Borrisbeg Grid Connection

Natura Impact Statement

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Borrisbeg Grid Connection
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1 Introduction

1.1 Purpose of Document

This document is to inform the Competent Authority's Appropriate Assessment (AA) (Stage 2) with respect to the proposed Borrisbeg Grid Connection at Strogue and Clonmore, Co. Tipperary (hereafter referred to as the "Proposed Grid Connection" for purposes of the AA Screening). The Proposed Grid Connection is described in Section 3 of this report.

The need for preparing an NIS was confirmed following the completion of an AA Screening for the Proposed Grid Connection which concluded that, based on the information available regarding the project , likely significant effects (LSE) on European Sites during its construction and operation could not be ruled out. Both the AA Screening and NIS have been prepared with reference to the European Communities (Bird and Natural Habitats) Regulations 2011, as amended, which transposes into Irish law the EU Habitats Directive.

The report to inform Screening for AA prepared for the Proposed Grid Connection concluded that it cannot be excluded on the basis of objective scientific information that the Proposed Grid Connection either individually or in combination with other plans or projects is likely to have a significant effect on any European site(s), namely and specifically the Lower River Suir Special Area of Conservation (SAC).

Therefore, the Proposed Grid Connection is subject to an NIS in accordance with Article 6(3) of the EU Habitats Directive (Directive 92/43/EEC) on the Conservation of Natural Habitats and of Wild Fauna and Flora; the Planning and Development Act 2000, as amended.

This report assesses whether the Proposed Grid Connection will have an adverse effect on the integrity of the Lower River Suir SAC on the basis of objective evidence and in view of best scientific knowledge and with reference to published Conservation Objectives (COs) of that SAC and its Qualifying Interests.

The document is structured as follows:

- **Section 2– Legislative Context and Guidance** sets out the guidance and approach which was used to complete Stage 1 – Screening Assessment.
- **Section 3– Project Description** sets out the Proposed Grid Connection which has been subject to Stage 1 – Screening Assessment.
- **Section 4: Ecology Baseline** summarises the methodology and findings of the desk and field studies which have been completed to inform the Stage 1 – Screening Assessment.
- **Section 5 – Stage 2: Natura Impact Statement (NIS)** assesses the Proposed Grid Connection and assesses whether it will have an adverse effect on the integrity of European Sites identified as likely to be significantly affected during the Stage 1: AA Screening. In the case of the Proposed Grid Connection, the Stage 1: AA Screening only identified likely significant effects with respect to the Lower River Suir SAC.

1.1.1 Statement of Authority

This report was produced by Declan McGovern and reviewed by Dr. Robert Rowlands. Declan is an Ecologist in the Environment, Planning and Renewables Sector of RPS has been working with RPS since graduating from UCD with a masters in Applied Environmental Science in 2019. His completed master's thesis analysed the most effective sampling methods for capturing an accurate representation of the biodiversity present in motorway stormwater retention ponds. Declan's excels in Environmental Legislation, Freshwater Macroinvertebrate Monitoring techniques, Geographical

Software such as ARCGIS and QGIS. Since joining RPS, he has widened his ecological expertise and field survey experience to include terrestrial mammal surveys, habitat surveys and aquatic surveys. His experience as an ecologist has focused on the preparation of ecological assessments, including Invasive plant surveys and reports, aquatic habitat assessments, Ecological constraint reports, Screening for Appropriate Assessments and Natura Impact Assessments. Dr Rob Rowlands is a Technical Director in RPS with over 20 years' experience. He is an experienced multi-disciplinary project manager; in particular, advising on strategy with respect to ecology, landscape, heritage/archaeology and arboriculture. His ecological experience has included the completion of Ecological Impact Assessments (including for EIA) and AAs with respect to the Habitats and Birds Directive.

2 LEGISLATIVE CONTEXT AND GUIDANCE

2.1 Legislative context

2.1.1 European Context

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, better known as "The Habitats Directive", provides protection for habitats and species of European importance. Articles 3 to 9 provide the legislative means to protect habitats and species of Community interest through the establishment and conservation of a European Union (EU)-wide network of sites known as Natura 2000 (hereafter referred to as 'European Sites').

The requirements of the Directive have been transposed into Irish legislation principally through the Birds and Natural Habitats Regulations (BNHR) 2011, as amended and Part XAB of the Planning and Development Act 2015 (as amended).

Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to have a significant effect on or to adversely affect the integrity of European Sites (Annex 1.1). Article 6(3) establishes the requirement for Appropriate Assessment (AA):

> *"Any plan or project not directly connected with or necessary to the management of the [European] site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subjected to appropriate assessment of its implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public."*

Article 6(4) states:

> *"If, in spite of a negative assessment of the implications for the [European] site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, Member States shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted."*

Each European Site has assigned COs and a list of Qualifying Interest (QIs) and/or species of Special Conservation Interest (SCIs). The CO concept appears in the eighth recital of Directive 92/43/EEC which reads: "*whereas it is appropriate, in each area designated, to implement the necessary measures having regard to the conservation objectives pursued*". Article 1 then explains that "*conservation means a series of measures required to maintain or restore the natural habitats and the populations of species of wild fauna and flora at a favourable status*".

The National Parks and Wildlife Service (NPWS) publish conservation objectives for European Sites on their website. NPWS advise in the general introductory notes of their site-specific conservation objectives (SSCO) series publications, that an appropriate assessment based on their "*published conservation objectives will remain valid even if the conservation objective targets are subsequently updated, providing they were the most recent objectives available when the assessment was carried out*". NPWS advise that to assist in that regard, it is essential that the date and version are included when objectives are cited

2.1.2 National context

In the context of the Proposed Grid Connection, the requirement (to screen) for AA under the Habitats Directive is transposed by the Planning and Development Acts (2010 to 2018 as amended); 'the Planning Acts', and the Planning and Development Regulations (2010 to 2018, as amended).

Under Section 177U (5) of the Planning Acts', the competent authority shall determine that an AA of a proposed development is required if it cannot be excluded, on the basis of objective information, that the proposed development, individually or in combination with other plans or projects, will have a significant effect on a European Site(s).

Under Section 177V (2) the competent authority shall take into account each of the following matters in their AA determination:

a) The NIS (defined below)
b) Any supplemental information furnished in relation to an NIS
c) If appropriate, any additional information sought by the planning authority and furnished by the applicant in relation to a NIS
d) Any additional information furnished to the competent authority at its request in relation to a NIS
e) Any information or advice obtained by the competent authority
f) If appropriate, any written submissions or observations made to the competent authority in relation to the application for consent for proposed development
g) Any other relevant information.

Under the Planning Acts (177T), an NIS is defined as *"a statement, for the purposes of Article 6 of the Habitats Directive, of the implications of a proposed development, on its own or in combination with other plans or projects, for one or more than one European site, in view of the conservation objectives of the site or sites'. The NIS must 'include a report of a scientific examination of evidence and data, carried out by competent persons to identify and classify any implications for one or more than one European site in view of the conservation objectives of the site or sites*

2.2 Guidance and Approach

This document has been prepared with reference to the relevant guidance and principles. The principal national and European guidelines have been followed in the preparation of this document. The following list identifies these and other pertinent guidance documents:

- DoEHLG (2009, rev. 2010) Appropriate Assessment of Plans and Projects in Ireland Guidance for Planning Authorities. Department of the Environment, Heritage and Local Government
- EC (2000) Communication from the Commission on the Precautionary Principle. Office for Official Publications of the European Communities, Luxembourg
- EC (2006) Nature and biodiversity cases: Ruling of the European Court of Justice
- EC (2007) Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the Commission
- EC (2013) Interpretation manual of European Union Habitats. Version EUR28. European Commission, DG Environment, Nature ENV B.3
- EC (2014) Article 6 of the Habitats Directive: Rulings of the European Court of Justice
- EC (2019) Commission notice "Managing Natura 2000 sites, The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC". Brussels, 21.11.2018, C (2018) 7621 final. European Communities, Luxembourg
- EC (2020) Commission Notice 7730 'Guidance document on wind energy developments and EU nature legislation', Office for Official Publications of the European Communities, Luxembourg

- EC (2021a) (Amended) Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg. European Commission
- EC (2021b) (Amended) Commission notice “Guidance document on the strict protection of animal species of Community interest under the Habitats Directive”. Brussels, 21.10.2021, C (2021) 7301 final. European Commission
- NPWS (2013a) Ireland’s Summary Report for the period 2008 – 2012 under Article 12 of the Birds Directive. National Parks and Wildlife Services. Department of Arts, Heritage and the Gaeltacht, Dublin, Ireland
- NPWS (2019a) The Status of EU Protected Habitats and Species in Ireland. Volume 1: Summary Overview. Unpublished NPWS report. Edited by: Deirdre Lynn and Fionnuala O’Neill
- NPWS (2019b) The Status of EU Protected Habitats and Species in Ireland. Volume 2: Habitat Assessments. Unpublished NPWS report. Edited by: Deirdre Lynn and Fionnuala O’Neill
- NPWS (2019c) The Status of EU Protected Habitats and Species in Ireland. Volume 3: Species Assessments. Unpublished NPWS report. Edited by: Deirdre Lynn and Fionnuala O’Neill
- OPR (2021) Practice Note PN01: Appropriate Assessment Screening for Development Management. Office of the Planning Regulator, Dublin 7, Ireland.

The Commission’s 2018 Notice (EC, 2019) and both European and national case law have been reviewed and have informed the approach and content of this document in relation to key issues including the interpretation of concepts of site integrity, the absence of lacunae and the use of mitigation measures, amongst others.

3 Development Description

The Proposed Grid Connection will be entirely located within the townlands of Strogue and Clonmore, Co. Tipperary and will consist of the provision of the following:

i. *A 110 kilovolt (kV) 'loop-in/loop-out' Air-Insulated Switchgear (AIS) electrical substation, including 2 no. single-storey control buildings with staff welfare facilities, underground wastewater storage tank, all associated electrical plant, cabling, equipment and apparatus, and security fencing, within a substation compound with a total footprint of approximately 1.41ha;*

ii. *2.1 kilometre 110kV underground cabling route, with 0.9km following the public road corridor and 1.2km along new proposed access track across agricultural grassland (including joint bays, communication and earth sheath link chambers and all ancillary works along the route);*

iii. *2 no. lattice-type end masts with a height of 16 metres to facilitate connection to the existing 110kV Ikerrin-Thurles overhead electricity transmission line;*

iv. *1 no. temporary construction compound (including offices and staff welfare facilities);*

v. *Vegetation removal and Spoil Management;*

vi. *Site Drainage; and*

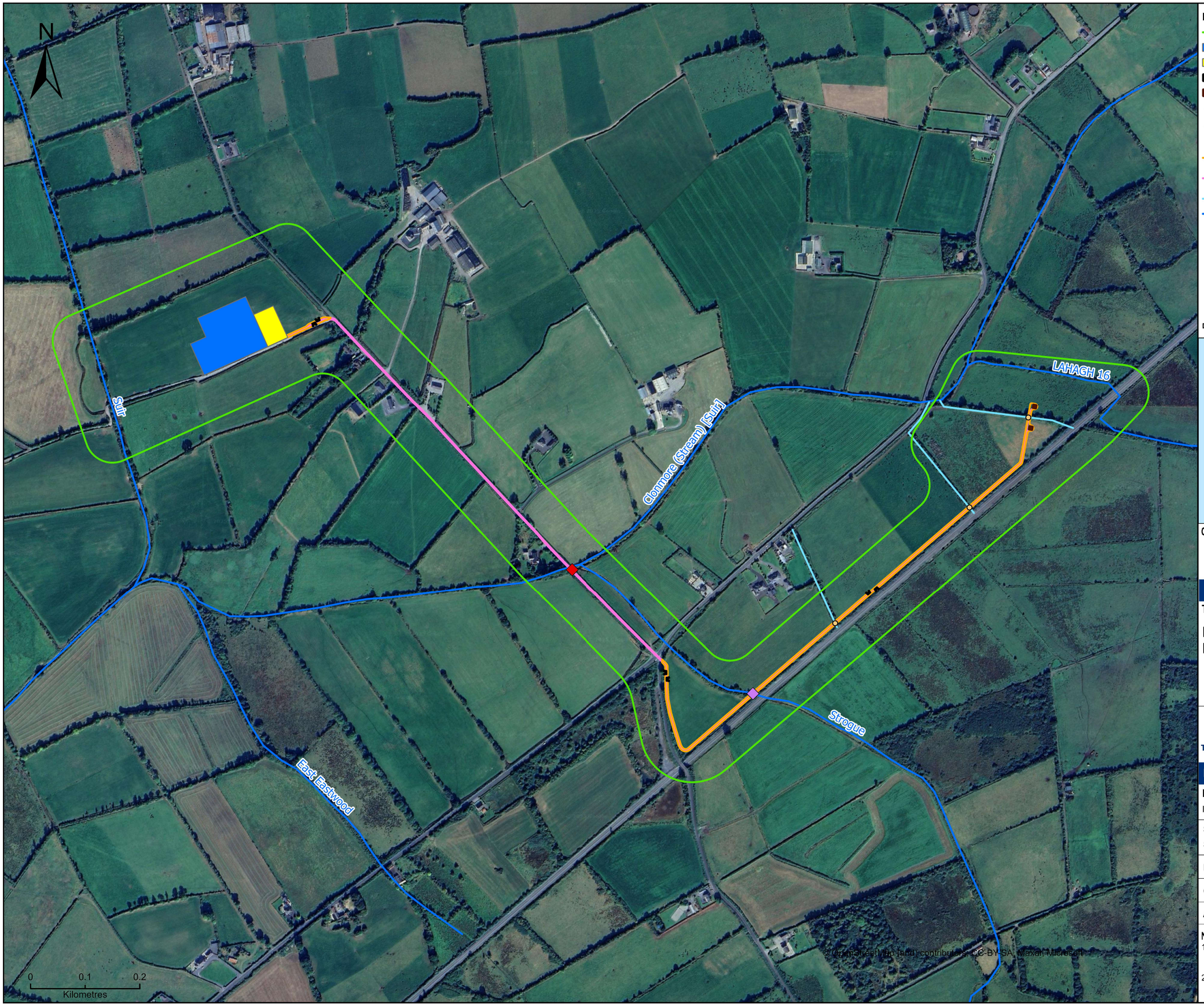
vii. *All ancillary works and apparatus.*

A ten-year planning permission is sought.

