# Technical Appendix 1: Landscape and Visual Impact Assessment

Coolshamrock 110kV Substation SID

22/09/2023

## Disclaimer

*Neo Environmental Limited shall have no liability for any loss, damage, injury, claim, expense, cost or other consequence arising as a result of use or reliance upon any information contained in or omitted from this document.*




| Neo Environmental Ltd | |
|---|---|
| **Head Office - Glasgow:**<br>Wright Business Centre,<br>1 Lonmay Road,<br>Glasgow.<br>G33 4EL<br>**T** 0141 773 6262<br>**E:** info@neo-environmental.co.uk | |
| **Warrington Office:**<br>Cinnamon House,<br>Crab Lane,<br>Warrington,<br>WA2 0XP.<br>**T:** 01925 661 716<br>**E:** info@neo-environmental.co.uk | **Rugby Office:**<br>Valiant Suites,<br>Lumonics House, Valley Drive,<br>Swift Valley, Rugby,<br>Warwickshire, CV21 1TQ.<br>**T:** 01788 297012<br>**E:** info@neo-environmental.co.uk |
| **Ireland Office:**<br>Johnstown Business Centre,<br>Johnstown House,<br>Naas,<br>Co. Kildare.<br>**T:** 00 353 (0)45 844250<br>**E:** info@neo-environmental.ie | **Northern Ireland Office:**<br>83-85 Bridge Street<br>Ballymena,<br>Co. Antrim<br>BT43 5EN<br>T: 0282 565 04 13<br>**E:** info@neo-environmental.co.uk |

**Prepared For:**

Renewable Energy Systems (RES) Ltd

**Prepared By:**

Donal Walls BSc Hons

| | Name | Date |
|---|---|---|
| Edited By: | Colleen Patterson | 22/09/2023 |
| Checked By: | Paul Neary | 22/09/2023 |
| | **Name** | **Signature** |
| Approved By | Paul Neary |  |

# CONTENTS

# EXECUTIVE SUMMARY

1.1. Neo Environmental Ltd has been appointed by Renewable Energy Systems (RES) Ltd to undertake an Landscape and Visual Impact Assessment for a Strategic Infrastructure Development Application for a new 110kV Substation to feed into the existing Drumline-Ennis 110kV overhead line circuit.

1.2. The LVIA considers the potential direct and indirect effects of the proposed infrastructure upon the landscape resources, views and visual amenity receptors within the existing landscape and visual baseline across a 5km study zone.

1.3. The proposed infrastructure will result in a substation and associated infrastructure located in the rural setting of the Ennis Drumlin Farmland LCA 13. The overall design of the proposed infrastructure has been carefully considered within the confines of the 3 agricultural fields to ensure the effects upon the landscape and visual receptors are limited. The addition of the substation and other electrical infrastructure onto the agricultural land will result in a localised Minor adverse effects. The potential effects on the wider extent of the LCA are greatly reduced by the Proposed Development's confinement within the immediate landscape. It will have a no change effect on the neighbouring East Clare Loughlands LCA 11, Fergus Estuary LCA 14 or Tulla Drumlin Farmland LCA 12.

1.4. The proposed infrastructure has been designed around the existing drystone walls, field boundaries, hedgerows and trees to minimise disturbance to these elements and features. There are a number of existing Overhead Lines (OHL) within the local landscape. These elements and features will be largely retained helping to contain the proposed infrastructure across the extent of the Application Site. The existing hedgerow planting along the outer boundaries provides sufficient cover within the Application Site. Although the newly established hedgerow and density of the proposed site elements will reduce the Application Site's openness. The proposed infrastructure will result in Minor adverse effects upon the characteristics of the Application Site.

1.5. The potential visibility of the proposed infrastructure across the 5km study zone was found to be limited to the immediate vicinity of the Application Site. The Application Site's relatively flat setting, together with the screening due to variations in the local topography and/or the presence of natural and built elements and features help contain visual impacts.

1.6. Those visual receptors with the greatest potential views of the proposed infrastructure include residents, farm workers (some being involved as landowners) and road users along and off various roads which frame the Application Site. The proposed infrastructure will introduce a substation, towers and associated infrastructure elements which will be in contrast to the existing landscape elements across the Application Site and surrounding lowland fields.

1.7. These potential views are typically experienced directly or obliquely from ground or first floor views, with receptors views limited to varying portions of the taller elements of the proposed

infrastructure. Potential visual effects of the proposed infrastructure upon these local receptors existing views have been considered within this LVIA from 11 representative viewpoints. These were assessed and found to result in initial **Moderate to Moderate/Minor adverse** visual effects, with some effects reducing as planting becomes established over time.

1.8. Proposed hedgerow and tree planting along the Application Site's outer boundaries (associated with planning reference 22586) will help mitigate any inward views. As the proposed mitigation planting becomes established, thickening out and increasing in height, it will filter out some of these views further and reduce the initial predicted effects. Some receptors views from the upper floors of their nearby properties will remain largely unaltered due to their more elevated setting looking down onto the proposed infrastructure.

1.9. Other similar developments within the 5km study area include the consented Lissan West Solar Farm application (Planning Ref: 171001) along with planning reference 19180, 20562, 21915 and 22586 all of which are detailed in the cumulative section of this report **see Table 1.3**. The proposed infrastructure will result in an overall **Minor adverse** cumulative visual effect given its enclosed nature within the surrounding landscape.

1.10. At the end of the proposed infrastructure's lifespan, the predicted effects are reversible as the land can be easily returned to an agricultural use, similar in form to its current state.

# INTRODUCTION

## Background

1.11. Neo Environmental Ltd has been appointed by Renewable Energy Systems (RES) Ltd (the "Applicant") to undertake a Landscape and Visual Impact Assessment (LVIA) for a Strategic Infrastructure Development ("SID") Application for a new 110kV Substation ("the Proposed Development") to feed into the existing Drumline-Ennis 110kV overhead line (OHL) circuit. The Substation and 110kV loop in infrastructure is situated within the townland of Coolshamroge, Ennis, Co. Clare ("the Application Site"). The Substation is to facilitate the Manusmore Solar Farm (PA Ref: 20562), the Manusmore Solar Farm Extension (PA Ref: 21915) and the Coolshamrock Solar Farm (PA Ref: 22586).

1.12. Please refer to **Figure 3, Volume 2** for the layout of the Proposed Development.

## Development Description

**1.13.** Coolshamrock and Manusmore Solar Farms will feed into a new 110kV substation. The method of connection to the national grid for the new substation will be a looped connection into the existing Drumline – Ennis 110kV Circuit. 2 No. new OHL end towers will be constructed to facilitate connection to the existing OHL (see **Figure 3 and 11, Volume 2).** The application site will comprise of a 110/33kV substation which consists of 2 No. control buildings, a transformer compound, a high voltage (HV) switchgear compound, a customer MV compound and associated cabling. There is also 2. No underground 110kV cables, a cable access track and 2 No. overhead line towers.

**1.14.** The control buildings will consist of foundation works, block work, roofing, low voltage electrical fit out, medium voltage switchgear, cladding and building finishing works.

**1.15.** A power transformer, HV electrical equipment (4bays), lightning protection masts, communication mast, structural steel works, circuit breakers, current transformers, voltage transformers, busbars, surge arresters, cable sealing ends, disconnectors/earth switches, surge arrestors and post insulators will be installed in the Eirgrid HV Substation Compound.

**1.16.** The Customer MV Compound will consist of 2 No. capacitor banks, 1 No. reactor banks and associated circuit breakers (capacitor and reactor), 1 no. harmonic filter, resistor, pre-insertion resistor and 1 No. auxiliary transformer.

1.17. Palisade and concrete post and rail fencing will be erected around the compound for security/protection.

1.18. The 110kV loop in connection will connect the Drumline-Ennis 110kV overhead line (OHL) circuit to 2. Overhead line towers and 2. No associated 110kV underground cables and into the HV compound infrastructure. There is a cable access which branches from the consent solar tracks (P22568) to provide access to the cables and towers.

## Site Description

1.19. The proposed Substation and 110kV loop in infrastructure is located within the townland of Coolshamroge, Ennis, Co. Clare. The proposed site is approximately 7km southeast of Ennis, 4.2km east of Clarecastle and 1.5km west of the smaller settlement Quin.

1.20. The Application Site in which the substation is proposed to be located comprises of 3 fields of relatively flat agricultural land. The Application site lies at an elevation of c. 26-31m AOD and covers a total area of c. 3.78 acres. The approximate Irish Grid Reference points (ITM) of the proposed substation are X 539777 and Y 674345. The proposed substation will be enclosed by palisade fencing. Access to the proposed substation will be from a private lane off an unnamed local road to the south which is the same entrance point from the consented Coolshamrock Solar Farm (PA Ref:22/586).

## Purpose of this Report

1.21. This LVIA will provide an assessment of the potential effects of the Proposed Development on the existing landscape and visual amenity of the Application Site and surrounding area. The approach taken will follow the guidelines set out in the "Guidelines for Landscape and Visual Impact Assessment, 3rd Edition" (GLVIA3) produced by the Landscape Institute and the Institute of Environmental Management and Assessment [1]. In accordance with the GLVIA3 guidance the level of assessment is proportional to the development's scale, type, and likely effects.

1.22. While landscape and visual effects are closely related, they are separately assessed in this report.

- Landscape effects as a result of the Proposed Development may be defined as changes in the physical landscape which may give rise to changes in its character and quality, landscape patterns, designations, features and elements.
- Visual effects as a result of the Proposed Development comprise changes to the composition of existing views and visual amenity experienced by people, such as residents, recreational or vehicular users.
- Cumulative landscape and visual effects with other similar existing consented not constructed or Developments (pending planning) in the surrounding area will also be considered where appropriate.

[1] Landscape Institute and Institute of Environmental Management and Assessment (2013, 3rd edition) Guidelines for Landscape and Visual Impact Assessment, Routledge, London.

1.23. These effects may have a direct or indirect, adverse (negative), beneficial (positive) or neutral nature. They may vary in duration from short to long-term and have irreversible or reversible effects.

## Scope of The Assessment

1.24. The LVIA will be based on a 5km study zone from both landscape and visual assessments, which may be extended if deemed appropriate e.g. for the cumulative assessment.

1.25. The assessment is based on the final layout of the proposed solar farm as shown on the Proposed Development Layout (**Figure 3, Volume 2**) and various detailed structure drawings which accompany this planning application. The written report is supported by various figures which are referenced throughout this report and found within **Appendix 1A**, including the Landscape & Ecology Management Plan (**Figure 1.8 Appendix 1A**) which shows the landscape mitigation measures incorporated into the overall design scheme.

