Screening Report

Proposed 110kV Underground Grid Connection between L30535 road to Kellis 220kV Substation

in support of the Appropriate Assessment Process

Prepared for:

HW Planning Ltd.

On behalf of **Garreenleen Solar Farm Ltd.**

Prepared by:

Ecology Ireland Wildlife Consultants Ltd.

March 2024

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Executive Summary

In December 2023, HW Planning Ltd. on behalf of Garreenleen Solar Farm Ltd. requested a Section 5 Declaration from Carlow County Council in relation to a proposed 110kV underground grid connection cabling between the L30535 public road (to the north of the existing Kellis 220kV substation) to a line bay in the Kellis 220kV substation.

Garreenleen Solar Farm Limited are currently advancing plans for the construction and operation of a solar farm at Garreenleen, Bendinstown, Tinnaclash and Ardbearn, Co. Carlow. As part of this, they are finalising grid connection arrangements with EirGrid to allow for the export of renewable energy generated by the project to the national transmission network. The application for planning permission for the solar farm, support infrastructure and associated ancillary development works was previously made to Carlow County Council under planning reference 20/143 and was permitted under An Bord Pleanála Reference ABP-307891 on the 28th September 2021. Pursuant to this, planning permission was obtained from An Bord Pleanála on 2nd November 2022 under section 182A of the Planning and Development Acts (as amended) for a 110kV substation in the townland of Bendinstown and associated 110kV underground cable connection to the existing Kellis 220kV substation. Permission was sought for and obtained to the point at which the underground cabling terminates in the public road at the boundary of the Kellis 220kV substation. While planning permission was not sought for the remainder of connection to the line bay in the substation, these works were described and assessed in environmental reporting in the SID application as part of a 'one-project' approach.

In order to connect the permitted underground cable to the now assigned bay (H10) in the existing Kellis 220kV substation, it is proposed to extend this cabling southwards from the public road into the substation lands by means of underground trench before connecting into the bay. The total length of the subject underground cabling is approximately 43 metres. The excavation, installation and reinstatement process will take 1 no. day to complete. Excavated material shall be employed to backfill the trench.

In their response to the request for a Section 5 declaration Carlow County Council sought clarification in relation to the requirement for Appropriate Assessment in relation to the proposed underground grid connection. The planning authority noted that the proposed development forms an extension to the underground cabling of an approved solar farm project and that the wider project was subject to a Natura Impact Statement. The reasons why the solar farm and permitted underground cable projects required NIS were related to elements of these projects which required work directly adjoining or intersecting with watercourses with hydrological links to downstream European designated sites. The proposed 43m underground cable route does not adjoin or cross any watercourses and there are no Natura 2000 sites within the Zone of Influence of the works. Given the nature, location and extent of the proposed grid connection there is no likelihood of any significant effects on any designated European sites. This screening assessment has been prepared in support of the Appropriate Assessment process for the information of the Planning Authority. **It is objectively concluded that no significant effects arising from the proposed underground grid connection to Kellis 220kV substation are likely to occur alone, or in combination with any other plan or project, in relation to any Natura 2000 site.**

1 Introduction

Ecology Ireland Wildlife Consultants Ltd. (Ecology Ireland) were commissioned by HW Planning Ltd., on behalf of Garreenleen Solar Farm Ltd., to undertake an appraisal of the potential effects of a short section of underground cable connection linking a permitted underground cable to Kellis 220kV substation in Co. Carlow, on designated conservation sites in the wider area. In December 2023, HW Planning Ltd. on behalf of Garreenleen Solar Farm Ltd. requested a Section 5 Declaration from Carlow County Council in relation to a proposed 110kV underground grid connection cabling between the L30535 public road (to the north of the existing Kellis 220kV substation) to a line bay in the Kellis 220kV substation.

Garreenleen Solar Farm Limited are currently advancing plans for the construction and operation of a solar farm at Garreenleen, Bendinstown, Tinnaclash and Ardbearn, Co. Carlow. As part of this, they are finalising grid connection arrangements with EirGrid to allow for the export of renewable energy generated by the project to the national transmission network. The application for planning permission for the solar farm, support infrastructure and associated ancillary development works was previously made to Carlow County Council under planning reference 20/143 and was permitted under An Bord Pleanála Reference ABP-307891 on the 28th September 2021. Pursuant to this, planning permission was obtained from An Bord Pleanála on 2nd November 2022 under section 182A of the Planning and Development Acts (as amended) for a 110kV substation in the townland of Bendinstown and associated 110kV underground cable connection to the existing Kellis 220kV substation. Permission was sought for and obtained to the point at which the underground cabling terminates in the public road at the boundary of the Kellis 220kV substation. While planning permission was not sought for the remainder of connection to the line bay in the substation, these works were described and assessed in environmental reporting in the SID application as part of a 'one-project' approach.

In order to connect the permitted underground cable to the now assigned bay (H10) in the existing Kellis 220kV substation, it is proposed to extend this cabling southwards from the public road into the substation lands by means of underground trench before connecting into the bay. The total length of the subject underground cabling is approximately 43 metres. The excavation, installation and reinstatement process will take 1 no. day to complete. Excavated material shall be employed to backfill the trench.

In their response to the request for a Section 5 declaration Carlow County Council sought clarification in relation to the requirement for Appropriate Assessment in relation to the proposed underground grid connection. Ecology Ireland previously carried out the ecological assessments in relation to the permitted Garreenleen Solar farm and underground cable route. The planning authority noted in their letter of 15th December 2023 that the proposed development forms an extension to the underground cabling of an approved solar farm project and that the wider project was subject to a Natura Impact Statement.