The Proposed Grid Connection will facilitate the connection of the consented Borrisbeg Renewable Energy Development Wind Farm, Planning Reference ABP: 318704 which comprises 9 No. wind turbines with a tip height of 185 metres with an estimated installed generating capacity of 63MW (herein referred to as the "Consented Wind Farm").

The Proposed Grid Connection will connect to the national grid via a 'loop-in-loop-out' connection. The onsite 110kV substation will connect to the nearby Ikerrin to Thurles 110kV overhead line (OHL) via approx. 2.1km of underground electricity cabling which will run in a south-eastward direction from the proposed onsite 110kV substation through a mix of local road and new track over agricultural land to the existing OHL. The existing OHL will be broken by 2 no. end masts (lattice type towers). Refer to **Figure 3-1** for the design layout. The construction methods for the above elements are detailed below in **Section 3.1.1** to **3.1.8.**

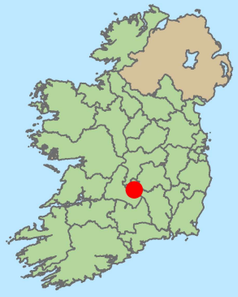
The Ecology Survey Area for the Proposed Grid Connection is illustrated in **Figure 4-1** and was surveyed on 7th May 2025 to inform the appraisal of the Proposed Grid Connection. The walkover survey focussed on habitats, IAPS, bird and mammals occurrences along the Proposed Grid Connection footprint (and approximately 20m either side of the footprint where access allowed and visual inspection where access was limited).



Legend

- EIAR Boundary
- 110kV Substation
- Temporary Construction Compound
- Joint Bays
- End Masts
- New Clear span crossing
- HDD crossing under bridge
- Field Drain Culverts
- Proposed Cabling Route with New Track
- Proposed Cabling Route in Public Road (to be upgraded)
- Field Drains
- EPA Watercourses

Data Sources: EPA



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NOTE:

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3.1 Construction Methodologies

3.1.1 On-site Electricity Substation and Control Buildings

The Proposed on-site 110kv electricity substation and control buildings will be constructed as follows:

1. The area of the on-site substation will be marked out using ranging rods or wooden posts and the soil and overburden stripped and formed into a berm beside the substation.
2. 2 no. control buildings will be built within the on-site substation compound;
3. The foundations will be excavated down to the level indicated by the designer and appropriately shuttered reinforced concrete will be laid over it. An anti-bleeding admixture will be included in the concrete mix;
4. The block work walls will be built up from the footings to DPC level and the floor slab constructed, having first located any ducts or trenches required by the follow on mechanical and electrical contractors;
5. The block work will then be raised to wall plate level and the gables & internal partition walls formed. Scaffold will be erected around the outside of the building for this operation;
6. The roof slabs will be lifted into position using an adequately sized mobile crane;
7. The timber roof trusses will then be lifted into position using a telescopic load all or mobile crane depending on-site conditions. The roof trusses will then be felted, battened, tiled and sealed against the weather;
8. The electrical equipment will be installed and commissioned;
9. Perimeter fencing will be erected;
10. The construction and components of the substation will be built to EirGrid specifications.

3.1.2 Underground Electrical (110kV) and Communication Cabling

The underground cabling works will consist of the installation of ducts in an excavated trench to accommodate electrical and fibre communications cables to facilitate a loop connection between the proposed 110kV on-site substation and the existing110kV Ikerrin to Thurles OHL. The underground electrical cabling will be laid beneath the surface of new tracks in agricultural land and the public roads (L-7039, L-7038 and R433) using the following methodology:

1. Before works commence, updated surveying will take place along the proposed cable route, with all existing culverts and services identified. All relevant bodies i.e., ESBN, Tipperary County Council etc. will be contacted and all up to date information for all existing services sought.
2. When the cable is located on public roads, a traffic management plan will be prepared prior to any works commencing. A road opening licence will be obtained where required and all plant operators and general operatives will be inducted and informed as to the location of any services.
3. A tracked 360-degree excavator will then proceed to dig out the proposed trench, typically to a depth of 1300mm, within which the ducts will be laid.

4. The cable ducts will be concrete surrounded where ducts pass under the public road and under drains or culverts.
5. Trench supports will be installed, or the trench sides will be benched or battered back where appropriate and any ingress of ground water will be removed from the trench using submersible pumps, fitted with appropriate silt filtration systems, to prevent contamination of any watercourse.
6. Once the trench has been excavated, a base-layer will be laid and compacted, comprising Clause 804, or 15 Newton CBM4 concrete as required.
7. The ducting will be installed as per specification, with couplers fitted and capped to prevent any dirt etc. entering the duct. In poor ground conditions, the ends of the ducts will be shimmed up from the bed of the trench, to prevent any possible ingress of water dirt. The shims will be removed again once the next length has been connected. Extreme care will be taken to ensure that all duct collars (both ends) are clean and in good condition prior to ducts being joined.
8. Six pre-cast concrete joint bay chambers typically 2.5m x 6m x 1.75m will be installed below finished ground level, approximately 750 metres apart or as otherwise required by ESB/EirGrid and electrical requirements.
9. As the works progress, the as-built location of the ducting will be recorded using a total station or GPS.
10. As per the associated base-layer (Clause 804 material or 15 Newton CBM4 concrete) will be installed and compacted as per approved detail, with care not to displace the ducting.
11. Spacers will be used to ensure that the correct cover is achieved at both sides of the ducting.
12. The remainder of the trench will be backfilled in two compacted layers with approved engineer's specified material.
13. Yellow marker warning tape will be installed across the width of the trench, at 300mm depth.
14. The finished surface is to be reinstated, as per original specification.
15. Marker posts will then be placed at regular intervals (generally at joint bays and any change in direction) to denote the location of the underground cabling.

3.1.3 Temporary Construction Compound

One temporary construction compound will be located adjacent to the proposed 110kV substation and will be constructed as follows:

1. The area to be used as the compound will be marked out at the corners using ranging rods or timber posts. Drainage runs and associated settlement ponds will be installed around the perimeter;
2. The compound platform will be established using a similar technique as the construction of the substation platform;
3. A layer of geo-grid will be installed where deemed necessary by the designer and compacted layers of well graded granular material will be spread and lightly compacted to provide a hard area for Site offices and storage containers;
4. A limited amount of fuel will have to be stored in appropriately bunded containers and a designated area for oil storage will be constructed within the compound;
5. A waste storage area will be provided within the compound;
6. The compound will be fenced and secured with locked gates if necessary; and,

7. Upon completion of the Proposed Grid Connection, the temporary construction compound will be decommissioned and allowed to vegetate naturally.

3.1.4 Proposed Access Tracks

Where the grid connection and communication cables are laid in agricultural fields, the following steps will be undertaken:

1. Excavation will take place to a competent stratum beneath the topsoil (as agreed with the site designer and resident engineer).
2. Road construction will be carried out in sections of approximately 50m lengths i.e., no more than 50m of access road to be excavated without re-placement with stone fill.
3. The proposed new roads will be constructed at the same level as existing ground levels in order to ensure natural flow paths are maintained in areas within the floodplain.
4. Existing drains will be culverted under the proposed access track which will provide a drainage outlet for flood water following a significant flood event, preventing any damming effect from the proposed access roads within the site-specific flood zones.
5. Placement of spoil berms along the proposed access roads shall be avoided within the site-specific flood zones.
6. The road build-up will be approximately 500mm of selected granular fill. Granular fill to be placed in layers in accordance with the designer's specification.
7. Access roads to be finished with a layer of capping material across the full width of the road.
8. A layer of geogrid/geotextile may be required at the surface of the competent stratum.

3.1.5 End Masts

The proposed on-site 110kV substation will connect to the existing 110kV Ikerrin to Thurles overhead line (OHL). Two proposed end masts (lattice type towers) will be located immediately beneath the existing OHL. The existing OHL conductor will be terminated at these masts to facilitate a new OHL loop connection following the proposed c.2km underground grid connection route leading to the on-site 110kV substation. The following section outlines the construction methodology for the new loop in tower structures which will be constructed underneath the existing 110kV Ikerrin to Thurles OHL:

1. The Steel lattice tower sites are scanned for underground services such as cables etc.
2. A foundation c.4m x 4m is excavated and the formation levels (depths) will be checked by the on-site foreman The excavated material will be temporarily stored close to the excavation and excess material will be used as berms along the grid access track. See **Figure 3-2** and **Figure 3-3**.
3. To aid construction, a concrete pipe is placed into each excavation to allow operatives level the mast at the bottom of the excavation. The frame of the reinforcing bars will be prepared and strapped to a concrete pipe with spacers as required. The reinforcing bars will be lifted into each excavated foundation using the excavator and chains/slings. The base and body section of each tower will then be assembled next to excavation.
4. Concrete trucks will pour concrete directly into each excavation in distinct stages.
5. A third pour for the leg of the tower 1m x 1m and will be 300mm over ground level.

6. Once the main concrete foundation pour is cured after circa five days, metal shuttering is installed to accommodate the placement of concrete around the tower legs. During each pour, the concrete will be vibrated thoroughly using a vibrating poker.
7. Once the concrete is set after the five days the shuttering is removed.
8. The tower foundations will be backfilled one leg at a time with the material already excavated at the location. The backfill will be placed and compacted in layers. All dimensions will be checked following the backfilling process.
9. The existing overhead line will be de-energised by ESB so work can commence on the construction of the towers.
10. An earth mat consisting of copper or aluminium wire will be laid circa 400mm below ground around the tower. This earth mat is a requirement for the electrical connection of the equipment on the tower structure.
11. Once the base section of each tower is completed and the concrete sufficiently cured, it is ready to receive the tower body. Temporary hardstands may be removed and disposed of off site where necessary.
12. A hardstand area for the crane will be created by laying geogrid material on the ground surface and overlaying this geogrid with a suitable grade of aggregate.
13. A physical barrier (Heras Fence Site Boundary) will be put in place to restrict plant from coming too close to the OHL.
14. The towers will be constructed lying flat on the ground beside the recently installed tower base.
15. The conductor will be moved off centre using a stay wire and weights to anchor the stay wire to ground.
16. The tower section will be lifted into place using the crane and guide ropes.
17. The body sections will be bolted into position.
18. The conductor will be centred over the towers and held in place. Once the conductor is secured at both ends it is then cut and attached onto each tower. The small section of conductor in between the two towers will be removed and utilised as connector wire for the new towers. Refer to **Figure 3-4** for a constructed tower.

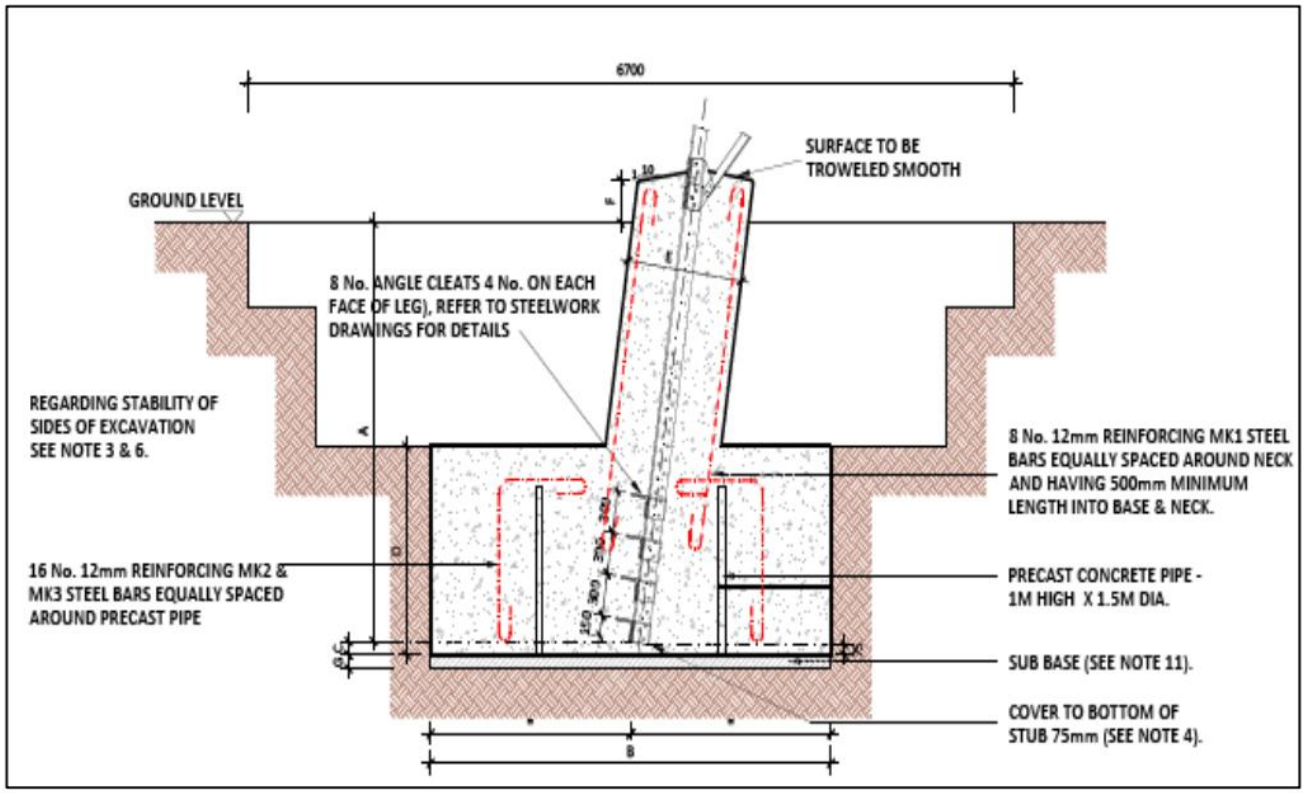


Figure 3-2: New Mast Foundation: Source TII Group

Figure 3-3: Standard 110kV mast foundation excavation. Source: TIi Group

Figure 3-4: Steel Lattice Tower Complete. Source: Applicant, Ardderroo Wind Farm, Co. Galway.