1.26. The LVIA has taken the following approach:

- Firstly, identify and evaluate the existing landscape and visual baseline within a 5km study zone;
- Determine the landscape and visual receptors with potential to be considerably affected by the Proposed Development and their sensitivity to the proposed changes resulting from the Proposed Development; and
- Assess the interaction of the Proposed Development with the landscape and visual receptors taking account of any mitigation measures in order to establish a judgement of the 'degree of effects' the Proposed Development will have upon each receptor.

### Methodology

1.27. The methodology followed in this LVIA can be found within **Appendix 1C.** The asserted 'degrees of effects' grades used within in this LVIA are provided in **Table 1.1** below. These effects are attained by combining the level of sensitivity with the level of magnitude of change to provide the effects upon each receptor. These effects are graded as **Major, Major/Moderate, Moderate, Moderate/Minor, Minor or No Change**, either direct or indirect effects and can be characterised as adverse or beneficial. Although the table doesn't necessary provide a clear correlated value which is where professional judgment will be used in the LVIA on asserting a value.

Table 1-1: Degree of landscape and visual effects

| Sensitivity (Susceptibility & Value) | Magnitude of Change | | | | |
|---|---|---|---|---|---|
| | High | Medium | Low | Negligible | None |
| High | Major | Major/ Moderate | Moderate | Moderate/ Minor | No Change |
| Medium | Major/ Moderate | Moderate | Moderate/ Minor | Minor | No Change |
| Low | Moderate | Moderate/ Minor | Minor | Minor/None | No Change |
| Negligible | Moderate/ Minor | Minor | Minor/ No Change | No Change | No Change |
| None | No Change | No Change | No Change | No Change | No Change |

## Supporting Documents

1.28. The report is supported by the following Figures and Technical Appendices:

- Appendix 1A: Figures;
  - Figure 1.1 – Landscape Character Areas
  - Figure 1.2 – Landscape Designations with ZTV
  - Figure 1.3 – Viewpoints Locations with ZTV
  - Figure 1.4 – Viewpoints 1 & 2
  - Figure 1.5 – Viewpoints 3 & 4
  - Figure 1.6 – Viewpoints 5 & 6
  - Figure 1.7 – Viewpoints 7 & 8
  - Figure 1.8 – Viewpoints 9 & 10
  - Figure 1.9 – Viewpoints 11
  - Figure 1.10 – Landscape and Ecology Management Plan (LEMP) (Submitted with Consented Coolshamrock Solar Farm Application, Planning Reference: 22586)
- Appendix 1B: Site Photographs 1 to 5 – Internal views of Application Site

- Appendix 1C: Methodology

## Statement of Authority

1.29. This LVIA was prepared by Neo Environmental's landscape architect Donal Walls BSc Hons.

1.30. Donal is a Landscape Architect with three years post qualification private practice experience. Prior to joining Neo Environmental Donal has worked on a range of projects including strategic green infrastructure, urban design, master-planning, and residential placemaking projects within the UK. While at Neo Environmental Donal has conducted landscape and visual impact assessments, appraisals, and landscape plans for a wide variety of project types including energy, residential and commercial projects across the UK and Ireland.

## Limitations & Assumptions

1.31. It is necessary to select a range of representative viewpoints across the study zone as the scope of the study does not allow for all potential visual receptors to be assessed individually. Many receptors are located within private lands, e.g. residences, and cannot be accessed, therefore, where required, a nearby representative point was chosen on the public road. Variations in the weather can bring about differences in the degree of visibility experienced within the site or from a viewpoint on the day of the field work, and any other given day.

# LEGISLATION, POLICY AND GUIDANCE

1.32. National and local planning authority policies of relevance to landscape and visual issues in relation to the Proposed Development and the surrounding area are outlined below.

## European Landscape Convention 2000

1.33. The European Landscape Convention 2000 ("the European Landscape Convention") considers all landscapes as being inclusive and important to everyone not just designated landscapes. The ELC's definition of landscape which has been consigned within the Planning and Development Act 2000 by the Planning and Development (Amendment) Act 2010 (No. 30 of 2010) is as follows:

1.34. "*Landscape means an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors*". (Article 1.a. of the European Landscape Convention) [2.]

## Planning and Development Act 2000 (as Amended)

1.35. Part XIII Amenities Sections 202-204 of the Planning and Development Act 2000[3] provides provision for local authorities to designate sections of the landscape as either Areas of Special Amenity or Landscape Conservation Areas.

1.36. Section 202: Area of Special Amenity states:

*"(1) Where, in the opinion of the planning authority, by reason of*

*(a) its outstanding natural beauty, or*

*(b) its special recreational value,*

*and having regard to any benefits for nature conservation, an area should be declared under this section to be an area of special amenity, it may, by resolution, make an order to do so and the order may state the objective of the planning authority in relation to the preservation or enhancement of the character or special features of the area, including objectives for the prevention or limitation of development in the area."*

1.37. Section 204: Landscape Conservation Area states:

[2] Council of Europe (2000) *European Landscape Convention and reference documents*. Available at: https://rm.coe.int/CoERMPublicCommonSearchServices/DisplayDCTMContent?documentId=09000016802f80c6

[3] Office of the Attorney General (OAG) (2000) Planning and Development Act (amended 2002), in *Irish Statute Book*. Dublin: Stationery Office.

*"(1) A planning authority may, by order, for the purposes of the preservation of the landscape, designate any area or place within the functional area of the authority as a landscape conservation area.*

*(2) (a) Notwithstanding any exemption granted under section 4 or under any regulations made under that section, the Minister may prescribe development for the purpose of this section, which shall not be exempted development.*

*(b) Development prescribed under paragraph (a) may be subject to any conditions or restrictions that the Minister may prescribe.*

*(3) An order made by a planning authority under this section may specify, in relation to all or any part of the landscape conservation area, that any development prescribed by the Minister under subsection (2) shall be considered not to be exempted development in that area."*

1.38. Section 10 of the Act requires the local authority to set out objectives within their development plan for the preservation of the character of the landscape including views.

*"(e) the preservation of the character of the landscape where, and to the extent that, in the opinion of the planning authority, the proper planning and sustainable development of the area requires it, including the preservation of views and prospects and the amenities of places and features of natural beauty or interest;"*

## National Landscape Strategy for Ireland 2015-2025

1.39. The National Landscape Strategy for Ireland 2015-2025 ("the National Landscape Strategy")[4] seeks to implement the objectives of the Council of Europe's Landscape Convention through a series of actions and policies aimed at understanding, protecting, managing and planning of the landscape and to support sustainable landscape changes.

1.40. The objectives of the National Landscape Strategy are to:

- *"implement the European Landscape Convention by integrating landscape into our approach to sustainable development;*
- *establish and embed a public process of gathering, sharing and interpreting scientific, technical and cultural information in order to carry out evidence-based identification and description of the character, resources and processes of the landscape;*
- *provide a policy framework, which will put in place measures at national, sectorial - including agriculture, tourism, energy, transport and marine - and local level, together*

[4] Department of Arts, Heritage and the Gaeltacht (2015) *National Landscape Strategy for Ireland 2015-2025*. Available at: http://www.ahg.gov.ie/app/uploads/2015/09/national-landscape-strategy-for-ireland-2015-2025.pdf

*with civil society, to protect, manage and properly plan through high-quality design for the sustainable stewardship of our landscape; and*

- *ensure that we take advantage of opportunities to implement policies relating to landscape use that are complementary and mutually reinforcing and that conflicting policy objectives are avoided in as far as possible."*

## Planning and Development Guidance Recommendations for Utility Scale Solar Photovoltaic Schemes in Ireland[5]

1.41. This guidance document was produced in October 2016 as a set of policy and guidance recommendations for all planning considerations for proposed solar developments within Ireland. This includes sections on Landscape and Visual Impacts and screening. Section 5.2.2 regarding Landscape states:

"Recommendation No. 8:

*It is recommended that the impact on the landscape be addressed using the following key criteria:*

*• Within a defined radius of the proposal under consideration, a plan showing cumulative 'zones of visual influence'.*

*• Maps of cumulative zones of visual influence are used to identify appropriate locations for visual impact studies.*

*• Examination of simultaneous visibility assessments;*

*• Sequential effects on visibility occur when an observer moves through a landscape and sees two or more schemes. Common routes through a landscape (e.g. major roads; long distance paths or cycle routes) can be identified as 'journey scenarios' and the proposals impact on them can be assessed;*

*• Photomontages to show all existing and consented solar farms, and those for which planning applications have been submitted, in addition to the proposal under consideration.*

*• at the most detailed level, description and assessment of cumulative impacts may include the following landscape issues: scale of development in relation to landscape character or designations, sense of distance, existing focal points in the landscape and sense of remoteness or wildness.*

*•If necessary to undertake a glint and glare assessment, including cumulative effectives of all existing and consented solar farms."*

[5] Future Analytics (2016) *Planning and Development Guidance Recommendations for Utility Scale Solar Photovoltaic Schemes in Ireland.*

1.42. Further recommendations include that a site-specific approach be taken when considering screening provided by the topography and existing and new native hedgerows, when assessing any visual impacts.

## Clare County Development Plan 2023-2029

1.43. Clare County Council's Development Plan 2023-2029[6] adopted 28th April 2023 (the "County Development Plan"), recognises the need to protect the natural and manmade environment, while encouraging sustainable growth throughout the county.

1.44. The planning polices with relevance to landscape resources and visual amenity, can be found in Chapters 14: Landscape, as well as within Chapters 15: Biodiversity, Natural Environment and Green Infrastructure and Chapter 18: Design & Placemaking. Please see relevant policies outlined below and within the accompanying Archaeology & Architectural Heritage Impact Assessment and the Ecological Appraisal. Other policies referenced here relate to renewable energy which can be found within Chapter 10 and Volume 8 of the County Development Plan.

### CDP 14.1 Landscape Character Assessment

*"It is an objective of Clare County Council: To encourage the utilisation of the Landscape Character Assessment of County Clare and other relevant landscape policy and guidelines and to have regard to them in the management, enhancement and promotion of the landscapes of County Clare"*

### CDP14.4 Development Plan Objective: Shannon Estuary Working Landscape

*"It is an objective of the Development Plan:*

*a) To permit development in these areas that will sustain economic activity of regional and national significance – especially through the protection of resources to sustain largescale energy projects, logistics, large-scale manufacturing and associated infrastructure. All such developments shall be required to conform to relevant management and conservation objectives for designated and protected habitats and species within the estuary;*

*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:*

[6] Clare County Council (2017) Clare *County Development Plan 2017-2023*. Available at: volume-1-written-statement-clare-county-development-plan-2023-2029-51406.pdf (clarecoco.ie)

*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;*

*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."*

1.45. Other areas of distinct landscapes and seascape characteristics within the 5km study zone include Heritage Landscapes and Seascapes. These areas are protected from the visual impact of any inappropriate developments within their limits by the CDP Development Plan Objectives 14.5 and 14.6 respectively.

