Volume 1: Planning Statement

Coolshamrock 110kV Substation SID

22/09/2023

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1. INTRODUCTION

BACKGROUND

1.1. Neo Environmental Ltd have been commissioned by Renewable Energy Systems (RES) Ltd ("the Applicant") to undertake a Planning and Environmental Statement 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**). A Natura Impact Statement has been prepared in respect of the application for planning permission.

1.2. Please see **Figure 3, Volume 2** for the layout of the Proposed Development.

1.3. The purpose of this Statement is to outline the Planning merit of the Proposed Development within a context of best practice guidance, legislation and National and County Planning Policy and should be read in conjunction with the following documentation that accompanies the subject application:

- Planning Forms
  - Application form;
  - Landowner Letter of Consent;
  - Site notice;
  - Newspaper advert; and
  - Cover Letter;
- Vol 1
  - Natura Impact Statement; and
  - Planning Statement.
- Vol 2
  - Planning & Technical Drawings.
- Vol 3 – Technical Appendices

- Technical Appendix 1. Landscape and Visual Impact Assessment (LVIA);
- Technical Appendix 2. Ecological Impact Assessment (EcIA);
- Technical Appendix 3. Archaeology and Architectural Heritage Impact Assessment (AAHIA);
- Technical Appendix 4. Flood Risk Assessment (FRA) and Drainage Impact Assessment (DIA);
- Technical Appendix 5. Construction Traffic Management Plan (CTMP);
- Technical Appendix 6: Outline Construction and Environmental Management Plan (OCEMP); and
- Technical Appendix 7 – Assessment of Acoustic Impact.

DEVELOPMENT DESCRIPTION

1.4. 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**).

1.5. The 110kV substation will consist of 2 No. control buildings, a transformer compound, a high voltage (HV) switchgear compound, an MV compound and associated cabling. There is also 2. No underground 110kV cables, a cable access track and 2 No. overhead line towers.

1.6. The control buildings will consist of foundation works, block work, roofing, low voltage electrical fit out, medium voltage switchgear, cladding and building finishing works. A power transformer, HV electrical equipment for 4 bays, OHL gantry, 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.

1.7. 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. auxillary transformer.

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

1.9. The 110kV loop in connection will connect the Drumline-Ennis 110kV overhead line (OHL) circuit to 2. No 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 (PA Ref: 22568) to provide access to the cables and towers.

SITE DESCRIPTION

1.10. 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.

1.11. 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.

1.12. 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:22586).

2. THE PROPOSAL

2.1. CCC will be aware of the background to the 3no Solar Farms which are registered under **Planning Reference 20562**, **21915** and **22586** and subsequently granted consent on 12th November 2020, 30th November 2021 and most recently 14th April 2023. The Proposed Substation is to be located within the boundary of the consented Coolshamrock Solar Farm; however, the Substation is to facilitate all permits as they are treated as one Project with one Grid Connection Agreement with EirGrid.

2.2. The Prospective Applicant requested a Pre-Application consultation under Section 182e of the Planning and Development Act (as amended) on the 6th January 2023. The SID pre-application meeting was then held virtually on the 3rd March 2023 via Microsoft Teams. The meeting was chaired by Ciara Kellett (Director of Planning) and she was joined by Maire Daily (Planning Inspector), Sarah Caulfield (Executive Officer) all representing An Bord Pleanala. Representing the Prospective Applicant was Colleen Patterson and Paul Neary of Neo-Environmental Ltd and Rachel Buchanan and Edel Burke of Renewable Energy Systems (RES) Ltd. On 12th June 2023, the Board decided that the proposed development would be strategic infrastructure within the meaning of section 182A of the Planning and Development Act, 2000, as amended.

2.3. The proposed substation and loop in loop out connection details were provided to Eirgrid. A subsequent loop in loop out grid connection was provided by Eirgrid on 31st October 2022 and the prospective applicant accepted this offer on the 2nd March 2023.

2.4. Schedule 7 of the Planning and Development Act 2000 (updated 16 July 2021) lists various energy and transmission development types which require a SID application.

2.5. The characteristics of the proposed infrastructure are as follows:

- The proposed method will be a loop in loop out connection and is defined as “a new 110kV substation to feed into the existing Drumline – Ennis 110kV circuit”;
- The Substation lies within one local authority and there are no implications for any other planning authority;
- The Substation does not lie within any designated areas;
- The Substation currently is to facilitate the Manusmore Solar Farm (**PA Ref: 20562**), Manusmore Solar Farm Extension (**PA Ref: 21915**) and the Coolshamrock Solar Farm (PA Ref: 22586, but once energised will be handed over to EirGrid and it will be under their ownership.
- The substation and cable proposed are not a critical link for other strategic developments in the area; and

- All equipment proposed is standard and meets EirGrid functional specifications.