3.1.6 Existing Underground Services

Any underground services encountered along the cable route will be surveyed for level and the ducting will pass over the service provided adequate cover is available. A minimum clearance of 300 mm will be required between the bottom of the ducts and the service in question. If the clearance cannot be achieved the ducting will pass under the service and again 300 mm clearance between the top of the communications duct and bottom of the service will be achieved. In deeper excavations an additional layer of marker tape will be installed between the communications duct and top-level yellow marker tape. If the required separation distances cannot be achieved then a number of alternative options are available such as using steel plates laid across the width of the trench and using 35N concrete surrounding the proposed ducting, with marker tape on the side of the trench. Back fill around any utility services will be with dead sand/pea shingle where appropriate.

3.1.7 Joint Bays

Joint bays are typically pre-cast concrete chambers where lengths of cable will be joined to form one continuous cable. Bays are typically 2.5m x 6m x 1.75m pre-cast concrete structures installed below finished ground level. Six joint bays, in groups of two are proposed along the proposed

underground grid connection cable route, at a minimum of 750 metres apart or as otherwise required by ESB/EirGrid and electrical requirements. Two joint bays are proposed to be located in a new track adjacent to the L-70391 third class road northeast of the proposed 110kV substation. The four remaining joint bays are proposed to be located in a new track in an agricultural field in the townland of Strogue. Therefore, public access/traffic will not be impacted during the placement or maintenance of the proposed joint bays. During construction the joint bay locations will be completely fenced off once constructed and will be covered until cables are being installed. Once the cabling is installed the joint bays will be permanently backfilled with the existing surface re-instated and there will be no discernible evidence of the joint bay on the ground.

In association with joint bays, Communication Chambers are required at every joint bay location to facilitate jointing of the communication cabling. Earth Sheath Link Chambers are also required approximately every second joint bay along the cable route. Earth Sheath Links are used for earthing and bonding cable sheaths of underground electrical cabling, installed in a flat formation, so that the circulating currents and induced voltages are eliminated or reduced. Earth Sheath Link Chambers and Communication Chambers are located in proximity to Joint Bays and are pre-cast concrete structures with a steel access cover at finished surface level. The locations of the joint bays and chambers are shown on **Figure 3-1.** Refer to **Figure 3-5** above for a standard joint bay. The precise siting of all Joint Bays, Earth Sheath Link Chambers and Communication Chambers within the underground cabling route corridor assessed is subject to approval by ESBN and/or EirGrid.

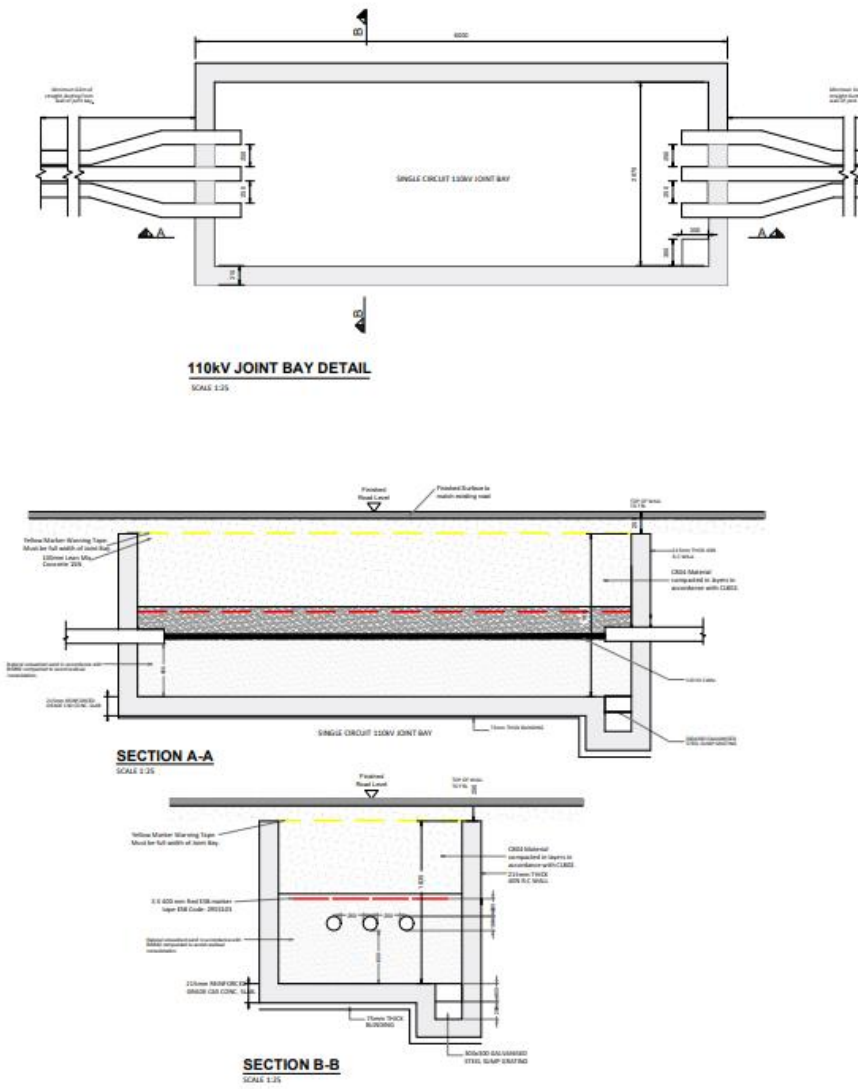


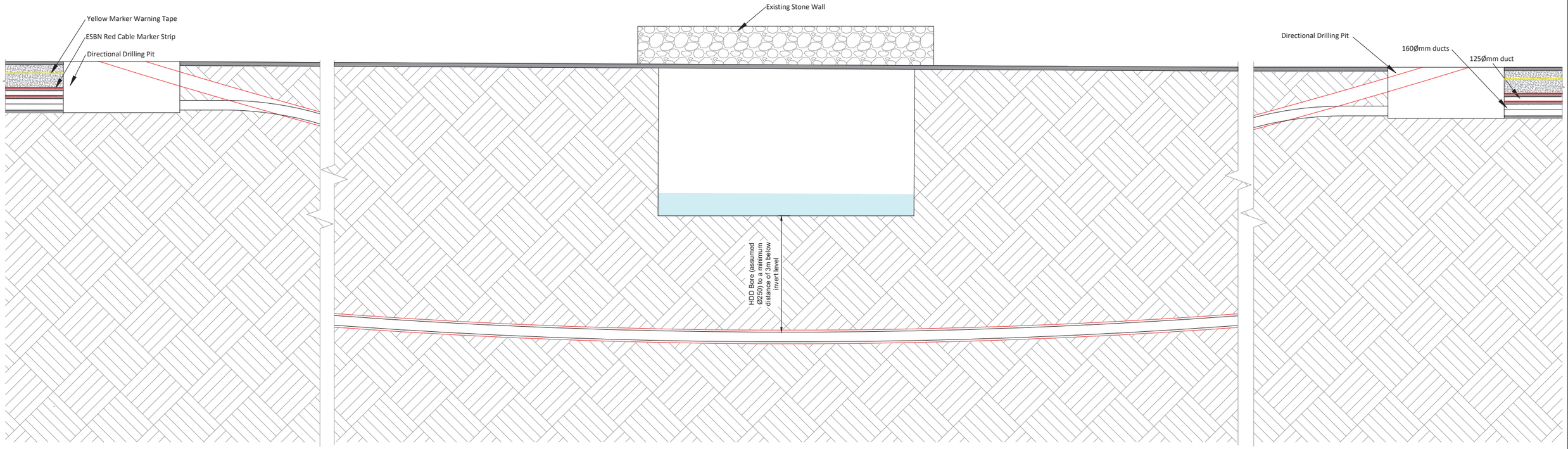
Figure 3-5: Standard Joint Bay

3.1.8 Watercourse Crossings

3.1.8.1.1 Horizontal Directional Drilling

The Clonmore watercourse crossing is located in the L-7039 road. It is proposed to cross this watercourse via the Horizontal Directional Drilling (HDD) method. This method comprises drilling under obstacles such as bridges, culverts, railways, water courses, etc. to install cable ducts under the obstacle. The directional drilling methodology for the underground grids connection cabling route is further detailed in **Figure 3-6** below.

1. The HDD method of duct installation will be carried out using Vermeer D36 x 50 Directional Drill (approximately 22 tonnes), or similar plant, for the directional drilling at watercourse/culvert crossings. The launch and reception pits will be approximately 0.55m wide, 2.5m long and 1.5m deep.
2. The pits will be excavated with a suitably sized excavator.
3. The drilling rig will be securely anchored to the ground by means of anchor pins which will be attached to the front of the machine. The drill head will then be secured to the first drill rod and the operator shall commence to drill into the launch pit to a suitable angle which will enable him to obtain the depths and pitch required to the line and level of the required profile. Drilling of the pilot bore shall continue with the addition of 3.0m long drill rods, mechanically loaded and connected into position.
4. During the drilling process, a mixture of a natural, inert and fully biodegradable drilling fluid such as Clear Bore™ and water is pumped through the centre of the drill rods to the reamer head and is forced in to void and enables the annulus which has been created to support the surrounding subsoil and thus prevent collapse of the reamed length.
5. Depending on the prevalent ground conditions, it may be necessary to repeat the drilling process by incrementally increasing the size of the reamers. When the reamer enters the launch pit, it is removed from the drill rods which are then passed back up the bore to the reception pit and the next size reamer is attached to the drill rods and the process is repeated until the required bore with the allowable tolerance is achieved.
6. The use of a natural, inert and biodegradable drilling fluid such as Clear Bore™ is intended to negate any adverse impacts arising from the use of other, traditional polymer-based drilling fluids and will be used sparingly as part of the drilling operations. It will be appropriately stored prior to use and deployed in the required amounts to avoid surplus.
7. Should any excess drilling fluid accumulate in the reception or drilling pits, it will be contained and removed from the Site in the same manner as other subsoil materials associated with the drilling process to a licensed recovery facility.
8. Backfilling of launch and reception pits will be conducted in accordance with the normal specification for backfilling excavated trenches. Sufficient controls and monitoring will be put in place during drilling to prevent frack-out, such as the installation of casing at entry points where reduced cover and bearing pressure exits. Sufficient controls and monitoring will be put in place during drilling to prevent frack-out, such as the installation of casing at entry points where reduced cover and bearing pressure exits.



Standard Horizontal Directional Drill Under Exisitng Watercourse Crossing

SCALE: 1:100 @ A3

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Model File Identifier: IE002700-RPS-00-XX-DR-Z-XR0007

Scale: 1:100 @ A3

Created on: 29/07/2025

Sheets: 06 of 10

Project: BORRISBEG RENEWABLE ENERGY DEVELOPMENT

Title: Standard 110 kV Horizontal Directional Drilling Under Existing Watercourse Crossing

File Identifier: IE002700-RPS-00-XX-DR-Z- DG0006-07

Status: S01

Rev: P01

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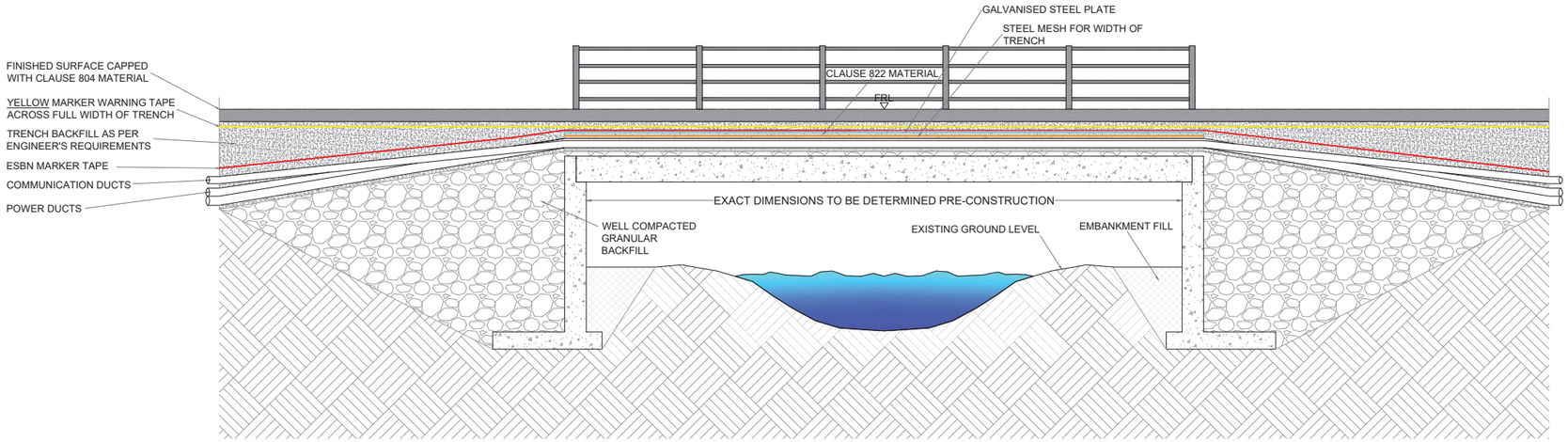
3.1.8.2 Clear Span Watercourse Crossing

It is proposed to construct a clear-span watercourse crossing over the Strogue Stream along the grid connection cable route. The clear-span watercourse crossing methodologies presented below will ensure that no instream works are necessary. The standard construction methodology for the installation of a clear-span watercourse crossing is as follows:

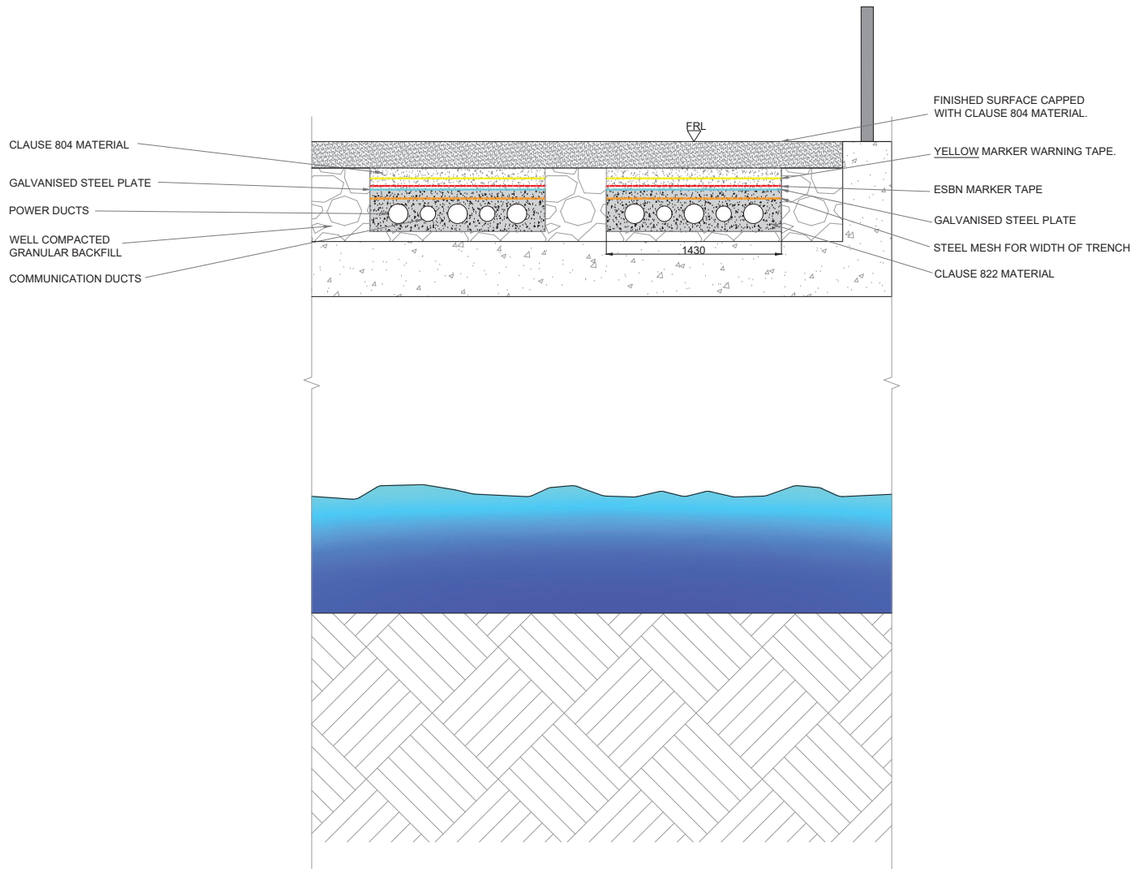
1. The access road on the approach either side of the watercourse will be completed to a formation level which is suitable for the passing of plant and equipment required for the installation of each watercourse crossing.
2. All drainage measures along the proposed road will be installed in advance of the works.
3. A foundation base will be excavated to rock or competent ground with a mechanical excavator with the foundation formed in-situ using a semi-dry concrete lean mix. The base will be excavated along the stream bank with no instream works required.
4. Once the foundation base has been completed, the pre-cast concrete box culvert will be installed using a crane which will be set up on the bank of the watercourse and will be lifted into place from the bank with no contact with the watercourse.
5. Where the box culvert is installed in sections, the joints will be sealed to prevent granular material entering the watercourse,
6. Once the crossing is in position stone backfill will be placed and compacted against the structure up to the required level above the foundations.
7. Underground cabling ducting will be contained within the road make-up of the proposed crossing.

This watercourse crossings will be constructed to the specifications of the OPW bridge design guidelines ’Construction, Replacement or Alteration of Bridges and Culverts - A Guide to Applying for Consent under Section 50 of the Arterial Drainage Act, 1945’, and in consultation with Inland Fisheries Ireland. Confirmatory inspections of the proposed new watercourse crossing location will be carried out by the Project Civil/Structural Engineer and the Project Hydrologist prior to the construction of the crossing. Refer to **Figure 3-7** below for details



Clear Span Watercourse Crossing - 110kV - Longitudinal Section

SCALE: 1:100 @A3



Clear Span Watercourse Crossing - 110kV - Cross Section

SCALE: 1:50 @A3

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(v) All Levels refer to Ordnance Survey Datum, Malin Head.

(vi) Exact location of cable/joint bay in the road curtilage to be subject to ESB specifications and agreement with Tipperary County Council.

(vii) Final levels may vary depending on local ground conditions

(viii) Layout and arrangements of electrical equipment is shown indicatively and for illustration purposes only as final specifications of buildings and electrical equipment is to be dictated by EirGrid/ESBN requirements.

(ix) Crossings to be sized appropriately for 1 in 100yr flooding.

(x) New culvert crossings to use 900mm pipes, or to be sized to engineer's requirements.

(xi) The exact configuration of the underground cabling will be set by the requirements of the electrical designers at detailed design stage.

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Project
BORRISBEG RENEWABLE ENERGY DEVELOPMENT

Title
Standard 110kV Clear Span Watercourse Crossing

Model File Identifier
IE002700-RPS-00-XX-DR-Z-XR0005

File Identifier
IE002700-RPS-00-XX-DR-Z- DG0006-04

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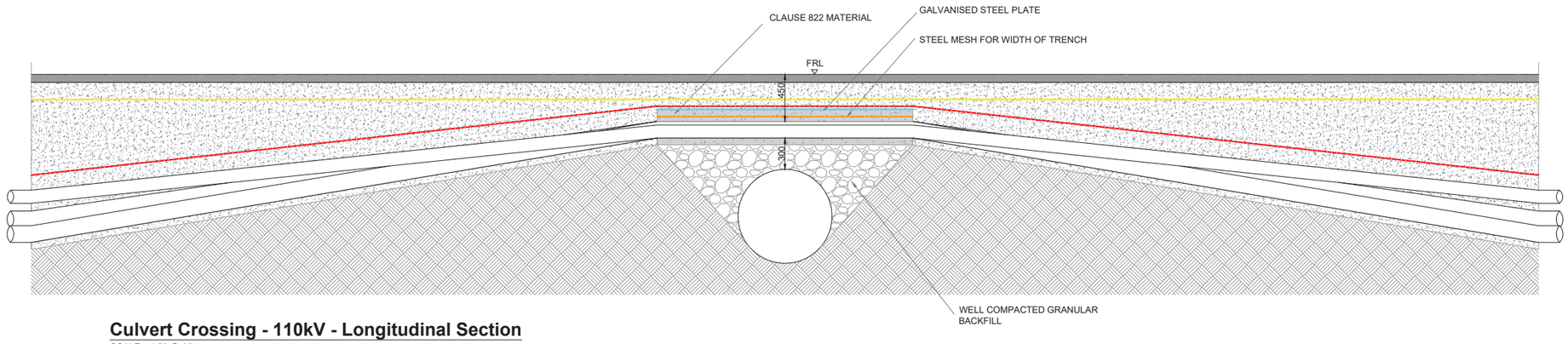
3.1.8.2.1 Culvert Crossing

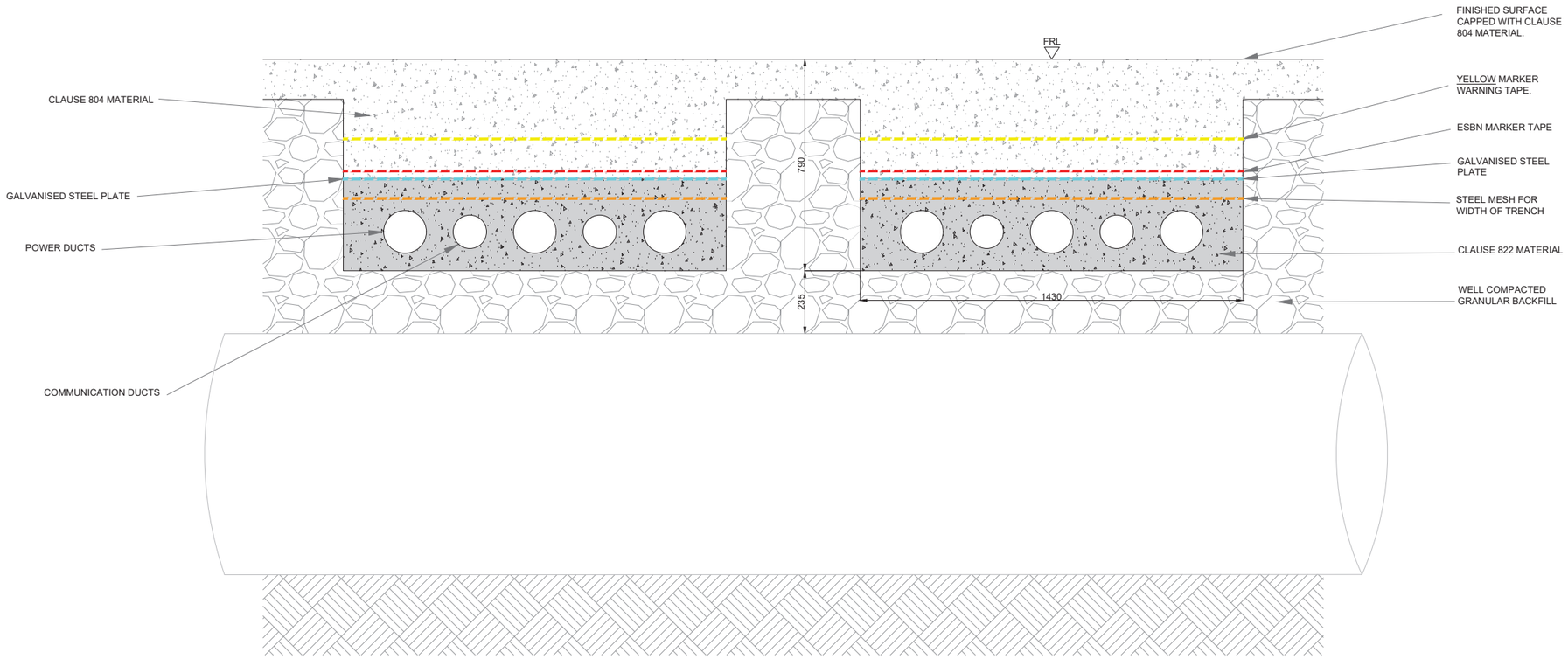
All new proposed culverts and proposed culvert upgrades at field drain crossings required for the Proposed Grid Connection, will be suitably sized for the expected peak flows in the watercourse. Some culverts may be installed to manage drainage waters from works areas of the Proposed Grid Connection, particularly where the waters have to be taken from one side of an existing roadway to the other for discharge. All culverts will be inspected regularly to ensure there is no blockage by debris, vegetation or any other material that may impede conveyance. Please see **Figure 3-8** below. the culverts will be constructed/upgraded as follows:

1. The access road on the approach to the channel will be completed to a formation level which is suitable for the passing of plant and equipment required for the installation of the culvert and drain crossing.
2. The installation of the culvert will take place in low flow conditions.
3. Where a flow exists, the water running through the channel will be pumped around the water crossing location and back into the channel downstream of the works area.
4. Where over pumping is required, measures will be taken to ensure that the pumped water discharge does not disturb the stream bed with the force of water from the discharge. A steel plate to reduce the force of the flow will be used where appropriate.
5. The Project Engineer will determine the required gradient of the culvert. The pipe must be laid at a gradient that will ensure water is contained within the pipe at all times. Where necessary a rock armour dam will be installed within the stream to reduce flow and ensure an acceptable depth of water remains within the pipe. Where a gradient of 1 – 1.5% is identified, the use of a baffle has been recommended.
6. The bed of the channel will be excavated, if necessary, to achieve the correct line and to allow the pipe to be embedded 300mm into the base of the existing drain.
7. The embedded section will be allowed to fill naturally with existing material within the base of the drain or with suitable drainage material such as gravel or round shingle, where deemed applicable.
8. The culvert will be lowered into place using an excavator with a lifting mechanism.
9. Smaller 50mm stone, sourced on site will be placed upon the sub-base to construct the road over the water crossing.



Culvert Crossing - 110kV - Longitudinal Section

SCALE 1:50 @ A3



Culvert Crossing - 110kV - Cross Section

SCALE: 1:20 @ A3

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(x) New culvert crossings to use 900mm pipes, or to be sized to engineer's requirements.

(xi) The exact configuration of the underground cabling will be set by the requirements of the electrical designers at detailed design stage.

Rev	Date	Drn / Chk	Amendment / Issue	App

Client

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Project
BORRISBEG RENEWABLE ENERGY DEVELOPMENT

Title
Standard 110kV Culvert Crossing

Model File Identifier
IE002700-RPS-00-XX-DR-Z-XR0005

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3.2 Operation

A condition of the Consented Wind Farm's grant includes for an operational lifespan of 30 years from the date of full operational commissioning of the proposed turbines. The proposed 110kV substation will consolidate the energy generated by each wind turbine of the Consented Wind Farm and facilitate its export to the national grid. Following the end of the Consented Wind Farm's operational lifespan, the equipment may be replaced with a new technology, subject to planning permission being obtained, or the Consented Wind Farm will be decommissioned fully. However, the Proposed Grid Connection infrastructure will remain in place as it will become part of the National Electricity Grid under the ownership and control of the ESB and EirGrid.

3.2.1 Maintenance

The electricity substation and access tracks will require periodic maintenance. The Substation will be operational 24 hours per day, 7 days a week throughout the year. Substations can be operated remotely and manually. Supervisory operational and monitoring activities will be carried out remotely using a SCADA system, with the aid of computers connected via a telephone modem link. The following maintenance procedures will also be adhered.

- Periodic service and maintenance work which include some vehicle movement.
- For operational and inspection purposes, substation access is required.
- Servicing of the substation equipment will be carried out in accordance with the manufacturer's specifications, which would be expected to entail the following:
  - Six-month service – three-week visit
  - Annual service – six-week visit
  - Weekly visits as required.

It is estimated that 1-2 daily visits will be made to the substation for authorised persons and vehicles to undertake inspections. Occasional technical problems may require maintenance visits by technical staff. During the six-month and annual service visits, some waste (lubricating and cooling oils, packaging from spare parts or equipment, unused paint, etc.) will arise. This will be recorded and removed from the site and reused, recycled or disposed of in accordance with the relevant legislation in an authorised facility. Authorised persons and vehicles (personnel cars) will periodically visit the Site to undertake minor routine maintenance and inspection, if and when required. Although the level of activity required for the maintenance of the Proposed Grid Connection infrastructure is minimal, the impacts associated with traffic volumes for this period are assessed in Chapter 14 Material Assets: Traffic and Transport.