### CDP 14.7 Scenic Routes

*"It is an objective of Clare County Council:*

*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;*

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

### CDP 15.19 Woodland, Trees and Hedgerows

*"It is an objective of Clare County Council:*

*D) To work with landowners, local communities and other relevant groups to promote the retention and conservation of existing trees and hedgerows and encourage development proposals that enhance the landscape through positive management and additional planting/sensitive replanting of native tree species;*

*E) To protect woodlands and hedgerows from damage and/or degradation and to prevent disruption of the connectivity of woodlands and hedgerows of the County;*

*F) To ensure, where required, applications for development include proposals for planting/ leave a suitable ecological buffer zone, between the development works and areas/features of ecological importance;*

*G) Where hedgerows are required to be removed in the interests of traffic safety or where breaches to hedgerows occur due to river drainage/maintenance works and flood repair, to require the applicant/developer to replace the hedgerows with suitable native species to the satisfaction of the Council;*

*I) To require, where possible, that all trees felled as a result of development proposals be replaced at a minimum ratio of 10 new native species per 1 tree felled.*

### CDP 10.11 Renewable Energy

*"It is an objective of the Development Plan: To facilitate the development of renewable energy developments in rural areas in accordance with the adopted Clare Wind Energy Strategy and Renewable Energy Strategy and the associated SEA and NIR (and any subsequent strategies)."*

## Clare Renewable Energy Strategy 2023-2029

1.46. Clare County Council has produced the Clare Renewable Energy Strategy Interim Version[7] to set out the aims and objectives of the Council in furthering renewable energy developments across the county, while being in accordance with the objective of the County Development Plan 2023-2029. The council's objectives for Solar Energy are discussed in Chapter 7 of the strategy.

### RES 7.1 Increase the penetration of commercial scale solar energy projects

*It is an objective of Clare County Council:*

*A) To increase the penetration of utility scale solar energy development in appropriate locations.*

*B) To favourably consider the redevelopment of brown field sites for large solar PV projects.*

*C) To favourably consider the development of solar farms on agricultural lands which allow for farm diversification and multipurpose land use.*

### RES 7.2 Increase the penetration of commercial scale solar energy projects

*It is an objective of Clare County Council:*

*A) To promote and facilitate the use of solar technology across the County including schools, public offices and for infrastructure, e.g. traffic lights, streetlights, road information signage etc.*

*B) To promote the integration of solar energy into existing and planned developments, particulary commercial and industrial buildings with large roof areas..*

[7] Clare County Council *Clare County Development Plan 2023-2029: Volume 5 Clare Renewable Energy Strategy 2023-2029* Available at: Volume 5 Clare Renewable Energy Strategy-Clare County Development Plan 2023-2029 (Interim) (clarecoco.ie)

*C) To encourage the use of solar thermal or solar PV installations as part of the design and planning process for new developments and refurbishments.*

# CHARACTERISTICS OF THE DEVELOPMENT

1.47. The three different phases of the Proposed Development include: its construction, operation, and decommissioning. Each phase will have varying effects on landscape resources and visual amenity. These phases are briefly outlined below and will be fully considered in this assessment. Full details on the built structures, overall site layout and construction works are provided within the Planning Statement and illustrated by the supporting figures.

## Construction Phase

1.48. The period will occur over a duration of a four-month construction period. The consented planning reference 22586 will be constructed at the same time as the proposed development. Access will be gained from one new access point off an unnamed road to the south of the Application Site. This access point was consented as part of the Coolshamrock Solar Farm (Planning Reference: 22/586).

1.49. The main construction activities within the site which may potentially impact upon the landscape resources or visual amenity include:

- Erecting construction traffic signage;
- Erecting security fence;
- Site preparation, including mowing and marking out if required;
- Constructing the permeable pad for the grid compound;
- Sustainable Drainage Systems (SuDS) installation;
- Cable route trenching and cable laying;
- Concrete base formation for the buildings and associated above ground infrastructure;
- Building of above ground infrastructure;
- Installation of ecological and landscape measures as outlined within the supporting Ecology and Landscape and Ecology Management Plan (LEMP), please see Figure 1.8, Appendix 1A of Technical Appendix 1: Landscape and Visual Assessment.

## Operational Phase

1.50. Once constructed, the Proposed Development will remain on these lands for the agreed planning consent period.

## Decommissioning Phase

1.51. Decommissioning works will be similar in nature to those undertaken during the construction phase but in reverse order, including:

- Movement of site traffic to, from and through the site during the works;
- Removal of the above-ground Proposed Development's structures from the site, with some temporary storage of materials necessary; and,
- Where necessary, disturbed ground will be gently graded, cultivated and reseeded to return it to suitable conditions for agricultural use.

# LANDSCAPE APPRAISAL

## Landscape Baseline

1.52. The purpose of collecting and describing the landscape baseline data for the study zone is to help establish the context of the landscape into which the Proposed Development is seeking to be located, later using this to assess the potential effects of the Proposed Development.

## Local Landscape Character Studies

1.53. The landscape across the study zone falls within the County of Clare. A landscape character assessment has been undertaken by Clare County Council to help gain a better understanding of the existing landscape and to help identify elements in need of preserving, conserving or enhancing. The *Landscape Character Assessment of County Clare* is included within the supporting documentation of the Council's County Development Plan.

1.54. The landscape across the County of Clare has been classified into 21 Landscape Character Areas (LCA). There are four LCAs located within the 5km study zone, as mapped in **Figure 1.1 of Appendix 1A**, which include the Fergus Estuary LCA 14, Ennis Drumlin Farmland LCA 13, Tulla Drumlin Farmland LCA 12 and East Clare Loughlands LCA 11.

1.55. The Application Site is located within the confines of the Ennis Drumlin Farmland LCA 13.

1.56. Key characteristics of the landscape of the Ennis Drumlin Farmland LCA 13 are:

- Settlement of Ennis is the focal point of the area where both historical and modern development is apparent.
- Ennis situated within drumlin farmland, drumlins-oriented northeast to southwest punctuated by small loughs.
- Area can be disorientating due to many small winding roads and limited views.
- Communication centre for the region with Ennis as county town, with Fergus River running through the town.

1.57. Within 5km study of the Option Area, the surrounding drumlin landscape consists primarily of working agricultural farmland, punctuated with loughs and forestry plantation. Quin Quarry is located c. 0.82km to the southwest of the Option Area.

1.58. The landscape condition and sensitivity are described in the landscape character assessment as,

- *"…variable, poor development has degraded landscape quality in some areas through highly visible quarries, golf courses, and road upgrades. Linear development along the main roads and on the small roads near to Ennis reflect the housing pressures within this area, but their urban design frequently detracts from the landscape. Large pylons are also visible along the skyline north of Ennis. Nonetheless, the more remote drumlin hinterland, away from the main roads, remains quite rural and intact. The banks of the Fergus are designated as a feature of high amenity under the county development plan."*

1.59. Identified forces for change in the landscape character assessment does not include any energy related development but relevant principles for landscape management which include:

- *The integrity of the rural landscape should be maintained through sensitive planning and design;*
- *Advice for new developments should include design, siting and boundary treatments; and,*
- *Core agricultural features including hedgerows and stone walls should be maintained.*

*"The landscape is flat, coarse grassland, occasional clumps of coniferous forestry between 1-3 km² in size, fields defined principally by stone walls. There are no areas of particular scenic value although the stone walls are quite distinct."*

*Recommendations:*

*"3.7 The landscape is flat therefore height restrictions should apply to built development to avoid long distant visual intrusion.*

*3.8 Development is prohibited in the areas (primarily bogs) that carry a nature designation. Development in the class 1 area should be either set close to existing medium sized blocks of forestry or screened by either new commercial forestry or mixed deciduous woodland, both of which are present in this area.*

*3.9 Due to the rural nature of the area scattered development which cannot be screened by forestry should be of natural stone or rendered finish of a colour that is sympathetic to the colours of the landscape. Stonewalls are a distinct element of the character of this area and should be constructed to match traditional style around new development."*

## Designations

1.60. Landscape designations are landscapes which are attributed special protection at national (legislative) to local (County Development Plan) level, to protect against inappropriate development. Historic and ecological designations also contribute to the overall landscape

character and quality. These are briefly outlined below and considered in detail within the respective Technical Appendices. The various designations and routes are indicated on **Figure 1.2 of Appendix 1A**.

### Built, Archaeology & Ecological Designations

1.61. There are various existing historical and ecological features found throughout the study area which help contribute to this area's current overall landscape character.

1.62. There are a total of 103 recorded sites within the RMP, HGDL and NIAH (83 within ZTV) and a total of 6 NIAH and 5 HGDLs that were identified within the 2km study zone (**Figure 3.1: Appendix 3A**).

1.63. Within 15km of the Application Site boundary there are three SPAs, eighteen SACs and one Ramsar Site. Within 5km of the Application Site boundary there are five pNHAs.

1.64. These ecological and heritage assets and designations, and any potential effects of the Proposed Development on them, are considered in detail in the text and figures of the corresponding **Technical Appendix 2: Ecological Impact Assessment** and **Technical Appendix 3: Archaeology & Architectural Heritage Impact Assessment**, respectively.

### Heritage Landscapes

1.65. Heritage Landscapes are a County Clare wide designation which are defined within the Clare County Development Plan 2023-2029 as:

*"Heritage Landscapes are areas where natural and cultural heritage are given priority and where development is not precluded but happens more slowly and carefully."*

1.66. The nearest Heritage Landscape is The Fergus and Shannon Estuary, located on the lowlands southwest of the Application Site.

# SITE AND SURROUNDING ENVIRONMENT

## The Site

1.67. The Application Site is contained within the limits of 3 fields over a total area of approximately 3.78 acres. It is accessed from a private lane off an unnamed local road to the south (consented as part of PA Ref: 22/586).

1.68. The Application Site's elevation ranges from approximately 26m to 29m AOD. The fields are of an irregular form and small to medium in scale. The improved grassland is currently under pasture which is grazed by cattle and sheep.

1.69. The landcover consists of improved agricultural grassland across small to medium scaled fields. These fields are partitioned by a mix of boundaries consisting of post and wire fencing, treelines and short stretches of hedgerows. Electricity lines supported by small pylons runs through the northeast section of the Application Site. A quarry can also be found to the immediate west of the boundary.

1.70. The hedgerows consist mainly of mature hawthorn specimens (*Crataegus monogyna*) with an understory of briars (*Rubus fruticosus*), ivy (*Hedera Helix*) and some gorse (*Ulex europaeus).* Hazel *(Corylus avellana)* trees are also found alongside the hedgerow cover within the site.

1.71. Several individual and short strands of mature trees are located along some field boundaries. The species of trees consist predominantly of semi-mature ash (*Fraxinus excelsior*) and some individual sycamore (*Acer pseudoplatanus*). Pockets of forestry with hedgerow understorey is located along the outside of the Application Site to the west.