To help clarify the requirement for Appropriate Assessment (AA) this report describes the reasons why the solar farm and permitted underground cable projects required NIS.

1.1 Statement of Competence

This Screening report, in support of the Appropriate Assessment process was prepared by Dr. Gavin Fennessy (BSc PhD MCIEEM). Dr. Fennessy has 25 years of experience in professional consultancy. He is the Director & Principal Ecologist of Ecology Ireland Wildlife Consultants and this role has contributed to and Project Managed numerous impact assessment projects including EcIA, EIAR, AA, SEA etc. Gavin is a trained and experienced Expert Witness having presented expert testimony at several An Bord Pleanála Oral Hearings, including the Oral Hearing held in relation to the Opera Project in 2019.

Dr. Fennessy designed the surveys and was lead author on the previous EcIA's and Screenings for AA prepared in relation to the permitted solar farm and substation developments at Garreenleen and Bendinstown.

1.2 Background: Appropriate Assessment

A screening assessment is undertaken to establish if any proposed plan or project is likely to have a significant effect or impact on any site that has been designated under the E.U. Habitats Directive (92/43/EEC) as a Special Area of Conservation (SAC), or the E.U. Birds Directive (79/409/EEC as amended 2009/147/EC) as a Special Protection Area (SPA). Collectively, SAC's and SPA's are known as Natura 2000 sites. The E.U. Habitats Directive was initially transposed into Irish law under the European Communities (Natural Habitats) Regulations 2007 (SI 94/1997), which were subsequently amended under SI 233/1998 and SI 378/2005. More recently, these regulations were revised through the European Communities (Birds and Natural Habitats) Regulations 20011 (SI 477/2011). Also, the management of sea-fisheries within Natura 2000 sites is now legislated nationally through the European Union (Birds and Natural Habitats) (Sea-Fisheries) Regulations 2013 (SI 290/2013) to implement responsibilities in accordance with the European Communities (Birds and Natural Habitats) Regulations 2011 and 2013.

A screening assessment is part of an appropriate assessment process that consists of up to four steps, where each step follows on from the preceding one. The need to undertake one or more phases of this process has arisen from Articles 6(3) and 6(4) of the Habitats Directive; where the former Article is primarily concerned with the protection of sites from likely significant effects and the latter allows derogation from such protection in very specific circumstances involving imperative reasons of overriding public interest. Designated Natura 2000 sites have a set of qualifying interests and associated conservation objectives that are considered in detail in the assessment of the potential impacts of a project or plan.

The first part of the assessment is a screening process to identify whether significant[1] effects on a Natura 2000 site are likely to arise from the project or plan in question. If significant effects are likely to occur or if it is unclear whether significant effects are likely to occur, then the process moves onto the next phase where an appropriate assessment (AA) considers potential mitigation measures for adverse impacts identified in Screening. Typically, a Natura Impact Statement (NIS) is prepared by consultants on behalf

[1] A European Court of Justice ruling in 2013 (Case C-258/11) has stated the following regarding significant effect: "Where a plan or project not directly connected with or necessary to the management of a site is likely to undermine the site's conservation objectives, it must be considered likely to have a significant effect on that site."

of the promoter/developer of a plan or project and this is part of the information used by the competent authority in carrying out an Appropriate Assessment of the proposed plan or project. If it is considered that mitigation measures will not be able to satisfactorily reduce potential adverse impact on a Natura 2000 site, then an assessment of alternative solutions is considered in third phase of the assessment process. If adverse effects remain and the proposed activity or development is deemed to be of Imperative Reasons of Overriding Public Interest (IROPI), the final assessment step permits consideration of permission for development with consideration of compensatory measures.

While a screening assessment appraisal or NIS may be provided by the advocate of the plan or project in question, the AA itself is undertaken by the competent authority (*e.g.* the planning authority and An Bord Pleanála). So, in this case, the screening assessment for the project, described herein, is undertaken by Carlow County Council; informed by this Stage 1 Screening Statement and any other relevant information provided to the statutory body.

1.3 Methodology

This report presents the outcome of screening assessment to identify whether significant effects (or impacts) are likely to arise from the proposed revised cabling design which will involve the undergrounding of c. 43m of cable to facilitate the permitted Garreenleen Solar Farm. It is important to emphasize that a screening assessment does not have to ascertain the existence of a significant effect on a Natura 2000 site as such; it only has to establish whether a significant effect is possible or may occur (as per judgement by Ms. Justice Finlay Geoghegan; see guidelines below).

The conservation objectives of Natura 2000 sites have been compiled by the National Parks & Wildlife Service (NPWS) in relation to the habitats and species (*i.e.* qualifying interests) for which the sites are selected. These conservation objectives are referred to when carrying out appropriate assessments for plans and projects that might impact on these sites.

Documents associated with the development and relevant ecology databases were consulted as part of this assessment (as outlined in Sections 4 & 5 below). Field assessments were also undertaken over several visits in early 2020. The following guidelines were used in the completion of this assessment;

- Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites – European Commission Methodical Guidance on the provisions of Article 6(3) and 6(4) of the 'Habitats' Directive 92/43/EEC (European Commission 2001)
- Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities (DoEHLG 2009)
- Office of the Planning Regulator Practice Note PN01 - AA Screening for Development Management (OPR, 2021).
- European Commission (2021) Assessment of plans and projects in relation to Natura 2000 sites - Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC. Brussels, 28.9.2021 C (2021) 6913 final.

