the determination of the value of a landscape. The evaluation of landscape value is undertaken with reference to the definitions stated in the table below:

Table 10-3 Landscape Value

Landscape Value	Classification Criteria
High	Nationally designated or iconic, unspoilt landscape with few, if any, degrading elements.
Medium	Regionally or locally designated landscape, or an undesignated landscape with locally important landmark features and some detracting elements.
Low	Undesignated landscape with few if any distinct features or with several degrading elements.

10.3.8.2 Landscape Susceptibility

Landscape susceptibility relates to the ability of a particular landscape to accommodate the Proposed Development. Landscape susceptibility is appraised through consideration of the baseline characteristics of the landscape, and in particular the scale or complexity of a given landscape.

The evaluation of landscape susceptibility is undertaken with reference to a three-point scale, as outlined in the table below.

Table 10-4 Landscape Susceptibility Criteria

Landscape Susceptibility	Classification Criteria
High	Small scale, intimate or complex landscape considered to be intolerant of even minor change.
Medium	Medium scale, more open or less complex landscape considered tolerant to some degree of change.
Low	Large scale, simple landscape considered tolerant of a large degree of change.

10.3.8.3 Landscape Sensitivity

Landscape sensitivity to change is determined by employing professional judgment to combine and analyse the identified landscape value, quality and susceptibility and is defined with reference to the scale outlined in the table below:

Table 10-5 Landscape Sensitivity to Change Criteria

Landscape Sensitivity	Classification Criteria
High	<p>Landscape characteristics or features with little or no capacity to absorb change without fundamentally altering their present character.</p> <p>Landscape designated for its international or national landscape value or with highly valued features.</p> <p>Outstanding example in the area of well cared for landscape or set of features that combine to give a particularly distinctive sense of place.</p> <p>Few detracting or incongruous elements.</p>
Medium-high	<p>Landscape characteristics or features with a low capacity to absorb change without fundamentally altering their present character.</p> <p>Landscape designated for regional or county-wide landscape value where the characteristics or qualities that provided the basis for their designation are apparent or a landscape with highly valued features locally.</p> <p>Good example in the area of a well-cared for landscape or set of features that combine to give a clearly defined sense of place.</p>
Medium	<p>Landscape characteristics or features with moderate capacity to absorb change without fundamentally altering their present character.</p> <p>Landscape designated for its local landscape value or a regional designated landscape where the characteristics and qualities that led to the designation of the area are less apparent or are partially eroded or an undesignated landscape which may be valued locally – for example an important open space.</p> <p>An example of a landscape or a set of features which is relatively coherent, with a good but not exceptional sense of place - occasional buildings and spaces may lack quality and cohesion.</p>
Medium-low	<p>Landscape characteristics or features which are reasonably tolerant of change without detriment to their present character.</p> <p>No designation present or of little local value.</p> <p>An example of an un-stimulating landscape or set of features; with some areas lacking a sense of place and identity.</p>
Low	<p>Landscape characteristics or features which are tolerant of change without detriment to their present character.</p> <p>An area with a weak sense of place and/ or poorly defined character/ identity.</p> <p>No designation present or of low local value or in poor condition.</p> <p>An example of monotonous unattractive visually conflicting or degraded landscape or set of features.</p>

10.3.8.4 Landscape Receptors

The landscape resources within the study area that could be affected by the development include:

- Physical resources such as buildings, open space, trees, watercourses etc.;
- Designated, valued or recognised components that contribute to landscape character; and
- Cultural heritage interests that contribute to landscape character.

Landscape receptors are defined as those landscape resources within the study area from which the development may be visible or where potential visibility of the development in one part of the landscape resource affects the experience of another part. Field assessment studies were used to check the potential visibility of the development from the landscape resources within the study area. Within this section specific consideration is also given to changes to landscape elements such as the built fabric, open space or trees.

10.3.8.5 Sensitivity of Landscape Receptors

The sensitivity of a landscape receptor is an expression of its ability to accommodate the Proposed Development as part of its own character. The sensitivity of a landscape varies according to the nature of the existing resource and the nature of the proposed changes as a result of the Proposed Development. The sensitivity of the landscape is based on interpretation of a combination of judgements relating to their susceptibility to the type of change or development proposed and the value attached to the landscape.

10.3.8.6 Landscape Character

Landscape character is a complex mix of physical features and patterns and cultural elements. Buildings, structures and spaces and the resulting layout and urban grain, the density and mix, scale and appearance, human interaction and cultural and historic features combine to create a common 'sense of place' and identity that is experienced as landscape character. Definable units (character areas and character zones) can be used to categorise the landscape and the level of detail and size of unit can be varied to reflect the scale of definition required. It can be applied at national, regional and local levels.

The quality or condition of a landscape character receptor is a reflection of its attributes, such as the condition of the buildings and spaces or vegetative components and the attractiveness and landscape quality of the area as well as its sense of place. A landscape with consistent, intact and well-defined, distinctive attributes is generally considered to be of higher quality and in turn, higher sensitivity, than a landscape where the presence of inappropriate or discordant elements has detracted from its inherent attributes. The higher the quality of a receptor the greater is its sensitivity to the Proposed Development.

10.3.8.7 Magnitude of Landscape Change

Magnitude of change is an expression of the size or scale of change in the landscape, the geographical extent of the area influenced and the duration and reversibility of the resultant effect. The variables involved are described below:

- The extent of existing landscape elements that will be lost, the proportion of the total extent that this represents and the contribution of that element to the character of the landscape;
- The extent to which aesthetic or perceptual aspects of the landscape are altered either by removal of existing components of the landscape or by addition of new ones;
- Whether the effect changes the key characteristics of the landscape, which are integral to its distinctive character;
- The geographic area over which the landscape effects will be felt (within the Proposed Development site itself; the immediate setting of the Proposed Development site; at the scale of the landscape type or character area; on a larger scale influencing several landscape types or character areas); and
- The duration of the effects (short term, medium term or long term) and the reversibility of the effect (whether it is permanent, temporary or partially reversible).

Changes to landscape characteristics can be both direct and indirect. **Direct change** occurs where the Proposed Development will result in a physical change to the landscape within or adjacent to the Proposed Development site. **Indirect changes** are a consequence of the direct changes resulting from the Proposed Development. They can often occur away from the Proposed Development site (for example, off-site construction staff parking) and may be a result of a sequence of interrelationships or a complex pathway (for example, a new road or footpath construction may increase public access and associated problems e.g. littering). They may be separated by distance or in time from the source of the effects. The magnitude of change affecting the baseline landscape resource is based on an interpretation of a combination of the criteria set out in the table below:

Table 10-6 Magnitude of Landscape Change Criteria (Landscape Effects)

Magnitude of Landscape Change	Classification Criteria
None	No change.
Negligible	Little perceptible change.
Low	Minor change, affecting some characteristics and the experience of the landscape to an extent; and Introduction of elements that is not uncharacteristic.
Medium	Noticeable change, affecting some key characteristics and the experience of the landscape; and Introduction of some uncharacteristic elements.
High	Noticeable change, affecting many key characteristics and the experience of the landscape; and Introduction of many incongruous developments
Very High	Highly noticeable change, affecting most key characteristics and dominating the experience of the landscape; and Introduction of highly incongruous development.

10.3.9 Visual Effects

Visual effects are determined by the extent of visibility and the nature of the visibility (i.e. how a development is seen within the landscape); for example, whether it appears integrated and balanced within the visual composition of a view or whether it creates a focal point.

Negative visual effects may occur through the intrusion of new elements into established views, which are out of keeping with the existing structure, scale and composition of the view. Visual effects may also be beneficial, where an attractive focus is created in a previously unremarkable view or the influence of previously detracting features is reduced. The significance of effects will vary, depending on the nature and degree of change experienced and the perceived value and composition of the existing view.

10.3.9.1 Receptors

For there to be a visual impact, there is the need for a viewer. Views experienced from locations such as settlements, recognised routes and popular vantage points used by the public have been included in the assessment. Receptors are the viewers at these locations. The degree to which receptors, i.e. people, will be affected by changes as a result of the Proposed Development depends on a number of factors, including:

- Receptor activities, such as taking part in leisure, recreational and sporting activities, travelling or working;
- Whether receptors are likely to be stationary or moving and how long they will be exposed to the change at any one time;
- The importance of the location, as reflected by designations, inclusion in guidebooks or other travel literature, or the facilities provided for visitors;

- The extent of the route or area over which the changes will be visible;
- Whether receptors will be exposed to the change daily, frequently, occasionally or rarely;
- The orientation of receptors in relation to the Proposed Development and whether views are open or intermittent;
- Proportion of the developments that will be visible (full, sections or none);
- Viewing direction, distance (i.e. short-, medium- and long-distance views) and elevation;
- Nature of the viewing experience (for example, static views, views from settlements and views from sequential points along routes);
- Accessibility of viewpoint (public or private, ease of access);
- Nature of changes (for example, changes in the existing skyline profile, creation of a new visual focus in the view, introduction of new man-made objects, changes in visual simplicity or complexity, alteration of visual scale, landform and change to the degree of visual enclosure); and
- Nature of visual receptors (type, potential number and sensitivity of viewers who may be affected).

10.3.9.2 Value of the View

Value of the view is an appraisal of the value attached to views and is often informed by the appearance on Ordnance Survey of tourist maps and in guidebooks, literature or art. Value can also be indicated by the provision of parking or services and signage and interpretation. The nature and composition of the view is also an indicator. The value of the view is determined with reference to the definitions outlined in the table below:

Table 10-7 Value of the View

Value	Classification Criteria
High	Nationally recognised view of the landscape, with no detracting elements.
Medium	Regionally or locally recognised view, or unrecognised but pleasing and well composed view, with few detracting elements.
Low	Typical or poorly composed view often with numerous detracting elements.

10.3.9.3 Visual Susceptibility

The GLVIA guidelines identify that the susceptibility of visual receptors to changes in views and visual amenity is a function of:

- The occupation or activity of people experiencing the view at a particular location; and
- The extent to which their attention or interest may therefore be focused on the views and visual amenity they experience at particular locations.

For example, residents in their home, walkers whose interest is likely to be focused on the landscape or a particular view, or visitors at an attraction where views are an important part of the experience often indicate a higher level of susceptibility. Whereas receptors occupied in outdoor sport, where views are not important, or at their place of work, are often considered less susceptible to change. Visual susceptibility is determined with reference to the three-point scale and criteria outlined in the table below:

Table 10-8 Visual Susceptibility

Susceptibility	Classification Criteria
High	Receptors for which the view is of primary importance and are likely to notice even minor change.
Medium	Receptors for which the view is important but not the primary focus and are tolerant of some change.
Low	Receptors for which the view is incidental or unimportant and is tolerant of a high degree of change

10.3.9.4 Visual Sensitivity

Sensitivity to change considers the nature of the receptor; for example, a person occupying a residential dwelling is generally more sensitive to change than someone working in a factory unit. The importance of the view experienced by the receptor also contributes to an understanding of the susceptibility of the visual receptor to change as well as the value attached to the view.

A judgement is also made on the value attached to the views experienced. This takes account of:

- Recognition of the value attached to particular views, for example in relation to heritage assets, or through planning designations;
- Indicators of the value attached to views by visitors, for example through appearance in guidebooks or on tourist maps, provision of facilities for their enjoyment (sign boards, interpretive material) and references to them in literature or art; and
- Possible local value; it is important to note that the absence of view recognition does not preclude local value, as a view may be important as a resource in the local or immediate environment due to its relative rarity or local importance.

The visual sensitivity to change is based on interpretation of a combination of all or some of the criteria outlined in the table overleaf.

Table 10-9 Sensitivity to Change Criteria

Visual Sensitivity	Classification Criteria
High	Users of outdoor recreational facilities, on recognised national cycling or walking routes or in nationally designated landscapes. Residential buildings.
Medium-high	Users of outdoor recreational facilities, in highly valued landscapes or locally designated landscapes or on local recreational routes that are well publicised in guide books. Road and rail users in nationally designated landscapes or on recognised scenic routes, likely to be travelling to enjoy the view.
Medium	Users of outdoor recreational facilities including public open space in moderately valued landscapes. Users of primary transport road network, orientated towards the Proposed Development, likely to be travelling for other purposes than just the view.
Medium-Low	People engaged in active outdoor sports or recreation and less likely to focus on the view.

Primary transport road network and rail users likely to be travelling to work with oblique views of the project or users of minor road network.

Low

People engaged in work activities indoors, with limited opportunity for views of the Proposed Development.

10.3.9.5 Magnitude of Visual Change

Visual effects are direct effects as the magnitude of change within an existing view will be determined by the extent of visibility of the Proposed Development. The magnitude of the visual effect resulting from the development at any particular viewpoint or receptor is based on the size or scale of change in the view, the geographical extent of the area influenced and its duration and reversibility. The variables involved are described below:

- The scale of the change in the view with respect to the loss or addition of features in the view and changes in its composition, including the proportion of the view occupied by the development;
- The degree of contrast or integration of any new features or changes in the landscape form, scale, mass, line, height, sky lining, back-grounding, visual clues, focal points, colour and texture;
- The nature of the view of the development, in relation to the amount of time over which it will be experienced and whether views will be full, partial or glimpses.
- The angle of view in relation to the main activity of the receptor, distance of the viewpoint from the development and the extent of the area over which the changes will be visible; and
- The duration of the effects (short term, medium term or long term) and the reversibility of the effect (whether it is permanent, temporary or partially reversible).

The magnitude of visual effect resulting from the development at any particular viewpoint or receptor is based on the interpretation of the above range of factors and is set out in the table below:

Table 10-10 Magnitude of Visual Change Criteria (Visual Effects)

Magnitude of Visual Change	Classification Criteria
None	No change in the existing view.
Negligible	The development will cause a barely discernible change in the existing view.
Low	The development will cause very minor changes to the view over a wide area or minor changes over a limited area.
Medium	The development will cause modest changes to the existing view over a wide area or noticeable change over a limited area.
High	The development will cause a considerable change in the existing view over a wide area or a significant change over a limited area.
Very High	The development will cause significant changes in the existing view over a wide area or a change which will dominate over a limited area.

10.3.10 Significance Criteria

The objective of the assessment process is to identify and evaluate the potentially significant effects arising from the Proposed Development. The assessment will identify the residual effects likely to arise from the finalised design taking into account mitigation measures and the change over time.

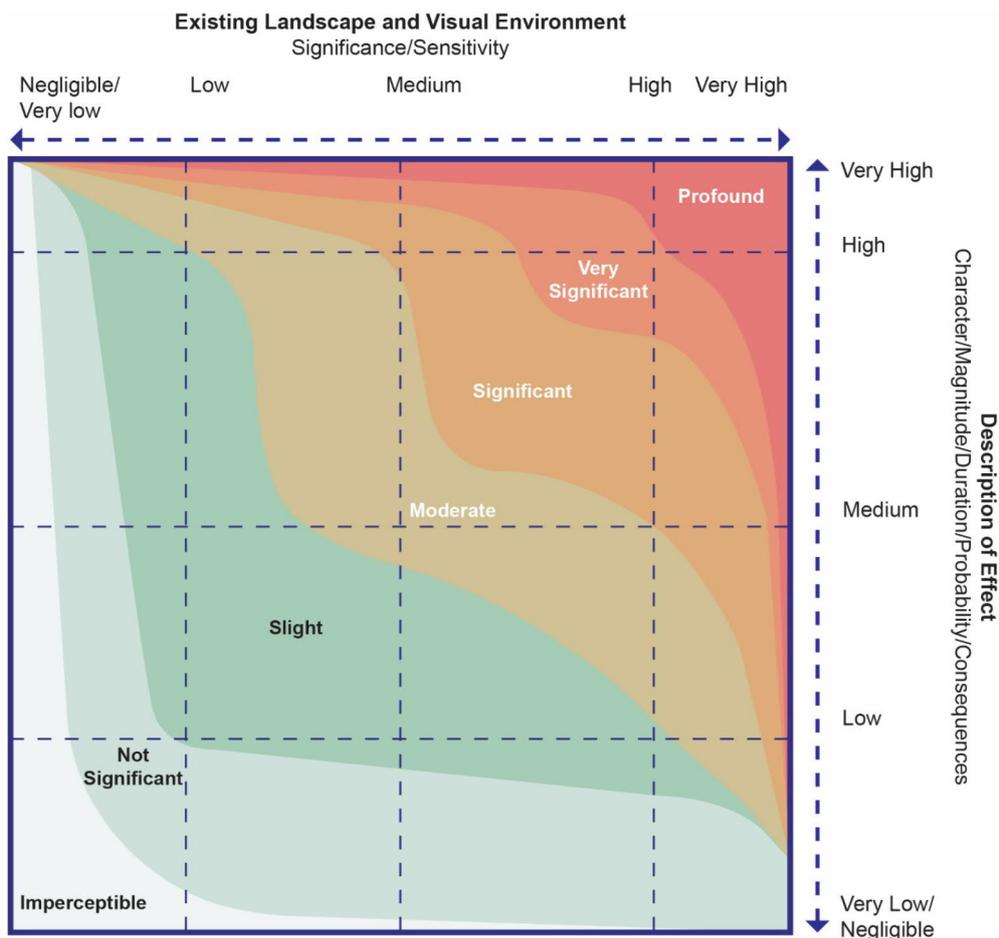
The significance of effects is assessed by considering the sensitivity of the receptor and the predicted magnitude of effect in relation to the baseline conditions. In order to provide a level of consistency and transparency to the assessment, and allow comparisons to be made between the various landscape and visual receptors subject to assessment, the assessment of significance is informed by pre-defined criteria as outlined in the table below. When assessing significance, individual effects may fall across several different categories of significance and professional judgement is therefore used to determine which category of significance best fits the overall effect to a landscape or visual receptor.