1.72. A number of photos within **Appendix 1B – Site Photographs 1 to 5** illustrate some of the elements and features of the Application Site and its surroundings.

## The Surroundings

1.73. The topography across the study zone ranges between approximately 0m to 85m AOD, generally flat with some small gentle undulating terrain.

1.74. The drumlin landscape across the study zone consists primarily of working agricultural farmland, punctuated with loughs and forestry plantation.

1.75. Other non-agricultural uses within the rural landscape include a number of quarries, industrial units, golf course and equestrian centres. Quin Quarry is located c. 0.82km to the southwest of the Application Site.

1.76. Tree cover includes small blocks of mixed woodland and conifer plantations scattered along farmland. Other smaller strands of mature and established trees can be found within shelterbelts and some field boundaries.

1.77. Waterbodies within the study zone include the Fergus Estuary located approximately 4.11km to the southwest of the Application Site and the River Rine, located approximately 1.03km southeast of the Application Site, which flows west to meet the Fergus Estuary.

1.78. Settlements within the study zone include rural ribbon developments found along local rural roads surrounding the Application Site. These ribbon developments, referred to as 'cluster' settlements within the settlement hierarchy of the Clare County Development Plan 2023-2029, consist of single and two storey properties. The larger village of Quin is located approximately 1.25km east of the Application and is home to the historic Quin Abbey. The rural population are well served by a mix of national to local graded roads throughout the study zone, including the R469, L3148, L7198 and other unnamed local roads.

## Landscape Value

1.79. The relative landscape value attached to the various landscape receptors identified through the baseline study needs to be established. These receptors include a mix of designated and non-designated landscapes, features, aesthetic and perceptual qualities. The value is later combined with the susceptibility to change of the landscape receptor to determine the landscape sensitivity. The approach taken in the determination of the value is outlined in the methodology contained in Appendix 1C.

1.80. The nationally and county designated areas and assets found throughout the study zone, which contributes to the landscape setting, will be **highly valued** due to their national or regional importance.

1.81. The improved grassland within part the Application Site is typical grassland cover; could be easily replaced and therefore has a **low value**. The various hedgerows and trees enclosing the Application Site are typical of the surrounding local landscape and have a **medium value**. Other key natural features within the rural landscape include mature trees, waterways and historic field systems, which all contribute to the character of the rural landscape and have a **medium to high value**.

1.82. The various built up areas of modern dwellings within the settlements and concentration of modern dwellings through the rural areas are of a **low value.** The historic village of Quinn has a rich townscape which is of a **medium to high value.**

# LANDSCAPE IMPACTS

1.83. The following section considers the interaction of the Proposed Development with those potentially affected landscape receptors identify through the baseline study. This will be done by determining the likely effects occurring throughout each phase of the Proposed Development upon these receptors.

## Landscape Receptor Sensitivity

1.84. The landscape sensitivity of the following landscape receptors identified through the baseline study is determined by considering their susceptibility to change from the Proposed Development and their value based on professional judgement. Further details can be found in the methodology within **Appendix 1C**.

### Landscape Character

1.85. The Clare Landscape Character Assessment has broadly identified the landscape sensitivity of the Ennis Drumlin Farmland LCA 13 as being variable due to poor development.

1.86. The areas of the Clare Heritage landscape which fall within the extents of the study zone include the banks of the Fergus Estuary which have a **high sensitivity** to this type of development. The areas of the LCA closer to the main roads and built up area will result in them having a **Low-Medium sensitivity** to the Proposed Development.

1.87. The elements and features of the Application Site will have varying susceptibility and value, with hedgerows and trees being more sensitive to change than the area of improved grassland. When considering the overall value and susceptibility of the fields being developed out within the limits of the Application Site, they will have a **Low** sensitivity to this Proposed Development type.

1.88. On review the landscape of the Ennis Drumlin Farmland LCA 13 is considered as having a **Low** sensitivity.

### Application Site's Landscape Fabric

1.89. The elements of the Application Site generally have a low to medium value, with some of a high value and with an overall medium susceptibility to the proposed changes due to the gentle flat lowlands and partial degree of enclosure provided by the drystone walls, trees, and hedgerows along the field boundaries. Overall, the Application Site will have a **Low sensitivity** to the scale of the Proposed Development type.

## Landscape Effects

1.90. The following section assesses the landscape effects of the Proposed Development on the landscape character and resources of the landscape receptors. The predicted magnitude of change is combined with the landscape receptor's level of sensitivity to determine the Proposed Development's Degree of Effects for each receptor.

### Landscape Character

#### Construction Phase

1.91. During the temporary construction phase, there will be a notable increase of construction activity during the six month construction period within the limits of the Application Site. The works will have a localised temporary disturbance to a small portion of the rural landscape of the Ennis Drumlin Farmland LCA. Movement of construction traffic to and from the Application Site will result in limited disturbance around the single access point. Traffic will move to and from the regional road before dissipating. Traffic will be quickly absorbed across the wider road network.

1.92. The effects during the construction phase will be temporary and localised, **Moderate/Minor to Moderate adverse**, lasting only for the buildout period.

#### Operational Phase

1.93. Once operational, the Proposed Development will collectively add a new small scale man-made feature in the form of grid infrastructure over 3.78 acres within the Ennis Drumlin Farmland LCA. The Proposed Development has been designed around the confines of the existing field boundaries whilst retaining an agricultural use by allowing sheep to lightly graze the land or maintenance by cutting. The proposed mitigation measures within the planning reference 22586 will help improve the condition of the existing hedgerows over the lifespan of the operational phase. These improved field boundary edges will help contain the various structures of the Proposed Development within the local area and limit their overall visibility within the Ennis Drumlin Farmland LCA. The retained and strengthened field systems, along with the continued light agricultural use of the lands, are in keeping with the council's recommendations and potential capacity set out for the Ennis Drumlin Farmland LCA.

1.94. The effects during the operational phase will have a medium magnitude of change which, together with the medium sensitivity of the area, will have a localised **Moderate adverse** effect on the characteristics of the Proposed Development lands and immediate rural landscape of the Ennis Drumlin Farmland LCA.

1.95. As the mitigation planting fills out, it will help to further contain the Proposed Development within this part of the Ennis Drumlin Farmland LCA and reduce effects to **Moderate/Minor adverse.** Likewise, across the wider extent of this LCA the effects are reduced to **Moderate/Minor adverse** due to the variations in the local topography and screening

provided by natural and built elements across the intervening landscape of the Ennis Drumlin Farmland LCA.

1.96. The low setting and high degree of enclosure of the Application Site provided by the field hedgerows, trees and woodland within the intervening landscape and topographical fluctuations will greatly limit its potential visibility from within the neighbouring East Clare Loughlands LCA, Fergus Estuary LCA and Tullagh Drumlin Farmland LCA.

### Decommissioning Phase

1.97. At the decommissioning phase, there will be some localised disturbance to the rural landscape while structures are dismantled and removed from the Application Site. However, at the end of decommissioning, the land will be reinstated to its former full agricultural use, aiding the reversal of any effects on the landscape character. By this stage, the retained field hedgerows will have filled out and have an improved condition.

## Application Site's Landscape Fabric

### Construction Phase

1.98. The construction works will require a temporary disturbance (4-month period) to the Application Site's agricultural land due to the installation of the substation and its associated infrastructure.

1.99. The design of the Proposed Development will follow the existing site's topography while its structures will be offset from the nearest existing hedgerow. These measures will help minimise any disturbance to the existing landscape elements and features found across the Application Site.

1.100. Any disturbed ground resulting from the movement of machinery and installation of the various structures and underground cabling trenches, will be gently graded back and reseeded with grass around towers and access track.

1.101. The effects upon the Application Site during the construction phase will be temporary and short term, lasting only for the build out period. They will have a low/medium magnitude of change which together with the Application Site's medium sensitivity, will result in **Moderate/Minor adverse** effects overall.

### Operational Phase

1.102. Once operational, the Application Site fields will contain a new feature in the form of a substation and associated structures. The retained and enhanced boundary hedgerows will help to further contain the new structures within each field.

1.103. The land will be largely left undisturbed, with occasional maintenance visits throughout the year to undertake servicing of the infrastructure.

1.104. The effects during the operational phase will have a low magnitude of change which, together with the Application Site's medium sensitivity, will result in **Moderate/Minor adverse** effects. As the existing and new lengths of the boundary hedgerow increase in height as part of the mitigation measures given as part of the Coolshamrock Solar Farm LEMP, they will help to improve the condition of the existing field hedgerow, whilst further containing the Proposed Development within the fields of the Application Site.

### Decommissioning Phase

1.105. At the decommission phase, all existing above-ground structures will be removed, and the lands reinstated to a similar state to their current agricultural use. At this stage, any effects will revert to **No Change** or be of **Minor beneficial** effect from the retained enhanced field boundary hedgerows.

### Designations

1.106. The potential effects of the Proposed Development upon the setting of the sixteen Historic Gardens and Designed Landscapes and other historical and cultural assets are considered in detail within **Technical Appendix 3: Archaeology & Architectural Heritage Impact Assessment**. Ecological designations within the study zone include the River Shannon and River Fergus Estuaries SPA, Lower River Shannon SAC, which is a key landscape feature. It is however, not considered in the visual assessment due to its distance from the Proposed Development. The Proposed Development does not fall within the limits of any Landscape Designation. The nearest of which include the Fergus/Shannon Estuary Heritage Landscape, located along the lowland southwest of the Application Site. The Proposed Development is not visible from the Fergus/Shannon Estuary Heritage Landscape, or its shoreline contained by the SAC, thus it will have **No Change** to the landscape setting of this ecological designation.

## Landscape Summary

### Landscape

1.107. Overall, the Proposed Development will introduce a new renewable energy feature into a small portion of the rural landscape of the Ennis Drumlin Farmland LCA. It will add to the existing electrical infrastructure within the Application Site and surrounding rural landscape. This will result in very localised **Moderate** adverse effects on the immediate LCA which reduce to **Moderate/Minor** adverse effects across the wider extents of this LCA as the Proposed Development becomes contained within the surrounding landscape.

1.108. The Proposed Development has been designed to fit within the confines of the 3 fields, minimising any disturbance to the existing landscape elements and features across the Application Site. The landcover will change from pasture to one of renewable energy. The addition of the Proposed Development will result in a **Moderate/Minor** adverse effect upon the Application Site fabric.

# VISUAL APPRAISAL

## Visual baseline

1.109. In order to assess how the Proposed Development will potentially affect the existing views experienced by people and their visual amenity, it is necessary to first determine the extent of the potential visibility of the Proposed Development within the study area and the receptors likely to be affected. This was established by determining the following criteria:

- Review of the bare earth Zone of Theoretical Visibility (ZTV) to determine the potential extent of the Proposed Development visibility across the study zone;
- Determining the different groups of people (known as visual receptors) who may experience views of the Proposed Development from the desktop study and field survey; and
- the selecting of representative viewpoints which to assess the Proposed Development effects on the existing views and visual amenity at each point.