- Integrated Biodiversity Impact Assessment – Streamlining AA, SEA and EIA Processes: Practitioner's Manual (EPA 2013)
- European Court of Justice Ruling 11th April 2013 Case C-258/11 Peter Sweetman and Others v An Bord Pleanála - Criteria to be applied when assessing the likelihood that N6 Galway City Outer Bypass road scheme will adversely affect the integrity of Lough Corrib SAC
- High Court Ruling 25th July 2014 by Ms. Justice Finlay Geoghegan; Neutral Citation [2014] IEHC 400; High Court Record No. 2013 802 JR; Kelly -v- An Bord Pleanála – Judicial review of grant of planning by An Bord Pleanála for two wind farm phases in County Roscommon
- High Court Ruling 24th November 2014 by Mr. Justice Hedigan; Neutral Citation [2014] IEHC 557; High Court Record No. 2014 320 JR; Rossmore Properties Limited & Anor -v- An Bord Pleanála
- High Court Ruling 25th February 2016 by Mr. Justice Barton. Neutral Citation [2016] IEHC 134; High Court Record No. 2013 450 JR; Balz & Anor -v- An Bord Pleanála.
- European Court of Justice ruling 12th April 2018 in respect of Case C-323/17 (People Over Wind & Sweetman) - it is not appropriate for the purposes of Appropriate Assessment (AA), at the screening stage, to take account of the measures intended to avoid or reduce the harmful effects of a plan or project.
- European Court of Justice 19th April 2018; Case C 164/17; Grace & Sweetman -v- An Bord Pleanála – a measure compensating for the negative effects of a project cannot be taken into account in an Appropriate Assessment Natura Impact Statement (Stage 2).
- European Court of Justice 7th November 2018; Case C 461/17; Holohan & Others v. An Bord Pleanála - an Appropriate Assessment must identify and examine the implications of the proposed project for species present on the Natura 2000 site, including species for which the site has been listed and those for which it has not, provided those implications are liable to affect the conservation objectives of the site; an Appropriate Assessment must identify and examine the implications of the proposed project for species and habitats outside the boundaries of the Natura 2000 site, provided those implications are liable to affect the conservation objectives of the site.
- High Court Ruling 2nd February 2019 by Mr. Justice Barniville; Neutral Citation [2019] IEHC 84; High Court Record No. 2017 883 JR; Kelly -v- An Bord Pleanála & Anor- SUDS are not mitigation measures which a competent authority is precluded from considering at the stage 1 screening stage.
- Heather Hill Management Company CLG v An Bord Pleanála (Burkeway Homes Limited as Notice Party) [2019] IEHC 450. Mr. Justice Garrett Simons granted an order of certiorari setting aside the decision of the Board to grant permission for a residential development of 197 units at Bearna Co. Galway, on the basis that it was a material contravention of the Galway County Development Plan (the CDP), it failed to carry out a 'justification test' as required and failed to carry out proper Appropriate Assessment screening.

1.3.1 Information Consulted for this Report

This assessment has been informed by the following sources of data:

- Desk based surveys;

- Previous reports completed for the associated permitted developments;
- Information on the location, nature and design of the proposed project as provided by the client;
- Department of Housing, Planning, Community and Local Government (DHPCLG) online land-use mapping (www.myplan.ie/en/index.html);
- Office of Public Works (OPW) National Flood Hazard Mapping website (www.floodmaps.ie)
- Environmental Protection Agency (EPA) geoportal mapping tool (https://gis.epa.ie/EPAMaps/);
- National Parks and Wildlife Service protected site and species information and data (https://www.npws.ie/protected-sites);
- National Biodiversity Data Centre (www.biodiversityireland.ie); and
- Ordnance Survey of Ireland mapping and aerial photography (www.osi.ie).

2 Stage 1: Screening for Appropriate Assessment

2.1 Brief Description of the Site & Project

2.1.1 Site Location & Proposed development

The proposed 110kV underground grid connection cabling is located between the L30535 public road (to the north of the existing Kellis 220kV substation) to a line bay in the Kellis 220kV substation (Figure 2-1). The underground cabling will consist of 3 No. 160mm diameter HDPE power cable ducts, 2 No.125mm diameter HDPE communications ducts and 1 no. 63mm diameter earth continuity duct to be installed in an excavated trench 825mm wide by 1315mm in depth. The total length of the subject underground cabling is approximately 43 metres. As per the submitted plans, the laying of the cabling will require the temporary removal of 6 metres of hedgerow at the boundary of the public road and substation site. This will be reinstated post the completion of works with native landscape planting. The excavation, installation and reinstatement process will take 1 no. day to complete. Excavated material shall be employed to backfill the trench. A grade, smooth and trim trench floor will be established, before the ducts are laid and carefully covered by a Cement Bound Granular Mixture. The encased ducts will be backfilled before laying of topsoil and reseeding of grass.

There are no European designated site located in the vicinity of the cable route (Figure 2-2) with the closest nationally designated site, Ardristan Fen pNHA situated 2.7km distant (Figure 2-3).

The habitats intersected run from the public road (BL3) through the hedgerow (WL1) and improved agricultural grassland (GA1) before entering the existing substation footprint (BL3).

The development site is located within the Barrow Catchment (Hydrometric Area 14) (www.epa.ie). The development site is within the South-eastern River Basin District and Barrow_SC_09 subcatchment. There are no watercourses crossed or in the immediate vicinity of the proposed cable route. The habitats intersected run from the public road (BL3) through the hedgerow (WL1) and improved agricultural grassland (GA1) before entering the existing substation footprint (BL3).

2.1.2 Associated Projects

In their response to the request for a Section 5 declaration, Carlow County Council sought clarification in relation to the requirement for Appropriate Assessment in relation to the proposed underground grid connection. The planning authority noted that the proposed development forms an extension to the underground cabling of an approved solar farm project and that the wider project was subject to a Natura Impact Statement.