3.2.2 Monitoring

The CEMP sets out a programme of monitoring required for the operational phase of the project. The CEMP should be consulted for detailed information on the monitoring requirements during the operational phase; however, a summary of the key information is provided below:

i. Monthly water sampling and laboratory analysis will be undertaken for the first six months during the operational phase.

ii. The drainage system will be monitored in the operational phase until such a time that all areas that have been reinstated become re-vegetated and the natural drainage regime has been restored.

iii. Post-construction linear habitat restoration monitoring: Monitoring of minor segments of restored hedgerow which was removed to facilitate the construction

of the access track within agricultural lands in the townland of Strogue. Monitoring will occur following the main growing season (i.e., in September) in a given year for the first five years of growth.

3.3 Decommissioning

The Grid Connection infrastructure will remain in place as it will become part of the National Electricity Grid under the ownership and control of the ESB and EirGrid.

4 Ecology Baseline

4.1 Methodology

4.1.1 Desk Study

A desk study was completed in April 2025 to identify relevant European Sites and information regarding their QIs, SCIs and Conservation Objectives etc. This desk study methodology along with results are detailed in **Appendix B**.

1.1.1 Field Survey

The Ecology Survey Area for the Proposed Grid Connection (as illustrated in **Figure 4-1**) was previously surveyed during 2022 and 2023 to inform the planning application for the Consented Wind Farm. An update ecology walkover survey was completed by a qualified ecologist on 7th May 2025 to inform the appraisal of the Proposed Grid Connection. The walkover survey focussed on habitats, IAPS, bird and mammals occurrences along the Proposed Grid Connection works footprint (and approximately 20m either side of the footprint where access allowed. In areas where access was limited, visual inspections were undertaken and where backed up by the desktop assessment.

The otter surveys were conducted as per NRA (2009) guidelines (Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes). This involved a search for all otter signs e.g., spraints, scat, prints, slides, trails, couches and holts. The dedicated otter surveys also followed the guidance as set out in NRA (2008) 'Guidelines for the Treatment of Otters Prior to the Construction of National Roads Schemes. A search for Third Schedule Invasive Plant species was also undertaken with cognisance of *The Management of Invasive Alien Plant Species on National Roads* – Technical Guidance. GE-ENV-01105. Transport Infrastructure Ireland.

Legend

Ecology Survey Area

Client

Buirios Ltd

Borrisbeg Grid Connection

Title

Ecology Survey Area

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Issue Details

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4.2 Survey Findings

4.2.1 Habitats

Habitats within the Proposed Grid Connection survey area where reassessed in May 2025 to denote if material changes had occurred in the interim between surveys that were carried out for the Consented Wind Farm in 2022 and 2023.

No significant material changes to the original habitat baseline occurred. Two small areas previously noted as agricultural grassland adjacent to the road had been overgrown and colonised with shrubby plants and grasses and are now classified as Dry meadows and grassy verges (GS2). This habitat was found to the south of the Proposed Grid Connection survey area and does not have affinity to any Annex I grassland habitat. This habitat will not be impacted by the Proposed Grid Connection works.

The substation, temporary construction compound, sections of the underground cabling route and end mast locations are located within areas of agricultural grassland (GA1). Species composition here includes ryegrass sp., common dock (*Rumex obtusifolius*), common daisy (*Bellis perennis*), common dandelion (*Taraxacum officinale*), spear thistle (Cirsium vulgare), Cuckoo flower (*Cardamine pratensis*), germander speedwell (*Veronica chamaedrys*), common buttercup (*Ranunculus acris*), cowslip (*Primula veris*) and soft rush (*Juncus effusus*). The underground cabling route for the majority of its length will occur on built land (BL3) with little to no vegetation present here save for common daisy and grass species growing in the middle of the road. The underground cabling route crosses under the Clonmore Stream (FW2) via HDD drilling and will not interact with the river at this location.

The underground cabling route crosses through hedgerows (WL1) and treelines (WL2) to the south of the Site. Species composition within the hedgerows consists of hawthorn (*Crataegus monogyna*), bramble (*Rubus fruticosus*), bush vetch (*Vicia sepium*), common nettle (*Urtica dioica*), alder (*Alnus glutinosa*), blackthorn (*Prunus spinosa*) and ash (*Fraxinus excelsior*) while species composition within the treelines consisted of elm and ash and included aforementioned hedgerow species which included hawthorn, bramble, alder, blackthorn and ash. The underground cabling route crosses over the Strogue river (FW2) and a number of drainage ditches (FW4) before it terminates at the end masts. Species composition within the Strogue river was very low with fools' watercress (*Helosciadium nodiflorum*) and common horsetail (*Equisetum arvense*) present instream in slower flowing sections while species within drainage ditches across the Site consisted of common horsetail, common reed (*Phragmites australis*) and marsh marigold (*Caltha palustris*). Habitats are mapped in Figure 4-2 below.

Legend

Ecology Survey Area

Habitats

- BL3
- GA1
- GA2
- GS2
- FW2
- FW4
- WL1
- WL2

Data Sources:

Client

Buirios Ltd

Borrisbeg Grid Connection

Title

Habitats within Ecology Survey Area

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Issue Details

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4.2.2 Otter Surveys

No otter signs, couches or holts were encountered during the ecological walkover survey in May 2025 which denotes no change in otter signs within the Site area since 2022/2023 surveys

4.2.3 Invasive Alien Plant Surveys

No Third Schedule Invasive plants were encountered during the ecological walkover survey in May 2025 which denotes no change in the Third Schedule IAPS of the Site since 2022/2023 surveys.

5 APPROPRIATE ASSESSMENT – STAGE 2: NATURA IMPACT STATEMENT

5.1 Introduction

Following on from the Stage 1 – Screening Assessment (**Appendix A** of this report), it has been concluded that the Proposed Grid Connection has potential for LSEs on one European Site due to the activities associated with the construction phase and/or the operational and maintenance phase of the Proposed Grid Connection. Refer to Figure 5-1 for the European Sites located within the ZOI of the Proposed Grid Connection. LSEs have been identified with respect to the following European Site and its associated QIs:

- Lower River Suir SAC (Site Code: 002137)

A Stage 2 - NIS has been prepared based on the Proposed Grid Connection description set out in **Section 3** of this document and with reference to the Conservation Objectives for the European Site listed above. The assessment considers whether the Proposed Grid Connection will result in an adverse effect on the integrity of this European Site.

The integrity of a European Site is defined as "…*the coherent sum of the site's ecological structure, function and ecological processes, across its whole area, which enables it to sustain the habitats, complex of habitats and/or populations of species for which the site is designated*".

The published guidance states that the integrity of a European Site relates to its Conservation Objectives. The effects of the Proposed Grid Connection are assessed against these Conservation Objectives, as published by the National Parks and Wildlife Service (NPWS).

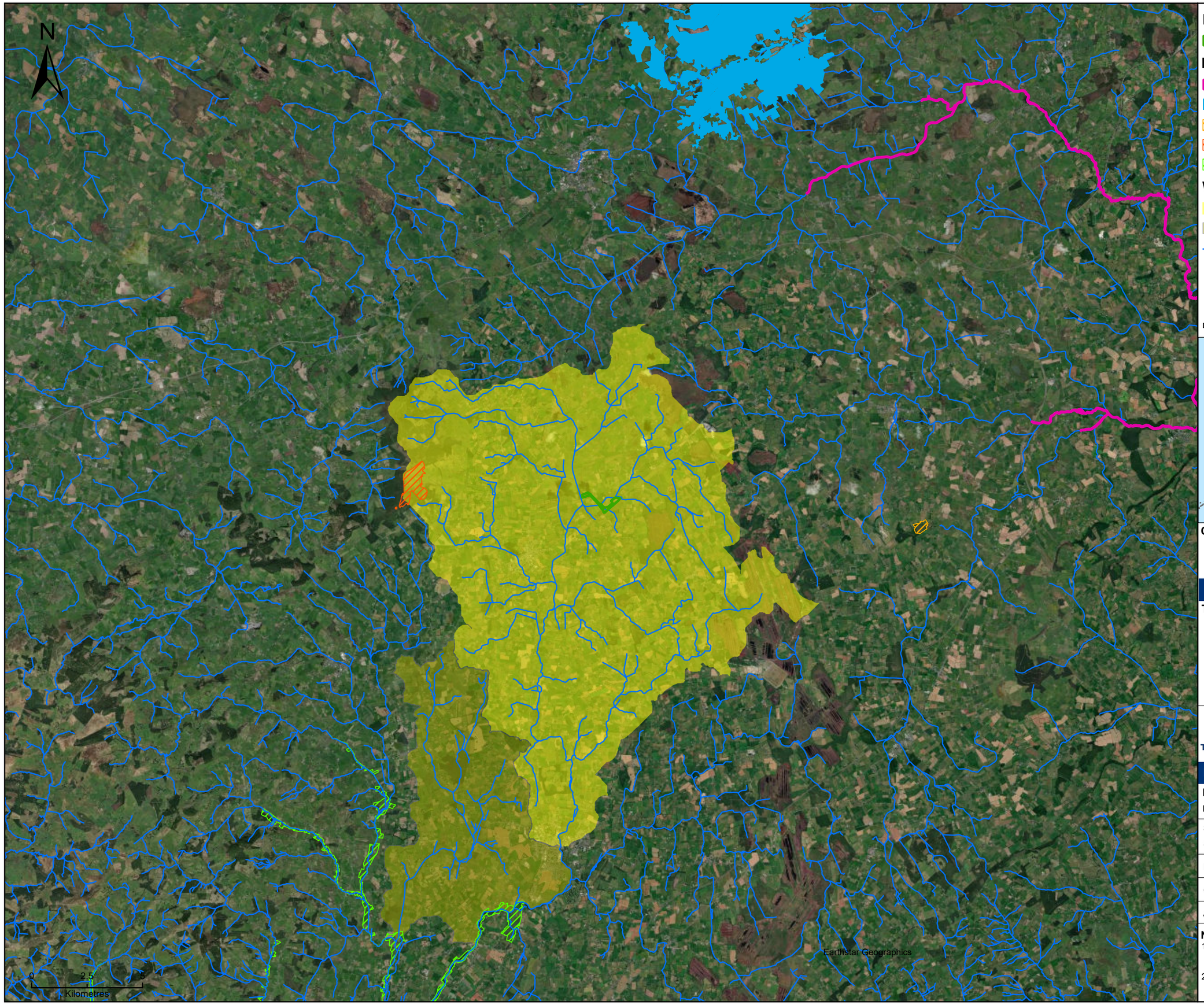
5.2 Summary of Stage 1 – Screening Assessment

Based on the Source-Pathway-Receptor model and LSE's (see **Appendix B**), the Stage 1 - Screening Assessment for the Proposed Grid Connection concluded that the potential effects arising from the Proposed Grid Connection are as follows:

- Hydrological effects arising from the construction and/or operational and maintenance phases of the of the Proposed Grid Connection. These effects can arise from a number of different sources including an accidental release of pollutants (e.g., suspended solids, silt, concrete, fuels, oils and lubricants) which could be released from the site (e.g., from machinery or during construction activities) into the surface water network. This could cause a consequent reduction in water quality in European Sites hydrologically linked via the surface water network to the site during the works.

The Stage 1 Screening Assessment concluded that there was a theoretical pathway for impact and resultant effects from the Proposed Grid Connection on a number of different QI of the Lower River Suir SAC which are outlined in (**Appendix C, Apx Table 2).** This assessment also concluded that there is no potential pathway for impact from the Proposed Grid Connection on SCI of the River Nore SPA and Slieve Bloom Mountains SPA which are listed in (**Appendix C**, **Apx Table 3).** As such, they are not included for further assessment in this document.

Appendix D outlines the Conservation Objectives (CO) of the QI receptors potentially affected by the Proposed Grid Connection as identified within the Stage 1 – Screening Assessment**.** These receptors will be carried through to the detailed impact prediction stage of this NIS.



Legend

Proposed Grid Connection

European Sites

River Nore SPA
Slieve Bloom Mountains SPA
Galmoy Fen SAC
Kilduff, Devilsbit Mountain SAC
Lower River Suir SAC

WFD Subcatchments

Suir_SC_010
Suir_SC_020
EPA Waterbodies

Data Sources: EPA, NPWS

Client

Buirios Ltd

Borrisbeg Grid Connection

Title

European Sites in Zol of the Proposed Grid Connection

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Issue Details

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5.3 Overview of Potential Impacts and Effects

This section predicts the potential adverse effects of the Proposed Grid Connection on the QIs of Lower River Suir SAC. Potential adverse effects are based on information regarding the QIs and conservation objectives of the European Sites and have been informed by a desk study and field surveys. The stated attributes and targets for each conservation objective were central to the impact assessment process.

Impact prediction is based on the Source-Pathway-Receptor (S-P-R) model. Where no pathway exists, there is no possibility for significant effects on any QI of the European Site in question. A summary of the potential significant effects and pathways between the Proposed Grid Connection and the QIs of Lower River Suir SAC is provided below.

The only identified potential source of adverse effect on the Lower River Suir SAC is from the potential for polluting surface water run-off, mainly during the construction phase however also during the operational phase.

Surface water run-off of pollutants during the construction and operation phase may result from site clearance, enabling works, all construction works and some operational activities which could generate surface water pollutants in the form of silts, hydrocarbons and other pollutants. The main sources of impact which may lead to downstream surface water run-off effect are during the construction phase of the Proposed Grid Connection, in particular:

1. Construction of on-site Electricity Substation and Control Buildings and Temporary Construction Compound.
2. The underground cabling route which will be c.2.1km in length running along the local road (predominantly L-7039 with a small section through the R433 and L-7038) and new access tracks across agricultural land.

- A tracked 360-degree excavator will dig out the proposed trenching, typically to a depth of 1300mm, within which the ducts will be laid.
- New access tracks within agricultural fields are proposed to be founded on competent stratum. The standard make-up of the founded access tracks will be a stone thickness of c.500mm.
- End mast foundations c.4m x 4m is excavated and the formation levels (depths) will be checked by the on-site foreman The excavated material will be temporarily stored close to the excavation and excess material will be used as berms along the proposed access track.

3. The HDD which will occur underneath the Clonmore Stream.
4. The clear-span watercourse crossing of the Strogue.
5. Culvert installations within drainage ditches along the agricultural land.