## Visibility of the Application Site, Proposed Development & Potential Receptors

### ZTV Coverage

1.110. The bare earth scenario ZTV (**Figure 1.3 of Appendix 1A**) coverage extends over approximately two thirds of the study zone. Coverage is less prevalent across the northwest, northeast and southwest of the study zone.

### Receptors

1.111. However, as observed during the field visit, the actual potential visibility of the Application Site and subsequent Proposed Development will be much less than that predicted by the ZTV coverage. As the ZTV does not account for the mix of hedgerows, trees and buildings found throughout the surrounding landscape of the study zone which help to further partially or fully screen many potential receptors.

1.112. The Application Site has limited visibility as observed during the site visit. Potential views of the Application Site are largely confined to those local residential and road users' receptors within 2km or less from its boundaries. The majority of these receptors are located alongside or travelling along the four roads which frame the Application Site. The extent of their potential views as experienced by the affected receptors will vary depending on the degree of screening present and the receptor's angle of view when facing the Application Site and Proposed Development.

1.113. Several outward looking views have been recorded from within the Application Site which help illustrate the limited degree of visibility across the intervening landscape (**Site Photographs 1 to 5 of Appendix 1B**).

### Protected Scenic Routes & Views

1.114. Clare County Council has sought to protect key views from inappropriate development by designating scenic routes and viewpoints within the CDP. There is one such scenic route within the study area along the L3156 (see **Figure 1.2: Landscape Designations in Appendix 1A**).

1.115. The key views experienced along this route are of those looking west towards the Fergus Estuary facing away from the Application Site. The ZTV coverage indicates no potential visibility from sections of this route, however, the Application Site cannot be seen from any section of the scenic route, as observed during fieldwork.

### Recreational Access Routes

1.116. There are no known public rights of way through the Application Site or surrounding lands. Much of the local rural road network provides opportunities for informal recreational activity by walkers and cyclists.

1.117. The Mid Clare Way long National Trail runs along some of the roads and hills within the study area, as indicated on **Figure 1.2 of Appendix 1A**. The nearest section of this trail is located approximately 0.53km to the southwest, as the route passes along the L3148.

## Viewpoint Selection

1.118. Eleven viewpoints were selected which are reflective of representative views experienced from various receptor types within the immediate vicinity looking towards the Proposed Development. The locations of these viewpoints are listed in **Table 1.2** below and mapped out in **Figure 1.3** (Viewpoint Map), **Appendix 1A**.

1.119. The eleven selected views are from publicly accessible areas, i.e. roads which may differ from actual views experienced on private residential lands, though any variations are taken into consideration. The views have been recorded and annotated to show the extent of the Proposed Development within each photo view and whether it is visible or not, as illustrated in **Figures 1.4 to 1.9 Appendix 1A**.

Table 1.2: Viewpoint Selection

| Viewpoint Number and Location Name | Receptor Type(s) | Distance and Direction of viewpoint from the nearest section of the Application Site boundary line | Reason for choosing |
|---|---|---|---|
| 1: Stonewall entrance close to house receptor along L7194, Balllyhannon North | Residents & Road Users | 0.62km East | Views from nearby residence and road users |
| 2: Roadside view along L7194, Ballyhannon South | Residents & Road Users | 0.71km Southeast | Potential views from nearby residence and along stretch of this road |
| 3: Roadside view close to house receptor along L3148, Ballyhannon South | Residents & Road Users | 0.72km South | Potential rear views from nearby residences and road users |
| 4: House entrance along L3148, Coolshamroge | Residents & Road Users | 0.52km South | Potential views from nearby residence and along entrance and road users |
| 5: Field entrance along L7198, Cloonmore | Road Users | 0.58km Northwest | Potential views along stretch of this road |
| 6: Farmyard entrance long local road, Deerpark | Road Users | 0.91km West | Potential views from road users |
| 7: View from local road opposite house, Ballyvonnavaun | Residents & Road Users | 1.35km Northeast | Potential views from nearby residences and road users |
| 8: On unnamed local road beside residential property and farmstead | Road Users | 0.55km Northeast | Potential views from road users |

| | | | |
|---|---|---|---|
| 9: Along the R469 beside a residential property | Road Users | 1.08km Northeast | Potential views from local resident and road users |
| 10: By house along unnamed local road | Resident and Road Users | 0.66km North | Potential views from nearby residences and road users |
| 11: By farmstead along unnamed local road | Resident and Road Users | 0.14km Northwest | Potential views from nearby residences and road users |

1.120. Potential changes to the views of other receptors within settlements, along roads and that of recreational users found within the 5km study zone will also be considered.

# IMPACTS (VISUAL)

1.121. The following section considers the potential effect of the Proposed Development during the construction, operation (Year 0 and Years 5), and post decommissioning stages upon the existing views and visual amenity on the visual receptor(s) at the selected viewpoints and other visual receptors within the study area.

## Visual Receptor Sensitivity

1.122. The visual sensitivity of the following visual receptors (people) identified through the baseline study is determined by considering their susceptibility to change from the Proposed Development and their value based on professional judgement. Further details can be found in the methodology section in Appendix 1C.

- Residents: The views of receptors within the surrounding landscape including rural and urban areas will have a high sensitivity.
- Road Users: Those along the various local and regional graded roads will have a medium sensitivity. Those on designated driving routes where the views are a key part of the travelling experience will have medium-high sensitivity.
- Recreational Users: Walkers and cyclists travelling along dedicated routes or the roadway, will have a medium to high sensitivity; higher when a prominent rural setting within their views.
- Farm Workers: The views of farm workers across the rural landscape where views are secondary to their work, will have a medium sensitivity.

## Viewpoint Assessment

1.123. The following section assesses the visual effects of the Proposed Development on the selected receptors views and their visual amenity. The predicted magnitude of change is combined with the receptor's level of sensitivity to determine the Proposed Development's Degree of Effects for each receptor.

### Viewpoint Number 1: Stonewall entrance close to house receptor along L7194, Ballyhannon North

#### Description of the Existing View

1.124. This viewpoint is located along the L7194 residential road and shows a stonewall entrance to a local farm at Ballyhannon North. The view is framed by an entry gate with mature tree planting

on either side and faces west towards the Application Site. Due to the topography, views towards the Proposed Infrastructure will be fully screened. Internal site photos show a nearby house receptor (35pprox.. 74m north) will have partial upper storey views towards some of the infrastructure included within the proposed development **(see Site Photo 1 of Appendix 1B)**

### Effects of the Proposed Development on the Existing Views

1.125. No construction activity will be visible from Road Users along this receptor due to the distance, intervening roadside vegetation and topography of the land. Partial construction activities of the proposed towers (due to their height) may be visible from a nearby residence (located out of view to the right) but will be confined to the upper tips of the proposed towers and is similar in nature to the existing electricity pylons contained within the local landscape. No visibility towards the proposed substation will be possible due to the distance and intervening topography of the agricultural lands. This will result in a **No change** to views from Road Users and **Moderate/Minor adverse** change to views from nearby Residents.

1.126. Once operational, potential views of the substation from this viewpoint will be **fully** screened due to the distance and intervening topography of the agricultural lands. The growth of proposed mitigation associated with the solar farm application will also help to screen any views from this viewpoint. Thus, there will be **No change** to the existing views from Road Users and **Minor adverse to No change** view from Residents.

1.127. As proposed mitigation vegetation will have now matured there will be **No change** to views from both **Road Users** and **Residents** at the decommissioning phase.

Sensitivity of Receptor: **High** (Residents) **Medium** (Road Users)

Magnitude of Change: **Low** (Construction); **Low to Negligible** (Operational); **None** (Decommissioning).

Degree of Effects: **Minor adverse** (Construction); **Minor adverse to No Change** (Operational) **No Change** (Decommissioning) **No Change** (Post Decommissioning).

## Viewpoint Number 2: Roadside view along L7194, Ballyhannon South

### Description of the Existing View

1.128. This viewpoint is along the local L7194 road and is framed by an agricultural field in the foreground of view. A detached property with nearby farm-sheds is visible to the right of view. Roadside vegetation is minimal, and the land gently rises from the roadside towards the above buildings. The detached property is separated by a stonewall boundary and surrounded by mature deciduous boundary tree planting. Several existing electricity pylons frame the landscape in the foreground and background, punctuated by three mature trees at the top of the hill. Given the topography of the land and surrounding mature vegetation alongside the properties, views are considered unlikely.

### Effects of the Proposed Development on the Existing Views

1.129. No construction activity will be visible from these receptors due to the distance, intervening vegetation and topography of the land.

1.130. Once operational, potential views of the Proposed infrastructure from this viewpoint will be **fully** screened by the intervening field hedgerows and trees. Thus, there will be **no change** to their existing views.

Sensitivity of Receptor: **High** (Residents) **Medium** (Road Users)

Magnitude of Change: **None** (Construction); **None** (Operational); **None** (Decommissioning).

Degree of Effects: **No Change** (Construction); **No Change** (Operational) **No Change** (Decommissioning) **No Change** (Post Decommissioning).

## Viewpoint Number 3: Roadside view close to house receptor along L3148, Ballyhannon South

### Description of the Existing View

1.131. This viewpoint is located close to a detached property, located to the right, along the L3148. This property is illustrated in **photo 2 of Appendix 1B**. The foreground of view is framed by thick roadside vegetation. Subsequent mature field boundary vegetation can be seen in the middle to long distance of view and various existing electricity pylons are dotted along the skyline from west to east. Due to the dense roadside vegetation, tree-cover and relatively flat landform, views towards the proposed substation will be fully screened with some partial views anticipated towards associated infrastructure.

### Effects of the Proposed Development on the Existing Views

1.132. Temporary site construction will be visible but confined to the elevated structures associated with the proposed infrastructure. The proposed substation and infrastructure will be screened by mature boundary mitigation planting (associated with the Coolshamrock Solar Farm application) along the southern boundary of fields 3 and 4 which will help to limit views towards construction. Views will be further limited by the lower topography and existing mature hedgerow and tree planting.

1.133. In the operational phase, partial views of the proposed lighting, communication mast and electricity pylon infrastructure will be visible due to their height above the boundary vegetation. As the existing view includes wooden-pole electricity pylons, within close proximity to the residential receptor, this will help to integrate the presence of similar type infrastructure. These views will be in conjunction with partial views of the upper side profiles of solar arrays associated with planning reference 22/586 in the southern fields will be possible due to intervening vegetation. Proposed mitigation along this southern boundary will have matured by Year 5 has matured, views towards the Proposed Development will be fully screened from the roadside.

1.134. The proposed development will add new renewable energy infrastructure within the surrounding pastureland. The proposed mitigation planting along the Application Site's outer boundary edges will help to further enclose the new structures.