The significance of the effects can be adverse (negative) or beneficial (positive) according to the definitions set out in the table below:

Table 10-11 Categories of Significance of Landscape and Visual Effects

Significance Category	Description of Effect
Profound	An effect that obliterates sensitive characteristics within the landscape and/ or visual environment.
Very Significant	An effect which, by its character, magnitude, duration, or intensity significantly alters most of a sensitive aspect of the landscape and/ or visual environment.
Significant	An effect which, by its character, magnitude, duration, or intensity alters a sensitive aspect of the landscape and/ or visual environment.
Moderate	An effect that alters the landscape in a manner that is consistent with existing and emerging baseline trends.
Slight	An effect which causes noticeable changes in the landscape and/ or visual environment without affecting its sensitivities.
Not Significant	An effect which causes noticeable changes in the landscape and/ or visual environment but without significant landscape and/ or visual consequences.
Imperceptible	An effect capable of measurement but without significant landscape and/ or visual consequences.

The significance of the effect is determined by considering the magnitude of the effect and the quality of the baseline environment affected by the Proposed Development. The basis for consideration of the significance of effects is included overleaf.



Adapted from EPA Guidelines On The Information To Be Contained In Environmental Impact Assessment Reports, August 2017

Figure 10-1 Basis for Consideration of Significance of Effects

Effects will be assessed for all phases of the Proposed Development. Construction effects are considered to be temporary, short term effects which occur during the construction/ decommission phase only. Operational/ residual effects are those long-term effects, which will occur as a result of the presence or operation of the development.

The quality of each effect is based on the ability of the landscape character or visual receptor to accommodate the Proposed Development, and the impact of the development within the receiving context. Once this is done, the quality of the effect is then assessed as being neutral, beneficial or adverse. A change to the landscape or visual resource is not considered to be adverse simply because it constitutes an alteration to the existing situation.

10.3.11 Cumulative Effects

In addition to landscape and visual effects, it is also important to consider potential cumulative effects. Significant cumulative effects may occur where a number of similar developments combine to increase the prevalence of that type of development within a landscape or view to the extent that they become a defining characteristic. Cumulative effects will also arise from incremental changes caused by other past, present or reasonably foreseeable actions together with the Proposed Development.

The cumulative assessment evaluates the additional change resulting from the Proposed Development in relation to the theoretical baseline scenario and follows a similar methodology to that used for the landscape and visual assessments. The table below states definitions which are used to determine cumulative effects.

The cumulative assessment includes developments that are consented but not constructed, that are the subject of undetermined applications, or are currently at scoping which are similar in type and scale

to the Proposed Development. Existing approved projects or projects already under construction are considered part of the baseline receiving environment and have been considered in cumulation.

10.3.11.1 Magnitude of Cumulative Effects

The principle of magnitude of cumulative effects makes it possible for the proposed scheme to have major effects on a particular receptor, while having only minor cumulative effects in conjunction with other existing developments.

The magnitude of cumulative effects arising from the proposed scheme is assessed as very high, high, medium, low or negligible, with intermediate categories, based on interpretation of the following parameters:

- The additional extent, direction and distribution of existing and other developments in combination with the Proposed Development;
- The distance between the viewpoint, the Proposed Development and the cumulative developments; and
- The landscape setting, context and degree of visual coalescence of existing and Proposed Development and cumulative developments.

10.3.11.2 Significance of Cumulative Effects

As for the assessment of landscape and visual effects, the significance of any cumulative effects follows a same classification described in Section 10.3.10 above, and will be assessed as profound, very significant, moderate, slight, not significant, imperceptible.

10.3.11.3 Types of Visual Cumulative Effects

In addition to the magnitude of cumulative visual effects, the below specific types of visual cumulative effects will also be assessed. The table below states definitions which are used to determine cumulative effects.

Table 10-12 Definition of Specific Types of Cumulative Effects

Specific Types of Cumulative Effects	Characteristics
In combination	Where two or more developments are or would be within the observers arc of vision at the same time without moving her/ his head.
In Succession	Where the observer has to turn her/his head to see various developments actual and visualised. ¹

10.3.11.3 Limitations of Cumulative Assessment

The cumulative assessment focuses on potential cumulative effects relating to the main permanent structure of each cumulative development. This is due to the uncertainty of the timing of construction activities for each of the identified developments. As a result, temporary structures and activity relating to construction have not been considered within the cumulative assessment.

10.3.12 Field Work

A site survey of the study area and beyond was carried out in February and November 2020 identifying the potential visibility of the Proposed Development and key additional viewpoints within the core study area and the wider landscape. Photomontages showing the existing view and the superimposed development on photomontages have been produced from key representative viewpoints, taking into account topography, existing buildings, screening vegetation and other localised factors. The Booklet of Planning Application Photomontages contains details on viewpoint locations and Photomontages 1 – 16 (Appendix A10-1, Vol. 4). Photomontage locations are also indicated in Figure F10-1, Vol. 3.

¹ Guidelines for Landscape and Visual Impact Assessment, Third Edition, LI and Institute of Environmental Management & Assessment (2013).

10.3.13 Selection of Viewpoints

Viewpoint selection has been carried out according to the current best practice standards and the following industry guideline:

- Photography and Photomontage in Landscape and Visual Impact Assessment, Landscape Institute Advice Note 01/2011; and
- ‘Visual Representation of Development Proposals’, Landscape Institute, Technical Guidance Note 06/19, 17 September 2019.

It is not feasible to take photography from every possible viewpoint located in the study area. Photography has been taken from viewpoints, which are representative of the nature of visibility at various distances and in various contexts. Viewpoint photography is used as a tool to come to understand the nature of the potential residual effects. The selection process of viewpoint locations is as follows:

- The location of viewpoints within the study area is informed by desktop and site surveys;
- Identification and selection of representative viewpoints showing typical open or intermittent views within a local area, which will be frequently experienced by a range of viewers; and
- Identification and selection of specific viewpoints from key viewpoints in the landscape such as routes or locations valued for their scenic amenity, main settlements etc.

10.3.14 Photomontages

Photomontages are photorealistic visualisations produced using specialist software. They illustrate the likely future appearance of the Proposed Development from a specific viewing point. They are useful tools for examining the effects of the development from a number of critical viewpoint positions at publicly accessible locations within the study area.

However, photomontages in themselves can never provide the full picture in terms of potential effects. Photomontages are one source of information and used as a tool to help to understand the nature of potential effects and to assist the determination of the magnitude and significance of residual landscape and visual effects. They can only inform the assessment process by which judgements are made. A visualisation can never show exactly what the Proposed Development will look like in reality due to factors such as; different lighting, weather and seasonal conditions which vary through time and the resolution of the image. As the photomontages are representative of viewing conditions encountered, some of them may show existing buildings or vegetation screening some or all parts of the developments. Such conditions are normal and representative.

The images provided give a reasonable impression of the scale of the development and the distance to the development but can never be 100% accurate. It is recommended that decision-makers and any interested parties or members of the public should ideally visit the viewpoints onsite, where visualisations can be compared to the ‘real life’ view, and the full impact of the Proposed Development can be understood.

Viewpoints/ Photomontages 1 – 15 show the Proposed Development including the following information:

- Existing View, showing the baseline image; and
- Photomontage, showing the Proposed Development including all visible components at full height.

Photomontage images have been produced with reference to best practice and the following industry guidelines:

- ‘Visual Representation of Development Proposals’, Landscape Institute, Technical Guidance Note 06/19, 17 September 2019;
- Guidelines for Landscape and Visual Impact Assessment (GLVIA), Third Edition, Landscape Institute and Institute of Environmental Management and Assessment, IEMA, 2013; and

- Visual Representation of Wind Farms, Version 2.2, Scottish Natural Heritage, February 2017 (in relation to viewpoint selection, technical equipment, function and limitations of visualisations).

10.3.15 Zone of Theoretical Visibility (ZTV)

Mapping the extent of the area from which a development is likely to be visible is commonly referred to as a Zone of Theoretical Visibility (ZTV). ZTV prediction does not take into account the effects of seasons, lighting, weather conditions or visibility over distance. Moreover, a ZTV does not take into account the screening effects of existing vegetation or built structures and can omit topographical variations of up to 10 m. Therefore, in reality, ZTV mapping's principal use is to identify viewing points for further analysis.

10.4 Baseline Environment

This section provides a summary of the current (2019) baseline conditions within the study area, as defined in Section 10.3.1 - Study Area and Section 10.4.4 - Establishment of the Baseline.

10.4.1 Site Location and Description

The Proposed Development site is located in north Co. Kerry along the south shore of the Shannon Estuary 4.5 km to the west of the Tarbert and 3.5 km to the east of the village of Ballylongford which spans the Ballyline River. The site occupies part of two townlands, Kilcolgan Lower and Ralappane. It incorporates farmland and parts of the shoreline on the Shannon Estuary.

The character of the landscape is of low-lying, rolling agricultural pastureland, strongly influenced, and determined by its exposed estuarine setting. The broad waters of the Shannon Estuary are the defining landscape feature, while the prominent built developments at Moneypoint and Tarbert Island, together with large electricity pylons going off into the distance, draw the immediate focus. Within its estuarine context, the existing site is largely indistinct, being without features of note, such as distinct cliffs and woodland.

The location of the site on the edge of the southern shore results in it being particularly visible in scenic views from the northern shore of the estuary; from the waters of the estuary and Scattery Island and Hog Island; and from sections of the south shore extending west to beyond Ballylongford Bay and Carrig Island.

While portions of the site are openly visible from areas and properties immediately south and southeast, e.g. Ralappane House, the site is not particularly visible within the wider landscape. The undulating nature of the landscape east of the site provides middle-ground screening while even low roadside and field vegetation provides effective foreground and middle-ground screening of views from within the flatter landscape west of the site.

The Shannon Estuary within the study area is also the location for several large and visually prominent industrial developments such as Moneypoint Power Station at the shore in Co. Clare and Tarbert Power Station at the shore in north Co. Kerry. The closest large scale industrial activities are the 846MWe coal-fired Moneypoint Power Station, approximately 3 km to the north, and the 594 MWe oil-fired Tarbert Power Station at Tarbert, approximately 5 km to the east. The Rusal Aughinish (formerly Aughinish Alumina) plant at Foynes is located approximately 26 km to the east in Co. Limerick and outside of the study area.

The Proposed Development site is approximately 52 hectares (including both onshore and offshore elements) and has been zoned for industrial use by KCC. The site is bordered to the north by the Shannon Estuary and to the south by the L1010 Coast Road, connecting Tarbert to Ballylongford. The Proposed Development site is currently in pasture with some tillage, comprising primarily improved grassland with some wet grassland adjacent to the Shannon Estuary shore. Its boundary to the shore is formed by low sandy cliffs. A small stream runs in a north-westerly direction through the site and discharges into the Shannon Estuary. Field boundaries consist mostly of hedgerows and some small drainage ditches.

The topography of the land within the Proposed Development site is generally undulating and rising up from the Shannon Estuary shoreline. Some of the fields are waterlogged in wet weather and there are

pockets of marshy ground. There are currently several old disused farm buildings and structures on the Proposed Development site .

10.4.2 Receptor Groups

The main receptor groups within the study area are as follows:

- Residential;
- Vehicular Traffic;
- Workers; and
- Visitors/ Tourists.

10.4.2.1 Residential

Residential receptors will have a High sensitivity to visual changes as views will be experienced on a daily basis and therefore, even the smallest change in the landscape character or visual amenity will be noticed. Residences located within the Co. Kerry part of the study area are sparse and scattered across the area and along the local and regional roads. They cluster in villages such as Ballylongford and Tarbert. Long distance visibility from residences is often limited by local vegetation or undulating topography. However, open views north towards the Shannon Estuary can be experienced from elevated locations and where intervening vegetation is low. The closest dwellings to the Proposed Development are located along the L1010 in the vicinity of the Proposed Development location and Ralappane House, which is located east, southeast of the Proposed Development site and reached via an access road from the L1010.

Residences within Co. Clare follow a similar pattern as in Co. Kerry. They are sparsely dispersed across the study area but concentrate in the and around the town of Kilrush. Views across the Shannon Estuary are available from the Coast Road and from elevated locations along the N67 and beyond.

Residences located in Co. Limerick and within the eastern most section of the study area concentrate also along the main road such as the N67 and are otherwise scarcely scattered along local roads.

10.4.2.2 Vehicular Traffic

Vehicular Traffic is present along all local, regional and national roads within the study area. It includes also ferry passengers between Tarbert and Killimer. The sensitivity of vehicular traffic is considered Medium as receptors often travel to get from one place to another with little attention for views. However, the study area contains a number of scenic roads, protected views and prospects as well as the Wild Atlantic Way touring route. Traffic along these routes, which include scenic views across the Shannon Estuary will be focusing on views as well as the traffic. High sensitivity can be attributed to vehicular traffic of residents of the local area around the Proposed Development in particular, where views are an important component on their way to or from home.

10.4.2.3 Workers

Workers at their place of work in local commercial and industrial facilities will have a Low sensitivity to changes in views as their primary focus is not related to the visual amenity.

10.4.2.4 Visitors/ Tourists

The study area contains a number of scenic roads, protected views and prospects as well as the Wild Atlantic Way touring route. The visual amenity is part of the experience for visitors/ tourists travelling along these designated routes and will therefore have a Medium to High sensitivity to the quality of the components of the landscape character and visual amenity.

10.4.3 County Kerry – Landscape Designations

10.4.3.1 Landscape Character

According to Objective ZL-2 contained in the current Kerry County Development Plan 2015-2021, KCC is to '*Prepare a Landscape Character Assessment of the County following the publication of the proposed National Landscape Strategy. This assessment will include capacity studies for different forms of development and will involve consultation with adjoining local authorities*'.

Landscape Character Areas were identified for the Renewable Energy Strategy by KCC in 2012, based on this assessment, the Proposed Development site is located within the following Landscape Character Area (LCA):

- 2 – Tarbert Pastures.

The study area also covers the following landscape character areas:

- 1 – Ballylongford Creek; and
- 4 – Inner River Plain.

10.4.3.2 Tarbert Pastures

The landscape character assessment describes this character as follows (extract only):

'This compact area is located on the southern shore of the River Shannon, around Glencloosagh and Tarbert Bay's. Subtle variations in topography between Knockfinglas Point, Dooncaha and Tarmonhill create the inland boundary. There is one viewing point for this area.

- **Scale:** *This is a small area with small features due to the topography.*
- **Landform:** *Undulating*
- **Landcover:** *Pasture. Areas of sessile oak woodland around Tarbert.*
- **Road Network:** *There is a dense network of roads in the area.*
- **Settlement Pattern:** *Tarbert village, with small clusters of dwellings and farms away from the main road network.*
- **Prominent Features:** *Tarbert Power Station and its chimney's.*
- **Perception:** *Although intensely farmed, residential development is relatively scarce ensuring a quiet peaceful aspect to the landscape.*
- **Quality of Landscape:** *Rural landscape.*

Table 10-13 Conclusions of the Development Capacity Assessment

Development Capacity Assessment

		Yes	No	Detail
1	Designated amenity/ view as per Kerry County Development Plan 2009-2015?	✓		Secondary Special Amenity to northeast of Tarbert, between N69 and estuary.
2	Is the landscape important for scenert, tourism or recreation?		✓	
3	Identified in the public consultation as a scenic landscape?		✓	1 group (out of 3) identified small area next to Tarbert as particularly scenic.
4	Is there a limited amount of the particular landscape in the county?		✓	
5	Does it provide a setting that contributes to the character/ amenity of a settlement?	✓		Tarbert
6	Coastal landscape?	✓		Estuary

Development Capacity Assessment

7	Are there dominant features in the landscape?	✓	Tarbert Power Station and where visible the Estuary.
8	Are cultural, historical or archaeological associations present in the landscape?	✓	Historical
9	Windfarm(s) in the area or visible from the area?	✓	Turbines permitted in Gurteenavallig to Southwest of Tarbert.
10	Is the landscape of national/ county importance?	✓	

Figure 10-2 Development Capacity Assessment²

The development capacity summary states the following (relevant extracts only):

'It would appear that population density would not be as high as other parts of North Kerry. There is a significant area of land zoned industrial along the estuary, known as the Ballylongford Landbank. There is landscape capacity in the landbank area given the industrial nature of the area. However this land is zoned for industrial uses and wind development would prejudice its potential for industrial development. Outside of the landbank there is some landscape capacity but this is limited by the quality and agricultural nature of the landscape. There is also a need to protect the setting around the town of Tarbert and the scenic area to the northeast of the town. There was no consensus amongst the three public consultation summary maps. Planning permission for turbines has been granted in the townland of Gurteenavallig, Planning Reg. No. 11/ 299. This will alter to some extent the character of the area, adding an industrial aspect to this otherwise rural landscape. Additional wind development of a limited extent would not therefore significantly change the nature of the landscape. Given this capacity, the area is zoned as being Open to Consideration'.