2.6. Based on environmental assessments, the scale and type of development are in line with the criteria outlined in Schedule 7 of the Planning and Development Act 2000 (updated 16 July 2021). It is therefore anticipated that the proposed infrastructure **will not constitute EIA Development.**

3. DEVELOPMENT DESCRIPTION

3.1. This Section provides a detailed breakdown and description of the design of the Substation proposed.

3.2. The substation compound will measure approximately 94.75m x 134.75m (12,767.56m^2 in total). The majority is made up of crushed aggregate which will be compacted to create a surface. There are numerous small foundations dotted around the compound, however the main buildings are:

- IPP Building - 14.00m (L) x 10.00m (W)
- Eirgrid Building – 25.00m (L) x 18.00m (W)

3.3. The consented solar farm (**Planning Reference 22/586**) construction compound will be used. Please refer to the **Drawings Pack** within **Volume 2** for more detail.

Control Buildings

3.4. There will be 2no Control Buildings which will consist of the following:

- Foundation Works
- Block Work
- Roofing
- Cladding
- Building Finishing Works

3.5. Please see **Figure 8, Volume 2** for the Eirgrid substation building plan and **Figure 9 Volume 2** for the IPP building.

Eirgrid HV Substation Compound

3.6. There will be 1no Eirgrid HV Substation Compound which will consist of the following:

- Control Building
- Power Transformer
- HV Electrical Equipment (4 bays)
- 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, and
- Cabling

3.7. Please refer to the figures within **Volume 2** for more detail.

Customer MV Compund

3.8. There will be 1no Customer MV Compound which will consist of the following:

- IPP control building
- 2no. capacitor banks
- 1no. reactor bank and associated circuit breaker (capacitor and reactor)
- 1no. harmonic filter
- Resistor
- Pre-insertion resistor
- 1no. Auxilliary transformer

3.9. Please see **Figure 5, Volume 2** for more details.

Overhead Line Towers

3.10. There will be 2no new Overhead Line Towers associated with the Proposed Development. These are new towers outside the substation compound which will be required to tie into existing Drumline – Ennis 110 kV overhead line.

3.11. Please refer to **Figure 11** within **Volume 2** for more detail.

Palisade / Concrete Post and Rail Fencing

3.12. There will also be palisade fencing within the Proposed Development which will be approximately 2.65m high.

3.13. Please refer to **Figure 6** within **Volume 2** for more detail.

4. CONSTRUCTION AND DECOMISSIONING

4.1. This Section will provide a brief summary on the construction and decommissioning process associated with the Proposed Development.

4.2. The construction of the proposed Substation will typically take c.4 months.

4.3. The following activities will be undertaken during the construction phase:

- Erecting construction traffic signage;
- Creation of internal site tracks;
- Erecting 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 1.10, Appendix 1A of Technical Appendix 1: Landscape and Visual Assessment.** The LEMP was submitted as part of the consented Coolshamrock Solar Farm Application.

4.4. Please note, however, that many of these tasks will take place concurrently in order to limit the construction phase as far as is reasonably possible.

4.5. The construction phase of the Proposed Development is anticipated to cover a period of up to four months. During this period, there will be a combination of HGVs for the component deliveries and cars/vans for construction staff. HGV movements are expected to be most intense throughout the early stages of construction, tailing off towards the final weeks. Car/van movements are expected to be constant throughout.

4.6. All traffic movements will be carried out between the hours of 08.00 to 19.00 on Monday to Friday and 08.00 to 16.00 on Saturdays. Outside of these times works are limited to:

- Works which do not require significant noise e.g., distribution of materials, assembly of structures and modules, commissioning and testing and

- Works required in an emergency where there is the potential of harm or damage to personnel, plant, equipment, or the environment, provided the developer retrospectively notifies the County Council or ABP of such works within 24 hours of their occurrence.

4.7. Upon the end of the lifetime of the Proposed Development, the subject land shall be reinstated to its former agricultural use within a year of the last export.

4.8. It is considered that the potential impacts during the decommissioning phase will be similar to those identified for the construction phase of the Proposed Development. Therefore, it is recommended that the pre-construction measures should also be applied at this stage of the development.

4.9. Most of the infrastructure will be removed from site and recycled. Due to the long-life span of the project, no details of this can be provided at present. However, it is recommended that a pre-commencement condition outlining the requirement for a Decommissioning Method Statement is attached to any planning decision by ABP.

5. POLICY CONTEXT

5.1. European Union (EU) and Irish Government policies at national, regional and local level identify the development and promotion of renewable energy as a primary strategy in implementing energy policy, tackling climate change and the transition to a low carbon climate resilient and environmentally sustainable economy.

Global Context

5.2. The 2005 'Kyoto Protocol' provided a framework for international action on climate change at a global level. As part of this, Ireland committed themselves to legally binding targets to reduce their greenhouse gas emissions. Ireland were party to the Conference of Parties to the United Nations Framework Convention on Climate Change in December 2015, signifying their intent to play a proactive part in the long-term emissions reduction goal that aspires to net-zero emissions after 2050 via the Paris Agreement.