Sensitivity of Receptors: **High** (Residents) **Medium** (Road Users)

Magnitude of Change: **Low** (Construction); **Low** (Operational); **Low** (Decommissioning).

Degree of Effects: **Moderate to Moderate/Minor adverse** (Construction); **Moderate to Moderate/Minor adverse** (Operational); **No Change** (Decommissioning) **No Change** (Post Decommissioning).

## Viewpoint Number 4: House entrance along L3148, Coolshamroge

### Description of the Existing View

1.135. This viewpoint is located next to a house along the main entrance to the Application Site along the L3148. This roadside view looks northwards with a characteristic stone-wall to the left of view and a small portion of the onward fields visible in the foreground. A single two-storey property, to the right of view, is prominent and faces directly onto the gently undulating agricultural fields which are divided by low-lying field boundary vegetation. Farm sheds are prominent along the entrance however views towards the Application Site are fully screened due to the topography of the land. This viewpoint is illustrated in **Figure 1.5 of Appendix 1A.**

### Effects of the Proposed Development on the Existing Views

1.136. Construction activities associated with the proposed infrastructure will be partially visible along areas of the access track within the short to middle distance of view. Note this is the same access track that will be used as part of the planning reference 22/586 solar application therefore disturbance will be localised, contained and temporary. Visibility will be filtered by the topography of the land. This will result in a **medium** scale change experienced locally.

1.137. In the operational phase there will be no views towards the Application Site. Views are screened from the roadside by out-houses and sheds to the left of view. The remaining portion of this view is heavily filtered and screened by existing vegetation. Due to the orientation of the property (facing west) no windows will experience views towards the proposed infrastructure.

1.138. At the decommissioning phase, construction machinery will be partially visible along the main access track. Effects will be temporary in nature, localised and therefore minimised. This will result in a **low** scale change experienced locally.

Sensitivity of Receptors: **High** (Residents) **Medium** (Road Users)

Magnitude of Change: **Medium** (Construction); **None** (Operational); **Low** (Decommissioning).

Degree of Effects: **Moderate to Moderate/Minor adverse** (Construction); **No Change** (Operational); **No Change** (Decommissioning) **Moderate/Minor adverse** (Post Decommissioning).

## Viewpoint Number 5: Field entrance along L7198, Cloonmore

### Description of Existing View

1.139. This viewpoint is located at a field entrance along the L7198 local road. The view is framed by mature roadside hedgerow either side punctuated by field boundary tree planting. Field boundary vegetation is punctuated by coniferous vegetation both in small groups and lone-standing. This viewpoint is illustrated in **Figure 1.6 of Appendix 1A**.

### Effects of the Proposed Development on the Existing Views

1.140. No construction activity will be visible from this receptor due to the distance, intervening vegetation and topography of the land.

1.141. Once operational, potential views of the proposed infrastructure from this viewpoint will be **fully** screened by the intervening field hedgerows and trees. Thus, there will be **no change** to their existing views.

1.142. No visibility is anticipated at the decommissioning phase similar to that of the construction phase, therefore this will result in a no change scale change experienced locally.

Sensitivity of Receptor: **Medium** (Road Users)

Magnitude of Change: **None** (Construction); **None** (Operational); **None** (Decommissioning).

Degree of Effects: **No Change** (Construction); **No Change** (Operational) **No Change** (Decommissioning) **No Change** (Post Decommissioning).

## Viewpoint Number 6: Farmyard entrance long local road, Deerpark

### Description of Existing View

1.143. This viewpoint is located at a farmyard entrance along an unnamed local road. The agricultural out-buildings can be seen to the left of view, set on a hill-top, whilst the centre of view shows undulating agricultural lands. Two southwest facing properties can be seen nestled in the landscape to the right of view. Both properties are surrounding by dense mature tree planting. Two existing wooden-pole electricity pylons can be seen running east to west at this viewpoint. This viewpoint is illustrated in **Figure 1.6 of Appendix 1A**.

### Effects of the Proposed Development on the Existing Views

1.144. No construction activity will be visible from this receptor due to the distance, intervening vegetation and topography of the land.

1.145. Once operational, potential views of the proposed infrastructure from this viewpoint will be **fully** screened by the intervening field hedgerows and trees. Thus, there will be **no change** to their existing views.

1.146. No visibility is anticipated at the decommissioning phase, similar to that of the construction phase, therefore this will result in a no change scale change experienced locally.

Sensitivity of Receptor: **Medium** (Road Users)

Magnitude of Change: **None** (Construction); **None** (Operational); **None** (Decommissioning).

Degree of Effects: **No Change** (Construction); **No Change** (Operational) **No Change** (Decommissioning) **No Change** (Post Decommissioning).

## Viewpoint Number 7: View from local road opposite house, Ballyvonnavaun

### Description of Existing View

1.147. This viewpoint is located along the local unnamed road and is framed by a large property to the left of view and surrounding deciduous tree planting. A characteristic drystone wall field boundary can be seen in the surrounding farmland accompanied by clumps of hedgerow and sparse tree cover. An overhead wooden-pole electricity pylon can be seen running from north to south within the rural landscape, as illustrated in **Figure 1.7 of Appendix 1A**. A two-storey residential property is visible to the left of view also with surrounding boundary hedgerow. Due to the distance, intervening vegetation and built landform views towards the proposed infrastructure are fully screened therefore resulting in no change experienced locally.

### Effects of the Proposed Development on the Existing Views

1.148. No construction activities will be visible due to intervening vegetation, distance to site and built landform. This will result in no change experienced locally. Infill hedgerow has been proposed, along the northwestern boundary of field 1, as part of the planning reference 22/586 as a general landscape enhancement however this will not impact any visual effects from this receptor due to the distance as there are no views.

1.149. During the operational phase, the proposed infrastructure will be fully screened by the topography and landform in views looking southeast towards site. Therefore, there will be no change to existing views from this location. During the operational phase, at Year 5, this receptor will remain fully screened from any views towards the Proposed Development.

1.150. Once operational, potential views of the proposed infrastructure from this viewpoint will be **fully** screened by the intervening field hedgerows and trees. Thus, there will be no change to their existing views.

Sensitivity of Receptor: **Medium** (Road Users)

Magnitude of Change: **None** (Construction); **None** (Operational); **None** (Decommissioning).

Degree of Effects: **No Change** (Construction); **No Change** (Operational) **No Change** (Decommissioning) **No Change** (Post Decommissioning).

## Viewpoint Number 8: On unnamed road Local Road beside residential property & farmstead

### Description of Existing View

1.151. This viewpoint is located along the local unnamed road and is framed by a characteristic drystone wall field which forms the boundary of a nearby property (out of view) to the right of view. A faint line of an electricity line can be seen across the skyline. Due to the presence of boundary vegetation and built form, it is anticipated that the proposed infrastructure will not be visible. This viewpoint is illustrated in **Figure 1.7 of Appendix 1A**.

### Effects of the Proposed Development on the Existing Views

1.152. No construction activities will be visible due to intervening vegetation, built-form and the distance to the proposed infrastructure. This will result in no change experienced locally.

1.153. Once operational, potential views of the proposed infrastructure from this viewpoint will be **fully** screened by the intervening boundary hedgerows and tree planting. Thus, there will be **no change** to their existing views.

1.154. No visibility is anticipated at the decommissioning phase, similar to that of the construction phase, therefore this will result in a no change scale change experienced locally.

Sensitivity of Receptor: **Medium** (Road Users)

Magnitude of Change: **None** (Construction); **None** (Operational); **None** (Decommissioning).

Degree of Effects: **No Change** (Construction); **No Change** (Operational) **No Change** (Decommissioning) **No Change** (Post Decommissioning).

## Viewpoint Number 9: Along the R469 beside residential property

### Description of Existing View

1.155. This viewpoint is located along the R469 road and overlooks agricultural lands divided by field boundary hedgerow and mature tree growth. A thick band of woodland can be seen to the left of view situated on the lower-lying lands within view. The agricultural lands are gently

undulating and the presence of an electricity pylon can be seen in the centre of view. Due to the distance, intervening vegetation and built landform views towards the proposed infrastructure are fully screened. This viewpoint is illustrated in **Figure 1.8 of Appendix 1A**.

### Effects of the Proposed Development on the Existing Views

1.156. Due to the topography of the lands and distance to the proposed infrastructure, no construction activities will be visible. The gently undulating landform is key is mitigating views southwest towards the proposed infrastructure and obstructs views across the skyline in the long distance of this view.

1.157. During the operational phase, the proposed infrastructure will be fully screened by the topography and landform in views looking southwest towards site. Therefore, there will be no change to existing views from this location.

1.158. Once operational, potential views of the proposed infrastructure from this viewpoint will be **fully** screened by the intervening field hedgerows and trees. Thus, there will be no change to their existing views.

Sensitivity of Receptor: **High** (Residents) **Medium** (Road Users)

Magnitude of Change: **None** (Construction); **None** (Operational); **None** (Decommissioning).

Degree of Effects: **No Change** (Construction); **No Change** (Operational) **No Change** (Decommissioning) **No Change** (Post Decommissioning).

## Viewpoint Number 10: By house along unnamed local road

### Description of Existing View

1.159. This viewpoint is framed by roadside vegetation in the foreground of the view, accompanied by a residential property to the right of view. Agricultural fields can be seen in the medium to long distance of view sub-divided by boundary tree and hedgerow vegetation. The lower section of a wooden-pole electricity pylon can be seen in the immediate distance however no additional electrical infrastructure can be seen from this location. This viewpoint is illustrated in **Figure 1.8 of Appendix 1A**. The property in view is two-storey however and has windows facing northeast, away from proposed infrastructure.

### Effects of the Proposed Development on the Existing Views

1.160. No construction activities will be visible due to intervening field-boundary vegetation and the distance to the proposed infrastructure. This will result in no change experienced locally.

1.161. During the operational phase, the proposed infrastructure will be fully screened by the topography and landform in views looking southwest towards site. Therefore, there will be no change to existing views from this location..

1.162. Once operational, potential views of the proposed infrastructure from this viewpoint will be **fully** screened by the intervening field hedgerows and trees. Thus, there will be no change to their existing views.

Sensitivity of Receptor: **High** (Residents) **Medium** (Road Users)

Magnitude of Change: **None** (Construction); **None** (Operational); **None** (Decommissioning).

Degree of Effects: **No Change** (Construction); **No Change** (Operational) **No Change** (Decommissioning) **No Change** (Post Decommissioning).

## Viewpoint Number 11: By Farmstead along unnamed local road

### Description of Existing View

1.163. This viewpoint is located close to a farmstead (out of view) to the left, along an unnamed local road located 0.14km northwest of the proposed infrastructure. The heavy presence of existing roadside and field boundary vegetation can be seen in the foreground and middle distance of view. As the road is single track and slightly sunken, it is anticipated there will be no views towards the proposed infrastructure. This viewpoint is illustrated in **Figure 1.9 of Appendix 1A**.