It should be noted that the above capacity statement and development capacity summary is somewhat out of date. Existing wind farms at Leanamore (located within this LCA 2 – Tarbert Pastures) and Tullahennel Wind Farm (located in the adjoining LCA 4 – Inner River Plain) are a visible elements in this character area even at longer distances. However, the overarching landscape character apart from Tarbert Island, which can be described as industrial, is rural. The statements in the capacity summary appear to contradict each other. It describes this LCA as 'industrial' and later as 'rural landscape' apart from industrial features.

The area has indeed a scenic value. While the overall landbank may lack prominent landscape features, it is part of the intrinsic open character of the River Shannon Estuary leading west towards the Atlantic. Its low but undulating coastline with shallow sandy cliffs and beaches within the study area form part of a transition zone between land and sea and provide scenic views between the shores of Co. Kerry and Co. Clare, which can be appreciated from either shore or islands such as Scattery Island. This has been recognised by the designation of the R551 as part of the Wild Atlantic Way. While the Shannon Estuary features major and visually prominent industrial developments such as Moneypoint and Tarbert Power Stations, it has retained its rural character along the coastline further west. The coastline has capacity for recreational use in terms of scenic coastal walking routes if access to the land could be facilitated.

The 2 adjoining landscape character area are described below:

10.4.3.3 Ballylongford Creek

The landscape character assessment describes this character as follows (extract only):

² As included in Landscape Character Assessment prepared for the Renewable Energy Strategy 2012 & Adopted/ Proposed Archaeological Landscapes, Kerry County Council Planning Policy Unit, November 2012, Page A-15

‘Subtle changes in topography create the limit to this area. These changes run from Letter Point on Bunaclogga Bay to the summit of Knockanore Mountain before falling east to Tullahennel and crossing flat topography to Leanamore. From here the boundary turns north to join a rise in topography at Glansillagh before joining the shoreline of the River Shannon at Knockinglas Point. There is one viewing point for this area.

- **Scale:** *The extent of this landscape area is relatively small. The landscape within this area is comprised of small features such as fields, walls, hedges and individual houses. These elements break up the landscape into small-scale units, with the height and scale of Knockanore Mountain being the dominant feature.*
- **Landform:** *There is a gentle slope towards the estuary, generally flat.*
- **Landcover:** *Moorland is present on high topography on the northeast slopes of Knockanore Mountain. The remaining part of the area is generally pasture with some marginal land.*
- **Road Network:** *There is a dense network of roads in the area.*
- **Settlement Pattern:** *Generally within the villages of Asdee and Ballylongford, and in clusters along the main access roads. Isolated farmsteads are also present.*
- **Prominent Features:** *Knockanore Mountain, River Shannon Estuary.*
- **Perception:** *It is a peaceful landscape.*
- **Quality of Landscape:** *This landscape has a prominent landmark in Knockanore Mountain which is visible from the surrounding area. It is an attractive rural landscape with views north towards the Shannon Estuary’.*

Similar to the development capacity assessment of LCA 2 -Tarbert Pastures, this landscape character assessment states that the character area is not important for scenery or has scenic landscapes. Again, this cannot be supported following site surveys in the area. The interaction between land an estuary are important features along the coastline and elevated areas in the hinterland. Open views of the Shannon Estuary are scenic as well as the small scale undulating landscape. While section of the coast are low rise or flat, they bare a tranquil and pleasant setting. The sandy beaches and as well as Carrick Island and Carrigafoyle Castle are scenic features in the landscape character area and provide long distance views across the Shannon estuary. The coastline has capacity for recreational use in terms of scenic coastal walking routes if access to the land could be facilitated.

10.4.3.4 Inner River Plain

The landscape character assessment describes this character as follows (extract only):

‘The southern boundary extends from the summit of Knockathea in Co. Limerick, across a line of low hills to the north of Listowel to the eastern side of Knockanore Mountain. The northern boundary continues across the relatively flat topography between Tullahennel to higher topography at Tarmonhill on the Co. Limerick border ...’.

- **Scale:** *The scale of the landscape varies from large open moorland in the higher areas to smaller patchwork fields created by hedgerows, walls and a multiplicity of local roads.*
- **Landform:** *Flat in the western part but rises up to the east.*
- **Landcover:** *Some moorland on the higher ground in the area with pasture lower down. The flat lands in the centre of the area are pasture. There is some peatbog in places.*
- **Enclosure:** *Pasture is enclosed within hedgerows and hedge banks. Mature hedgerows are also present around settlements.*
- **Road Network:** *There is a dense network of roads in the area.*
- **Settlement Pattern:** *Comprises isolated farms and dwellings with a concentration of built development along main roads and at Moyvane.*

- **Prominent Features:** Knockanore Mountain
- **Perception:** Quiet pleasant rural landscape disturbed only by heavy development along roads.
- **Quality of Landscape:** This is a marginal area which is generally flat which results in the area not having any particular qualities.

This landscape character is located in the southern part of the study area. Intervisibility with the Proposed Development is unlikely.

10.4.3.5 County Clare – Landscape Designations

10.4.3.6 Landscape Character

The Landscape Character of Co. Clare is described within the Landscape Character Assessment of County Clare, March 2004, which is referenced in the Clare County Development Plan 2017-2023. It also defines Seascape Character Areas, which are described separately in Section 10.3.7 herein.

The landscape character assessment identifies a range of classifications for the landscape of Co. Clare. The below is an extract of the most relevant classifications located within the study area.

The study area covers the following Landscape Character Types and Landscape Character Areas as indicated in Figure F10-1, Vol. 3 – Landscape Designations:

Landscape Character Types (LCT)

10.4.3.7 FRH – Farmed Rolling Hills

This type is described as follows (extract):

The land cover consists of a mosaic of forestry and pasture/ grassland, no drumlins and rolling uneven topography. Infrastructure can be highly visible across this landscape type. Views are afforded from more elevated hills across the surrounding areas and to the Shannon estuary.

10.4.3.8 FLR – Farmed Lowland Ridges

This type is described as follows (extract):

The land cover is pasture, deciduous woodland and scrub and follows a linear ridge topography.

Landscape Character Areas (LCA)

10.4.3.9 LCA 18 – Shannon Estuary Farmland

Landscape Character Area Extent

'This area extends from Ballynacally in the north along the R473, encompassing the Labasheeda peninsula and continuing along the Shannon estuary to Kilrush. It is fringed by the Kilrush farmlands to the north'.

Geology and Landform

'... This area is composed of a prominently ridged landscape, with linear hills aligned south-west to north-east. The coastal fringe is flatter and slopes towards the Shannon. It also becomes increasingly flatter towards Kilrush'.

Landscape Condition and Sensitivity

'This area is of variable condition. In parts, the traditional landscape pattern dominates. The area is more intact in the east and north, where it is less accessible. Occasional modern residential development along the estuary line can be inappropriate and not reflective of local styles.

Around Kilrush and along the coast, tourist and holiday home development has also adversely affected the landscape. Moneypoint power station is a singularly large-scale detractor on the Shannon, accompanied by a number of prominent pylons. The ridges create many small-scale areas unsuitable for large development.

The sensitivity remains higher in the more intact areas, with elevated areas also sensitive due to their increased visibility. The estuary coastline is partly degraded due to infrastructure and the industrial activity within the Shannon estuary.

The woodland scrub around Clonderlaw Bay and the broadleaved areas in the grounds of Kilrush House are classified as visually vulnerable and sensitive under the county development plan. The coastline to Clonderlaw Bay is also classified as an area of high amenity under this plan'.

Key Characteristics

- *'Prominently ridged landscape, with linear hills aligned south-west to north-east.*
- *Secluded areas interspersed with more open views. Views are afforded across the Shannon estuary and across to Limerick from elevated areas and on the estuary shores.*
- *Coastal fringe is flatter and slopes down towards the sea.*
- *Diverse habitat and land cover.*
- *Scattery Island is an important historical and focal feature.*
- *Complex patterns of pasture, woodland and scrub habitats.*
- *Old Vandeleur Estate plantations, gardens and restored woodland recreation area'.*

The Clare County Development Plan categorises the landscape of the County into 3 'Living Landscapes'.

'County Clare comprises a number of areas that have similar characteristics for which similar planning policies are applicable. A description of each area is provided below along with the criteria used to define the boundaries of each area. The descriptions outline the vision and future role of the particular landscape together with policies/ objectives that will guide development of that landscape'.

The three categories have differing objectives as follows:

- **Settled Landscapes:** Areas where people live and work;
- **Working Landscapes:** Intensively settled and developed areas within Settled Landscapes or areas with a unique natural resource; and
- **Heritage Landscapes:** Areas where natural and cultural heritage are given priority and where development is not precluded but happens more slowly and carefully.

The study area includes area includes all 3 categories. Sections of heritage Landscapes are located south of Kilrush along the coast and include islands in the Shannon Estuary including Scattery Island. Working Landscapes are also located along the coast and include Moneypoint Power Station and ancillary developments. The remainder of the study area covering Co. Clare is categorised as 'Settled Landscapes'.

The Landscape Character Assessment assesses also forces for change. It states the following in relation to build developments, among others:

'Table 6.3b Broad Landscape Guidance for Built Development

Materials and Colour

- *Limit the range of materials and colours used on any one building and use natural materials, such as timber, stone and slate to link with existing buildings.*
- *Select cladding materials and colours for modern industrial and farming buildings to minimise their impact in the countryside. Avoid the use of light colours, which can reflect the light, and intense greens or blues, which often clash with the surrounding natural tones of fields and woods. The treatment of roofs is particularly important when considering the visual impact these have on views to lowland areas from surrounding hills.*
- *Ensure that the materials and colours used are in harmony with one another and with existing buildings nearby'.*

10.4.4 County Limerick – Landscape Character Assessment

The eastern section of the study area covers parts of Co. Limerick and the following landscape character area (LCA) as described in Limerick County Development Plan 2010-2016:

10.4.4.1 Shannon Integrated Coastal Management Zone (ICMZ)

'This zone comprises a large area of northern County Limerick and is bounded on one side by the Shannon Estuary while its southern boundary is defined by the gradually rising ground, which leads onto the agricultural zone and the western hills to the south west. The presence of the estuary is the defining characteristic of the region. The landscape itself is generally that of an enclosed farm type, essentially that of a hedgerow dominant landscape. This differs from the other agricultural landscapes of the County in that the field patterns, particularly close to the estuary, tend to be less regular than those elsewhere in the County.'

In relation to visual effects, Objective EH O12 states the following:

‘ ...

(b) To protect the views and prospects along the N69 (see Map 7.6), as a priority for the Planning Authority. Only in exceptional circumstances (e.g. domestic extensions and/ or a suitably screened dwelling for a son or daughter of a landowner where the son or daughter is engaged in full time farming or other exceptional circumstances) will development be allowed between the road and the estuary. Where housing is permitted single storey high quality design together with sensitive site location and landscape is required.

...’

10.4.5 Protected Views and Prospects/ Scenic Routes

10.4.5.1 Co. Kerry

Kerry County Development Plan 2015-2021 identifies a number of Views and Prospects. Relevant designations located within the study area are indicated in Figures F10-1 Landscape Designations and F10-2 Landscape and Seascape Designations and are listed below:

- Views north of the River Shannon estuary and Co. Clare shores from a section of the R551 between Ballylongford and Asdee. This section is also part of the Wild Atlantic Way driving route.
- Estuarine views east and northeast along sections of the L6010 towards Carrigafoyle Castle north of Ballylongford. This section is also part of the Wild Atlantic Way driving route.
- Views west of Lislaughtin Abbey from a short section of the L1010 northeast of Ballylongford.
- Views east and southeast of Tarbert Bay along sections of the N69 including its section on Tarbert Island to the ferry terminal. This section is also part of the Wild Atlantic Way driving route

Relevant extracts of the development plan state the following:

'County Kerry contains areas of outstanding natural beauty which are recognised internationally. There is a need to protect and conserve views and prospects adjoining public roads throughout the County. These views and prospects are important to the amenity of the County and to its tourist industry.

...

It is not proposed that the protection and conservation of these views and prospects should give rise to the prohibition of development along these routes, but & Landscaping development where permitted, should not seriously hinder or obstruct these views and should be designed and located to minimise their impact.

...’

It is an objective for the Council to:

'ZL-5: Preserve the views and prospects as defined on Map No's 12.1, 12.1a– 12.1u.

ZL-6: *Facilitate the sustainable development of existing viewing points as identified by Fáilte Ireland along the route of the Wild Atlantic Way, while ensuring the protection of environmental attributes in the area through the implementation of environmental protection objectives, standards and guidelines of this Plan*.

10.4.5.2 Co. Clare

Clare County Council recognises that the Shannon Estuary is an important tourist asset and designated a number of scenic routes along the River Shannon estuary. The following Scenic Route is located within the study area:

Coast road south east of Cappagh to Carrowdotia South, which includes sections of the N67

This designated scenic route is also part of the Wild Atlantic Way.

Clare County Development Plan includes a number of objectives in relation to Scenic Routes located in 'Heritage Landscapes' and 'Working Landscapes'. Scenic Route 19 travels through both designations. Relevant extracts are included below.

CDP13.4 Shannon Estuary Working Landscapes

'It is an objective of the Development Plan:

...

B - That selection of appropriate sites in the first instance within this landscape, together with consideration of the details of siting and design, are directed towards reducing visual impact and that residual visual impacts are minimised;

C - That particular regard should be given to avoiding intrusions on scenic routes and on ridges or shorelines. Developments in these areas will be required to demonstrate:

- I. That sites have been selected to avoid visually prominent locations wherever feasible;*
- II. That site layouts avail of existing topography and vegetation to reduce visibility from scenic routes, walking trails, public amenities and roads; and*
- III. That design for buildings and structures reduce visual impact through careful choice of form, finish and colours and that any site works seek to reduce visual impact of the development.*

CDP13.5 Heritage Landscapes

'It is an objective of the Development Plan:

To require that all proposed developments in Heritage Landscapes demonstrate that every effort has been made to reduce visual impact. This must be demonstrated for all aspects of the proposal – from site selection through to details of siting and design. All other relevant provisions of the Development Plan must be complied with. All proposed developments in these areas will be required to demonstrate:

- That sites have been selected to avoid visually prominent locations;*
- That site layouts avail of existing topography and vegetation to minimise visibility from scenic routes, walking trails, public amenities and roads; and*
- That design for buildings and structures minimise height and visual contrast through careful choice of forms, finishes and colour and that any site works seek to reduce the visual impact of the development.*

CDP13.7 Scenic Routes

It is an objective of the Development Plan:

- A. To protect sensitive areas from inappropriate development while providing for development and change that will benefit the rural community;*
- B. To ensure that proposed developments take into consideration their effects on views from the public road towards scenic features or areas and are designed and located to minimise their impact; and*

- C. *To ensure that appropriate standards of location, siting, design, finishing and landscaping are achieved.*

10.4.5.3 Co. Limerick

The current Limerick County Development Plan 2010-2016 designates Views and Prospects. According to the Draft Limerick Development Plan 2022-2028, these designations will remain unchanged.

The eastern extend of the study area covers a section of County Limerick and designated Views and Prospects as follows and as indicated in Figure F10-1 – Landscape Designations:

- Shannon estuary from Foynes to Glin, which is incorporated into the Shannon Estuary Integrated Coastal Management Zone.

A number of objectives in relation to views and prospects are defined by the Council. The below is an extract of relevant objectives:

Objective EH O12: Shannon Coastal Zone Landscape Character Area

'It is the objective of the Council:

...