In some cases the distance from groundworks to streams and watercourses that are tributaries and are connected to the Lower River Suir is less than 10 metres.

Such pollutants, depending on the extent and duration of the pollutants adversely affect aquatic habitats and species; including their loss and/or degradation. Such adverse effects are well documented (IFI, 2016, NRA, 2009), including with respect to the particular QIs of the Lower River Suir SAC which are identified at the screening stage (See **Appendix D**, **Apx Table 2**): namely;

- 1092 White-clawed crayfish (*Austropotamobius pallipes*)
- 1095 Sea lamprey (*Petromyzon marinus*)
- 1096 Brook lamprey (*Lampetra planeri*)
- 1096 River Lamprey (*Lampetra fluviatilis*)

- 1103 Twaite Shad (*Alosa fallax fallax*)
- 1106 Salmon (*Salmo salar*)
- 1355 Otter (*Lutra lutra*)

As per the CO's for the Lower River Suir SAC a Q-Value of at least Q3-4 is required by white-clawed crayfish, while. Twaite Shad also require dissolved oxygen levels no lower than 5mg/L. There are no specific water quality targets for any of the lamprey species but a Q-value of at least 4 is required by salmon. Otters require no significant decline in fish biomass. Otters' diets' while broad are dominated by fish, particularly salmonids, eels and sticklebacks in freshwater environments. Therefore, all the above QI are highly susceptible to negative impacts that may occur from surface water run-off.

Typically, the magnitude of such effects is greater closer to the source of the impact; typically dissipating and dispersing the further the pollutants travel along the hydrological pathway; particularly as a result of the assimilation capacity of the hydrological pathway (including dilutionary effect) and depending on the nature, type, quantity and duration/frequency of pollutant originating from the source of impact.

In the case of the Lower River Suir SAC, there is a theoretical surface water hydrological pathway from the Proposed Grid Connection to the SAC. However, given the scale and nature of the proposed development combined with the significant spatial separation between the Proposed Grid Connection and the SAC, it is considered that the risk of pollutants arising from the construction or operation of the Proposed Grid Connection, as now described (**Section 3**), reaching the SAC and adversely affecting the QIs of that SAC are nil; beyond reasonable scientific doubt. Therefore, the changes in surface water run-off of pollutants during either construction or operation of the Proposed Grid Connection will **not result in any adverse effects on the integrity of the Lower River Suir SAC**.

However, adopting a highly conservative and precautionary approach, mainly to protect the aquatic habitats outside of the SAC and more local to the Proposed Grid Connection (such as the FW2 habitat identified), standard pollution prevention, control and response measures are proposed which, as a result of their implementation, will provide a "belt and braces" level of additional certainty that no significant effects to the SAC will arise as a result of the construction and operation of the Proposed Grid Connection.

5.4 Potential In-combination effects

As part of the screening for AA, in addition to the proposed works, other relevant projects and plans in the region must also be considered at this stage. The following sections outline the results of this assessment.

5.4.1 Plans

The plans that are considered in-combination with the proposed works are outlined in **Appendix E**.

5.4.2 Projects

A search was conducted of planning applications (projects) within the ZOI (i.e. the hydrological catchment within which the Proposed Grid Connection is located and has the potential to have effects on downstream receptors e.g. River Suir SAC) of the Proposed Grid Connection , using

Myplan[1], and the Department of Housing, Planning and Local Government EIA portal map viewer[2]. The search was limited to the ten-year period preceding the date of issue of this report and excluded retention applications (i.e., typically local-scale residential or commercial developments where an impact has already occurred), incomplete, withdrawn, and refused applications. The relevant projects with potential for in-combination adverse effects on the integrity of European sites, are detailed in **Appendix E.**

Furthermore, a search of An Coimisiún Pleanála[3] was undertaken to identify any relevant applications, including Strategic Infrastructure Development (SID), Strategic Housing Development (SHD) and Large-scale Residential Development (LRD) in the past ten years or in close proximity to the proposed works.

The Forestry Licence Viewer[4] indicates that there are several afforestation licences are either pending or approved in the Suir River catchment. No relevant foreshore applications were identified that could result in an in-combination effect with the proposed works.

5.4.3 In-combination Conclusion

Numerous local planning applications at different stages of the planning process were found within and in close proximity to the Site. Adherence to the overarching policies and objectives of Tipperary County Development Plan 2022- 2028 and any future development plans ensure that local planning applications and subsequent grant of planning comply with the core strategy of proper planning and sustainability and with the requirements of relevant EU Directives, National Legislation and environmental considerations. Therefore, there is no potential for adverse in-combination effects on European Sites

In conclusion, no plans or projects were identified which could, in combination with the proposed works, contribute to cumulative effects on the identified European Sites.

[1] Available online at https://myplan.ie/. Accessed May 2025
[2] Available online at https://housinggovie.maps.arcgis.com/apps/webappviewer/index.html?id=d7d5a3d48f104ecbb206e7e5f84b71f1. Accessed May 2025
[3] Available online at http://www.pleanala.ie/. Accessed July 2025
[4] https://forestry-maps.apps.rhos.agriculture.gov.ie/ accessed May 2025

6 Mitigation

For the purposes of this assessment the term 'mitigation measures' are considered to be "*those measures which aim to minimise, or even cancel, the negative impacts on a site that are likely to arise as a result of the implementation of a plan or project. These measures are an integral part of the specifications of a plan or project*" (Guidance document on Article 6(4) of the Habitats Directive 92/43/EEC, as amended, January 2007).

Based on the AA carried out in **Section 5**, the mitigation will focus on disturbance and surface water pollution pathways.

The proposed mitigation that is detailed below are considered best practice measures. All of the measures are based on national and international standards and have proven to be effective in this and other jurisdictions. The proposed measures have been specifically tailored to suit the Proposed Grid Connection works having regard to the particular environmental constraints.

6.1.1 Site Environmental Clerk of Works

The Project Developer will be required to engage a qualified Environmental Engineer, Environmental Scientist, or equivalent, with experience in wind farm construction to fulfil the role of Environmental Clerk of Works (ECoW) to oversee the construction works and audit the implementation of the CEMP. The ECoW will report to the Project Developer and Project Contractor but will liaise closely with the Construction Manager in relation to the Project Contractor's day-to-day implementation of the CEMP on site. The responsibilities and duties of the ECoW will include the following:

1. Review/approval of the CEMP and supporting environmental documentation and review/approval of contractor method statements;
2. Undertake environmental monitoring, inspections and reviews to ensure the works are carried out in compliance with the CEMP by the Project Contractor;
3. Manage the water quality monitoring programme and turbidity monitors;
4. Maintain a live Actions List and accompanying map outlining any corrective actions across the site requiring attention or action by the contractor;
5. Confirm for the Project Contractor that pre-commencement requirements have been met to allow construction activities to commence;
6. Highlight for the contractor, any abandonment triggers that are occurring and inform the contractor that works are to cease.
7. Generate environmental reports as required to show environmental data trends and ensure environmental records are maintained throughout the construction period;
8. Advise site management/contractor/sub-contractors on:
9. Prevention of environmental pollution and improvement to existing working methods;
10. Changes in legislation and legal requirements affecting the environment;
11. Suitability and use of plant, equipment and materials to prevent pollution;
12. Environmentally sound methods of working and systems to identify environmental hazards;
13. Assist the contractor in coordinating the required inputs and site visits from the Project Ecologist or Project Hydrologist to support the ECoW role;
14. Ensure immediate notification of any environmental incidents are issued to the Construction Manager and Project Developer;
15. Support the investigation of incidents of significant, potential or actual environmental damage and ensure corrective actions are carried out, recommend means to prevent recurrence and communicate incident findings to relevant parties.

16. Liaise with the Project Design Team and attend meetings to report on audit findings
17. Support the contractor who will be responsible for providing toolbox talks and site induction content to ensure the requirements of the CEMP are delivered on site.
18. The geotechnical design requirements of the Proposed Grid Connection are not within the remit of the ECoW.

The level, detail and frequency of reporting expected from the ECoW for the Construction Manager, Developer's Project Manager, and any Authorities or other Agencies, will be agreed by all parties prior to commencement of construction, and may be further adjusted as required during the course of the Proposed Grid Connection.

6.1.2 Project Ecologist/Ornithologist

The Project Ecologist will be available to support the ECoW on matters relating to the protection of sensitive habitats and species encountered prior to or during the construction phase of the Proposed Grid Connection. The Project Ecologist will not be full time on site but will undertake pre-commencement surveys and visit the site as required. The responsibilities and duties of the Project Ecologist/Ornithologist will include the following:

1. Undertake a pre-construction transect/walkover bird survey to ensure that significant effects on breeding birds will be avoided.
2. Inform and educate on-site personnel of the ornithological and ecological sensitivities within the Site.
3. Oversee management of ornithological and ecological issues during the construction period and advise on ornithological issues as they arise.
4. Provide guidance to contractors to ensure legal compliance with respect to protected species onsite.
5. Liaise with officers of consenting authorities and other relevant bodies with regular updates in relation to construction progress

6.2 Pre-Construction Surveys

Pre-construction surveys by an experienced ecologist will be carried out for otter within all areas within 150 m of the Proposed Grid Connection. This includes a survey of any otter breeding/resting sites identified in the current baseline within the ZoI of the Proposed Grid Connection (150 m for breeding sites, where access allows; noting that TII guidance recommends 20 m for non-breeding sites). These will be undertaken in a representative season to ensure accuracy, for instance, otter surveys can be undertaken at any time of the year, however, timing surveys when riparian growth is not fully established or has died back or after a period of prolonged dry weather may be preferable as otter signs can be more easily spotted during these conditions. Otter surveys will be carried out in accordance with NRA guidance (NRA, 2008a, NRA, 2008b). The findings of the pre-construction survey will be reviewed with respect to the Proposed Grid Connection in relation to whether the updated findings trigger a requirement for a species derogation licence from NPWS; based on current baseline a derogation licence will not be required.

In the unlikely event that an otter holt is identified within or immediately adjacent to the Proposed Grid Connection footprint, consultation will be undertaken with the National Parks and Wildlife Service and a derogation licence applied for.

No works will be undertaken within 150m of any holts at which breeding females or cubs are present.

No wheeled or tracked vehicles (of any kind) will be used within 20m of active, but non-breeding, otter holts. Light work, such as digging by hand or scrub clearance will not take place within 15m of such holts, except under licence. All of the above works will be undertaken or supervised by an appropriately qualified ecologist.

Pre-construction surveys by an experienced ecologist will be carried out for Third Schedule Invasive Alien Plant Species (IAPS) within Site. These will be undertaken in a representative season(s) (i.e. spring and summer) to ensure accuracy. IAPS surveys will be carried out having regard to guidance of Transport Infrastructure Ireland (TII 2020a, TII 2020b).

6.3 Construction Phase

6.3.1 Water Quality Protection Measures

6.3.1.1 Earthworks

The main earthworks along the Grid Connection will be related to the underground cabling, substation and temporary construction compound, access road and end masts. Potential sources of sediment-laden water include:

- Drainage and seepage water resulting from excavations;
- Stockpiled excavated material providing a point source of exposed sediment; and,
- Erosion of sediment from emplaced site drainage channels.

The key mitigation measure during the construction phase is the avoidance of sensitive hydrological features where possible, by application of suitable buffer zones (i.e. 50m to main watercourses. The Proposed Grid Connection infrastructure is located significantly away from the delineated 50m watercourse buffer zones with the exception of the HDD for an existing watercourse crossing on the Clonmore River within the underground cabling route and a new clear span bridge watercourse crossing on the Strogue River within the underground cabling route. Additional control measures, which are outlined further on in this section, will be undertaken at these locations.

The large setback distance from sensitive hydrological features means that adequate room is maintained for the proposed drainage mitigation measures (discussed below) to be properly installed and operate effectively

6.3.1.2 Pre-commencement Temporary Drainage Works

The pre-commencement temporary drainage works will be as follows:

1. All existing dry land drains that intercept the proposed works area will be temporarily blocked down-gradient of the works using check dams/silt traps;
2. Clean water interceptor drains will be installed upgradient of the works areas;
3. Check dams/silt fence arrangements (silt traps) will be placed in all land drains that have surface water flows and also along existing farm track roadside drains; and;
4. A double silt fence perimeter will be placed down-slope of works areas that are located inside the watercourse 50m buffer zone.

The following mitigation measures are proposed for the underground cabling watercourse crossing works;

1. No stock-piling of construction materials will take place along the grid route;
2. No refuelling of machinery or overnight parking of machinery is permitted in this area;

3. No concrete truck chute cleaning is permitted in this area;
4. Works will not take place at periods of high rainfall, and will be scaled back or suspended if heavy rain is forecast;
5. All machinery operations will take place away from the stream and ditch banks, apart from where crossings occur. Although no instream works are proposed or will occur; Any excess construction material will be immediately removed from the area and sent to a licenced waste facility;
6. No stockpiling of materials will be permitted in the constraint zones; Spill kits will be available in each item of plant required to complete the stream crossing;
7. The area around the Clear Bore™ (or similar alternative) batching, pumping and recycling plants will be bunded using terram and sandbags in order to contain any spillages;
8. Accidental spillage of fluids will be cleaned up immediately and transported off site for disposal at a licensed facility; and,
9. Adequately sized skips will be used for temporary storage of drilling arisings during directional drilling works. This will ensure containment of drilling arisings and drilling flush.

6.3.1.3 Silt Fences

Silt fences will be emplaced within drains down-gradient of all construction areas. Silt fences are effective at removing heavy settleable solids such as those present in the subsoils/sandstone tills that overlie the

Proposed Grid Connection. This will act to prevent entry to water courses of sand and gravel sized sediment, released from excavation of mineral sub-soils of glacial and glacio-fluvial origin, and entrained in surface water runoff. Inspection and maintenance of these of these structures during construction phase is critical to their functioning to stated purpose. They will remain in place throughout the entire construction phase. Double silt fences will be placed within drains down-gradient of all construction areas inside the 50m buffer zones.