European Context

5.3. The Renewable Energy Directive 2009/28/EC committed Member States to setting their own targets within a context of an overarching EU target of producing 20% of its energy from renewable sources by 2020. However, the European Commission has since published a revised Renewable Energy Directive to make the EU a global leader in renewable energy and ensure that the target of at least 27% renewables in the final energy consumption in the EU by 2030 is met. This target is binding at EU level and will be fulfilled through individual Member States' contributions guided by the need to deliver collectively for the EU.

National Context

5.4. A brief summary of Ireland's legislative context is provided below;

- National Climate Change Strategy 2007-2012[1]
  - Sets out a programme for achieving targets to limit the emission of greenhouse gases in Ireland by reducing transport emissions, encouraging renewable energy, changing agricultural practices and changing in waste disposal policies and plans.
- Delivering a Sustainable Energy Future for Ireland 2007-2020 White Paper[2]

[1] https://www.teagasc.ie/media/website/crops/crops/NationalClimateChangeStrategy2007_2012.pdf

[2] https://www.teagasc.ie/media/website/crops/crops/EnergyWhitePaper12March2007.pdf

  - This Paper establishes the strategic goal of accelerating growth of renewable energy sources and increasing the production of electricity from renewable energy sources to 33% by 2020, (which has subsequently been increased to 40% in December 2008).

- National Energy Efficiency Plan 2009-2020[3]
  - The Plan sets out a strategy to reduce the Ireland's dependence on imported fossil fuels, improve energy efficiency across a number of sectors and ensure a sustainable energy future.

- National Renewable Energy Action Plan Ireland (NREAP)[4]
  - Article 4 of the 2009/28/EC Directive on renewable energy required Ireland and other Member Statesto adopt a national renewable energy action plan. Submitted to the European Commission in 2010, Ireland's NREAP sets out national targets for the share of energy from renewable sources to be consumed in transport, electricity and heating and cooling in 2020. The plan demonstrates how Ireland will meet its overall national target established under the Directive.

- National Policy Position on Climate Action and Low Carbon Development, 2014[5]
  - The National Policy Position provides a high-level policy direction for the adoption and implementation by Government of plans to enable the State to move to a low carbon economy by 2050.

- Ireland's Transition to a Low Carbon Energy Future 2015 – 2030 White Paper[6]
  - With recognition of the EU and global policy context, the core objectives of Irish energy policy up to 2030 are sustainability, security of supply and competitiveness in the transition to a lowcarbon system. The White Paper makes clear that this transition requires the active engagement of both local and national state agencies, including local planning authorities, along with citizens, communities and businesses.

[3]https://www.dccae.gov.ie/en-ie/energy/topics/Energy-Efficiency/Pages/related-publications.aspx

[4]https://www.teagasc.ie/media/website/crops/crops/2010NREAP.pdf

[5]https://www.dccae.gov.ie/en-ie/climate-action/publications/Pages/National-Policy-Position.aspx

[6]https://www.dccae.gov.ie/en-ie/energy/topics/Energy-Initiatives/energy-policy-framework/white-paper/Pages/White-Paper-on-Energy-Policy-inIreland-.aspx

- Climate Action and Low Carbon Development Act, 2015[7]
  - The Act provides the legislative underpinning of the Irish Government's objective of a low carbon, climate resilient and environmentally sustainable economy by 2050, and supports wider EU and UN objectives. The Act and the objectives it underpins provide a clear steer in favour of development that assists with the transition to a low-carbon, climate resilient and environmentally sustainable economy.
- National Mitigation Plan, (NMP), July 2017[8]
  - This first NMP, (to be completed every five years), represents a critical first step towards a decarbonised economy, identifying where Ireland is in terms of a decarbonisation transition and addressing the challenge of 2020 targets, whilst laying the foundation for the achievement of the 2050 objective.
- National Adaptation Framework, January 2018[9]
  - This outlines statutory enforced responsibilities for Government departments, State agencies and local authorities to reduce the vulnerability of the Ireland to the negative effects of climate change.
- Renewable Electricity Support Scheme, (RESS), July 2018[10]
  - The RESS is a High-Level Design Paper following in the footsteps of the White Paper providing support to renewable electricity projects in Ireland. It will also incorporate a series of auctions to be held at frequent intervals throughout the lifetime of the scheme. This will allow Ireland to take advantage of falling technology costs and by not auctioning all the required capacity at once; we will not be 'locking in' higher costs for consumers for the entirety of the scheme. The Policy objectives of the RESS include:
    - An Enabling Framework for Community Participation through the provision of pathways and supports for communities to participate in renewable energy projects;

7https://www.dccae.gov.ie/en-ie/climate-action/legislation/Pages/Climate-Action-and-Low-Carbon-Development-Act-2015.aspx

8https://www.dccae.gov.ie/en-ie/climate-action/publications/Pages/National-Mitigation-Plan.aspx

9https://www.dccae.gov.ie/en-ie/climate-action/topics/adapting-to-climate-change/national-adaptation-framework/Pages/default.aspx

10https://www.dccae.gov.ie/en-ie/energy/topics/Renewable-Energy/electricity/renewable-electricity-supports/ress/Pages/default.aspx

- Increasing Technology Diversity by broadening the renewable electricity technology mix (the diversity of technologies);
- Delivering an ambitious renewable electricity policy to 2030; and
- Increasing energy security, energy sustainability and ensuring the cost effectiveness of energy policy.