- B. *To protect the views and prospects along the N69 (see Map 7.6), as a priority for the Planning Authority. Only in exceptional circumstances (e.g. domestic extensions and/ or a suitably screened dwelling for a son or daughter of a landowner where the son or daughter is engaged in full time farming or other exceptional circumstances) will development be allowed between the road and the estuary. Where housing is permitted single storey high quality design together with sensitive site location and landscaping is required.*

...'

Objective EH O17: Scenic Views and Prospects

- a) *It is the objective of the Council to safeguard the scenic views and prospects by integrating them into landscape character areas, which will ensure a more balanced approach towards landscape issues within the County.*
- b) *In areas where scenic views and prospects are listed in Map 7.6 there will be a presumption against development except that which is required in relation to farming and appropriate tourism and related activities, or a dwelling required by a long term land owner or his/ her family that can be appropriately designed so that it can be integrated into the landscape.*
- c) *The Planning Authority will exercise a high level of control (layout design, siting, materials used, landscaping) on developments in these areas. In such areas site specific designs are required. It should be noted that in areas outside these delineated areas, high standards will also be required.*

The Draft Limerick Development Plan 2022-2028 objective are very similar and state the following:

Objective EH O30: Views and Prospects

'It is the objective of the Council:

- a) *Preserve, protect and encourage the enjoyment of views and prospects of special amenity value or special interests and to prevent development, which would block or otherwise interfere with views and/ or prospects.*
- b) *In areas where scenic views and prospects are listed in the Draft Plan, there will be a presumption against development, except that required to facilitate farming and appropriate tourism and related activities. The development must be appropriately designed so that it can be integrated into the landscape'.*

10.4.6 Seascape Character

The River Shannon estuary is part of seascape character areas of local and national planning bodies as follows:

10.4.6.1 Co. Kerry

Currently no planning references to a seascape character assessment or a definition of seascape designations.

10.4.6.2 Co. Clare

Clare County Development and the associated Landscape Character Assessment includes details on Seascape Character Areas (SCA) along the shores of County Clare. Figure F10-2 – Seascape Character, indicates the location of relevant seascape character areas located within the study area namely:

- SCA 10 – Lower Shannon; and
- SCA 11 – River Shannon.

SCA 10 – Lower Shannon

Seascape Character Area Extent

'The Lower Shannon SCA is situated between Kilcredaun Point and Lynchs Point (east of Money Point).'

Geology and Landform

'Long sand and shingle beaches with an exposed feel when winds are from the south west'.

Historic Seascape and Human Influences (Extract)

'There is a monastic complex, possibly from the sixth century, and medieval round towers and churches on Scatterry Island. It remained a pilgrimage and burial site after the Elizabethan slighting of the monastery and the island's conversion to a defensive fort (its pattern – or penitential round – was suppressed in the early 1800s).'

Condition and Sensitivity

'The condition of the seascape is moderate becoming poorer closer to the River Shannon SCA. Power stations and windfarms are dominant features degrading views across the water in County Kerry and Limerick. Changes would be evident due to low lying and exposed nature of the area'.

Key Characteristics

- *'The River Shannon in this area is wide, creating a greater coastal than estuarine sense;*
- *Views from Kilrush to Scatterry Island and Hog Island;*
- *Settlement is concentrated around Kilrush including caravan parks and golf club;*
- *Pylons and Money Point Power Station are prominent features;*
- *Kilrush is a designated Heritage Town and Sea Angling Centre;*
- *Kilrush Marina is a major infrastructure providing 120 berths at all stages of the tide. It has been awarded Blue Flag status;*
- *Scatterry Island is a designated ACA (Architectural Conservation Area); and*
- *There are views across to Ballylongford and County Kerry'.*

The development plan states that *'Liaison with Kerry and Limerick County Council should be undertaken with reference to all proposed developments along their coastline'.*

Extract in relation to 'Forces for change'

'...

Coastal development in prominent locations which would detract from the seascape value of the area e.g. power station, wind farms, marinas, etc. within view on the Kerry and Limerick coastline

...'

Extract from ‘Principles for Seascape Management’

‘...

Linear urban development should be avoided and all other development should be screened appropriately

Views to the coastline of Limerick and Kerry should be retained

Promote agricultural and environmental schemes to avoid dereliction of coastal based landscapes

...’.

SCA 11 – River Shannon

Seascape Character Area Extent

‘The River Shannon SCA extends from Limerick to east of Money Point. It is bounded by Kerry Head to the South and Kilrush farmlands to the North’.

Geology and Landform

‘The River Shannon SCA consists of a shallow low-lying and muddy linear coastline. This area is composed of a prominently ridged landscape, with linear hills aligned south-west to north-east. The coastal fringe is flatter and slopes towards the Shannon. It also becomes increasingly flatter towards Kilrush’.

Condition and Sensitivity

‘The estuary is in moderate to good condition. However, industrial and commercial activity dominates the view from land to sea.

Low lying, flat and open views to sea increase the area's sensitivity to change particularly from shipping and industrial activities’.

Key Characteristics

- *‘Coastal fringe is flatter and slopes down towards the sea;*
- *Views to scattered farm house settlements;*
- *Deep water berthing facilities;*
- *Views of shipping, commercial, industrial activity, pasture land and forestry;*
- *Focal point for travelling the waterways of Ireland;*
- *Shannon Airport is a landmark transport node of transcontinental significance (also, Fergus Estuary Seascape Area below); and*
- *Car ferry service to Tarbert along the north coast of County Kerry’.*

Extract in relation to ‘Forces for change’

‘...

Visible impacts of shipping and commercial activity

Plantations of coniferous forestry

...’.

Extract from ‘Principles for Seascape Management’

‘...

Best practice forestry guidelines should be adhered to in order to avoid inappropriately siting or design of plantations

Infrastructural developments including road widening along the coastline should consider local landscape character

Linear development along the coastline should be avoided and all other development should be screened appropriately.

...!

10.4.6.3 Co. Limerick

Currently no planning references to a seascape character assessment or a definition of seascape designations.

10.4.6.4 Regional Seascape Character Assessment for Ireland

The Regional Seascape Character Assessment has been prepared for the Marine Institute. The report presents Regional Seascape Character Areas.

Seascape character assessment represents a core component of the evidence base for Marine Spatial Planning and marine policy formulation. Seascape character assessment (SCA) has emerged as a method for assessing, characterising, mapping and describing seascape character.

Seascape is defined as *'an area of sea, coastline and land, as perceived by people, whose character results from the actions and interactions of land with sea, by natural and/ or human factors'*, according to the definition from *'An Approach to Seascape Character Assessment, Natural England 2012*.

The assessment distinguishes between Regional Seascape Character Types and Regional Seascape Character Areas.

The Shannon Estuary within the study area is located within the following:

Regional Seascape Character Type: 2 – Large Estuary

The Shannon Estuary is part of this character type and has the following principal drivers:

- *'Partially enclosed coastal body associated with confluence of large rivers;*
- *Complex tidal patterns of tidal channels associated with ebb and flow of tidal streams. Mudflats, and small islands present;*
- *Commonly zone of deposition Sloping landform with inlets and small islands;*
- *Deciduous woodland fringes occasional shorelines;*
- *Transitional zone between freshwater and marine with rich habitat for a range of flora and fauna; and*
- *Long history of human activity and habitation associated with sheltered rich estuarine environment'.*

Regional Seascape Character Area: SCA8 – Shannon Estuary and Tralee Bay

The below is an extract of a wealth of information provided in the overall assessment document:

'The SCA extends eastwards from Limerick including the Shannon Estuary, Mouth of the Shannon from Kilcredaun Point to Kilconley Point, extending landward to the north at Loop Head, encompassing Kerry Head and Brandon Head (Brandon Point/ Dulick Point). This SCA extends 12 nautical miles offshore'.

Vistas and Views (extract)

- *'Within the estuary views are across the channel with parts of the views framed by the indented shoreline and strips of woodland close to the shoreline, often associated with former demesne landscapes. The vertical features of industrial units such as the towers of Moneypoint and Tarbert help to situate views within this area as it largely low lying and sloping to the shoreline. Whilst industrial elements can be a features within this part of the*

- *SCA the eye is often drawn to the interesting and diverse inlets with wooded shorelines, small rocky shores and a dynamic intertidal zone.*
- *At the elevated parts of this SCA, the views become expansive and long views are possible north and south; where sea stacks and cliffs are visible they draw the eye and the crashing waves against the rocks can dominate the view.*
- *Lighting – clusters of lighting associated with the larger settlements and villages can be seen across the estuary and along the coast. Lighting at Tarbert, Moneypoint, Auginish can be seen associated with stacks and chimneys. The light spill from Limerick City is also visible closer to the city’.*

10.4.6.5 National Marine Planning Framework (NMPF)

The NMPF categorised Shannon Estuary into the following Seascape Character Area:

- Shannon Estuary and Tralee Bay

It also defines it as a ‘Large Estuary’ in terms of its ‘Seascape Coastal Type’. It uses therefore the same categorisation as set out in the Regional Seascape Character Assessment of Ireland as described above in Section 10.4.6.4.

The NMPF sets out the following policy:

‘Seascape and Landscape Policy 1: *Proposals should demonstrate how the likely significant impacts of a development on the seascape and landscape of an area have been considered. Proposals will only be supported if they demonstrate that they, in order of preference:*

- avoid,*
- minimise, or*
- mitigate*

significant adverse impacts on the seascape and landscape of the area.

- If it is not possible to mitigate significant adverse impacts, proposals must set out the reasons for proceeding.*

This policy should be included as part of statutory environmental assessments’.

It also states the following (extract):

‘Many areas of [the] coastline are distinctive for their natural beauty and their diverse range of activities.

This policy aims to make sure that proposals consider their potential impacts on the seascape and landscape of an area. This is not only important for the protection of iconic views and character but also to aid in the process of enabling development where it is most appropriate.

The effects of development, such as through wind and tidal energy projects, port development, coastal defences, cable landings and pipelines, on an area’s seascape and landscape should be considered.

This is not only for individual areas, but also for the contributions they make to nationally designated sites and their settings. Increased footfall from tourism and recreation activities may raise the awareness of an area, but it can also change marine character and the visual resource. Routing and site selection are important tools in ensuring that impacts on seascape and landscape are minimised and mitigated ...

The final part of this policy identifies the need to set out the reasons for proceeding where significant adverse impacts on the seascape and landscape of the area cannot be avoided, minimised or mitigated. Where this is required, reasoning should include how optimisation of space might be achieved, what measures are proposed to minimise and mitigate significant adverse impact (if such steps are not possible, a description of why this is), as well as setting out the reasons why a given proposal should proceed in light of the likely impact ... ‘.

10.4.7 Wild Atlantic Way

According to Fáilte Ireland, the Wild Atlantic Way is a 'defined touring route, stretching along the Atlantic coast from Donegal to West Cork'.

Sections of this touring route are located with the study area in Co. Kerry, Co. Limerick and Co. Clare as mapped in Figures F10-1 Landscape Designations and F10-2 Landscape and Seascape Designations. Sections of Designated Views and Prospects as well as Scenic Routes using the same route/ locations as the Wild Atlantic Way.

Sections of the Wild Atlantic Way located within the study follow the route of the R551 in either direction to Ballylongford and Tarbert, the L6010 to Carrigafoyle Castle, the N67 between Tarbert and Tarbert Ferry Port, the Tarbert-Killimer Ferry Route, sections of the N67 between Killimer and Kilrush but deviating from N67 to the coastal road and the R473 into Kilrush before joining the N67 again. It also extends east from Tarbert towards Foynes along the N69.

Kerry County Development Plan states the following:

'The Fáilte Ireland Wild Atlantic Way has identified a network of existing viewing points along its route. In order to maximise the potential of the Wild Atlantic Way these existing viewing points will be protected ... The Council will work with Fáilte Ireland in the sustainable development of these viewing points'

10.5 Characteristics of the Proposed Development

A detailed description of the Proposed Development is included in Chapter 02 – Project Description.

10.6 Assessment of Impact and Effect

The following potential visual effects, direct and indirect townscape effects, as well as the duration and nature of effects arising from the Proposed Development, have been identified. Photomontages 1-15 illustrate the Proposed Development from representative viewpoint locations within the study area. A description of each photomontage is included in Section 10.6.3 herein.

10.6.1 Effects at Construction

Effects at construction and most works will include earthworks, removal of vegetation, etc., albeit with some level of additional construction works required for the actual location of the Proposed Development and associated developments. The construction stage will give rise to some level of landscape and visual impacts, primarily through additional disturbance, including:

- Loss of existing vegetation.
- Extended soil stripping, earthworks, grading, etc.
- Installation of additional structures related to the Plant.
- Potential effects to visual amenity within the locality or the wider study area as a result of the visibility of construction activities such as ground works, the construction and associated scaffolding, cranes etc.
- Effects of temporary to short-term site infrastructure such as site traffic, construction compounds, soil storage areas etc. especially those located in areas adjacent to visual receptors.
- Physical effects arising from construction of the Proposed Development will be confined to the development site.

It is considered that the emergence of new structures within an extended area of construction activity will be the most visually prominent aspect of the construction works relating to the Proposed Development.

Views of this area and any associated earthworks will also be partly restricted due to the undulating nature of the topography within the Co. Kerry part of the stud area. Open views of the majority of construction works will be possible from the Shannon Estuary itself and the shores of Co. Clare including elevated location in the hinterland. Landscape and visual effects will therefore range from **low** to **high** and their significance from **slight neutral** to **significant adverse** but **temporary-short term** depending on the distance to the Proposed Development and the extent of intervening topography and vegetation.

Photomontages 1-15 supplementing this assessment illustrate the visual effects at operational stage only. The proposed construction works do not allow for a meaningful illustration in photomontages as these can only show one particular snapshot in time, which will not capture the dynamic and complex nature of construction works comprehensively.

Visual effects and their significance during construction works will be temporary to short-term. They will be highest within the immediate vicinity of the site, primarily along the adjacent roads. Principal views of construction works will likely be experienced within a radius of approximately up to 500m from the site boundary as well as from dwellings facing the development site located within approximately 1 km from the site boundary. The magnitude of visual effects is considered **medium to high** in close distance views. Their significance is considered **moderate-significant adverse**.

The visibility of construction works within the wider study area beyond 1 km will be limited to middle distance open and partial views within Co. Kerry but to open views across the Shannon Estuary from the coastline in Co. Clare. Middle-and longer distance views will depend on weather conditions and associated visibility. Visual effects from these areas are considered **low to medium**, their significance **slight neutral** to **moderate adverse**.

Long distance views from locations within Co. Limerick are limited to elevated locations and will comprise sections of the upper construction works such as cranes. The magnitude of change will be **low to negligible** and their significance **not significant** or **imperceptible neutral**.

10.6.2 Effects at Operation

Figure F10-1, Vol. 3 illustrates 15 viewpoints from locations selected as 'Representative Viewpoints' for the assessment of landscape and visual effects of the Proposed Development. Views from these locations have been developed into photomontages, which are included in the Booklet of Photomontages accompanying this planning application.

Operational effects will result in:

- Likely effects of the development on views and visual amenity such as the potential for the development to alter (beneficial or adverse) the composition of the view from a viewpoint; and
- Likely cumulative effects of the development in combination with other planned and proposed developments of similar type and scale upon the landscape and visual resource of the study area.

10.6.3 Landscape Effects (and Seascape Effects)

The following likely direct and indirect landscape effects have been identified, (along with their duration and nature) arising from the Proposed Development. Direct or indirect landscape effects on the fabric of the landscape and its receptors are closely related to the nature and extent of visibility.

The Proposed Development is located within a green field site, which is zoned for industrial development. The site is currently used as agricultural land and is traversed by a number of existing mature hedgerows, scrub and drainage ditches. The site is located in Landscape Character Area 'Tarbert Pastures' and is zoned for industrial/ strategic development. The landscape character is considered to have a Low-Medium value. The landscape is sensitive to large scale developments. Its sensitivity is considered Medium. While the overall character of the landscape lacks distinct features, its setting along the shores of the Shannon Estuary, its openness, gentle undulations and sparse tree cover provide a sense of transition between land and ocean. The Shannon Estuary at this point is already broad and within reach of the Atlantic.

Key features surrounding the Proposed Development site include low-lying, rolling agricultural pastureland, strongly influenced, and determined by its exposed estuarine setting, along the Shannon Estuary. The broad waters of the Shannon Estuary are the defining landscape feature. However, prominent existing industrial developments at Moneypoint and Tarbert Island and related electricity pylons draw the immediate focus in the landscape.

The main landscape effects of the Proposed Development will be associated with the introduction of large industrial buildings including the LNG Terminal and ships (which will be berthed at the terminal for the majority of the year), leading to a long term change in landscape character at the site and an intensification of the industrial character along the Shannon Estuary. It is anticipated that the Proposed Development will alter the landscape character within approximately 1 km radius on the side of Co. Kerry. Change to the landscape character will be noticeable beyond 1 km and up to approximately 6 km along the coastline of Co. Clare and in elevated areas near the coast.