### Effects of the Proposed Development on the Existing Views

1.164. No construction activities will be visible due to intervening field and roadside vegetation. This will result in no change experienced locally. The property (out of view) is slightly setback from the roadside which limits any potential visibility. Therefore the residential receptor and road users will not be affected by the construction activities within the site.

1.165. During the operational phase, the proposed infrastructure will be fully screened by the topography and landform in views looking southeast towards site. Therefore, there will be no change to existing views from this location. During the operational phase, at Year 5, this receptor will remain fully screened from any views towards the Proposed Development.

1.166. Once operational, potential views of the proposed infrastructure from this viewpoint will be **fully** screened by the intervening field hedgerows and trees. Thus, there will be no change to their existing views.

Sensitivity of Receptor: **High** (Residents) **Medium** (Road Users)

Magnitude of Change: **None** (Construction); **None** (Operational); **None** (Decommissioning).

Degree of Effects: **No Change** (Construction); **No Change** (Operational) **No Change** (Decommissioning) **No Change** (Post Decommissioning).

## Rural Residents Settlements, Transport and Recreational Routes:

### Rural Residents

1.167. The potential visibility of the Proposed Development is largely confined to two individual properties (viewpoint 1 & 3) found along the L7194 and L3148. Both local roads frame the Application Site, and each property is located within 2km of the Application Site. A selection of the nearest affected residential receptors has been considered in the viewpoint assessment above. It found that these residences have partial upper floor views towards the highest proposed infrastructure in the form of a lightning, telecommunications mast and pylon towers.

1.168. Where visible, the proposed infrastructure will introduce new renewable energy features within view of the receptors described. The extent of these potential views will be influenced by a number of factors including the orientation of each property and whether screening occurs from any garden or field boundary hedgerows and trees. Those with upper floor views typically have oblique views of the Proposed Development across the Application Site. The proposed mitigation boundary hedgerow and tree planting associated with planning ref 22586, as it grows upwards, will help to reduce such views.

1.169. Potential views from the nearest residences as assessed from the above viewpoints ranged from **Minor** to **Moderate adverse** with these reducing as the visibility of the Proposed Development becomes screened by proposed mitigation screen-planting and infill hedgerow.

1.170. The limited visibility of the Proposed Development from only rural residents within the immediate area, will result in **No Change** to the existing views of any other rural residents found within the wider extents of the study area.

### Settlement

1.171. The Proposed Development will not be visible from within any of the six settlements across the study area including: Quin, Ballyhannon, Cloonmore, Deerpark, and Noughaval.

1.172. As any outward views are fully screened by variations in the local topography along with the presence of other buildings, trees, and hedgerows. The lack of visibility will result in **No change** to the existing views for residents or visitors within any settlement.

### Transport Routes:

1.173. The bare earth ZTV indicated some potential visibility of the Proposed Development across varying lengths of the national to local graded roads such as the R469. However, as determined while travelling along these routes during a field visit, the Proposed Development will not be visible from most routes across the study area, due to the distance to site, screening provided by natural landform, trees, and hedgerows within the intervening landscape.

1.174. Potential views will be similar to those observed from the eleven assessed viewpoints illustrated however, these views will be perpendicular to the Application Site following the direction of travel and therefore making views more oblique in nature. Potential views from road users are further hindered by small clusters of properties and hedgerows found along the roadside. Where visible, the shorter elements of the proposed infrastructure, such as the substation, will be contained by the drystone walls with growth of the mitigation boundary screen-planting helping to further limit views inwards over time. Some more prolonged views will occur for the more observant slow-paced walker, pausing and turning to look in the direction of the Proposed Development within close proximity to these viewpoints.

1.175. The medium to high sensitivity of users along these routes and none to low magnitude of change will result in the traveller experiencing **No change to brief Minor adverse effects** to their existing views due to the Proposed Development's limited visibility.

### Protected Scenic & Recreational Routes

1.176. The Proposed Development will not be visible from the single Clare County Council scenic route along the minor road towards the townland of Ballysallagh West. As this view is looking out west towards the Fergus estuary and away from the Application Site, thus having **No Change** to these existing views.

1.177. Potential views along the Mid Clare Walk National Trail will be limited to the taller elements of the proposed infrastructure (towers) along a short section to the southwest of the Application Site along the local L3148 road. Here the proposed infrastructure will be clearly visible on the hillside of the southwestern end of the Application Site located across the opposite side of the estuary and read alongside the existing dominant line of electricity pylons. The addition of the additional renewable energy structures will result a localised **Minor Adverse** effects upon passing walkers on a short section of this trail.

## Visual Summary

1.178. Given its small scale, the Proposed Development's potential visibility across the study area was found to be largely limited to those receptors within the immediate area (2km). Several factors contribute to the limited visibility of the proposed infrastructure including the relatively low-lying lands of the Application Site, containment created by drystone walls, presence of mature tree cover and hedgerow and surrounding agricultural lands within the immediate landscape.

1.179. Those affected receptors include residents and road users located along two of the four roads (L3148 & L7194) which frame the Application Site.

1.180. Affected residents will experience long-distance partial views from the upper storey of their properties towards the proposed infrastructure. Here, the proposed infrastructure will add new associated renewable energy features upon these receptors' views. The transient views of road users are more limited to glimpses of the taller elements within the proposed

infrastructure (towers) above sections of the roadside drystone walls, with the greatest transient views experienced by walkers. Likewise views of farmworkers are temporary in nature.

1.181. The proposed mitigation hedgerow boundary planting associated with planning reference 22/586 will seek to further enclose the proposed infrastructure helping to reduce its visibility from the upper storey views of the affected receptors as the new planting fills out overtime.

1.182. The potential visual effects of the Proposed Development upon these assessed viewpoint receptors range from Minor adverse to Moderate Adverse, with some of these slightly reducing as the mitigation planting becomes established by Years 5-10.

# MITIGATION & ENHANCEMENT MEASURES

1.183. Mitigation and other measures have been proposed through the iterative design process to help avoid, reduce, or compensate for any predicted significant effects on both the landscape resource and visual amenity. These include primary mitigation measures at the design stage, construction best practice and secondary mitigation measures during the operational phase.

1.184. The various proposed landscape measures are included in the accompanying Landscape & Ecology Management Plan (LEMP) which was submitted along with the consented Coolshamrock Solar Farm Application, Planning Ref: 22586, see **Figure 1.10 Appendix 1A**. The proposed substation was considered as part of the Coolshamrock Solar Farm Application and therefore it can be concluded that the mitigation measures outlined in this plan are sufficient to screen any views towards the Proposed Development.

1.185. The proposed landscaping works will be implemented within the first year of the completion of the construction works. The planting will be maintained throughout the lifetime of the Proposed Development by the landowner or landscape contractor on behalf of the client.

## Mitigation During Construction Phase

- Construction works will be undertaken following correct environmental practice on site to minimise their effects on the existing landscape and ecological site elements. The temporary construction area accommodating the construction activity will be reinstated and incorporated into the overall design.
- Site works and deliveries will be carried out at suitable times to be agreed with the council, while any necessary lighting will be directed downwards to prevent spillage. These measures will help reduce the potential visibility of works within the surrounding area.
- Any excavated soils for the cable trenches, tracks or bases will be separately stored as topsoil and subsoil before being backfilled or gently graded back into the existing land profile. No soil will be brought off-site or new soil into the site.
- Any development and excavation taking near to any trees or hedgerows should be carried out in accordance with the following guidance: '*BS 5837:2012 Trees in relation to design, demolition and construction. Recommendations*', *NJUG Volume 4 Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees*' and any recommendations in consultation with an arborist. The pruning required to

reduce the existing hedgerow trees should be carried out in accordance with BS 3998:2010 'Tree work Recommendations.'

- The layout of the substation, buildings and access tracks will follow the existing landforms to minimise any changes to the existing site levels. Existing access track and entrances will be utilised where possible and upgraded. The various structures will be offset from the existing field boundaries which will help to contain the development within each field.
- Structural landscape planting along boundary edges where required will help screen or interrupt external views of the proposed infrastructure.
- Landscape planting measures will be in keeping with any ecological recommendations to provide suitable habitat creation and enhancement.

## Mitigation During Operational Phase

- The growth of the new structure planting and existing field hedgerows will be maintained by cutting on a rotational basis to help thicken them out and kept to a minimum 3-4m height to help restrict inward views into the site.
- The underlying groundcover will be maintained through the implementation of suitable grazing or a cutting regime.

## Mitigation During Decommissioning Phase

- At the decommissioning stage all structures, bases, tracks, fencing and cabling will be removed offsite. The site works will be retained within the security fence areas, which will be removed after all other works are completed, to ensure the established field boundaries are protected from any accidental damage.
- The disturbed lands will be reinstated to a suitable grassland or arable crop coverage. Lengths of established field hedgerow boundaries will be retained. This will ensure the lands are returned to their pre-planning agricultural use, as intended.

## RESIDUAL EFFECTS

1.186. The potential residual effects will occur once the proposed landscape mitigation boundary planting associated with planning ref: 22586 has become established by about years 5-10. By this time, the new hedgerow planting will have reached approximately 3m which, along with the managed existing field hedgerows, will help to contain the Proposed Development within the local landscape. These enhanced field boundaries will also help reduce the overall visibility of the Proposed Development from some of the nearest receptors, and subsequently reduce their initial predicted adverse effects as identified within the visual appraisal above.

1.187. After the approved operational period ceases, the above ground structures will be removed from the Application Site. The removal of these structures will help to revert many of the previously predicted adverse effects upon the identified affected landscape and visual receptors. The enhanced field boundary hedgerows will be left in situ which, together with the reversion of the land to its former or similar agricultural use, will have Minor beneficial effects upon the landscape character and quality of the Application Site and surrounding lands.

# CUMULATIVE APPRAISAL

1.188. Cumulative effects are defined by the GLVIA3 as:

*"Result from additional changes to the landscape or visual amenity caused by the Development in conjunction with other developments (associated with or separate to it), actions that occurred in the past, present or are likely to occur in the foreseeable future."*

1.189. Cumulative landscape effects may occur to the landscape components e.g. loss of hedgerows or landscape characteristics by introducing new features. Cumulative visual effects may occur where one development is viewed in combination (static views of up to 90° arc), successively (turning around on the spot) or sequentially where the user moves along routes, e.g. roads or paths with one development or more.

1.190. A review of Clare County Council planning applications was undertaken to identify any existing, approved or proposed (in planning) solar farm developments or similar developments. This search was conducted on the 19th of January 2023 and incorporated a 5km study area for this cumulative appraisal.

1.191. The search revealed that there were four other approved solar developments within the study area, the details of the development are listed in Table 1.3 below.