Regional and Local Planning Policy Context

5.5. Whilst the National climate change and energy policy provide the landscape within which the planning system is set, it is against Regional and Local Planning Policy that the specifics of the subject application are to be considered and, as with the original application, the most applicable documents are:

- Regional Spatial and Economic Strategy (2020-2032) for the Northern and Western Region.[11]
- Clare County Development Plan 2023-2029

5.6. Prior to the establishment of the Northern and Western Regional Assembly on 1st January 2015, the three previous Regional Authorities produced individual Regional Planning Guidelines (RPG's), these have since been replaced by the Regional Spatial and Economic Strategy (RSES) on the 28th June 2019, in accordance with section 24 (9) of the Planning and Development Act 2000.

"The objective of regional spatial and economic strategies shall be to support the implementation of the National Spatial Strategy and the economic policies and objectives of the Government by providing a long-term strategic planning and economic framework for the development of the region for which the strategies are prepared which shall be consistent with the National Spatial Strategy and the economic policies or objectives of the Government." (sec23 Planning and Development Act 2000)."

5.7. The Strategy recognises in chapter 4 (page 163-165) of the report that;

"Renewable energy can be defined as energy developed from sources that are constantly replenished through the cycles of nature and, unlike fossil fuels, are not finite. It is important that our region sets out its ambitions concerning renewable energy in this context and shows its ability to help contribute to achieving national targets…The Northern and Western region is particularly well placed to lead the way in the efficient use of resources and developing a low carbon economy."

5.8. The relevant Regional Policy Objectives are as follows;

[11] https://www.nwra.ie/rses/

- RPO 4.16: The NWRA shall co-ordinate the identification of potential renewable energy sites of scale in collaboration with Local Authorities and other stakeholders within 3 years of the adoption of the RSES. The identification of such sites (which may extend to include energy storage solutions) will be based on numerous site selection criteria including environmental matters, and potential grid connections.
- RPO 4.17: To position the region to avail of the emerging global market in renewable energy by:
  - Stimulating the development and deployment of the most advantageous renewable energy systems
  - Supporting research and innovation
  - Encouraging skills development and transferability
  - Raising awareness and public understanding of renewable energy and encourage market opportunities for the renewable energy industry to promote the development and growth of renewable energy businesses.
  - Encourage the development of the transmission and distribution grids to facilitate the development of renewable energy projects and the effective utilisation of the energy generated from renewable sources having regard to the future potential of the region over the lifetime of the Strategy and beyond.
- RPO 4.18: Support the development of secure, reliable and safe supplies of renewable energy, to maximise their value, maintain the inward investment, support indigenous industry and create jobs.

5.9. The Strategy recognises in chapter 8 (page 265) of the report that;

"Regionally we have a pivotal role in delivering a successful transition. There are rich renewable energy resources through wind, solar and wave (to mention a few) along and throughout the region… There is still significant potential for all new outputs to our grid."

5.10. The relevant Regional Policy Objectives are as follows;

- RPO 8.1: The Assembly support the development of a safe, secure and reliable electricity network and the transition towards a low carbon economy centred on energy efficiency and the growth projects outlined and described in this strategy.

– **RPO 8.3:** The Assembly support the necessary integration of the transmission network requirements to allow linkages with renewable energy proposals at all levels to the electricity transmission grid in a sustainable and timely manner.

5.11. It is clear that The Strategy supports an increase in the amount of new renewable energy sources in the Region, including solar power.

Clare County Development Plan 2023 – 2029

5.12. Clare County Development Plan was adopted on 20th April 2023 and Volume 1 includes the Written Statement. Within this, Chapter 11, Physical Infrastructure, Environment and Energy, Section 11.8.3 Electricity Network, it highlights the need for a secure and adequate electricity infrastructure to meet the growth in demand and to ensure that an efficient and reliable electricity supply is available to households, business and industry. It goes to on to state:

"A strong transmission grid is essential to attract and retain high-tech industrial investment; to ensure competitive energy supplies; to achieve balanced development; to reduce dependency on fossil fuels; and to achieve climate change targets…Moreover to attract renewable energy development it is important for County Clare that the existing grid infrastructure is reinforced where necessary and expanded to areas not adequately serviced. Clare County Council will continue to work closely with Eirgrid to facilitate the on-going development of the grid infrastructure in line with national, regional and local requirements."