Direct and long-term change will occur locally where the Proposed Development will be physically located. The landscape character at site location will change from rural agricultural to an industrial. The Proposed Development will retain existing screening vegetation onsite where possible. A detailed landscape masterplan indicates the retention of existing vegetation including hedgerows, and proposes new planting along the entrance road minimising the impact on vegetation cover within the area and supporting the integration of the Proposed Development into its environs. At the site location, the magnitude of landscape change is considered **high** and the resulting significance is **very significant adverse** as the Proposed Development replaces an estuarine rural landscape character with an industrial character.

Indirect change will occur outside of the Proposed Development site boundary, where the visibility of the Proposed Development has an influence on the perception of the character of the landscape. The indirect change in landscape character is greatest in its immediate and close surroundings where open and partial views are possible within approximately 1 km radius from the Proposed Development site boundary in views from the Co. Kerry side of the Shannon Estuary. The magnitude of change in these areas is considered **medium to high**. The significance of landscape effects on the landscape character is therefore considered to be **moderate to significant adverse**. The Proposed Development will industrialise the landscape character and further intensify the industrial components of the landscape character in the wider study area when seen in conjunction with the existing industrial landscape character around Moneypoint Power Station.

Indirect change and the significance of landscape effects will reduce with increasing distance from the Proposed Development in the remaining study area (beyond approximately 1 km from the Proposed Development site boundary). The magnitude of landscape effects is considered **low to medium** and their significance Slight to **moderate adverse**. Given the prominence of the location, the intensification of the industrial character can be recognised over long distances across the Shannon Estuary in Co. Clare, where the change in landscape character will be recognisable at distance ranging between approximately 2.5 km – 6 km depending on weather conditions.

In the context of the wider study area, the Proposed Development will be perceived in conjunction with other existing large-scale industrial developments along the Shannon Estuary, which define already the overall character of estuary and its shorelines within the study area. The Proposed Development will therefore not be seen as totally uncharacteristic and can integrate into the wider landscape character.

The sensitivity and value of the seascape character of SCA 10 – Lower Shannon is considered Medium as existing large scale power stations and wind farms are prominent features the seascape character. The seascape character will be directly and indirectly affected. The addition of another large scale industrial facility with a new jetty and mooring areas will reinforce and intensify the industrial components within the estuarine character and become a prominent feature in the overall low lying and exposed nature of the area. The magnitude of effects on the seascape character are therefore considered **medium** and their significance is considered **moderate adverse**. The Proposed Development with its prominent buildings including the LNG Terminal and ships will further detract from the seascape value of the River Shannon SCA due to the low lying and exposed nature of the area as identified in the 'Forces for change' stated in the Seascape Character Assessment of County Clare.

Indirect effects will be experienced in the wider seascape character (beyond approximately 3 km from the Proposed Development site) of the Lower Shannon, where the number of industrial components will increase and further industrialise the character of the seascape long term. The magnitude of effects on the seascape character are therefore considered **low-medium** and their significance **slight-moderate adverse**. However, the proposed change in seascape character is not totally uncharacteristic considering existing large industrial developments within this seascape character area and the zoning of the development site for industrial developments. Landscape and mitigation proposals to minimise likely adverse effects on the landscape and seascape character are described in Section 10.8 – Mitigation and Monitoring Measures of this chapter.

A summary of outline landscape and seascape effects of the Proposed Development on key receptors located within the study area is provided in the table below.

Table 10-13 Summary of Landscape Effects

Receptor	Landscape Susceptibility	Landscape Sensitivity	Magnitude of Change (at operation)	Quality of Effects	Significance of Landscape Effects
Landscape character area 'Tarbert Pastures' (at the development site)	Medium-Low	Medium	High	Adverse	Very Significant
Landscape Character Area 'Tarbert Pastures' (outside of the Proposed Development site within 1 km of the site boundary)	Medium-Low	Medium	Medium-High	Adverse	Moderate-Significant
Landscape Character Area 'Tarbert Pastures' (beyond 1 km of the Proposed Development site)	Medium-Low	Medium	Low-Medium	Adverse	Slight-Moderate
Landscape Character Area 'Ballylongford Creek' (beyond 500m and up to 1 km of the Proposed Development site)	Medium	Medium	Medium	Adverse	Moderate
Landscape Character Area 'Ballylongford Creek' (beyond 1 km and up to 4 km of the Proposed Development site)	Medium	Medium	Low-Medium	Adverse	Slight-Moderate
Landscape Character Area 'Ballylongford Creek' (beyond 4 km of the Proposed Development site)	Medium	Medium	Low	Neutral	Not Significant

Receptor	Landscape Susceptibility	Landscape Sensitivity	Magnitude of Change (at operation)	Quality of Effects	Significance of Landscape Effects
Landscape Character Area 'Inner River Plain'	Medium	Medium	Very Low to None	Neutral	Imperceptible
Landscape Character Area 'Shannon Estuary Farmland'	Medium	Medium - High	Low-Medium	Adverse	Slight-Moderate
Landscape Character Area 'Shannon ICZM'	Medium	Medium	Very Low to None	Neutral	Imperceptible
Seascape Character Area 'Lower Shannon'	Low	High	Medium	Adverse	Moderate
Regional Seascape Character Type: 2 – <i>Large Estuary</i> (or Seascape Coastal Type according to the National Marine Planning Framework)	Low	High	Medium	Adverse	Moderate
Regional Seascape Character Area: <i>SCA8 – Shannon Estuary and Tralee Bay</i> (or Seascape Character Area according to the National Marine Planning Framework)	Low	High	Medium	Adverse	Moderate

10.6.4 Visual Effects

Visual effects will mainly relate to the introduction of HRSG and turbine halls as well as storage tanks / silo's, the LNG Terminal and LNG ships.

The main visual receptor groups are residents, vehicle travellers including ferry passengers, workers and visitors / tourists. Residents will have the highest sensitivity to change than road users or ferry passengers. Vehicle travellers and workers will focus mainly on traffic or their commercial tasks and not primarily on available views. Ship passengers will see the Proposed Development in conjunction with the prominent existing Tarbert Power Station and Moneypoint Power Station structures.

Visual effects will mainly relate to the introduction of a new large industrial facility onshore and the LNG terminal and ships within the River Shannon.

The closest residential dwellings in the immediate environment of the Proposed Development are located along the L1010 and the overall local road network in the area within approximately 1 km radius from the Proposed Development boundary in Co. Kerry. The highest visual change will be in the vicinity of the new entrance area along the L1010, at Ralappane House immediately east of the Proposed Development and in elevated areas where views of sections of the upper buildings such as the proposed 3 HRSG and turbine halls along with storage tanks/ silo's become available. The LNG terminal will often be screened in views from residences by topography, intervening vegetation and the proposed onshore structures itself. Viewpoints / Photomontages 1-4 & 6 are located within

approximately 1 km of the development boundary in Co. Kerry and are described in detail in Sections 10.6.4.1 and following herein.

Within the Co. Kerry side of the study area beyond 1 km from the boundary, views become quickly intermittent due to undulating topography and intervening vegetation. Viewpoints / Photomontages 5, 7 & 8 illustrate views from within 1-7 km from the boundary. Viewpoint / Photomontage 9 illustrates a long distance view to the east at approximately 9.5 km distance. Visual effects for these viewpoints and general surrounding areas at these various distance are described in detail in Sections 10.6.4.5 and following herein.

The Proposed Development will introduce a prominent industrial facility in available views within the Co. Kerry section of the study area. It will often be seen in conjunction with the existing Moneypoint Power Station and associated wind farm. In that respect, and considering the zoning of the site and surrounding areas for industry, the proposed development is not uncharacteristic in available views. However, it will introduce prominent structures in a currently rural section of the shoreline. It will intensify the industrial character of estuarine views. It will create a new points of focus in available close distance views (within approximately 1 km of the site). The significance of visual effects is considered to range from slight to significant adverse depending on the openness of the view and the extent of intervening topography and existing vegetation. Some close distance views are fully screened by intervening commercial forest plantations. Considering the location and the middle to long distance nature of views within 1 – 7 km from the development site boundary, visibility will also depended on weather conditions and the level of haziness.

The majority of open views of the Proposed Development will be experienced from the Co. Clare side of the Shannon Estuary, where middle to long distance open views of the proposal will be possible. This includes most coastal roads within the study area as well as elevated sections of the N67 and adjoining local roads, refer to Viewpoints / Photomontages 12 & 14. Visibility is generally considered middle to long distance in nature (beyond 1 km) due to the width of the estuary. Despite the distance, the Proposed Development will become a discernible new focus point in views from the shoreline. Refer to Viewpoints / Photomontages 10, 11 & 13. The Proposed Development will be a new component on often panoramic views across the estuary into Co. Kerry. It will be seen in conjunction with existing wind turbines including Leanamore Wind Farm and Tullahennel Wind Farm in Co. Kerry and Money Point Power Station and its chimney stacks in Co. Clare. Similar as for views in Co. Kerry, existing views contain already large scale industrial or light industrial developments, and the Proposed Development will therefore not be totally out of character. It will nevertheless industrialise additional areas further west along the shoreline, which are currently rural and natural in appearance. Visual effects are considered to range from low-high and the significance from slight to significant adverse depending on the distance and panoramic nature of the views. Considering the generally open nature of shoreline or elevated views from areas close to the shoreline, the visual change is still significant despite the middle to long distance nature of these views. A detailed description of Viewpoints / Photomontages listed above is contained in Sections 10.6.4.10 and following herein.

Viewpoint / Photomontage 15 illustrates a view from the ferry between Tarbert-Killimer within the River Shannon Seascape Character Area. The Proposed Development will further industrialise the Shannon Estuary in views west. However, it will be seen as one industrial component of several in available views. The buildings including the LNG Terminal and ships will be clearly visible in good weather conditions and add to the existing industrial character of the view. The development will, however, not alter the existing views significantly as it will be seen in panoramic views in conjunction with existing large power station structures of Tarbert and Moneypoint Power Station including wind turbines. A detailed description of this Viewpoint / Photomontage is contained in Section 10.6.4.15 herein.

Night-time photomontages have been produced for Viewpoints / Photomontages 8 and 12. The set of photomontages show the existing lit situation and the proposed scenario with main lights turned on only (day-to-day lighting required) and all lights turned on. A detailed description of visual effects is provided in the individual viewpoint / photomontage descriptions in Sections 10.6.4.8 and 10.6.4.12.

Viewpoints / Photomontages 1-15 (refer to Booklet of Photomontages) illustrate views from representative viewpoints within the study area, which captures estuarine views from the northern and southern shores of the Shannon Estuary.

10.6.4.1 Viewpoint/ Photomontage 1: View northwest from the L1010 at Carhoonakilla, Co. Kerry

This viewpoint is located at an approximate 972m distance to the centre of the site along the L1010 in the townland area of Carhoonakilla and shows an open view to the northwest. Beyond the road boundary, the landscape is comprised of undulating agricultural fields, enclosed by hedgerows. A farm settlement is partially visible in the distance in the left of this view, consisting of residential buildings along with ancillary outbuildings, sheds and barns. To the right of the view, on the horizon sits a band of farmed coniferous trees in front of which are two electricity pole sets associated with an overhead transmission line. A grouping of mature trees is visible in the distance to the left of the farm buildings.

The value of this view is considered to be low. The sensitivity of this view is considered medium-low. Visual receptors will mainly be vehicle drivers including cyclists or walkers. The susceptibility to change is considered medium as the view may be important to receptors but it will not be the primary focus.

In the photomontage, sections the upper parts of the proposed HRSG halls as well as storage tanks / silo's will become visible above the ridge in the background beyond the existing farm buildings in the centre of the view. The Proposed Development does not protrude much higher than the existing buildings. Some screening is offered by existing intervening vegetation associated to the farm in the distance. The Proposed Development will cause a noticeable but not prominent change in the current view. The magnitude of visual effects is considered **medium** and the significance is **slight adverse**.

10.6.4.2 Viewpoint/ Photomontage 2: View north from local road at Kilcolgan Upper, Co. Kerry

This viewpoint is located at an approximate 1,038 m distance to the centre of the site along L1010 in the townland of Kilcolgan Upper. The view is orientated to the north and is representative of a number of similar views in this area and displays an open undulating landscape in an estuarine setting. Sections of the River Shannon and the coastline of Co. Clare can be seen in the distance. Mature/ semi-mature trees dissect the view in the centre, a dwelling sits in the right of this view. The existing Moneypoint Power Station with its prominent stacks, as well as the associated wind farm can be seen in the background of this view.

The value of this view is considered to be medium. The sensitivity of this view is considered medium-high. Receptors of this view include mainly vehicle drivers including cyclists, local residents and walkers. The susceptibility of the view to change is considered medium.

The upper sections of the proposed 3 HRSG and turbine halls along with storage tanks/ silo's and other building structures will become visible in the middle distance. The Proposed Development will become a prominent new point of focus in this view. It will intensify the industrial character of this view bringing industrial elements further south and closer to this viewpoint. While prominently visible, the Proposed Development is not totally uncharacteristic when seen in combination with the existing power station buildings at Moneypoint. The Proposed Development will extend the established pattern of industrial development further west along the Shannon Estuary. While the underlying existing characteristic components of the view remain, there will be a clearly recognisable change in the overall composition of the view. The magnitude of visual effects is considered **medium-high** and the significance is **significant adverse**.

10.6.4.3 Viewpoint/ Photomontage 3: View north from local road at Glencullare North, Co. Kerry

This viewpoint is located at an approximate 1,988 m distance to the centre of the site along a local road in the townland of Glencullare North, and further south than Viewpoint/ Photomontage 2. This more elevated view is orientated to the north and representative of views in this area. Intermittent open views of the Shannon Estuary and Co. Clare in the distance are offered. A dwelling and an associated ancillary building as well as local overhead transmission lines are visible in this view. Existing vegetation includes roadside hedgerows and few single stands or small clusters of trees. Two existing stacks and other buildings associated with Moneypoint Power Station become partially visible in the background.

The value of this view is considered to be medium. The sensitivity of this view is considered medium-high. Receptors of this view include mainly vehicle drivers including cyclists, local residents and walkers. The susceptibility of the view to change is considered Medium.

The upper sections, mainly the HRSG and turbine halls, of the Proposed Development will become visible in the middle distance below the horizon line. From this viewing location, the roof sections of the three turbine halls will be the most visible elements followed by smaller scale ancillary buildings. The magnitude of change is considered **medium** and the resulting significance of visual effects is considered to be **slight-moderate adverse** as the development will increase the prevalence of large industrial infrastructure in this view when seen in combination with the existing Moneypoint Power Station components.

10.6.4.4 Viewpoint/ Photomontage 4: View east/ northeast from Kilcolgan Lower, Co. Kerry

This viewpoint is located at an approximate 1,281 m distance to the centre of the site along a local access road north of the L1010 in the townland of Kilcolgan Lower. The view is orientated east/northeast and is representative of views in this area, which include partially open views along the Shannon Estuary. The existing Moneypoint Power Station with its two chimney stacks as well as the associated wind farm are prominent features in the background of this view.

The value of this view is considered to be medium. The sensitivity of this view is considered medium. Receptors of this view include mainly vehicle drivers including cyclists, local residents and walkers. The susceptibility of the view to change is considered Medium.

Sections of the proposed HRSG and turbine halls as well as the air cooled condenser units will become visible in the middle distance. The views will also include the superstructures of the proposed LNG ships. The Proposed Development will be partially screened by intervening topography and vegetation. The HRSG and air cooled condenser units will become prominent new structures in this view and a new point of focus apart from the existing chimney stacks and wind turbines of Moneypoint Power Station in the background. The magnitude of visual change is considered **medium** and resulting significance of visual effects is considered to be **moderate adverse** as the development will further industrialise the view and increase the prevalence of large industrial infrastructure in this view when seen in combination with the existing Moneypoint Power Station components.

10.6.4.5 Viewpoint/ Photomontage 5: View northeast from L1010 in the townland of Kilcogan Lower east of Saleen Pier, Co. Kerry

This viewpoint, located at an approximate 2,256 m distance to the centre of the site, is representative of views northeast along the L1010. The foreground of the view comprises an agricultural field bounded by hedgerows and drainage ditches as well as a deciduous tree plantation in the middle distance. Local overhead distribution lines are located along the road. Sections of the Shannon Estuary are visible in the background. Residential properties are located behind the photographer of this view and are generally located individually or in small clusters along the L1010.

The value of this view is considered to be low. The visual receptors are mainly vehicle drivers and residents, some of which have windows facing into the same directions as this view. The sensitivity and susceptibility to change is considered medium-high.

The Proposed Development will be fully screened by intervening vegetation and topography and therefore not result in visual effects from this viewpoint.