6.3.1.4 Silt Bags

Silt bags will be used where small to medium volumes of water need to be pumped from excavations. As water is pumped through the bag, the majority of the sediment is retained by the geotextile fabric allowing filtered water to pass through. Silt bags will be used with natural vegetation filters or sedimats Sediment entrapment mats, consisting of coir or jute matting, will be placed at the silt bag location to provide further treatment of the water outfall from the silt bag. Sedimats will be secured to the ground surface using stakes/pegs. The sedimat will extend to the full width of the outfall to ensure all water passes through this additional treatment measure

6.3.1.5 Potential Release of Hydrocarbons

Accidental spillage during refuelling of construction plant with petroleum hydrocarbons is a significant pollution risk to surface water and associated ecosystems. The accumulation of small spills of fuels and lubricants during routine plant use can also be a pollution risk. Hydrocarbon has a high toxicity to humans, and all flora and fauna, including fish, and is persistent in the environment. It is also a nutrient supply for adapted micro-organisms, which can rapidly deplete dissolved oxygen in waters, resulting in death of aquatic organisms

Mitigation measures proposed to avoid release of hydrocarbons are as follows;

1. An emergency-operating plan will be established to deal with incidents or accidents during construction that may give rise to pollution in waterbodies proximal to the works. This will

include means of containment in the event of accidental spillage of hydrocarbons or other pollutants (e.g. oil booms, soakage pads);

2. On site re-fuelling of machinery will be carried out using a mobile double skinned fuel bowser. The fuel bowser will be parked on a level area on-site when not in use. All refuelling will be carried out outside designated watercourse buffer zones. Only designated trained and competent operatives will be authorised to refuel plant on-site. Mobile measures such as drip trays and fuel absorbent mats will used during refuelling operations as required. All plant and machinery will be equipped with fuel absorbent material and pads to deal with any event of accidental spillage.
3. Onsite refuelling will be carried out by trained personnel only and a permit to fuel system will be put in place;
4. Taps, nozzles or valves associated with refuelling equipment will be fitted with a lock system;
5. All fuel storage areas will be bunded appropriately for the duration of the construction phase. All bunded areas will be fitted with a storm drainage system and an appropriate oil interceptor. Ancillary equipment such as hoses, pipes will be contained within the bunded area;
6. Fuel and oil stores including tanks and drums will be regularly inspected for leaks and signs of damage;
7. The substation transformer and oil interceptor will be on a bunded concrete plinth capable of holding 110% of the stored oil volume. This mitigation measure is considered sufficient to eliminate potential risks to ground/peat/soils and subsoils, and groundwater and surface water quality.
8. The plant used during construction will be regularly inspected for leaks and fitness for purpose;
9. Spill kits will be available to deal with any accidental spillage in and outside the refuelling area.

6.3.1.6 Release of Cement-Based Products

Cement based products will be used as part of the construction methodology for the Proposed Grid Connection works. Concrete and other cement-based products are highly alkaline and corrosive and can have significant negative impacts on water quality. They generate very fine, highly alkaline silt (pH 11.5) that can physically damage fish by burning their skin and blocking their gills. A pH range of ≥ 6 ≤ 9 is set in S.I. No. 293 of 1988 Quality of Salmonid Water Regulations, with artificial variations not in excess of ± 0.5 of a pH unit. Entry of cement-based products into the site drainage system, into surface water runoff, and hence to surface watercourses or directly into watercourses represents a risk to the aquatic environment. Batching of wet concrete on site and washing out of transport and placement machinery are the activities most likely to generate a risk of cement-based pollution.

Mitigation measures proposed to avoid release of cement are as follows;

1. No batching of wet-concrete products will occur on site. Ready-mixed supply of wet concrete products and where possible, emplacement of pre-cast elements, will take place;
2. Where possible pre-cast elements for culverts and concrete works will be used;
3. Where concrete is delivered on site, only the chute will be cleaned, using the smallest volume of water practicable. No discharge of cement contaminated waters to the construction phase drainage system or directly to any artificial drain or watercourse will be allowed.
4. Chute cleaning water will be undertaken at lined concrete washout ponds;

5. Weather forecasting will be used to plan dry days for pouring concrete; and
6. The pour site will be kept free of standing water and plastic covers will be ready in case of sudden rainfall event.

6.3.1.7 Use of Siltbuster and Impacts on Downstream Surface Water Quality

Siltbusters (or similar equipment) are regularly used to remove suspended sediments on construction sites by means of chemical dosing and sedimentation (i.e. use of coagulants and flocculants to accelerate the settlement process). The benefits of using enhanced settlement systems on downstream surface water quality are widely known and are a positive effect. However, potential overdosing with chemical agents means there is a perceived risk of chemical carryover in post treatment water which could result in negative effects on downstream water quality.

Grid Connection construction water (i.e. surface water runoff or pumped groundwater) has sometimes very fine particles, particularly clays and peat, with slow settling velocities which do not settle out efficiently, even in a lamella clarifier at normal flow rates. In these cases, chemical dosing can be used to aggregate the particles (i.e. force them to combine and become heavier), increasing the particle settling rate and cleaning the water via gravity separation techniques. Agents commonly used include poly aluminium chloride (PAC), aluminium sulphate, ferric iron and ferrous iron. These agents are commonly used in drinking water treatment plants, so their use is widespread, and there is significant scientific knowledge around their use and control.

Measures employed to prevent overdosing and potential chemical carryover are as follows;

1. The siltbuster system comprises an electronic in-line dosing system which provides an accurate means of adding reagents, so overdosing cannot occur;
2. Continued monitoring and water analysis of pre and post treated water by means of an inhouse lab and dedicated staff, means the correct amount of chemical is added by the dosing system;
3. Dosing rates of chemical to initiate settlement is small, being in the order of 2-10 mg/L and the vast majority of the chemical is removed in the deposited sediment;
4. Final effluent not meeting the discharge criteria is recycled and retreated, which has a secondary positive effect of reducing carryover; and,
5. Use of biodegradable chemical agents can be used at very sensitive sites (i.e. upstream of SACs).

6.3.1.8 Morphological Changes to Surface Watercourses

Horizontal directional drilling, culverting and bridge crossing of surface watercourses can result in morphological changes, changes to drainage patterns and alteration of aquatic habitats. Construction of structures over water courses has the potential to significantly interfere with water quality and flows during the construction phase. It is proposed that only 1 no. new stream crossing on the Strogue Stream will be required to facilitate the underground cabling route. There is a total of 3 no. proposed drain crossings within the Proposed Grid Connection.

Mitigation measures proposed to alleviate morphological changes to watercourses during construction are as follows

1. All proposed new watercourse crossings will be bottomless or clear span culverts and the existing banks will remain undisturbed. No in-stream excavation works are proposed and therefore there will be no direct impact on the stream at the proposed crossing location;
2. All proposed drain crossing culverts will be minimum 900mm in diameter;

3. New access routes in mapped flood zones will be placed close to ground level to maintain the hydrology of the site. Culverts will be placed along access roads accordingly (i.e. low points and depressions) to facilitate drainage of flood waters;
4. All guidance / mitigation measures proposed by the OPW or the Inland Fisheries Ireland (IFI, 2016) is incorporated into the design of the proposed crossings;
5. As a further precaution, near stream construction work, will only be carried out during the period permitted by Inland Fisheries Ireland for in-stream works according to the Eastern Regional Fisheries Board (2004) guidance document "Requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites", i.e., May to September inclusive. This time period coincides with the period of lowest expected rainfall, and therefore minimum runoff rates. This will minimise the risk of entrainment of suspended sediment in surface water runoff, and transport via this pathway to surface watercourses (any deviation from this will be done in discussion with the IFI);
6. Where works are necessary inside the 50m buffer, double row silt fences will be emplaced immediately down-gradient of the construction area for the duration of the construction phase. and,
7. All new river/stream crossings will require a Section 50 application (Arterial Drainage Act, 1945). The river/stream crossings will be designed in accordance with OPW guidelines/requirements on applying for a Section 50 consent.

6.3.2 Operational Phase

During the operational phase, the potential for silt-laden runoff is much reduced compared to the construction phase. In addition, all permanent drainage controls will be in place and the disturbance of ground and excavation works will be complete. Some minor maintenance works may be completed, such as maintenance of site. These works will be of a very minor scale and will be very infrequent. Potential sources of sediment laden water will only arise from surface water runoff from small areas where new material is added during maintenance works. These minor activities could, however, result in the release of suspended solids to surface water and could result in an increase in the suspended sediment load, resulting in increased turbidity which in turn could affect the water quality and fish stocks of downstream water bodies. Potential effects could be significant if not mitigated against. During such maintenance works there is a low risk associated with release of hydrocarbons from site vehicles, although it is not envisaged that any significant refuelling works will be undertaken on site during the operational phase.

The mitigation measures outlined above within **Section 6.3.1.1** will ensure all surface water runoff from upgraded tracks and hardstand areas will be captured and treated prior to discharge/release. It is proposed that clean high-grade stone material will be sourced from local quarries for the maintenance of site tracks. Mitigation measures for control of hydrocarbons during maintenance works are described above within **Section 6.3.1.5.**

6.3.3 Decommissioning Phase

The Grid Connection infrastructure will remain in place as it will be part of the Electricity Grid under the ownership and control of the ESBN/ EirGrid and therefore no mitigation is required.

7 Conclusion

This NIS has been prepared following and in adherence to the Department of the Environment, Heritage and Local Government guidance 'Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities' (DEHLG, 2010). As stated in that guidance document, the requirement of the AA is not to prove what the impacts and effects will be, but rather to establish beyond reasonable scientific doubt that adverse effects on site integrity will not result.

RPS has prepared this NIS to document the analysis and evaluation seeking to establish whether or not, in view of objective scientific information and applying the precautionary principle, and in light of the COs of relevant European sites, the Proposed Grid Connection, either individually or in combination with other plans or projects, will adversity affect the integrity of European sites.

The construction and operation of the Proposed Grid Connection has been detailed (see **Section 3**), and the receiving environment has been described (**Section 4**). A number of European sites have been identified within the ZoI of the Proposed Grid Connection via the following effect pathways (**Section 5**): Pollution from surface water run-off.

To minimise and/or cancel the negative impacts on a European site that are likely to arise as a result of the Proposed Grid Connection required mitigation measures to be implemented have been set out (**Section 6**).

Following a comprehensive evaluation of the potential direct, indirect and cumulative impacts on the QIs of the aforementioned SAC and the implementation of the proposed mitigation measures, it has been concluded by the authors of this report that there will be no adverse effects on the integrity any European site either alone or in-combination with other plans and projects.

This NIS contains information which the competent authority may consider in making its own complete, precise and definitive findings and conclusions and upon which it is capable of determining that all reasonable scientific doubt has been removed as to the effects of the Proposed Grid Connection on the integrity of the relevant European sites.

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Appendix A Appropriate Assessment Screening

Borrisbeg Grid Connection

Report to Inform Screening for Appropriate Assessment

IE002700
Borrisbeg Grid Connection
F
18.09.2025

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Contents

Tables

Figures

1 Introduction

1.1 Purpose of Document

This document is to inform the Competent Authority's Appropriate Assessment (AA) Screening (Stage 1) with respect to the Proposed Grid Connection at Strogue and Clonmore, Co. Tipperary. The Proposed Grid Connection is described in Section 3 of this report.

Consent approval under the Planning and Development Act, 2000 (as amended) in respect of the Proposed Grid Connection can only be given after the Competent Authority has conducted an assessment pursuant to Section 177U of the Planning and Development Act and consistent with Article 6 of the EU Habitats Directive. The first stage of this assessment is to determine whether the Proposed Grid Connection is directly connected with or necessary to the management of a European Site(s) and, if not, whether the Proposed Grid Connection is likely to result in a significant effect(s) on a European Site(s) either alone or in combination with any other plans or projects. The assessment has been completed based on the available information and, where necessary, applying the precautionary principle.

Where the Competent Authority determines that the project is not directly connected with or necessary for the management of the site as a European Site and if it can be excluded on the basis of objective scientific information that the project, individually or in-combination with other plans or projects, will not have a significant effect on a European Site(s), the Competent Authority shall determine that an AA of the project is not required.

The document is structured as follows:

- **Section 2– Legislative Context and Guidance** sets out the guidance and approach which was used to complete Stage 1 – Screening Assessment.
- **Section 3– Project Description** sets out the Proposed Grid Connection which has been subject to Stage 1 – Screening Assessment.
- **Section 4: Ecology Baseline** summarises the methodology and findings of the desk and field studies which have been completed to inform the Stage 1 – Screening Assessment.
- **Section 5 – Stage 1: Screening Assessment** assesses the Proposed Grid Connection and identifies if it is likely to result in a significant effect on a European Site(s) either alone or in-combination with other plans and projects.

1.1.1 Statement of Authority

This report was produced by Declan McGovern and reviewed by Dr. Robert Rowlands. Declan is an Ecologist in the Environment, Planning and Renewables Sector of RPS has been working with RPS since graduating from UCD with a masters in Applied Environmental Science in 2019. His completed master's thesis analysed the most effective sampling methods for capturing an accurate representation of the biodiversity present in motorway stormwater retention ponds. Declan's excels in Environmental Legislation, Freshwater Macroinvertebrate Monitoring techniques, Geographical Software such as ARCGIS and QGIS. Since joining RPS, he has widened his ecological expertise and field survey experience to include terrestrial mammal surveys, habitat surveys and aquatic surveys. His experience as an ecologist has focused on the preparation of ecological assessments, including Invasive plant surveys and reports, aquatic habitat assessments, Ecological constraint reports, Screening for Appropriate Assessments and Natura Impact Assessments. Dr Rob Rowlands is a Technical Director in RPS with over 20 years' experience. He is an experienced multi-disciplinary project manager; in particular, advising on strategy with respect to ecology, landscape, heritage/archaeology and arboriculture. His ecological experience has included the completion of Ecological Impact Assessments (including for EIA) and AAs with respect to the Habitats and Birds Directive.

2 LEGISLATIVE CONTEXT AND GUIDANCE

2.1 Legislative context

The requirement for AA derives from Article 6(3) of the EU Habitats Directive 92/43/EC.

Article 6(3) requires that:

> "*any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and if appropriate, after having obtained the opinion of the general public*".

Thus, Article 6(3) provides a two-stage process:

- The first stage involves a screening for AA (which is addressed in this document).
- The second stage arises where, having screened the plan or project, it is determined that there is potential for Likely Significant Effects (LSEs) and an AA is required to inform decision making by the relevant Competent Authority.