5.13. Relevant objectives from this section include:

– **CDP11.45** It is an objective of Clare County Council:

a) To facilitate improvements in energy infrastructure and encourage the expansion of the infrastructure within the County;

b) To facilitate future alternative renewable energy developments and associated utility infrastructure throughout the County;

c) To collaborate with Eirgrid to facilitate the development of a safe, secure and reliable supply of electricity, enhanced electricity networks and new transmission infrastructure projects that might be brought forward in the lifetime of this Plan under EirGrid's (2017) Grid Development Strategy (subject to appropriate environmental assessment and then planning process);

d) To collaborate with EirGrid over the lifetime of the plan to ensure that the County's minimum target of 1,167MW of renewable energy generation is achieved and can be accommodated on the electricity network in County Clare.

5.14. As set out above, the proposed development is generally supported locally and nationally in policies and objectives set out in the Clare County Development Plan 2023-2029 and the Regional Spatial and Economic Strategy (2020-2032) for the Northern and Western Region. In terms of national policy, Ireland's Transition to a Low Carbon Energy Future 2015-2030 and the National Spatial Strategy support this type of development. With regard to the above, it is considered that the proposed development of a substation is broadly accepted and supported by both national and local; policy as it is required to export energy from the three consented solar farms to provide a source of revenue over a period of time.

6. PLANNING MERIT AND SUMMARY OF COMPLIANCE

6.1. This Section of the Statement will seek to evaluate the Planning Merit and potential impacts associated with the subject development by looking at the key planning considerations on an individual basis below.

The Principle of Development

6.2. CCC has already accepted the principle of a Solar Farm development at the subject site via the granting **Planning Reference 22/586**. This proposal is merely a Substation to facilitate the Manusmore Solar Farm (**PA Ref: 20562**), Manusmore Solar Farm Extension (**PA Ref: 21915**) and the Coolshamrock Solar Farm (**PA Ref: 22/586**). One could therefore argue that adherence with the Regional and Local Planning Policies listed in **Section 6** has already been achieved.

EIA Development

6.3. Based on environmental assessments, the scale and type of development are in line with the criteria outlined in Schedule 7 of the Planning and Development Act 2000 (updated 16 July 2021). It is therefore anticipated that the proposed infrastructure **will not constitute EIA Development.**

Ecological Impact Assessment and Natura Impact Statement

6.4. This application includes an **Ecological Impact Assessment (EcIA)** (see **Technical Appendix 2** within **Volume 3** for more detail).

6.5. To minimise potential impacts on local wildlife, ecological measures have been incorporated into the Proposed Development as part of the iterative design process. Standard best practice pollution prevention measures for the construction stage have also been outlined and considered as part of the impact assessment stage, prior to mitigation. These measures are outlined in detail within the EcIA.

6.6. The desk-based assessment identified 21 Natura 2000 sites located within 15km of the Application Site. 18 of the Natura 2000 sites are Special Areas of Conservation (SAC): Lower River Shannon SAC, Old Domestic Building (Keevagh) SAC, Poulnagordon Cave (Quin) SAC, Lough Gash Turlough SAC, Ballyallia Lake SAC, Newhall and Edenvale Complex SAC, Newgrove House SAC, Old Domestic Buildings, Rylane SAC, Kilkishen House SAC, Pouladatig Cave SAC, Ratty River Cave SAC, Dromore Woods and Loughs SAC, Knockanira House SAC, Toonagh Estate SAC, Danes Hole, Poulnalecka SAC, Old Farm Buildings, Ballymacrogan SAC, Moyree River System SAC and Ballycullinan, Old Domestic Building SAC The other three Natura 2000

sites are Special Protection Areas (SPAs): the River Shannon and River Fergus Estuaries SPA, Ballyallia Lough SPA and Slieve Augthy Mountains SPA. These designated sites have been outlined and fully assessed within the supporting **Natura Impact Statement** ("NIS") (see **Volume 1**). Hydrological and ornithological connectivity exists between the Application Site and the River Shannon and River Fergus Estuaries SPA and hydrological and ecological connectivity exists between the Application Site and the Lower River Shannon SAC, providing a pathway for potential impacts. It has also been concluded that Ecological connectivity exists between Old Domestic Building (Keevagh) SAC and Poulnagordon Cave (Quin) for lesser horseshoe bats. The remaining Natura 2000 sites do not have any hydrological, ecological or ornithological connectivity with the Proposed Development. The findings of the NIS conclude that with the implementation of integral design measures, mitigation and best practice construction methods, there will be **no significant effects** on any Natura 2000 sites from the Proposed Development.

6.7. There are no Natural Heritage Areas ("NHAs") within 5km of the Application Site; however, there are five Proposed Natural Heritage Areas ("pNHAs") located within 5km of the Application site: Old Domestic Building (Keevagh) pNHA, Poulnagordon Cave (Quin) pNHA, Fergus Estuary and Inner Shannon, North Shore pNHA, Dromoland Lough pNHA and Ballycar Lough pNHA.

6.8. Integral design measures and mitigation measures have been included within the EcIA. Please refer to the **EcIA** (**Technical Appendix 2** within **Volume 3**) for more detail.