The reasons why the solar farm and permitted underground cable projects required NIS were related to elements of these projects which required work directly adjoining or intersecting with watercourses with hydrological links to downstream European designated sites.

The application for planning permission for the solar farm, support infrastructure and associated ancillary development works was previously made to Carlow County Council under planning reference 20/143 and was permitted under An Bord Pleanála Reference ABP-307891 on the 28th September 2021. The planning application was accompanied by and ecological impact assessment (EcIA) and Natura Impact Statement

(NIS). This application considered three grid route options from the solar farm towards the Kellis substation.

The NIS for Garreenleen Solar Farm and grid option identified (i) potential indirect hydrological effects on the River Barrow and River Nore SAC and Slaney River Valley SAC, ii) potential ex-situ impacts on qualifying Otter from the River Barrow and River Nore SAC and Slaney River Valley SAC and iii) potential ex-situ impacts on qualifying White-clawed Crayfish from the River Barrow and River Nore SAC as a result of the solar farm development and grid-connection route options. These potential effects were associated with works that would be undertaken closely adjacent to the hydrologically connected watercourses e.g. the Burren. The Burren River and Garreenleen stream located within/adjacent to the development footprint flow into the River Barrow and Nore SAC c. 14km downstream of the development site. In addition, a number of drains in the east of the solar farm site may drain to tributaries of the River Slaney, which is designated as an SAC c. 5.7km downstream of the site.

Ex-situ disturbance impacts (*i.e.* where highly mobile species from the designated sites may occur at the development site to forage or commute) were also be considered. One mobile terrestrial mammal species (Otter *Lutra lutra*) is a qualifying interest of both the River Slaney Valley SAC and the River Barrow and Nore SAC. This species was found to occur on the solar farm site in association with the River Burren, where this watercourse is hydrologically linked to the River Barrow and Nore SAC c. 14km downstream of the development site. One other qualifying species of River Barrow and Nore SAC known to occur just downstream of the solar farm development site at Rathtoe Bridge EPA sampling station on the River Burren; White-clawed Crayfish *Austropotamobius pallipes* (www.epa.ie). This aquatic species is listed on Annex II of the EU Habitat's Directive and could potentially be impacted by siltation or water quality impacts as a result of the development.

Planning permission was obtained from An Bord Pleanála on 2nd November 2022 under section 182A of the Planning and Development Acts (as amended) for a 110kV substation in the townland of Bendinstown and associated 110kV underground cable connection to the existing Kellis 220kV substation. This application was also accompanied by an NIS. This is entirely consistent with the NIS prepared to accompany the original planning application, but of course this NIS considered the chosen grid connection route rather than the three options which were considered as part of the solar farm application. The chosen route involved two culvert and two bridge crossing, including a crossing of the Burren River. Both bridges require Horizontal Directional Drilling (HDD) for the cable crossing. This requires excavation and movement of plant and personnel in the vicinity of the bridge crossing. In the absence of appropriate environmental control it was concluded that without adequate mitigation that there was some potential for the contamination of watercourses to occur during this procedure. This could potentially affect sensitive aquatic species in the vicinity and downstream of the watercourse crossings.

The requirement for NIS for these previous applications was consistent: the potential for hydrological effects downstream though run-off and contamination and ex-situ disturbance of certain qualifying species in the vicinity of proposed works. These triggers for NIS do not exist in relation to the proposed undergrounding of 43m of cable at Kellis substation. There are no credible pathways for such effects on the European designated sites in the wider receiving environment.

Figure 2-1 Site Location Map

Figure 2-2 Natura 2000 sites in wider receiving environment.