10.6.4.6 Viewpoint/ Photomontage 6: View northeast from L1010 in the townland of Kilcogan Lower, Co. Kerry

This viewpoint, located at an approximate 1,827 m distance to the centre of the site, is representative of views northeast along the L1010 in the townland of Kilcogan Lower. A cluster of residential properties is located along the local road together with roadside hedgerows. Local overhead distribution lines are located along either side of the road. Intervening vegetation screens views of the Shannon Estuary.

The value of this view is considered to be low. The visual receptors are mainly vehicle drivers and local residents, some of which have windows facing towards the Proposed Development site. The sensitivity and susceptibility to change is considered medium.

The Proposed Development will be fully screened by intervening vegetation and topography and therefore not result in visual effects from this viewpoint.

10.6.4.7 Viewpoint/ Photomontage 7: View northeast from the R551, Bridge Street, Ballylongford, Co. Kerry

This viewpoint, located at an approximate 4,660 m distance to the centre of the site, is representative of views looking northeast from the R551 overlooking wetlands towards the Shannon Estuary. Moneypoint Power Station with its 2 stacks and associated wind farm are prominent focus points in the background. This section of the R551 is part of the Wild Atlantic Way touring route.

The value of this view is considered to be medium-high. The visual receptors are residents of adjacent properties, pedestrians, vehicle drivers and tourists. The sensitivity and susceptibility to change is considered medium-high.

Upper sections of the proposed HRSG and turbine halls will become partially visible in the background beyond the ruins of Lislaughtin Abbey. The majority of the Proposed Development is screened by intervening vegetation and topography as well as existing built structures. Due to the proposed colours of the built structures, the development will not become a prominent point of focus. While discernible, it will integrate into the existing view. The magnitude of visual change is therefore considered **low** and the resulting significance of visual effects is considered to be **not significant adverse**.

10.6.4.8 Viewpoint/ Photomontage 8: View east from Carrig Island, Co. Kerry

This viewpoint is located at an approximate 3,418 m distance to the centre of the site. The open view looks east from the shores of Carrig Island upstream along the River Shannon Estuary. The estuarine views include the coastline and headlands of the Co. Kerry shoreline as well as the Co. Clare shoreline in the distance. Moneypoint Power Station with its 2 stacks and prominent ancillary building structures including loading terminals in the River Shannon as well as the adjacent wind farm development will be clearly visible. Wind turbines associated with the Leanamore Wind Farm on the Co. Kerry side are also discernible.

The value of this view is considered medium. Receptors of this view will be local residents, walkers and visitors to Carrig Island. Their susceptibility to change is considered medium-high. The sensitivity of this area can be categorised as medium-high.

Day-time Photomontage

The Proposed Development will become visible in the centre of the view in the distance. The proposed jetty of the LNG Terminal as well as the LNG ships will become visible and new points of focus in the distance. The Proposed Development will introduce an industrial character along the southern shores of the Shannon Estuary in this view and intensify the overall industrial elements of this view. However, the Proposed Development will become one focus points among other existing ones in this panoramic view. The overall character of this view, its open nature and panoramic quality will not be altered. The proposed colour scheme will help integrating the Proposed Development within the existing visual character of the southern shoreline. The magnitude of change is considered **medium** and the resulting significance of visual effects is considered to be **moderate adverse**.

Night-time Photomontage/ Main Lights Turned On Only

During the hours of darkness, the existing Moneypoint Power Station is the most prominently lit up area along the northern shores of the Shannon Estuary, other sources of light are dotted along the remaining parts of the northern and southern shores of the estuary with the second most prominent source being Tarbert Power Station in the background. The Proposed Development with main lights turned on only will be a barely discernible addition to the overall lit up sections along the estuary. The LNG Terminal and associated ships will become the most discernible part of the lit Proposed Development. The magnitude of visual change during the hours of darkness will be **low** and the significance is considered **slight adverse**.

Night-time Photomontage/ All Lights Turned On

The Proposed Development will become a more obvious feature along the shore of the estuary at times when all lights of the Proposed Development are turned on. However, it will not become a prominent new lit up feature in the night view as the proposed lighting scheme is designed to focus on the ground and on areas where light is needed only thus reducing the amount of light spill into the surrounding environs as far as feasible. While the overall shoreline will be lit up further, the magnitude of visual change is considered **low-medium** and the significance **slight-moderate adverse**.

It should be noted that the visibility of the proposed lit up development will be highly depended on weather conditions at this distance.

10.6.4.9 Viewpoint/ Photomontage 9: View east from Littor Beach, Co. Kerry

This viewpoint, located at an approximate 9,440 m distance to the centre of the site, is representative of views east from Littor Beach with a panoramic view across Bunaclugga Bay. The low shorelines north and south along the wide Shannon Estuary allow for long distance panoramic views without significant vertical natural features. However, Moneypoint Power Station with its two chimney stacks, ancillary building structures and the associated wind farm are prominent vertical features in this long distance view. Tarbert Power Station with its chimneys and boiler halls are seen in the background along the southern shore of the estuary. Wind turbines associated with the Leanamore Wind Farm on the Co. Kerry side come into view on the right side in this view.

The value of this view is considered to be medium-high. The visual receptors are mainly walkers along the beach at times of low tide. The sensitivity and susceptibility to change is considered high.

The Proposed Development will be seen at a long distance from this viewpoint. Upper sections of the proposed HRSG and turbine halls will become partially visible as well as the proposed LNG Terminal and ships. While the Proposed Development will be discernible, it will not become another prominent industrial feature in this view. However, visibility of the Proposed Development will intensify the built up and industrial section along the shorelines of the Shannon estuary. The proposed building colours will help to integrate the development into its setting and avoid the creation of prominent new focus points. The magnitude of visual change is therefore considered **low** and the resulting significance of visual effects is considered to be **slight neutral**.

10.6.4.10 Viewpoint/ Photomontage 10: View southeast from Cappagh Pier, Coast Road, Co. Clare

This viewpoint, located at an approximate 6,618 m distance to the centre of the site, is representative of views southeast from Cappagh Pier close to the town of Kilrush. The Coast Road at Cappa Village in the townland area of Cappagh provides open estuarine views of sections of Hog Island (on the right in this view) as well as sections of the northern shore in Co. Clare (on the left in this view) and the southern shores of the Shannon Estuary in Co. Kerry (in the centre of this view). The shorelines are overall gently undulating and sparsely vegetated with any significant taller vegetation. Clusters of trees and residential dwellings can be seen along section of the Co. Clare shoreline and in the distance along the Co. Kerry shore. A single wind turbine and wind turbines associated with Leanamore Wind Farm are also visible in the centre setback from the Co. Kerry shoreline providing light industrial features in this view. The 2 chimney stacks of Moneypoint Power Station are out of view but are generally a discernible feature in the distance in views from this area. This view as well as other views along the Coast Road are designated as a scenic route in Clare County Development Plan and form also part of the Wild Atlantic Way touring route.

The value of this view is considered to be high. Visual receptors are mainly walkers, vehicle drivers, pedestrians and visitors. The sensitivity and susceptibility to change is considered high.

The Proposed Development will be openly visible in the centre of this view. The most discernible features will be the HRSG halls, the LNG Terminal and ships. However, most built structures of the Proposed Development will be visible. Considering the long distance and the high dependency on clear weather conditions, the Proposed Development will not become a prominent feature in this view, however it will, on a clear day become a new point of focus and it will intensify the industrial elements in this view. The proposed building colour scheme with its muted dark greens and greys is designed to particularly address open views across the Shannon Estuary. The Proposed Development will be seen against the land with its various shades of green and brown. The proposed colour scheme will pick up some of these colours and help the visual integration of the Proposed Development into its setting avoiding bright colours, which would otherwise point at and emphasise the proposed built structures even in long distance views. The magnitude of visual change is considered **medium**. The resulting significance is considered to be **moderate-significant adverse**.

10.6.4.11 Viewpoint/ Photomontage 11: View southeast from Coast Road at Aylevarroo, Co. Clare

This viewpoint, located at an approximate 4,780 m distance to the centre of the site, is representative of views along the Coast Road from at Aylevarroo Bay. This open view across the Shannon Estuary

and of the southern shoreline at Co. Kerry as well as other views along the Coast Road are designated as a scenic route in Clare County Development Plan and form also part of the Wild Atlantic Way touring route. The view contains a number of wind turbines setback from the shores in Co. Kerry. The wider panoramic view further left and not visible in this images contains the prominent built structures including chimney stacks of Moneypoint Power Station and the associated wind turbines. Tarbert Power Station would also become visible further left to this view. However, this view captures what a human eye can see without turning and focuses on the viewshed containing the Proposed Development.

The value of this view is considered to be medium-high. The visual receptors are mainly vehicle drivers including cyclists and occasional walkers. The sensitivity and susceptibility to change is considered medium.

The Proposed Development will be openly visible along the shoreline of Co. Kerry. The most prominent features will be the HRSG and turbine halls, the LNG Terminal and ships. However, most built structures of the Proposed Development will be visible. The Proposed Development will become a new point of focus in this view and intensifies the number of industrial developments along the Shannon Estuary in views from this area. Similar to Viewpoint/ Photomontage 10, the proposed building colour scheme with its muted dark greens and greys is designed to particularly address open views across the Shannon Estuary. The Proposed Development will be seen against the land with its various shades of green and brown. The colour scheme will pick up some of these colours and help the visual integration of the Proposed Development into its setting avoiding bright colours, which would otherwise emphasise further the existence of the proposed industrial structures in this view. The magnitude of visual change is considered **medium-high**. The resulting significance is considered to be **significant adverse**.

10.6.4.12 Viewpoint/ Photomontage 12: View southwest from N67 at Moyne Court, Co. Clare

This viewpoint, located at an approximate 4,409 m distance to the centre of the site, is representative of elevated views from the N67 at Moyne Court, looking south, southeast across the Shannon Estuary in the direction of the Proposed Development site. This view as well as other views along the N67 are designated as a scenic route in Clare County Development Plan and form also part of the Wild Atlantic Way touring route. The south sloping terrain towards the Shannon estuary contains generally low vegetation, clusters of small trees, low voltage transmission lines and some dwellings. The appearance of the existing vegetation is windswept. While out of view to the left of this image, Moneypoint Power Station and wind farm are vertical prominent features in the overall setting of the area. In the distance across the Shannon, the Co. Kerry shoreline and undulating landform form the backdrop and include wind turbines including Leanamore Wind Farm.

The value of this view is considered to be medium-high. Visual receptors include mainly vehicle drivers including cyclists and local residents. The sensitivity and susceptibility to change is considered medium.

The Proposed Development will be openly visible from this viewpoint. The most prominent features will be the HRSG and turbine halls, the LNG Terminal and ships as well as storage tanks / silo's. The Proposed Development will industrialise sections of the Kerry shoreline in this view and alter the visual character of the Co. Kerry shoreline in this view. It will become a point of focus and will be seen together with existing industrial structures at Moneypoint Power Station and the associated wind farm. The Proposed Development will be seen against the land with its various shades of green and brown. The proposed building colour scheme will pick up some of these colours and help the visual integration of the Proposed Development into its setting avoiding bright colours, which would otherwise emphasise further the existence of the proposed industrial structures in this view. The magnitude of visual change is considered **medium-high**. The resulting significance is considered to be **significant adverse**.

Night-time Photomontage/ Main Lights Turned On Only

During the hours of darkness, sections of the existing Moneypoint Power Station are prominently lit up on the Co. Clare side. Demarcation lights of wind turbines located in the vicinity of Moneypoint Power Station and across the Shannon estuary along the coastline of Co. Kerry are also red pointers in the dark. Other lights, including some very bright spots are dotted along the Co. Kerry shoreline and relate mainly to residential dwellings or farms.

The Proposed Development with main lights turned on will be most recognisable through the lit LNG Terminal and ships. The remaining structures will be a barely discernible addition to the overall

nightscape. The magnitude of visual change during the hours of darkness will be **low** and the significance is considered **slight adverse**.

Night-time Photomontage/ All Lights Turned On

The Proposed Development will become another discernible industrial feature along the shore of the estuary at times when all lights of the Proposed Development are turned on. The glow is, however, muted due to the application of a proposed lighting scheme that is designed to focus on the ground and on areas where light is needed only thus reducing the amount of light spill into the surrounding environs as far as feasible. The overall shoreline will be lit up further extending recognisable lit industrial facilities further west along the Shannon Estuary. The magnitude of visual change is considered **medium-high** and the significance **moderate-significant adverse**.

It should be noted that the visibility of the proposed lit up development will be highly depended on weather conditions at this distance.

10.6.4.13 Viewpoint/ Photomontage 13: View south from N67 across Ballymacrinan Bay, Co. Clare

This viewpoint, located at an approximate 3,661 m distance to the centre of the site, is representative of shore views from the northern banks of the Shannon Estuary of the study area, looking south across the Shannon Estuary of the Proposed Development site. The foreground of the view comprises a pebble shoreline with the waters of Shannon Estuary spanning across the scene. A wind turbine and met mast associated with Moneypoint Power Station can be seen left in the view. The tall verticality of these structures contrast with wide open view across the Shannon Estuary and its low shorelines from this location. The distant shoreline and hillsides of Co. Kerry define the background of this view and include a number of clusters of wind turbines including Leanamore Wind Farm and Tullahennel Wind Farm. This view as well as other views along the N67 in this area are designated as a scenic route in Clare County Development Plan and form also part of the Wild Atlantic Way touring route.

The value of this view is considered to be medium-high. The visual receptors are local residents, vehicle drivers including cyclists and walkers. The sensitivity and susceptibility to change is considered medium-high.

The Proposed Development will be openly visible with most of his components across the Shannon Estuary. It will become a new point of focus in this view and industrialise this section of the Co. Kerry shoreline. In the overall context of the location of this viewpoint, which is in close proximity to the existing Moneypoint Power Station and associated wind farm, the intensification of the industrial nature of the shoreline along the Shannon Estuary is not totally uncharacteristic.

The most discernible features will be the HRSG halls, the LNG Terminal and ships. The Proposed Development will mostly be seen against the land with its various shades of green and brown. The upper sections of the HRSG halls will break the skyline from this location. The proposed building colour scheme will pick up some of shades of the existing surrounding landscape and help the visual integration of the Proposed Development into its setting avoiding bright colours, which would otherwise point at and emphasise the proposed built structures in views across the Shannon Estuary. The magnitude of visual change is considered **medium-high**. The resulting significance is considered to be **moderate-significant adverse**.

10.6.4.14 Viewpoint/ Photomontage 14: View southwest from the N67 west of Killimer, Co. Clare

This viewpoint, located at an approximate 4,206 m distance to the centre of the site. It is representative of elevated views from a car park located along the N67 opposite the Church of St. Imy at Carrowdotia, west of Killimer in Co. Clare. Views along the N67 across the Shannon Estuary are generally intermittent due to road side vegetation and an undulating land profile in this area. This viewpoint location provides an open view passing a residential property and across the existing Moneypoint Power Station facilities including loading cranes, a wind turbine and one of the two chimney stacks. The Shannon estuary is located in the middle distance and an elevated panoramic long distance view opens up along the shores of Co. Kerry and beyond in the background. A number of clusters of wind turbines including Leanamore Wind Farm and Tullahennel Wind Farm can be seen in the distance on the Co. Kerry side. This viewpoint at the N67 is located along a designated scenic route as identified in the Clare County Development Plan which is also part of the Wild Atlantic Way touring route.

The value of this view is considered to be low-medium. The visual receptors are local residents, visitors to the Church of St Imy, vehicle drivers including cyclists and walkers. The sensitivity and susceptibility to change is considered medium-high.

The majority of the Proposed Development will be openly visible in the distance. The existing intervening loading cranes will only partially obscure views of small sections of the Proposed Development in the distance. The Proposed Development will introduce a large industrial complex along the shoreline of Co. Kerry in this view and industrialise this view further. When seen in conjunction with the prominent existing components of Moneypoint Power Station, the Proposed Development is not totally uncharacteristic. However, it will become a new point of focus, particularly the proposed LNG Terminal and ships, the HRSG halls and storage silos. The overall development will be seen against the land. The proposed building colour scheme will pick up some of shades of the existing surrounding landscape and help the visual integration of the Proposed Development into its setting avoiding bright colours, which would otherwise point at and emphasise the proposed built structures further in views across the Shannon Estuary. The magnitude of visual change is considered **high**. The resulting significance is considered to be **moderate-significant adverse**.