6.9. A total of six habitat types were noted during the Fossitt habitat surveys undertaken in August 2021 and March 2022. During the site visit the habitats were assessed for their potential to support protected and notable species present within the local area. The habitat types recorded within the Application Site are Improved Agricultural Grassland (GA1), Treelines (WL2), Hedgerow (WL1), Oak-Ash- Hazel Woodland (WN2), Active Quarries (ED3) and Spoil and Bare Ground (ED3).

6.10. The main impacts during the construction phase include the direct loss of habitat under the Proposed Development footprint. Improved agricultural grassland and arable land are the only habitats that shall be lost due to the construction of the Proposed Development; this habitat is of low ecological value. Overall, the loss of improved agricultural grassland is insignificant when compared to the to the surrounding fields that are dominated by this habitat.

6.11. From the current survey findings and impact assessment conducted, it is considered that the Proposed Development is **unlikely to have any significant effects** for local wildlife. However, as a precaution, several measures have been outlined within the EcIA to reduce any potential impacts for local ecology.

6.12. The findings of the NIS conclude that with the implementation of integral design measures, mitigation and best practice construction methods, there will be **no significant effects** for all Natura 2000 designated sites within the ZOI.

Archaeology and Architectural Heritage Impact Assessment

6.13. An **Archaeology and Architectural Heritage Impact Assessment (AAHIA)** has been produced as part of this application (See **Technical Appendix 3** within **Volume 3** for more detail). The AAHIA concluded that; all potential direct and indirect effects upon designated and non-designated heritage assets within the study zones have been assessed through appropriate methods.

6.14. It is considered that the Proposed Development will have overall **low to negligible** indirect effects (and **Low to negligible** residual indirect effects) upon designated and non-designated assets within the surrounding area, and will have **no direct effects** (and **Negligible** residual direct effects) upon known archaeology and heritage assets within the Application Site.

6.15. Results from the geophysical survey indicate that sub-surface remains within the Application Site are likely to be limited to cultivation marks, although the surrounding heritage assets within the RMP in the 2km study zone suggest demonstrable evidence for prehistoric, medieval and post-medieval settlement activity which may have extended into the vicinity of the Application Site. While no evidence for such remains from these periods is present inside the site, this potential cannot be entirely ruled out. Previous land uses associated with agriculture (as shown in the cultivation lines from the geophysical survey data) and modern quarrying suggest that the land has been subject to disturbance which may impact the potential for the survival of sub-surface remains of significance. Combined with the relatively small Application Site size, the likelihood for the Proposed Development to encounter or impact sub-surface archaeology of significance is considered to be low.

6.16. In consideration of the above, **it is recommended that no specific further pre-determination works are necessary in relation to archaeology and heritage. However, land within the substation boundary should be subject to the same evaluation by post-consent test trenching as has been recommended for the wider Coolshamrock Solar Farm (Planning Ref No. 22/586)**, ideally inclusive within the same programme and licence of work as the wider solar farm test trenching.

Compliance with Relevant Policies

6.17. The AAHIA has been conducted to meet the criteria set out by the NMS (National Monument Services) and the DAHG (now the Department of Culture, Heritage and the Gaeltacht), and has been conducted to the relevant IAI standards.

6.18. The Proposed Development has been considered in relation to international, national and local policies throughout the design process. The Development has been assessed in compliance with the heritage protection strategies outlined within the Planning and Development Act, Heritage Act and National Monuments Act. As such, the full array of archaeological and architectural heritage features at risk of potential impacts from the Proposed Development have been identified from the NMS, RMP, RPS and NIAH sources. Each asset identified has been assessed for impacts that may constitute interference or harm to their character or setting, in line with the relevant policy and guidance.

6.19. With the implementation of appropriate mitigation, the proposed solar farm will not significantly affect the assets or their settings and complies with the relevant policies and guidance at both national and local levels.

National Monuments Service Guidance Document

6.20. The following aspects were outlined in the guidance document as being a requirement of this assessment:

"(a) Examination of the relevant documentary sources (SMR, RMP etc.);

(b) Report on field inspection of the entire site;

(c) Quantification of the ground-disturbance impact on the 'site' identifying in particular areas of serious ground disturbance (e.g., trenching, sub-stations) but also quantifying the cumulative level of ground disturbance from piles to support solar arrays and assessing possible impact from driving machinery over land while inserting piles or subsequently removing them and ways in which such machine disturbance will be reduced or eliminated;

(d) Visual impact assessment. It is especially important that such an assessment address any visual impacts on national monuments of which the Minister is owner or guardian or on World Heritage Sites or candidate World Heritage Sites."

6.21. These aspects were addressed fully in the AAHIA within the baseline, impact assessment and mitigation sections. As such, the report is in compliance with the NMS guidance document.

Landscape and Visual

6.22. A **Landscape and Visual Appraisal (LVA)** and a **Landscape and Ecology Management Plan (LEMP)** has been produced to support this application (See **Technical Appendix 1** within **Volume 3** for more detail).