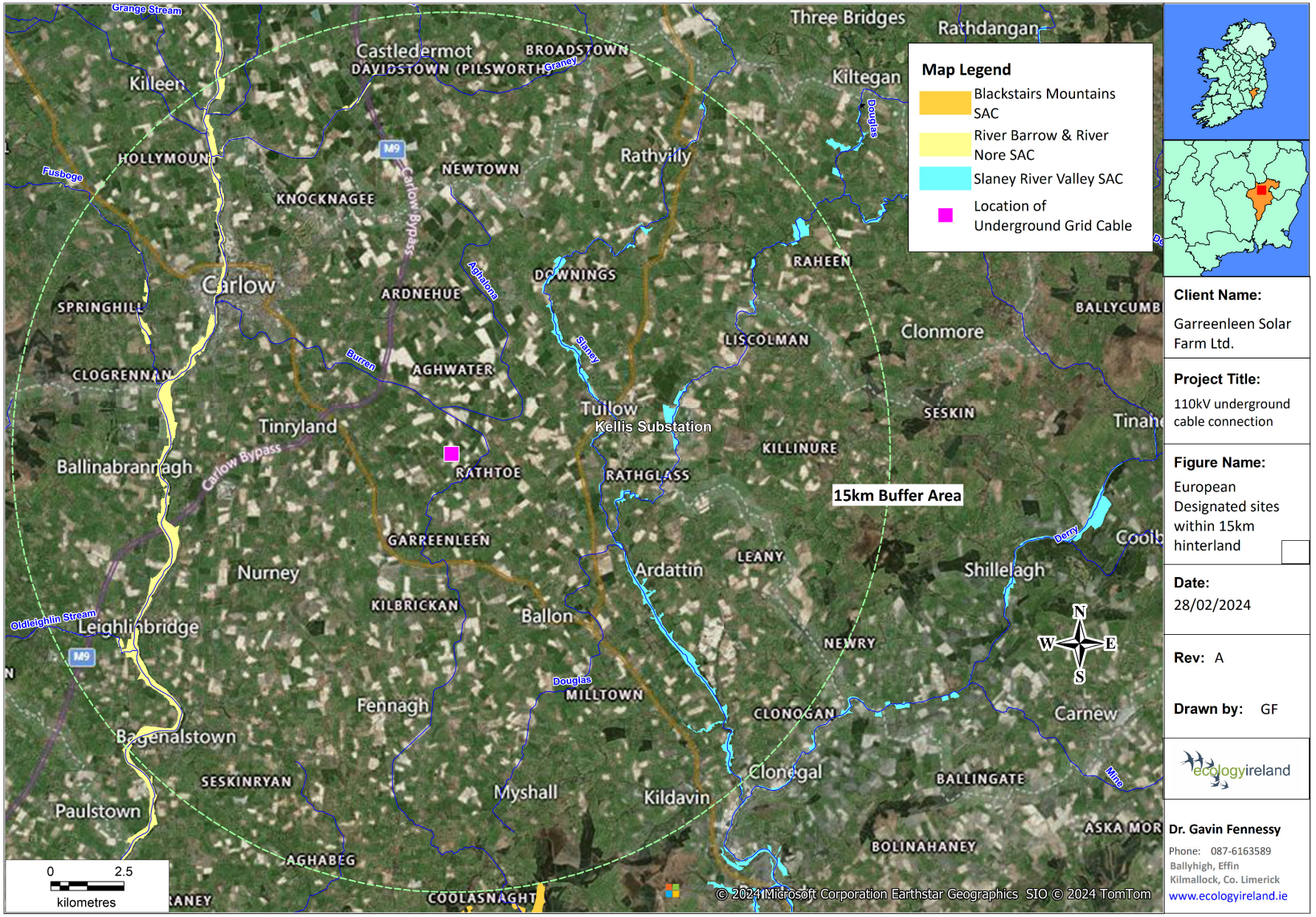
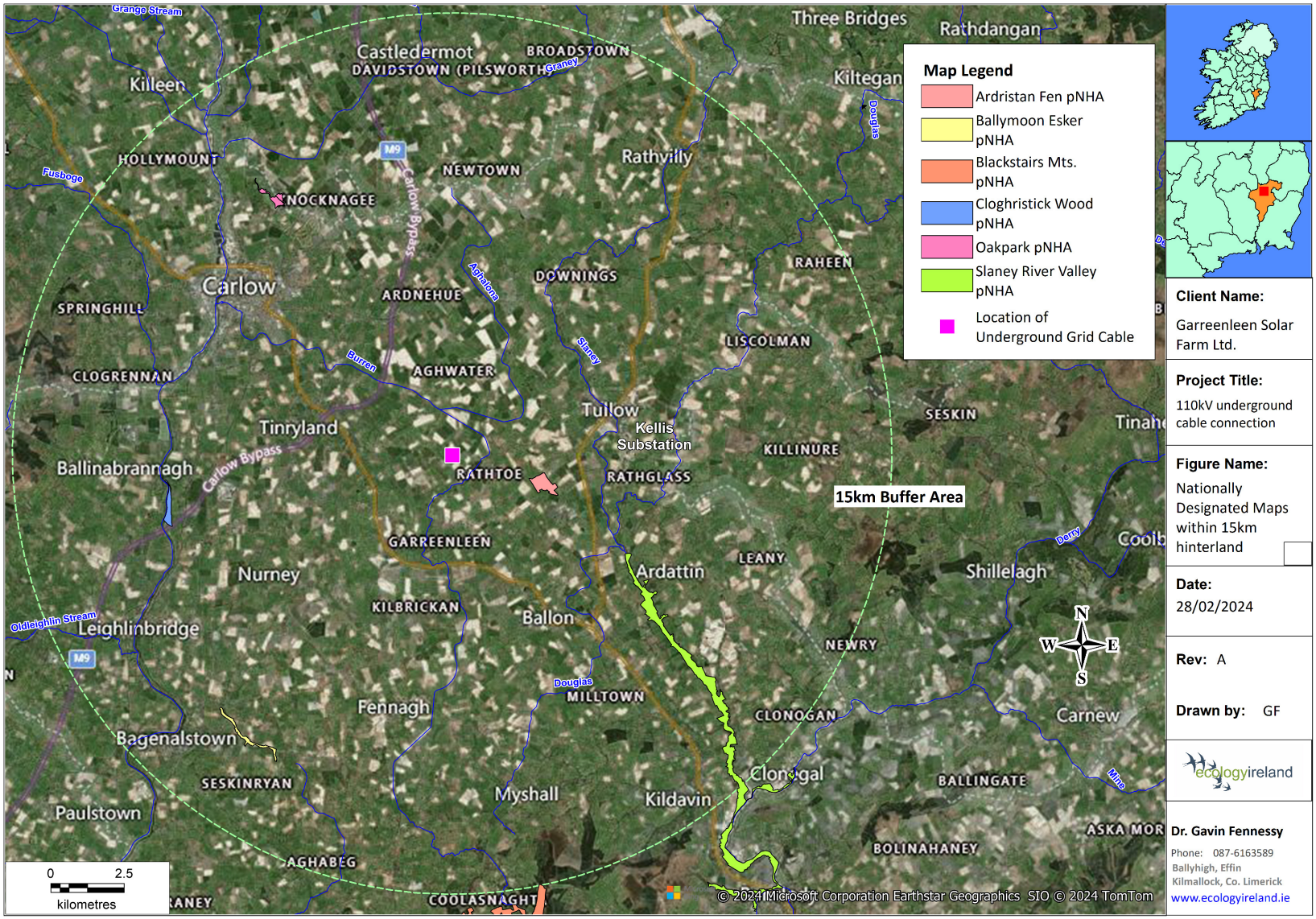


Figure 2-2 Nationally designated sites in wider receiving environment.