Table 1.3: Cumulative Developments within 5km

| Planning Reference | Planning Status | Description | Direction and Distance from nearest section of Proposed Development |
|---|---|---|---|
| 22586 | Approved, Conditional 14/04/2023 | Permission for development at this site in the townlands of Ballyvonnavaum TD, Coolshamroge TD, Cloonmore TD, Deerpark TD, and Manusmore TD, Ennis, Co Clare. The development will consist of planning permission for a period of 10 years to construct and complete a Solar PV Energy development with a total site area of 27.34 hectares, to include inverter station modules, solar PV panels ground mounted on support structures, internal access tracks, security fencing, electrical cabling and ducting, CCTV and other ancillary infrastructure, drainage, | 0km |

| | | | |
|---|---|---|---|
| | | additional landscaping and habitat enhancement as required and associated site development works including works relating to the access to the site. The solar farm would be operational for 35 years. A Natura Impact Statement has been prepared in respect to the application for planning permission | |
| 171001 | Approved-Conditional 06/02/2019 | 33 hectares solar farm on lands at Lissan West, Ballaghafaddy West, Clarecastle | 3.36km Southwest |
| 21915 | Approved-Conditional 30/11/2021 | 16.08 hectares solar farm on lands at Manusmore and Carrownanelly , Clarecastle, Ennis, Co Clare | 3.05km Southwest |
| 20562 | Approved-Conditional 12/11/2020 | the development will consist of a planning permission for a period of 5 years to construct and complete a Solar PV Energy development with a total site area of 99.2 hectares, to include a single storey electrical substation building, electrical transformer and invertor station modules, solar PV panels ground mounted on support structures, internal access tracks, security fencing, electrical cabling and ducting, CCTV and other ancillary infrastructure, drainage, additional landscaping and habitat enhancement as required and associated site development works including works relating to the access to the site. The Solar farm will be operational for 35 years. A Natura Impact Statement has been prepared in respect of this planning application. | 2.77km Southwest |
| 19180 | Approved Conditional - 17/08/2019 | 12.0 hectares consisting of the following; up to 57,250sq.m of solar photovoltaic panels on ground mounted steel frames; electrical substation with electrical control building and associated compound with palisade fence; inverter/transformer stations; | 5.00km Northwest |

| | | | |
|---|---|---|---|
| | | underground power and communication cables and ducts; boundary security fencing; new internal access tracks and associated drainage infrastructure; new site entrance to the public road which connects to the R352road; CCTV camera's and all associated site services and works. | |

## Cumulative Landscape

1.192. The approved planning reference 171001, 20562 and planning reference 21915 all fall within the Fergus Estuary LCA with the approved planning reference 19180 and planning reference 22586 located within the Ennis Drumlin Farmland LCA. The proposed infrastructure would be built at the same time as the planning reference 22586 if both approved.

1.193. Three solar farms will introduce a new renewable energy feature into the landscape of the Fergus Estuary LCA with two introducing a new feature into the Ennis Drumlin Farmland LCA creating a landscape with renewable energy infrastructure typology. It is expected that all developments will be operating within this landscape over a similar timeframe.

1.194. All developments have been largely designed to consider the existing field hedgerow boundaries. Mitigation planting has been proposed for all developments and will help enhance their boundaries and further help enclose the developments. Also, the implementation of a less intensive grazing regime for each solar farm will allow each to have a collaborative agricultural use to the development lands throughout their operational period.

1.195. Should all developments be constructed around the same period, there may be localised indirect temporary effects due to disturbance from the site traffic and site noise.

1.196. The addition of the proposed infrastructure, together with the other approved solar farms, they will collectively have a cumulative **Minor/Moderate Adverse** effect upon the landscape character of the Ennis Drumlin Farmland LCA during the construction and operational phases. It is anticipated that the lifespan and subsequent decommissioning phase of all developments will occur around the same period. At this stage there would be a notable return of the lands from solar farms with pasture use back to their former agricultural lands with enhanced field hedgerow boundaries, resulting in **No Change to Minor beneficial** effects to the characteristics of the Ennis Drumlin Farmland LCA.

1.197. Overall, the magnitude of change to the landscape would be **low to negligible**.

1.198. Given the sensitivity of the receiving LCA is low, the cumulative landscape effect will be **Minor Adverse**.

## Cumulative Visual

1.199. The potential for cumulative views of the proposed infrastructure with the planning reference 22586 would be likely as both would be contained within the same development. The potential for cumulative views of the proposed infrastructure with the approved planning reference 19180 from the seven viewpoints and local area was found to be limited, as many potential views are hindered by distance, localised variations in the topography and screening by natural and built elements across the local landscape. The potential for cumulative views of the proposed infrastructure with the approved solar farm planning reference 171001, 20562 and 21915 from the eleven viewpoints and local area was found to be even more limited due to the presence of the M18 road and low-lying surrounding lands.

1.200. Combined distant views of each of the solar farms with the proposed infrastructure are not anticipated due to the distance between each solar farm, intervening built landform and surrounding residential areas.

1.201. As the solar farms were to be developed around the same time this would result in some limited cumulative views of the site works. These views will be for a temporary duration.

1.202. Overall, the addition of the proposed infrastructure will increase views of renewable energy infrastructure within the locality, with most affected receptors occurring on the western side of the Fergus Estuary. These receptors will experience varied combined and successive cumulative views, with all having closer views of the approved planning reference 171001, while views of the proposed infrastructure are limited to its secluded and enclosed setting further away on the opposite side of the estuary. Sequential views are limited to those travelling along the regional road and local roads due to the network of roads between each development.

1.203. Here, the addition of the proposed infrastructure will result in Minor adverse cumulative views

# CONCLUSION

1.204. The proposed infrastructure will introduce a new small-scale renewable energy feature with associated infrastructure into the rural lands of the Ennis Drumlin Farmland LCA. The overall design of the proposed infrastructure has been carefully considered within the confines of the agricultural fields to ensure the effects upon the landscape and visual receptors are limited. The addition of the substation, and other infrastructure element onto the agricultural land will result in a localised **Moderate/Minor adverse** reducing to **Minor adverse** effect as proposed mitigation planting (associated with planning reference 22586) fills out and existing vegetation becomes more established. The potential effects on the wider extent of the LCA within the study area are greatly reduced by the Proposed Development's confinement within the immediate landscape.

1.205. The proposed infrastructure's overall design has been carefully considered within the confines of the agricultural fields to ensure the effects upon the landscape and visual receptors are limited. This includes setting back the various proposed site elements from the existing field hedgerow, drystone wall boundaries, trees and drains to minimise disturbance to these existing natural features.

1.206. The hedgerow and drystone wall boundaries will be largely retained and enhanced through planting with similar native hedgerow species to help contain the proposed infrastructure within the local landscape. The proposed infrastructure will result in **Minor adverse** effects upon the characteristics of the Application Site. The Proposed Development's low structures will help limit potential visibility from the neighbouring Fergus Estuary LCA, East Clare Loughlands LCA, Tulla Drumlin Farmland LCA, and East Clare Loughlands LCA resulting in a **No Change** effects upon each LCA.

1.207. The proposed infrastructure does not fall within the limits of any Landscape Designation. The nearest of which include the Fergus/Shannon Estuary Heritage Landscape. There will be no anticipated views from this landscape designation in line with the ZTV and on site surveys.

1.208. The potential visibility of the proposed infrastructure will be largely limited to a small group of residents, recreational and road users located within less 2km from the Application Site's boundary edges. Several factors contribute to the limited visibility of the proposed infrastructure structures including: topographical variations across the Application Site and surroundings, and several by high thick hedgerows and trees located along the boundaries of the Application Site, surrounding fields and local gardens.

1.209. The potential views of any affected receptors will consist of only partial views of the proposed infrastructure across some of the development fields. Here the proposed infrastructure will add a distinct new small-scale renewable energy feature into the rural landscape, which will be read alongside the existing electricity pylons which cross the Application Site.

1.210. The visual changes will result in **Minor to Moderate adverse** visual effects upon the upper floor of affected visual receptors. As the existing and new mitigating hedgerow planting

thickens out over time, it will help to reduce the extent of the proposed infrastructures visibility from some receptors and subsequently reduce adverse visual effects to No Change.

1.211. There are five other approved solar developments found within the 5km study area located between the Ennis Drumlin Farmland LCA and Fergus Estuary LCA. It is important to note that none have yet been constructed. This will result in Minor adverse cumulative effect upon the landscape character of the Ennis Drumlin Farmland LCA.

1.212. Cumulative views of all developments will not be possible from residential and road user receptors along the Application Site due to intervening distance, built landform, road infrastructure and the topography of the land. The addition of the Proposed Development will however increase the presence of grid infrastructure elements in the local landscape resulting in Minor adverse cumulative effect upon the views of these affected receptors.

1.213. Mitigation measures associated with planning ref 22586 have been proposed in the form of infill hedgerow and screen planting along the Application Site's outer boundaries to help reduce any inward views. As the proposed mitigation becomes established, thickening out and increasing in height, it will filter out some of these views further and reduce the initial predicted visual effects.

1.214. At the end of the proposed infrastructure's lifespan, the predicted effects are reversible as the land can be easily returned to an agricultural use, similar in form to its current state.

# APPENDICES

## Appendix 1A – Figures

- Figure 1.1 - Landscape Character Areas
- Figure 1.2 – Landscape Designations with ZTV
- Figure 1.3 - Viewpoints Locations with ZTV
- Figure 1.4 – Viewpoints 1 & 2
- Figure 1.5 - Viewpoints 3 & 4
- Figure 1.6 – Viewpoints 5 & 6
- Figure 1.7 – Viewpoints 7 & 8
- Figure 1.8 – Viewpoints 9 & 10
- Figure 1.9 – Viewpoints 11
- Figure 1.10 – Landscape and Ecology Management Plan (LEMP) (Submitted with Consented Coolshamrock Solar Farm Application, Planning Reference: 22586)

## Appendix 1B – Plates

## Appendix 1C - LVIA Methodology


## GLASGOW - HEAD OFFICE

Wright Business Centre, 1 Lonmay Road, Glasgow G33 4EL
T: 0141 773 6262
www.neo-environmental.co.uk

## N. IRELAND OFFICE

83-85 Bridge Street
Ballymena, Co. Antrim
Northern Ireland
BT43 5EN
T: 0282 565 04 13

## IRELAND OFFICE

Johnstown Business Centre
Johnstown House, Naas
Co. Kildare
T: 00 353 (0)45 844250
E: info@neo-environmental.ie

## RUGBY OFFICE

Valiant Office Suites
Lumonics House, Valley Drive,
Swift Valley, Rugby,
Warwickshire, CV21 1TQ
T: 01788 297012

## WARRINGTON OFFICE

Cinnamon House, Cinnamon Park
Crab Lane, Fearnhead
Warrington
Cheshire
T: 01925 661 716