6.23. The Proposed Development will introduce a substation and associated infrastructure located in the rural setting of the Ennis Drumlin Farmland LCA 13. However, the overall design of the Proposed Development 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 this substation onto the agricultural land will result in a localised **Minor adverse** effect. 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. It will not have any effect on the neighbouring East Clare Loughlands LCA 11, Fergus Estuary LCA 14 or Tulla Drumlin Farmland LCA 12.

6.24. The Proposed Development has been designed around the existing drystone walls, field boundaries, hedgerows and trees to minimise disturbance to these elements and features. These elements and features will be largely retained helping to contain the Proposed

Development across the extent of the Application Site. The proposed infrastructure will result in **Minor adverse** effects upon the characteristics of the Application Site.

6.25. The potential visibility of the Proposed Development 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.

6.26. Those visual receptors with the greatest potential views of the Proposed Development 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.

6.27. 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 mitigation planting becomes established overtime.

6.28. Proposed hedgerow and tree planting along the Application Site's outer boundaries (associated with planning reference 22586) will help reduce 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.

6.29. The proposed infrastructure will result in an overall **Minor adverse** cumulative visual effect given its enclosed nature within the surrounding landscape.

6.30. At the end of the Proposed Development'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.

Flood Risk and Drainage Impact

6.31. A **Flood Risk and Drainage Impact Assessment** has been produced to support this application (see **Technical Appendix 4** within **Volume 3** for more detail).

6.32. The FRA and DIA requirements are set out by the Department of Environment, Heritage and Local Government (now the Department of Housing, Planning, Community and Local Government) in 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (the "FRM Guidelines") document.

6.33. The Guidance aims to avoid inappropriate development in flood zones and instead direct it to areas of low risk by adopting a sequential approach.

6.34. The CFRAM, National Indicative Fluvial Mapping and PFRA interactive flood maps present no areas within the Application Site identified as being at risk of flooding from fluvial or coastal events and therefore the Application Site is **wholly** situated in 'Flood Zone C'.

6.35. The proposed type of development is not specifically mentioned within any of the three land use vulnerability categories outlined in The Planning System and Flood Risk Management Guidelines. The access tracks can be classed as 'Water Compatible Development' as long as they are not raised above ground level, whilst the fencing can also be included. All electrical infrastructure such as the transformer are classed as 'Essential Infrastructure'.

6.36. In addition to fluvial and coastal flood risk, the PFRA map also indicates areas of flood risk due to pluvial sources. This indicates no areas of pluvial flooding within the Application Site. In addition, the topographical survey was analysed and due to the sloping land down to the watercourse, it is unlikely any surface water flooding will occur.

6.37. The drainage strategy will consist of an underground piped system connecting the Eirgrid building and IPP switchroom to rainwater harvesting tanks, which overflow into a soakaway pit. As the transformer will hold a volume of oil, the system will include a class 1 full retention separator. The soakaway pit and rainwater harvesting tanks will be designed to hold a total volume of 23m^3 with the detailed design of the structure being submitted to the council and ABP for review prior to the construction period.

6.38. A permanent toilet is proposed within the Eirgrid building and IPP switchroom will be utilised by maintenance staff of the substation. This toilet will be off grid toilet with a foul holding tank which will be emptied when required by an approved contractor.

6.39. The FRA and DIA have therefore demonstrated that the Proposed Development will **not increase flood risk** away from the Application Site during the construction, operation and decommissioning phases. The Proposed Development is therefore considered to be acceptable in planning policy terms.

Traffic and Access

6.40. A **Construction Traffic Management Plan (CTMP)** has been produced in support of this application (see **Technical Appendix 5** within **Volume 3** for more detail).

6.41. The CTMP outlined the overall framework for managing the movement of construction and delivery traffic to and from the Coolshamrock Substation, as well as considering the type of traffic it will generate. The traffic assessment for the operational and decommissioning phases were also considered.

6.42. The CTMP considered parts of the guidance which are suitable for this project, namely to include details of the existing conditions (Planning Reference 22/586) and issues relating to the Proposed Development.

6.43. Impacts from the operational phase of the site, consisting of between 20-40 LGVs per year, will be below the threshold for a Traffic Impact Assessment, as stated in the NRAs Traffic and Transport Assessment Guidelines.

6.44. Increased volumes of traffic will be generated by the Proposed Development during the construction period. However, the overall volumes of traffic generated by the Proposed Development during the construction period are considered to be quite low each day. During the anticipated four-month construction period, a total of 554 HGV deliveries will be made to the Application Site. During the peak construction period there will be an estimated maximum of 20 daily HGV deliveries.