10.6.4.15 Viewpoint/ Photomontage 15: View southwest from Tarbert-Killimer ferry, Co. Clare

This viewpoint, located at an approximate 5,400 m distance to the centre of the site, is representative of views within the northern section of the Tarbert-Killimer ferry journey. This view illustrates an open and transient view west from the ferry along the Shannon Estuary flanked by the undulating shorelines of Co. Clare and Co. Kerry. Existing wind farm developments can be seen in the background on the Co. Kerry side. This particular view is focused towards the direction of the Proposed Development and contains one wind turbine associated with the wind farm at Moneypoint Power Station. If the viewer is to turn the head left the existing Tarbert Power Station and ancillary developments including storage tanks would become visible in views south. If the view were to turn further right to the north, the existing 2 chimney stacks of Moneypoint Power Station would become visible. The character of this view is determined by the seascape of the River Shannon. The overall seascape character in this area is defined by a mix of large industrial developments (Tarbert and Moneypoint Power Stations), fields bounded by hedgerows and low trees as well as clusters of coniferous plantations. The view from this particular viewpoint contains still large sections of natural although man-altered landscape along the shores. This view as well as the overall ferry journey between Tarbert and Killimer form part of the Wild Atlantic Way touring route.

The value of this view is considered to be medium. The visual receptors are ferry passengers. The sensitivity and susceptibility to change is considered medium-high.

The Proposed Development will be openly visible in the distance. During clear weather conditions, the Proposed Development will introduce an industrial facility and a new point of focus along the Co. Kerry shore in the middle distance. The most prominent features will be the HRSG halls, storage silos, the LNG Terminal and ships. The proposed building colour scheme will pick up some of shades of the existing surrounding landscape and help the visual integration of the Proposed Development into its setting avoiding bright colours, which would otherwise point at and emphasise the proposed built structures further in views across the Shannon Estuary. The magnitude of visual change is considered low-medium. The resulting significance is considered to be **moderate adverse**.

A summary table of visual effects from representative viewpoint locations is enclosed below:

Table 10-14 Summary of Visual Effects from Representative Viewpoint Locations

Viewpoint / Photo-montage	Receptor Group	Value of View	Susceptibility of View to Change	Sensitivity of View	Magnitude of Visual Effects (at operation)	Quality of Effects	Significance of Effects
1	Vehicle drivers, cyclists, walkers	Medium	Medium	Medium-Low	Medium	Adverse	Slight
2	Residents, vehicle drivers, cyclists, walkers	Medium	Medium	Medium-High	Medium-High	Adverse	Significant
3	Residents, vehicle drivers, cyclists, walkers	Medium	Medium	Medium-High	Medium	Adverse	Slight-Moderate
4	Residents, vehicle drivers, cyclists, walkers	Medium	Medium	Medium	Medium	Adverse	Moderate
5	Residents, vehicle drivers	Low	Medium-High	Medium-High	None	Neutral	None
6	Residents, vehicle drivers, cyclists, walkers	Low	Medium	Medium	None	Neutral	None
7	Residents, vehicle drivers, pedestrians, tourists	Medium-High	Medium-High	Medium-High	Low	Adverse	Not Significant
8 Day-Time	Residents, vehicle drivers, pedestrians, tourists	Medium	Medium-High	Medium-High	Medium	Adverse	Moderate
8 Night-Time (Main Lights turned on only)	Residents, vehicle drivers, pedestrians, tourists	Medium	Medium-High	Medium-High	Low	Adverse	Slight
8 Night-Time (All Lights turned on)	Residents, vehicle drivers, pedestrians, tourists	Medium	Medium-High	Medium-High	Low-Medium	Adverse	Slight-Moderate
9	Walkers	Medium-High	High	High	Low	Neutral	Slight

10	Residents, vehicle drivers, walkers, visitors	High	High	High	Medium	Adverse	Moderate- Significant
11	Vehicle drivers, cyclists, walkers	Medium- High	Medium	Medium	Medium-High	Adverse	Significant
12 Day- Time	Residents, vehicle drivers, cyclists	Medium- High	Medium	Medium	Medium-High	Adverse	Significant
12 Night- Time (Main Lights turned on only)	Residents, vehicle drivers, cyclists	Medium- High	Medium	Medium	Low	Adverse	Slight
12 Night- Time (All Lights turned on)	Residents, vehicle drivers, cyclists	Medium- High	Medium	Medium	Medium-High	Adverse	Moderate- Significant
13	Residents, vehicle drivers, cyclists, walkers	Medium- High	Medium-High	Medium-High	Medium-High	Adverse	Moderate- Significant
14	Residents, vehicle drivers, cyclists, walkers, visitors	Low- Medium	Medium-High	Medium-High	High	Adverse	Moderate- Significant
15	Ferry passengers	Medium	Medium-High	Medium-High	Low-Medium	Adverse	Moderate

10.6.5 Effects on Protected Views and Prospects/ Scenic Routes

10.6.5.1 Co. Kerry

Relevant protected views and prospects located within the study area are indicated in Figures F10-1 Landscape Designations and F10-2 Landscape and Seascape Designations. Visual effects on protected views and prospects are described below:

Views north of the River Shannon estuary and Co. Clare shores from a section of the R551 between Ballylongford and Asdee:

Designated views are pointing north and away from the Proposed Development. No landscape and visual effects will therefore arise from the Proposed Development in these views.

Estuarine views east and northeast along sections of the L6010 towards Carrigafoyle Castle north of Ballylongford: Available views of Carrigafoyle Castle will not be altered including estuarine views to the north and east in close proximity. However, similar as illustrated in Viewpoint/ Photomontage 8 (as described in Section 10.6.4 above), sections of the Proposed Development (mainly

the upper sections of the proposed HRSG and turbine halls and sections of the LNG Terminal and ships) will become partially visible in the distance when road side vegetation along this road is low and allows for long distance views north and east. Estuarine views include the coastline and headlands of the Co. Kerry shoreline as well as the Co. Clare shoreline in the distance. Moneypoint Power Station with its 2 stacks and prominent ancillary building structures including loading terminals in the River Shannon as well as the adjacent wind farm development will be clearly visible. Wind turbines associated with the Leanamore Wind Farm on the Co. Kerry side are also discernible.

The magnitude of change in open views is considered medium and the resulting significance of visual effects is considered to be moderate adverse.

Views west of Lislaughtin Abbey from a short section of the L1010 northeast of Ballylongford:

Designated views are pointing west, northwest and away from the Proposed Development. No landscape and visual effects will therefore arise from the Proposed Development in these views.

Views east and southeast of Tarbert Bay along sections of the N69 including its section on Tarbert Island to the ferry terminal: Designated views are pointing east and southeast and away from the Proposed Development. No landscape and visual effects will therefore arise from the Proposed Development in these views.

10.6.5.2 Co. Clare

Relevant designated scenic roads located within the study area are indicated in Figures F10-1 Landscape Designations and F10-2 Landscape and Seascape Designations. Visual effects on scenic roads are described below:

Coast road south east of Cappagh to Carrowdotia South (which includes sections of the N67)

Viewpoint / Photomontages 10 – 13 illustrate views from this scenic route and are described in Section 10.6.4 above. In summary, the magnitude of visual effects is considered to range between Medium and Medium-High during day-time hours. The significance is considered Moderate-Significant. Viewpoint / Photomontage 12 illustrates also the effects at night-time. The magnitude of visual effects ranges between Low and Medium-High and the resulting significance between Slight and Moderate-Significant depending if the Proposed Development is partially or fully lit. In general, views along this scenic route include open views across the Shannon Estuary and the southern shores in Co. Kerry. These often long distance views include long stretches of natural coastline but include also significant existing industrial developments such as Moneypoint Station as well as wind farms on either side of the shore. Views contain therefore often sections of industrial developments already. The Proposed Development will become a new point of focus in available views and depending on the distance, a prominent new feature in views. Given the long distance which ranges between 3.5 – 6.5 km, the extent of visibility will be depended on weather conditions. The Proposed Development will be seen in the context of existing industrial facilities and while it will intensify the industrial nature of views, it will not be totally uncharacteristic in available views.

10.6.6 Effects on the Wild Atlantic Way

Sections of the Wild Atlantic Way touring route are located within the study area as indicated in Figures F10-1 Landscape Designations and F10-2 Landscape and Seascape Designations. Sections of Designated Views and Prospects (Co. Kerry) as well as Scenic Routes (Co. Clare) using the same route/ locations as the Wild Atlantic Way.

10.6.6.1 Co. Kerry

Views from the Co. Kerry section will be limited to intermittent and glimpsed views of upper sections the Proposed Development in the distance but are often fully screened by intervening roadside vegetation and topography considering that the touring route is mainly well setback from the shoreline or views are orientated away from the Proposed Development. Viewpoint / Photomontage 07 indicates a view from this touring route in Co. Kerry and has been described in detail in Section 10.6.4 above.

In summary, the magnitude of visual change in Viewpoint / Photomontage 07 is considered low and the resulting significance of visual effects is considered to be not significant adverse.

10.6.6.2 Co. Clare

The majority of views of the Proposed Development will be experienced from Co. Clare where open views across the Shannon Estuary and the Proposed Development site are available. Viewpoints / Photomontages 10-15 indicate views from sections of this touring route located in Co. Clare including the car ferry between Tarbert and Killimer. A detailed description is provided in Section 10.6.4 above.

In summary, the magnitude of visual change is considered ranging between medium and high. The resulting significance is considered ranging between moderate and significant adverse depending on the distance to the Proposed Development and the openness and panoramic quality of available views. The majority of available views, however, contain sections of the existing industrial components such as Moneypoint Power Station and existing wind farm developments. While the Proposed Development will intensify the industrial nature of views, it will not be totally uncharacteristic as it will often be seen in conjunction with existing industrial developments.

10.7 Cumulative Landscape and Visual Effects

Cumulative landscape and visual effects may result from additional changes to the baseline landscape or views as a result of the Proposed Development in conjunction with other developments of a similar type and scale.

The following developments have been considered relevant as part of the cumulative landscape and visual impact assessment:

The footprint of the current Proposed Development was subject to a previous planning application for an LNG regassification terminal which was granted permission in 2008 (PL08B. PA0002 now expired) with an amendment to the phasing of the construction granted in 2013 (PL08.PM0002). Similarly, permission for the combined heat and Power Plant was granted in 2013 (PL08. PA0028). Foreshore licence applications have also been granted for the following – drainage outfall (FS006224), construction of a jetty (FS006225), construction of a materials jetty (FS006227), construction of a seawater intake and outfall (FS006228),

The current Proposed Development is intended to replace the facilities granted planning permission under (PL08.PM0002) and (PL08. PA0028). There will be no cumulative landscape and visual effects with these planning permissions.

The Proposed Development will be connected to the existing natural gas network at Leahies in Co. Limerick by an underground gas pipeline which was granted planning permission in 2009 (PL08.GA0003). The gas pipeline is important to the operation of the LNG Terminal so will likely be constructed at the same time. This development will have the potential to cause temporary landscape and visual effects during the construction phase resulting from the removal of vegetation along the gas pipeline corridor, earthworks and moving machinery. Main receptors of these effects will be local residents and vehicles drivers. Cumulative landscape and visual effects are considered to be **medium to high** locally and their significance is considered to range from **moderate to significant adverse** but temporary in views where the construction sites of both developments can be discernible at the same time. Visibility of construction works will diminish quickly with increasing distance from the construction site due to intervening vegetation and topography. The significance of landscape and visual effects will therefore reduce to **slight and imperceptible neutral**.

There are two other developments associated with the Proposed Development comprising the laying of a medium voltage (10/ 20 kV) and 220 kV underground cables which will connect the Shannon Technology and Energy Park to connect to the national electrical transmission system. These cables will run 5 km east from a substation within the Proposed Development under the L1010 road to the ESN/ EirGrid Killpaddock 220 kV substation. The cables and substation are subject to separate planning designs and planning applications.

These developments could have the potential to cause additional landscape and visual effects during their construction stage if the constructions stage overlaps with the one from the Proposed Development. Effects will arise from the removal of vegetation along the cable corridors, earthworks and moving machinery. Cumulative landscape and visual effects are considered to be **medium to high** locally and their significance is considered to range from **moderate to significant adverse** but temporary in views where the construction sites of both developments can be discernible at the same time. Main receptors of these effects will be local residents and vehicles drivers. Considering the use of the existing L1010, landscape effects will be minimal if roadside vegetation will be retained or reinstated. Visibility of construction works will diminish quickly with increasing distance from the construction site due to intervening vegetation and topography. The significance of landscape and visual effects will therefore reduce to **slight and imperceptible neutral**.

The overall masterplan for the Technology and Energy Park includes plans for the future development of a data centre within the lands southwest of the Proposed Development. These lands were investigated during the previous ES in 2006 and subsequent planning conditions. The data centre will be subject to a separate planning design and planning application and will be subject to their own surveys and landscape and visual impact assessment.

The Proposed Development and the data centre development will not be constructed simultaneously and there will be no landscape and visual cumulative effects arising during the construction phase. However, during operation and depending on the layout of the data centre and its visual presence, the landscape character will change further from a rural coastal setting to industrial. This change will be discernible along the southern shore of the River Shannon estuary in available views from the local road network and residential receptors in Co. Kerry as well as from the shores and from elevated areas further north in Co. Clare including designated scenic roads and the Wild Atlantic Way. Cumulative landscape and visual effects will likely be **significant adverse**.

Ten further planning applications are noted within approximately 5 km of the current Proposed Development over a 10-year period. Six of these applications (13138, 155, 18392, 18878, 19115 and 20850) relate to various elements of an electricity peaker power generating plant and battery energy storage system facility on a site 2.6 km to the east of the current Proposed Development. Elements of this development have already been constructed which is located on a site 2.6 km to the east of the current Proposed Development. Given the distance between these two developments, which includes an intervening dense mature tree plantation, it is unlikely that cumulative landscape and visual effects will arise.

10.7.1.1 Intertidal Applications/ Foreshore Applications

Planning application 14816 relates to the alteration of the existing 220 kV electricity station at Tarbert Island 4.5 km to the east of the current Proposed Development. Combined views are likely particularly west when crossing the River Shannon estuary by ferry between Tarbert and Killimer where open views of both developments will be possible. However, considering the existing prominence of the existing Tarbert Power Station and the distance between these developments, the magnitude of cumulative landscape and visual effects will be **low** and the significance **slight adverse**.

Planning applications 14816 and 17466 relate to alterations to the permitted accesses to Leenamore Wind Farm as well as the provision of a new substation compound with a single storey substation building and associated underground services. Leenamore Wind Farm is located 4 km to the south of the current Proposed Development. The existing Leenamore Wind Farm has already introduced a light industrial elements to the surrounding landscape character and visual amenity including long distance views from the shore zone of Co. Clare. Considering the scale of the proposed alterations to Leenamore Wind Farm cumulative landscape and visual effects are unlikely considering the locations and scale of the proposed developments, the effects of distance as well as intervening vegetation and topography.

The last planning application (304807-19) concerns the construction of a six-wind turbine wind farm at Aghanagran to the southwest of the village of Ballylongford approximately 5 km from the current Proposed Development. The Proposed Development will further industrialise the existing landscape and available views from locations where both developments will be visible in combination. Cumulative effects will be **low-medium** and their significance **slight to moderate adverse**.

The following foreshore licence applications are also noted outside the 5 km of the Proposed Development. These are mostly associated with the Shannon-Foynes Port company at Foynes

comprising the applications FS005818, FS005790, FS006128, FS006594, FS006785, FS006837 and FS006975. Foynes is 22 km from the Proposed Development, outside of the study area and at a distance where it is highly unlikely for cumulative landscape and visual effects to arise. Similarly, the application FS007081 is located at Cahiracon in Co. Clare which is 24 km to the northeast of the Proposed Development across the Shannon Estuary.

10.8 Mitigation and Monitoring Measures

Mitigation is a term used to describe the measures or actions that may be taken to minimise environmental effects. The purpose of mitigation is to avoid, reduce and where possible remedy or offset, any significant adverse direct and indirect effects on the environment arising from the Proposed Development. The following main landscape and visual mitigation categories have been defined and are itemised below (and have been carried through to the Outline Construction Environmental Management Plan (OCEMP) where relevant):

10.8.1 Facade Colour Scheme

Considering the scale of the Proposed Development, landscape mitigation can provide screening of the lower parts of the development and the area around the site entrance but not for the upper sections of the built structures. The Proposed Development is located in a prominent setting along the shoreline of the Shannon Estuary with a low rise but undulating landscape as a backdrop, particularly when seen from the Co. Clare side. The principal landscape and visual mitigation measures for the Proposed Development is therefore inherent in the design of its architecture and its colour scheme.

With the primary objective to minimise the visual impact of the built structures and to allow the buildings to be as unobtrusive as feasible against their backdrop, the proposed colour scheme was drawn from colours found the surrounding local landscape.

The building colours consist generally of a mix between the following six main colours, which range all within a muted mid-dark grey and green spectrum.