2.2 Description of the Natura 2000 Sites

The location of European and nationally designated sites is shown in Figure 2-2 and Figure 2-3 respectively. The closest Natura 2000 site, the Slaney River Valley SAC, is located 4.7km from the proposed underground cable route. In total there are three SAC's, no SPA's or NHA's and six pNHA's located within 15km of the cable route (Table 2-1). A summary of the qualifying interests of the European sites located in the wider receiving hinterland of the proposed underground cable route is shown in Table 2-2.

Note that for illustrative purposes, sites within a 15km distance of the development site are shown in Figure 2-2 and Figure 2-3. In keeping with current guidance, we consider the likely Zone of Influence (or Impact) for a proposed development and do not only consider sites out to this nominal distance of 15km. Where consideration of the Source-Pathway-Receptor (S-P-R) model indicates that there likely significant effects which in the absence of mitigation will occur in relation to more distant sites, these are considered as part of the screening process. In this case, the ZoI for direct and indirect effects is considered to be much smaller than 15km, given the scale and nature of the works and the lack of an obvious pathway by which any pollution or disturbance event could be conveyed into the wider receiving environment.

The proposed underground cable route is situated outside the Slaney River Valley SAC and therefore lacks any hydrological connectivity with this site. While the cable route is located within the Barrow catchment it is not situated proximate to any watercourse with hydrological linkages to any of the European sites located in the wider hinterland. Given the scale and nature of the works involved in laying of the cable there is no likelihood of any significant effects arising in relation to the River Barrow and River Nore SAC. The works area also lacks any suitable habitat for any of the QI species to be present and there is no likelihood of ex-situ effects on these species occurring in relation to the proposed undergrounding of cable at this location. The distances between the proposed underground cable works and the designated sites also precludes the risk of direct disturbance/displacement to any fauna occurring within the designated sites.

Blackstairs Mts. SAC the only other Natura 2000 site situated within 15km is located upland of the proposed development almost 15km from the site and is designated for two habitats: Northern Atlantic wet heaths with *Erica tetralix* [4010] and European dry heaths [4030]. There is no potential for the proposed development to impact upon the Blackstairs Mts. SAC as a result of the proposed development.

Table 2-1 Distance of designated sites from the proposed development.

Site Name	Site Code	Minimum Distance (km)
Natura 2000 sites		
Slaney River Valley SAC	000781	4.7
River Barrow and River Nore SAC	002162	9.1
Blackstairs Mountains SAC	000770	14.9
Nationally Designated Sites		
Ardristan Fen pNHA	000788	2.7
Slaney River Valley pNHA	000781	6.8
Cloghristick Wood pNHA	000806	9.6
Oakpark pNHA	000810	10.2
Ballymoon Esker pNHA	000797	11.7
Blackstairs Mountains pNHA	000770	14.9

Potential Impact-Receptor Pathway Summary

No potential effects on the qualifying objectives of the Slaney River Valley SAC, River Barrow and River Nore SAC and the Blackstairs Mountains SAC have been identified here and a Finding of No Significant Effects (FONSE) report has been completed for these Natura 2000 sites (Appendix A).

Table 2-2 Natura 2000 Site Summary

Site Name & Code	Conservation Summary	Minimum Distance From Site (km)
Slaney River Valley SAC 00781	The Conservation Objectives of this SAC are to maintain or restore the favourable conservation condition of the following qualifying interests: **Habitat:** • Estuaries • Mudflats and sandflats not covered by seawater at low tide • Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) • Mediterranean salt meadows (*Juncetalia maritimi*) • Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation • Old sessile oak woods with Ilex and Blechnum in the British Isles • Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*) **Species:** • Freshwater Pearl Mussel, *Margaritifera margaritifera* • Sea Lamprey, *Petromyzon marinus* • Brook Lamprey, *Lampetra planeri* • River Lamprey, *Lampetra fluviatilis* • Twaite Shad, *Alosa fallax* • Salmon *Salmo salar* • Otter, *Lutra* • Harbour Seal, *Phoca vitulina* (After NPWS 2011a)	Over Land: 4.6 km SAC No hydrological link

Site Name & Code	Conservation Summary	Minimum Distance From Site (km)
River Barrow and Nore SAC 002162	The Conservation Objectives of this SAC are to maintain or restore the favourable conservation condition of the following qualifying interests **Habitat:** • Estuaries • Mudflats and sandflats not covered by seawater at low tide • Reefs • Salicornia and other annuals colonising mud and sand • Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) • Mediterranean salt meadows (*Juncetalia maritimi*) • Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation • European dry heaths • *Hydrophilous* tall herb fringe communities of plains and of the montane to alpine levels • Petrifying springs with tufa formation (*Cratoneurion*) • Old sessile oak woods with Ilex and Blechnum in the British Isles • Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*) **Species:** • Desmoulin's Whorl Snail, *Vertigo moulinsiana* • Freshwater Pearl Mussel, *Margaritifera* • White-clawed Crayfish, *Austropotamobius pallipes* • Sea Lamprey, *Petromyzon marinus* • Brook Lamprey, *Lampetra planeri* • River Lamprey, *Lampetra fluviatilis* • Twaite Shad, *Alosa fallax* • Salmon, *Salmo salar* • Otter, *Lutra* • Killarney Fern, *Trichomanes speciosum* • Nore Pearl Mussel, *Margaritifera durrovensis* (after NPWS 2011b)	Over Land: 8.5 km SAC via watercourses *c*. 14 km SAC
Blackstairs Mountains SAC 00770	The Conservation Objectives of this SAC are to maintain the favourable conservation condition of the following qualifying interests: **Habitat:** • Northern Atlantic wet heaths with Erica tetralix • European dry heaths (after NPWS 2018)	Over Land: 12.8 km SAC via watercourses *n/a*