6.45. The abnormal load route will be from a different direction due to a bridge having a maximum height of 4.11m along the haul route above. Vehicle wills exit the M18 at junction 12 (Ennis) and head in a northeast direction for approximately 3km before taking a right hand turn onto the R469. The R469 will be continued along for approximately 3.5km before taking a right hand turn onto the L3148 and travelled along for approximately 1.8km before taking a right hand turn onto an unnamed road. Vehicles will follow this road for approximately 0.8km before taking a right-hand turn into the site access point.

6.46. The new access point is designed in accordance with the Geometric Design of Junctions DN-GEO-0306012 and swept path analysis showing the largest construction vehicle entering and exiting the site entrance points which confirms that the design is suitable. To facilitate the new access point, 18m of hedgerow will need to be removed. These remedial works were included as part of the adjacent solar farm application (Planning Ref: 22/586).

6.47. The County Development Plan states that visibility splays of 160m by 3m are standard for roads with speed limits of 85km/h. However, as outlined above, the speed limit is unlikely to be achieved along this stretch of the road due to the limited visibility and narrow nature of the road. Therefore, it is proposed that a relaxation by one step be made so that the Standard Stopping Distance (SSD) be lowered to 120m in the 'y' direction which is the SSD for a road with an average speed of 70km/h. The visibility splay of 120m by 3m is achievable with the realignment of 31m of hedgerow and the trimming of 55m of hedgerow. Furthermore, the splay dimensions of 120m x 3m and remedial works were included as part of the adjacent solar farm application (Planning Ref: 22/586).

6.48. A dedicated person will be appointed for the management of the delivery booking system during the construction stage.

[12] Transport Infrastructure Ireland, Geometric Design of Junctions (April 2017)

- The Applicant will conduct a pre- and post-construction condition survey 200m either side of the site access point. The Applicant is liable to repair any damage to the public roads attributed to the construction of the Proposed Development. This should be conditioned as part of any planning consent.

6.49. The CTMP sets out a variety of specific mitigation measures that will be implemented during construction that will minimise the impact of the construction traffic on the environment and local communities; the following provides a brief summary of each:

- Limitations on working times and HGV scheduling;
- Site security and signage; and,
- Measures to control emissions of dust and other airborne contaminants.

6.50. The CTMP conforms to the policies and objectives of the Clare County Development Plan 2023- 2029, and the Design Manual for Roads and Bridges published by the National Roads Authority (NRA).

Outline Construction Environmental Management Plan

6.51. An **Outline Construction and Environmental Management Plan (OCEMP)** has been produced in support of this application (see **Technical Appendix 6** within **Volume 3** for more detail).

6.52. The overall objective of the OCEMP is to reduce the potential impact on the environment during the construction and decommissioning phases of the Proposed Development. The appointed contractor will need to follow the measures identified within this document.

Landowner Benefits

6.53. The Proposed Development is required to export the energy from the three solar farms which provide a stable and diversified source of revenue over a sustained period while improving the ecological value of the sites and safeguarding their reuse for agriculture in future. After the solar farms and proposed substation and associated loop in infrastructure has been decommissioned, the sites can revert back to open pasture.

Legacy Benefits

6.54. The development will leave a positive legacy in the form of improved biodiversity and landscape value thanks to additional planting/gapping of hedgerows at the construction phase and the ongoing sensitive site management for the duration of the development's lifespan. Following decommissioning, the site can be returned to agricultural use with the benefit of enhanced landscape and biodiversity value from the matured mitigation planting.

Other Socio-Economic Benefits

6.55. The proposed development will generate a range of economic benefits both in terms of its construction and operation, generating jobs for installation, maintenance and its eventual remediation. A range of support services will be required including haulage, on-site welfare facilities, refuse and recycling facilities, transport and potentially local accommodation for construction workers. Many of these services will also be required during the site's decommissioning and restoration.

7. SUMMARY

7.1. The Proposed Development will consist of the construction of a new 110kV Substation to facilitate both Coolshamrock and Manusmore Solar Farms. 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.

7.2. This Substation will help to facilitate the continued growth and economic development of Co. Clare, whilst also helping to meet objectives in relation to increasing the provision of renewable energy nationally, regionally, and locally.

- The policies and objectives included within the national, regional and local plans, particularly Clare County Development Plan 2023-2029 and the Regional Spatial and Economic Strategy (2020-2032) for the Northern and Western Region both support the provision of a secure and reliable energy transmission infrastructure.

7.3. The proposed Substation at the subject site will also retain the following significant benefits:

- A significant saving of CO2 per year compared to equivalent fossil fuel generation by enabling the development of the adjacent solar farm;
- Helping the county of Clare to fulfil its aims of increased renewable energy production;
- Assisting the National efforts to achieve legally binding renewable energy targets at the EU level;
- Improving energy security for Irish consumers in a volatile marketplace;
- Providing local economic benefits in the form of rural diversification;

7.4. To conclude, we would reiterate that current legislation and planning policy advocate support for renewable energy developments and requires positive consideration, subject to development management and environmental considerations. There are no potential impacts that are considered unacceptable within the context of the planning policy framework for assessing such developments therefore on this basis, we contend that planning permission should be granted.

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