The colours pick up existing colours of the landscape along the Co. Kerry shore and its hinterland against which the Proposed Development will be seen in the majority of views. The proposed colour scheme will help to take the attention of away from individual buildings and roofscapes and help blending-in the proposed built structures better with the landscape in available views from local residences, the public road network, the shore, and in estuarine views across the River Shannon including designated views and prospects, scenic routes and the Wild Atlantic Way.

Sections of Proposed Development will still become a new focus point in the majority of available views, particularly the HRSG and turbine halls, the LNG Terminal and ships as well as storage tanks / silo's. The implementation of the proposed colour scheme will help to take the attention away from the Proposed Development and make it one of several other existing industrial facilities along the Shannon Estuary rather than pinpointing it with bright colours, which would otherwise emphasise further the existence of the proposed industrial structures in available views. The colours will also work with varying weather and visibility conditions, where their muted colours can quickly blend in.

A similar colour scheme has been applied to the constructed ESB substation near Kilmorna, Co. Kerry, which successfully helped the integration of the built structures into the surrounding landscape in close and distant views including designated scenic views across the River Feale valley.

Similar muted colours have also been applied to new or refurbished oil tanks on Whiddy Island helping to integrate these structures in available views. While the tanks cannot be missed, their colour helps to avoid making them stand out. The capping of some of the tanks was not changed in colour and left in a light grey which keeps drawing the attention of the viewer. This emphasises the need of muted colours not just on facades but also on roof structures.

10.8.2 Construction Phase

Visual mitigation measures at construction include the following:

- Existing tree protection measures during construction shall be carried out in accordance with BS 5837:2012;
- Minimise external lighting related to construction works; and
- Regular cleaning of public roads to remove any track out and to reduce temporary to short-term effects on visual amenity.

10.8.3 Operational Phase – Landscape Mitigation

Landscape mitigation measures have been developed in order to screen the lower sections of the proposed range of buildings and the proposed access road to help the integration into the landscape. The objectives of the landscape design are to;

1. Screen the site from the public road and adjacent property;
2. Preserve the existing landscape;
3. Maximize pervious surfacing;
4. Provide natural habitat for animals to aim for “no net loss of habitat”.

The specific strategies are described as below;

- At the location where the main access road connected to the public road, there are woodland mix of shrubs and trees. There are hedgerows of trees from southwest to northeast along the property line.
- The existing landscape in the northwest part of the site (out of the 10m offset from the mass grading area) is retained and groups of trees are proposed there. To protect water quality of the stream near the site entry, there is a 5-10 m buffer of retained vegetation along the stream.
- The area of CHP power plant, LNG processing/metering and utility metering are surfaced with gravel when there is no driveway and equipment. The other disturbed are seeded with native grass.
- To provide more diverse habitat for local animals like badgers and birds, there is alternate bunches of trees and shrubs along entry road. Groups of trees are planting in the retained area in the northwest part of the site. The proposed planting species are native and could provide ecological service.

10.8.4 Operational Phase - Lighting

Mitigation measures to reduce visual effects in relation to additional lighting include the following:

- Lighting will be kept to essential locations only, with the position and direction of lighting being designed to minimise intrusion and disturbance to adjacent areas;

- Use of full cut-off lanterns are proposed to minimise light spillage and upward escape of light onto adjacent areas;
- Lighting will be minimised in terms of number of lights and the power of the lights (lux level);
- Directional lighting, facing and located away from any surrounding vegetation; and
- Lighting will be turned off where possible when not in use except to meet the minimum requirements for Health and Safety (refer to night-time photomontages for Viewpoints/ Photomontages 8 and 12 and the differences between ‘main lights turned on only’ and ‘all lights turned on’ as described in Section 10.6.4 above).

10.9 Do Nothing Scenario

All components of the environment are constantly changing due to a combination of natural and human processes. When predicting likely direct and indirect effects it is important to remember that there are two available for comparison: the existing environment and the environment as it will be in the future if no development of any kind were to take place – the ‘do nothing’ impact.

In landscape terms, if the Proposed Development did not go ahead, the site will remain as a pattern of coastal fields and grasslands. The significance will be **imperceptible** and **neutral**.

In visual terms, the content in available views will remain similar without significant changes to the visual amenity. Likely changes will relate to changes to the existing vegetation due to maturing, pruning or natural development. The significance will be **imperceptible** and **neutral**.

However, the site location within an area zoned as ‘Industrial’ will retain the site as subject to considerable development pressure.

10.10 Residual Effects

Given the scale and location of the Proposed Development, the main landscape and visual mitigation measures focus on architectural mitigation and minimising lighting during night time. These measures will be implemented immediately and come into effect following the completion of construction works. Proposed landscape mitigation measures will enhance the screening of the lower parts of the Proposed Development include the entrance road and provide a suitable planting scheme within the site compound helping to screen the lower sections of the proposed onshore facilities.

Landscape mitigation will be recognisable locally and in short to medium distance views from the south where available. Landscape mitigation measures will be barely discernible in views south from the northern shores of the Shannon estuary due to their scale and the distance between the Proposed Development and the observer. The majority of visible built structures in available views will remain as at the time of the completion of construction works (façade design and colour scheme, lighting design). The proposed landscape mitigation measures will help the integration of the Proposed Development in available views. However, considering the often long distance nature of available views, landscape mitigation will not be able to further reduce landscape and visual effects, as identified in Section 10.5. The magnitude and significance of landscape and visual effects will therefore remain the same as described in Section 10.5.

10.11 Decommissioning Phase

As outlined in Chapter 02 – Project Description, in the event of decommissioning, measures will be undertaken by the Applicant to ensure that there will be no significant, negative environmental effects from the closed LNG Terminal and Power Plant. Examples of the measures that will be implemented are outlined in Section 2.11, Chapter 02 – Project Description. As a result, additional potential impacts and associated effects arising during the decommissioning phase are not anticipated above and beyond those already assessed during the construction phase.

10.12 Summary

10.12.1 Construction Effects

Landscape and visual effects and their significance at construction stage will be **temporary to short-term adverse** and will result in:

- Likely effects to landscape character or visual amenity within the locality or the wider study area as a result of the visibility of construction activities such as, scaffolding, cranes, the movement of construction vehicles along local roads, and other tall equipment such as machinery onsite;
- Effects of temporary – short-term site infrastructure such as site traffic and construction compounds; and
- Likely physical effects arising from construction of the development will be confined to the Proposed Development site.

10.12.2 Landscape and Seascape Effects (Operational Phase)

The main landscape effects of the Proposed Development will be associated with the introduction of large industrial buildings, leading to a long term change in landscape character at the site and an intensification of the industrial character along the Shannon Estuary. It is anticipated that the development will alter the landscape character within approximately 1 km radius on the side of Co. Kerry. Change to the landscape character will be noticeable beyond 1 km and up to approximately 6 km along the coastline of Co. Clare and in elevated areas near the coast.

At the site location, the direct landscape change is considered high and significant as the existing landscape character of an estuarine rural landscape character will be replaced with an industrial character.

The indirect change in landscape character is greatest and significant in its immediate and close surroundings where open and partial views are possible within approximately 1 km radius from the Proposed Development site boundary in views from the Co. Kerry side of the Shannon Estuary. The Proposed Development will industrialise the landscape character and further intensify the industrial components of the landscape character in the wider study area when seen in conjunction with the existing industrial landscape character around Moneypoint Power Station.

Indirect change and the significance of landscape effects will reduce to not significant with increasing distance from the Proposed Development in the remaining study area (beyond approximately 1 km from the Proposed Development site boundary). Given the prominence of the location, the intensification of the industrial character can be recognised over long distances across the Shannon Estuary in Co. Clare, where the change in landscape character will be recognisable at distance ranging between approximately 2.5 km – 6 km depending on weather conditions.

In the context of the wider study area, the Proposed Development will be perceived in conjunction with other existing large-scale industrial developments along the Shannon Estuary, which define already the overall character of estuary and its shorelines within the study area. The Proposed Development will therefore not be seen as totally uncharacteristic and can integrate into the wider landscape character.

The seascape character will be directly and indirectly affected. The addition of another large scale industrial facility with a new jetty and mooring areas will directly reinforce and intensify the industrial components in the estuarine character and become prominent features in the overall low lying and exposed nature of the area long term. Direct and significant effects will be experienced at the location of the new jetty and mooring platforms.

Indirect effects will be experienced in the wider seascape character (beyond approximately 3 km from the Proposed Development site) of the Lower Shannon, where the number of industrial components will increase and further industrialise the character of the seascape. The magnitude of effects on the seascape character are therefore considered significant and long term. However, the proposed change in seascape character is not totally uncharacteristic considering existing large industrial developments within this seascape character area.

10.12.3 Visual Effects (Operational Phase)

The main visual effects will relate to the introduction of a new large industrial facility onshore and the LNG terminal and ships within the River Shannon. The main visual receptor groups are residents, vehicle travellers including ferry passengers, workers and visitors / tourists. Residents will have the highest sensitivity to change than road users or ferry passengers. Vehicle travellers and workers will focus mainly on traffic or their commercial tasks and not primarily on available views. Ship passengers will see the Proposed Development in conjunction with the prominent existing Tarbert Power Station and Moneypoint Power Station structures.

The closest residential dwellings in the immediate environment of the Proposed Development are located along the L1010 and the overall local road network in the area within approximately 1 km radius from the Proposed Development boundary in Co. Kerry. The highest visual change will be in the vicinity of the new entrance area along the L1010, at Ralappane House immediately east of the Proposed Development and in elevated areas where views of sections of the upper buildings such as the proposed 3 HRSG and turbine halls along with storage tanks/ silo's become available. The LNG terminal will often be screened in views from residences by topography, intervening vegetation and the proposed onshore structures itself, which is evident in Viewpoints / Photomontages 1-4 & 6 which are located within approximately 1 km of the development boundary in Co. Kerry.

Within the Co. Kerry side of the study area beyond 1 km from the boundary, views become quickly intermittent due to undulating topography and intervening vegetation. The Proposed Development will introduce a prominent industrial facility in available views within the Co. Kerry section of the study area. It will often be seen in conjunction with the existing Moneypoint Power Station and associated wind farm. In that respect and considering the zoning of the site and surrounding areas for industry, the proposed development is not uncharacteristic in available views. However, it will introduce prominent structures in a currently rural section of the shoreline. It will intensify the industrial character of estuarine views. It will create a new point of focus in available close distance views (within approximately 1 km of the site). Some close distance views are fully screened by intervening commercial forest plantations. Considering the location and the middle to long distance nature of views within 1 – 7 km from the development site boundary, visibility will also be depended on weather conditions and the level of haziness.

The majority of open views of the Proposed Development will be experienced from the Co. Clare side of the Shannon Estuary, where middle to long distance open views of the proposal will be possible. This includes most coastal roads within the study area as well as elevated sections of the N67 and adjoining local roads, seen in Viewpoints / Photomontages 12 & 14. Visibility is generally considered middle to long distance in nature (beyond 1 km) due to the width of the estuary. Despite the distance, the Proposed Development will become a discernible new focus point in views from the shoreline, which is evident in Viewpoints / Photomontages 10, 11 & 13. The Proposed Development will be a new component on often panoramic views across the estuary into Co. Kerry. It will be seen in conjunction with existing wind turbines including Leanamore Wind Farm and Tullahennel Wind Farm in Co. Kerry and Money Point Power Station and its chimney stacks in Co. Clare. Similar as for views in Co. Kerry, existing views contain already large scale industrial or light industrial developments, and the Proposed Development will therefore not be totally out of character. It will nevertheless industrialise additional areas further west along the shoreline, which are currently rural and natural in appearance. Considering the generally open nature of shoreline or elevated views from areas close to the shoreline, the visual change is still significant despite the middle to long distance nature of these views.

Viewpoint / Photomontage 15 illustrates a view from the ferry between Tarbert-Killimer within the River Shannon Seascape Character Area. The Proposed Development will further industrialise the Shannon Estuary in views west. However, it will be seen as one industrial component of several in available views. The buildings including the LNG Terminal and ships will be clearly visible in good weather conditions and add to the existing industrial character of the view. The development will, however, not alter the existing views significantly as it will be seen in panoramic views in conjunction with existing large power station structures of Tarbert and Moneypoint Power Station including wind turbines.

10.12.4 Cumulative Effects (Operational Phase)

Cumulative landscape and visual effects may result from additional changes to the baseline landscape character or visual amenity as a result of the Proposed Development being seen in conjunction with other projects similar in scale, type and nature.

The majority of developments resulting in potential cumulative landscape and visual effects are related to underground cabling and gas pipe works (PL08.GA0003), which will result in temporary landscape and visual effects during the construction phase. Effects will arise from the removal of vegetation along the cable corridors, earthworks and moving machinery.

Likely significant cumulative landscape and visual effects will arise from the overall masterplan for the Technology and Energy Park, which includes plans for the future development of a data centre within the lands southwest of the Proposed Development. The Proposed Development and the data centre development will not be constructed simultaneously and there will be no landscape and visual cumulative effects arising during the construction phase. However, during operation and depending on the layout of the data centre and its visual presence, the landscape character will change further from a rural coastal setting to industrial. This change will be discernible along the southern shore of the River Shannon estuary in available views from the local road network and residential receptors in Co. Kerry as well as from the shores and from elevated areas further north in Co. Clare including designated scenic roads and the Wild Atlantic Way. Cumulative landscape and visual effects will likely be **significant adverse**.

Ten other planning applications are noted within approximately 5 km of the current Proposed Development over a 10-year period. Six of these applications (13138, 155, 18392, 18878, 19115 and 20850) relate to various elements of an electricity peaker power generating plant and battery energy storage system facility on a site 2.6 km to the east of the current Proposed Development. Elements of this development have already been constructed which is located on a site 2.6 km to the east of the current Proposed Development. Given the distance between these two developments, which includes an intervening dense mature tree plantation, it is unlikely that cumulative landscape and visual effects will arise.

10.12.4.1 Intertidal Applications/ Foreshore Applications

Planning application 14816 relates to the alteration of the existing 220 kV electricity station at Tarbert Island 4.5 km to the east of the current Proposed Development. Combined views are likely particularly west when crossing the River Shannon estuary by ferry between Tarbert and Killimer where open views of both developments will be possible. However, considering the existing prominence of the existing Tarbert Power Station and the distance between these developments, the magnitude of cumulative landscape and visual effects will be **low** and the significance **slight adverse**.

Planning applications 14816 and 17466 relate to alterations to the permitted accesses to Leenamore Wind Farm as well as the provision of a new substation compound with a single storey substation building and associated underground services. Leenamore Wind Farm is located 4 km to the south of the current Proposed Development. The existing Leenamore Wind Farm has already introduced a light industrial elements to the surrounding landscape character and visual amenity including long distance views from the shore zone of Co. Clare. Considering the scale of the proposed alterations to Leenamore Wind Farm cumulative landscape and visual effects are unlikely considering the locations and scale of the proposed developments, the effects of distance as well as intervening vegetation and topography.

The last planning application (304807-19) concerns the construction of a six-wind turbine wind farm at Aghanagran to the southwest of the village of Ballylongford approximately 5 km from the current Proposed Development. The Proposed Development will further industrialise the existing landscape and available views from locations where both developments will be visible in combination. Cumulative effects will be **low-medium** and their significance **slight to moderate adverse**.

The following foreshore licence applications are also noted outside the 5 km of the Proposed Development. These are mostly associated with the Shannon-Foynes Port company at Foynes comprising the applications FS005818, FS005790, FS006128, FS006594, FS006785, FS006837 and FS006975. Foynes is 22 km from the Proposed Development, outside of the study area and at a

distance where it is highly unlikely for cumulative landscape and visual effects to arise. Similarly, the application FS007081 is located at Cahiracon in Co. Clare which is 24 km to the northeast of the Proposed Development across the Shannon Estuary.

Table 10-14 Summary

Proposed Development Stage	Aspect/ Impact Assessed	Existing Environment/ Receptor Sensitivity	Effect/ Magnitude	Significance (Prior to Mitigation)	Mitigation and Monitoring Measures (the Proposed Development design embedded environmental controls and all mitigation and monitoring measures detailed herein are included in the OCEMP)	Residual Impact Significance
Construction	Changes to the baseline landscape and views	Sensitive	Negative	Significant	Visual mitigation measures at construction include the following: <ul style="list-style-type: none"> • Existing tree protection measures during construction shall be carried out in accordance with BS 5837:2012; • Minimise external lighting related to construction works; and • Regular cleaning of public roads to remove any track out and to reduce temporary to short-term effects on visual amenity. 	Moderate
Operational	Alteration of a view from a viewpoint/ cumulative effective of planned development on landscape	Sensitive	Negative	Very significant	Landscape mitigation measures have been developed in order to screen the lower sections of the proposed range of buildings and the proposed access road to help the integration into the landscape.	Moderate

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