3 Stage 1: Assessment Criteria

3.1 Elements of the Project Likely to Impact on the Natura 2000 Sites

3.1.1 Direct Habitat Loss

The proposed development is distant from any Natura 2000 site (>4.7km) and given the nature and scale of the project there is no potential for direct habitat effects on any of the European conservation sites. The habitats present within the proposed development site boundary are considered to be local importance local importance (higher value; e.g. hedgerows to lower value: improved agricultural grassland). The works area is not part of any designated site nor does it require any resources from them; thereby ruling out any direct habitat loss at the conservation sites in question.

3.1.2 Indirect Habitat Loss or Deterioration

The underground cabling will consist of 3 No. 160mm diameter HDPE power cable ducts, 2 No.125mm diameter HDPE communications ducts and 1 no. 63mm diameter earth continuity duct to be installed in an excavated trench 825mm wide by 1315mm in depth. The total length of the subject underground cabling is approximately 43 metres. As per the submitted plans, the laying of the cabling will require the temporary removal of 6 metres of hedgerow at the boundary of the public road and substation site. This will be reinstated post the completion of works with native landscape planting. The excavation, installation and reinstatement process will take 1 no. day to complete. Excavated material shall be employed to backfill the trench. A grade, smooth and trim trench floor will be established, before the ducts are laid and carefully covered by a Cement Bound Granular Mixture. The encased ducts will be backfilled before laying of topsoil and reseeding of grass.

There is no obvious pathway by which run-off from the works area could result in significant effects on any European designated site. The works will be completed over a very short period of time and the habitats directly impacted will be reinstated.

3.1.3 Disturbance / Displacement of Species

The underground cable route is distant from any European designated site and lacks attractive habitats for the qualifying species. Given the nature and scale of the proposed works there is no likelihood of any significant disturbance or displacement of qualifying species associated with the proposed project.

3.2 Likely Impacts of the Project on the Natura 2000 Sites

As outlined above, while the cable route is located within the Barrow catchment it is not situated proximate to any watercourse with hydrological linkages to any of the European sites located in the wider hinterland. Given the scale and nature of the works involved in laying of the cable there is no likelihood of any significant effects arising in relation to the River Barrow and River Nore SAC. The works area also lacks any suitable habitat for any of the QI species to be present and there is no likelihood of ex-situ effects on these species occurring in relation to the proposed undergrounding of cable at this location.

3.2.1 Size, Scale & Land-take

The proposed 110kV underground grid connection cabling is located between the L30535 public road (to the north of the existing Kellis 220kV substation) to a line bay in the Kellis 220kV substation (Figure 2-1). The underground cabling will consist of 3 No. 160mm diameter HDPE power cable ducts, 2 No.125mm diameter HDPE communications ducts and 1 no. 63mm diameter earth continuity duct to be installed in an excavated trench 825mm wide by 1315mm in depth. The total length of the subject underground cabling is approximately 43 metres.

3.2.2 Distance from or Key Features of the Natura 2000 Sites

As described in Table 2.1

3.2.3 Resource Requirements (water abstraction *etc.*)

Not applicable.

3.2.4 Excavation Requirements

As described in Section 3.1.2.

3.2.5 Emission (disposal to land, water or air)

There is no likelihood of damaging emissions to the air, soil or water as a result of the construction or operation of the underground cable at this location.

3.2.6 Transportation Requirements

The works are estimated to take approximately 1 day to complete.

3.2.7 Duration of Operations

The works are estimated to take approximately 1 day to complete.

3.2.8 Cumulative and In-combination Effects

The proposed undergrounding of cable between the public road and the existing substation was considered as part of the previous applications as part of a 'One Project' assessment. All aspects of the works required to construct and operate the solar farm, including the grid connection were evaluated. As already described, there were elements of the wider project that required mitigation to be applied. These in particular concerned works closely adjacent to or intersecting watercourses. The permitted solar farm as well as the permitted underground cable route were subject to detailed ecological assessment and mitigation strategy. These differed substantially from the works under consideration in the current report. The works to connect the cable from the L30535 to Kellis substation are very limited in extent and do not involve the crossing of any watercourses. No bespoke mitigation has been identified as being required in relation to the current proposed works to address any risks likely to result in any significant cumulative or in combination effects to European sites in the wider receiving environment.

3.2.9 Potential Significant Effects: Conclusion

Taking the above into consideration, it is considered that no elements of the project are likely to impact on any Natura 2000 sites, alone or in combination with any other plan or project. The key considerations that contributed towards this conclusion are summarised as follows;

- The development site is not part of the Natura 2000 sites under consideration here and does not require any resources from it – thereby ruling out any direct habitat loss effects.
- There are no watercourses intersected by the 43m underground cable route and therefore no indirect hydrological effects on Natura 2000 are expected as a result of the proposed development due to the relatively minor scale of the works and distances to the designated sites.
- The construction and operation of the underground cabling will not cause ex-situ disturbance/displacement to the qualifying faunal species of any Natura 2000 sites as there are no habitats of ecological significance for these species in the vicinity of the works areas.

3.3 Likely Changes to the Natura 2000 Sites

3.3.1 Reduction of Habitat Area

Not applicable.

3.3.2 Disturbance to Key Species

Not applicable.

3.3.3 Habitat or Species Fragmentation

Not applicable.

3.3.4 Reduction in Species Density

Not applicable.

3.3.5 Changes in Key Indicators of Conservation Value (water quality *etc*.)

Not applicable.

3.4 Likely Impacts on the Natura 2000 Sites as a Whole

3.4.1 Interference with the Key Relationships that Define the Structure and Function of the Natura 2000 Sites

Not applicable.

3.5 Indicators of Significance as a Result of the Identification of Effects Set Out Above

3.5.1 Loss

Not applicable.

3.5.2 Fragmentation

Not applicable.

3.5.3 Disruption

Not applicable.

3.5.4 Disturbance

Not applicable.

3.5.5 Change to Key Elements of the Site

Not applicable.

3.6 Elements of the Project Likely to Significantly Impact on the Natura 2000 Sites or where the Scale or Magnitude of Impacts are Unknown

Taking the above into consideration, it is considered that no elements of the project are likely to impact on any Natura 2000 sites, alone or in combination with any other plan or project. The key considerations that contributed towards this conclusion are summarised as follows;

- The development site is not part of the Natura 2000 sites under consideration here and does not require any resources from it – thereby ruling out any direct habitat loss effects.
- There are no watercourses intersected by the 43m underground cable route and therefore no indirect hydrological effects on Natura 2000 are expected as a result of the proposed development due to the relatively minor scale of the works and distances to the designated sites.
- The construction and operation of the underground cabling will not cause ex-situ disturbance/displacement to the qualifying faunal species of any Natura 2000 sites as there are no habitats of ecological significance for these species in the vicinity of the works areas.

4 Conclusion

In their response to the request for a Section 5 declaration Carlow County Council sought clarification in relation to the requirement for Appropriate Assessment in relation to the proposed underground grid connection. The planning authority noted that the proposed development forms an extension to the underground cabling of an approved solar farm project and that the wider project was subject to a Natura Impact Statement. The reasons why the solar farm and permitted underground cable projects required NIS were related to elements of these projects which required work directly adjoining or intersecting with watercourses with hydrological links to downstream European designated sites. The proposed 43m underground cable route does not adjoin or cross any watercourses and there are no Natura 2000 sites within the Zone of Influence of the works. Given the nature, location and extent of the proposed grid connection there is no likelihood of any significant effects on any designated European sites. This screening assessment has been prepared in support of the Appropriate Assessment process for the information of the Planning Authority.

It is objectively concluded that no significant effects arising from the proposed underground grid connection to Kellis 220kV substation are likely to occur alone, or in combination with any other plan or project, in relation to any Natura 2000 site.

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APPENDIX A:

Finding of No Significant Effects Report:

River Barrow & River Nore SAC, Slaney River Valley SAC and Blackstairs Mountains SAC

Name and location of the Natura 2000 sites.	River Barrow & River Nore SAC, Slaney River Valley SAC and Blackstairs Mountains SAC
Description of the project or plan.	In their response to the request for a Section 5 declaration Carlow County Council sought clarification in relation to the requirement for Appropriate Assessment in relation to the proposed underground grid connection. The planning authority noted that the proposed development forms an extension to the underground cabling of an approved solar farm project and that the wider project was subject to a Natura Impact Statement. The reasons why the solar farm and permitted underground cable projects required NIS were related to elements of these projects which required work directly adjoining or intersecting with watercourses with hydrological links to downstream European designated sites. The proposed 43m underground cable route does not adjoin or cross any watercourses and there are no Natura 2000 sites within the Zone of Influence of the works. Given the nature, location and extent of the proposed grid connection there is no likelihood of any significant effects on any designated European sites. This screening assessment has been prepared in support of the Appropriate Assessment process for the information of the Planning Authority.
Is the Project or Plan directly connected with or necessary to the management of the site (provide details)?	No.
Are there other projects or plans that together with the project of plan being assessed could affect the site (provide details)?	No.
The Assessment of Significant Effects	
Describe how the project or plan (alone or in combination) is likely to affect the Natura 2000 site.	Due to the reasons outlined in the following section, it is felt that no elements of the project are likely to impact on the Natura 2000 sites; The River Barrow & River Nore SAC, The Slaney River Valley SAC and the Blackstairs Mountains SAC.
Explain why these effects are not considered significant.	It is considered that no elements of the project are likely to impact on any Natura 2000 sites, alone or in combination with any other plan or project. The key considerations that contributed towards this conclusion are summarised as follows; • The development site is not part of the Natura 2000 sites under consideration here and does not require any resources from it – thereby ruling out any direct habitat loss effects. • There are no watercourses intersected by the 43m underground cable route and therefore no indirect hydrological effects on Natura 2000 are expected as a result of the proposed development due to the relatively minor scale of the works and distances to the designated sites. • The construction and operation of the underground cabling will not cause ex-situ disturbance/displacement to the qualifying faunal species of any Natura 2000 sites as there

	are no habitats of ecological significance for these species in the vicinity of the works areas.
List of agencies consulted.	None.
Response to consultation.	n/a

Data Collected to Carry out the Assessment			
Who carried out the assessment	**Sources of Data**	**Level of assessment completed**	**Where can the full results of the assessment be accessed and viewed**
Dr Gavin Fennessy BSc. & PhD Zoology & MCIEEM on behalf of Ecology Ireland Ltd.	▪ Associated documents/drawings. ▪ Site walkover. ▪ EPA online river mapping database ▪ NPWS online designated site data/mapping. ▪ National Biodiversity Data Centre (NBDC) online mapping ▪ References (below)	Desktop study & site visit; am satisfied that this has yielded enough information to adequately complete a screening assessment.	Full results of the assessment are available in Section 3.1 above.