2.2 Guidance and Approach

This document has been prepared with reference to the relevant guidance and principles. The principal national and European guidelines have been followed in the preparation of this document. The following list identifies these and other pertinent guidance documents:

- European Commission (EC) (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.
- Office of the Planning Regulator Practice Note (PN01) 'Appropriate Assessment Screening for Development Management' (OPR, 2021).
- EC Notice C (2018) 7621 'Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC', Office for Official Publications of the European Communities, Luxembourg (EC, 2018).
- EC (2013) EC Interpretation Manual of European Union Habitats. Version EUR 28. European Commission.
- Department of the Environment, Heritage and Local Government (DEHLG) (2010a) Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities. Department of the Environment, Heritage and Local Government, Dublin.
- (DEHLG, 2010b) DEHLG Circular - National Parks and Wildlife Service (NPWS) 1/10 and PSSP 2/10 on Appropriate Assessment under Article 6 of the Habitats Directive – Guidance for Planning Authorities. Department of the Environment, Heritage and Local Government, Dublin.
- EC (2000) Communication from the Commission on the Precautionary Principle. Office for Official Publications of the European Communities, Luxembourg.

The Commission's 2018 Notice (EC, 2018), European and national case law have been reviewed and have informed the approach and content of this document in relation to key issues including the interpretation of concepts of site integrity, the absence of lacunae and the use of mitigation measures, amongst others.

3 Development Description

The Proposed Grid Connection will be entirely located within the townlands of Strogue and Clonmore, Co. Tipperary, as detailed on Figure 3-1, and will consist of the provision of the following;

i. *A 110 kilovolt (kV) 'loop-in/loop-out' Air-Insulated Switchgear (AIS) electrical substation, including 2 no. single-storey control buildings with staff welfare facilities, underground wastewater storage tank, all associated electrical plant, cabling, equipment and apparatus, and security fencing, within a substation compound with a total footprint of approximately 1.41ha;*

ii. *2.1 kilometre 110kV underground cabling route, with 0.9km following the public road corridor and 1.2km along new proposed access track across agricultural grassland (including joint bays, communication and earth sheath link chambers and all ancillary works along the route);*

iii. *2 no. lattice-type end masts with a height of 16 metres to facilitate connection to the existing 110kV Ikerrin-Thurles overhead electricity transmission line;*

iv. *1 no. temporary construction compound (including offices and staff welfare facilities);*

v. *Vegetation removal and Spoil Management;*

vi. *Site Drainage; and*

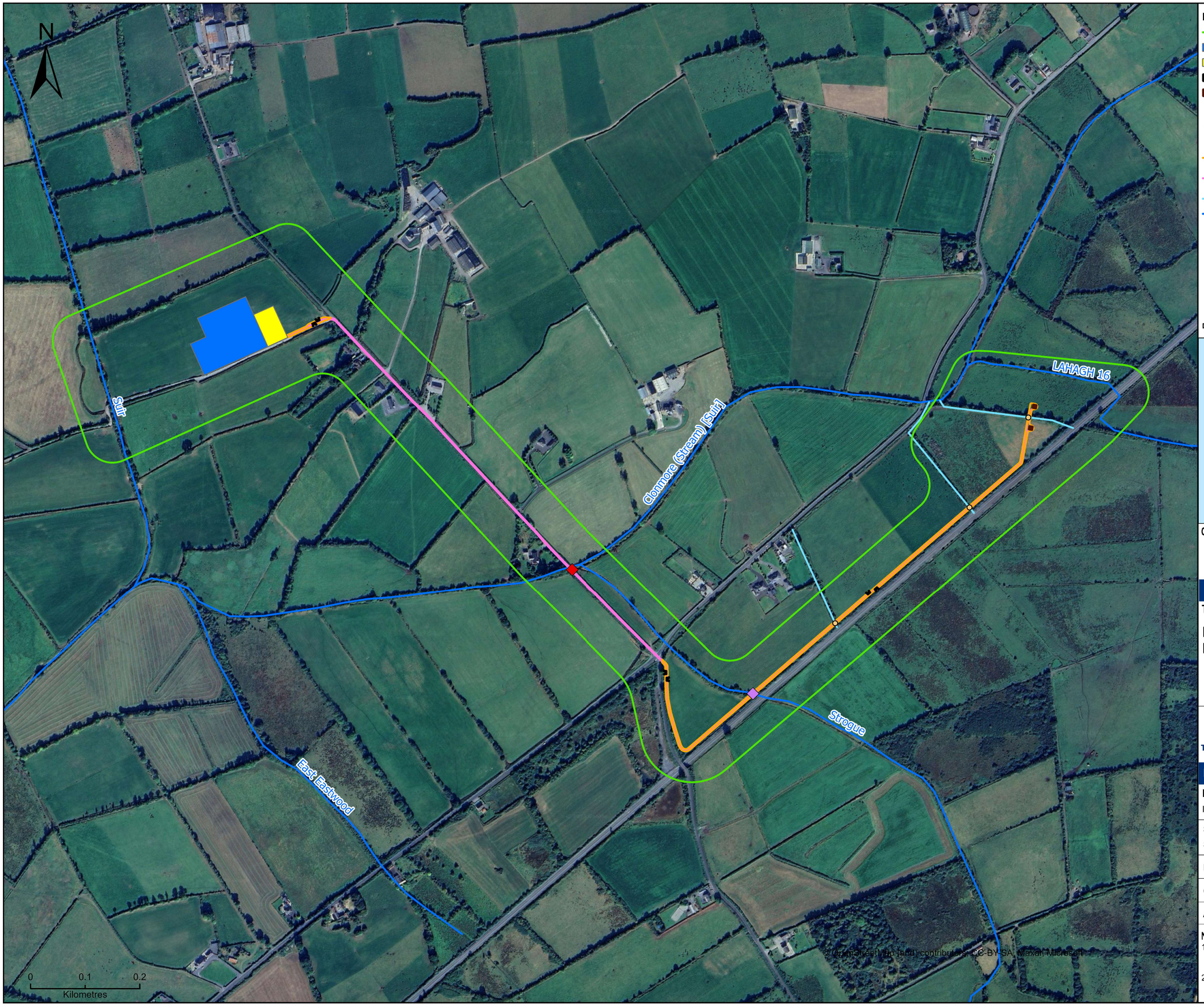
vii. *All ancillary works and apparatus.*

A ten-year planning permission is sought.

The Proposed Grid Connection will facilitate the connection of the consented Borrisbeg Renewable Energy Development Wind Farm, Planning Reference ABP: 318704 which comprises 9 No. wind turbines with a tip height of 185 metres with an estimated installed generating capacity of 63MW (herein referred to as the "Consented Wind Farm").

The Proposed Grid Connection will connect to the national grid via a 'loop-in-loop-out' connection. The onsite 110kV substation will connect to the nearby Ikerrin to Thurles 110kV overhead line (OHL) via approx. 2.1km of underground electricity cabling which will run in a south-eastward direction from the proposed onsite 110kV substation through a mix of local road and new track over agricultural land to the existing OHL. The existing OHL will be broken by 2 no. end masts (lattice type towers). Refer to Figure 3-1 for the design layout. The construction methods for the a bove elements are detailed below in **Section 3.1.1** to **3.1.7**.

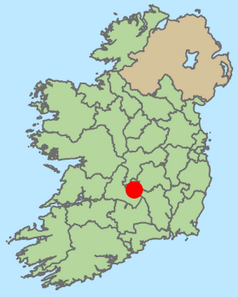
The Ecology Survey Area for the Proposed Grid Connection is illustrated in **Figure 4-1** and was surveyed on the 7th May 2025 to inform the appraisal of the Proposed Grid Connection. The walkover survey focussed on habitats, IAPS, bird and mammals occurrences along the Proposed Grid Connection footprint (and approximately 20m either side of the footprint where access allowed and visual inspection where access was limited).



Legend

- EIAR Boundary
- 110kV Substation
- Temporary Construction Compound
- Joint Bays
- End Masts
- New Clear span crossing
- HDD crossing under bridge
- Field Drain Culverts
- Proposed Cabling Route with New Track
- Proposed Cabling Route in Public Road (to be upgraded)
- Field Drains
- EPA Watercourses

Data Sources: EPA



Client

Buirios Ltd

Borrisbeg Grid Connection

Title

Borrisbeg Grid Connection Design

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Issue Details

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Status:	Rev:	Model File Identifier:	
S1	P01		
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Checked: KM		Scale:	1:6,500 (A3)
Approved: KM		Projection:	IRENET95 Irish Transverse Mercator

NOTE:

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3.1 Construction Methodologies

3.1.1 On-site Electricity Substation and Control Buildings

The Proposed on-site 110kv electricity substation and control buildings will be constructed as follows:

1. The area of the on-site substation will be marked out using ranging rods or wooden posts and the soil and overburden stripped and formed into a berm beside the substation.
2. 2 no. control buildings will be built within the on-site substation compound;
3. The foundations will be excavated down to the level indicated by the designer and appropriately shuttered reinforced concrete will be laid over it. An anti-bleeding admixture will be included in the concrete mix;
4. The block work walls will be built up from the footings to DPC level and the floor slab constructed, having first located any ducts or trenches required by the follow on mechanical and electrical contractors;
5. The block work will then be raised to wall plate level and the gables & internal partition walls formed. Scaffold will be erected around the outside of the building for this operation;
6. The roof slabs will be lifted into position using an adequately sized mobile crane;
7. The timber roof trusses will then be lifted into position using a telescopic load all or mobile crane depending on-site conditions. The roof trusses will then be felted, battened, tiled and sealed against the weather.
8. The electrical equipment will be installed and commissioned.
9. Perimeter fencing will be erected.
10. The construction and components of the substation will be built to EirGrid specifications.

3.1.2 Underground Electrical (110kV) and Communication Cabling

The underground cabling works will consist of the installation of ducts in an excavated trench to accommodate electrical and fibre communications cables to facilitate a loop connection between the proposed 110kV on-site substation and the existing110kV Ikerrin to Thurles OHL. The underground electrical cabling will be laid beneath the surface of new tracks in agricultural land and the public roads (L-7039, L7038 and R433) using the following methodology:

1. Before works commence, updated surveying will take place along the proposed cable route, with all existing culverts and services identified. All relevant bodies i.e., ESBN, Tipperary County Council etc. will be contacted and all up to date information for all existing services sought.
2. When the cable is located on public roads, a traffic management plan will be prepared prior to any works commencing. A road opening licence will be obtained where required and all plant operators and general operatives will be inducted and informed as to the location of any services.
3. A tracked 360-degree excavator will then proceed to dig out the proposed trench, typically to a depth of 1300mm, within which the ducts will be laid.
4. The cable ducts will be concrete surrounded where ducts pass under the public road and under drains or culverts.

5. Trench supports will be installed, or the trench sides will be benched or battered back where appropriate and any ingress of ground water will be removed from the trench using submersible pumps, fitted with appropriate silt filtration systems, to prevent contamination of any watercourse.
6. Once the trench has been excavated, a base-layer will be laid and compacted, comprising Clause 804, or 15 Newton CBM4 concrete as required.
7. The ducting will be installed as per specification, with couplers fitted and capped to prevent any dirt etc. entering the duct. In poor ground conditions, the ends of the ducts will be shimmed up from the bed of the trench, to prevent any possible ingress of water dirt. The shims will be removed again once the next length has been connected. Extreme care will be taken to ensure that all duct collars (both ends) are clean and in good condition prior to ducts being joined.
8. Six pre-cast concrete joint bay chambers typically 2.5m x 6m x 1.75m will be installed below finished ground level, approximately 750metres apart or as otherwise required by ESB/EirGrid and electrical requirements. Please see section 3.7.7 below for details.
9. As the works progress, the as-built location of the ducting will be recorded using a total station or GPS.
10. As per the associated base-layer (Clause 804 material or 15 Newton CBM4 concrete) will be installed and compacted as per approved detail, with care not to displace the ducting.
11. Spacers will be used to ensure that the correct cover is achieved at both sides of the ducting.
12. The remainder of the trench will be backfilled in two compacted layers with approved engineer's specified material.
13. Yellow marker warning tape will be installed across the width of the trench, at 300mm depth,
14. The finished surface is to be reinstated, as per original specification.
15. Marker posts will then be placed at regular intervals (generally at joint bays and any change in direction) to denote the location of the underground cabling.

3.1.3 Temporary Construction Compound

One temporary construction compound will be located adjacent to the proposed 110kV substation and will be constructed as follows:

1. The area to be used as the compound will be marked out at the corners using ranging rods or timber posts. Drainage runs and associated settlement ponds will be installed around the perimeter;
2. The compound platform will be established using a similar technique as the construction of the substation platform;
3. A layer of geo-grid will be installed where deemed necessary by the designer and compacted layers of well graded granular material will be spread and lightly compacted to provide a hard area for Site offices and storage containers;
4. A limited amount of fuel will have to be stored in appropriately bunded containers and a designated area for oil storage will be constructed within the compound;
5. A waste storage area will be provided within the compound;

6. The compound will be fenced and secured with locked gates if necessary; and,
7. Upon completion of the Proposed Grid Connection, the temporary construction compound will be decommissioned and allowed to vegetate naturally.

3.1.4 Proposed Access Tracks

Where the grid connection and communication cables are laid in agricultural fields, the following steps will be undertaken:

1. Excavation will take place to a competent stratum beneath the topsoil (as agreed with the site designer and resident engineer).
2. Road construction will be carried out in sections of approximately 50m lengths i.e., no more than 50m of access road to be excavated without re-placement with stone fill.
3. The proposed new roads will be constructed at the same level as existing ground levels in order to ensure natural flow paths are maintained in areas within the floodplain.
4. Existing drains will be culverted under the proposed access track which will provide a drainage outlet for flood water following a significant flood event, preventing any damming effect from the proposed access roads within the site-specific flood zones.
5. Placement of spoil berms along the proposed access roads shall be avoided within the site-specific flood zones.
6. The road build-up will be approximately 500mm of selected granular fill. Granular fill to be placed in layers in accordance with the designer's specification.
7. Access roads to be finished with a layer of capping material across the full width of the road.
8. A layer of geogrid/geotextile may be required at the surface of the competent stratum.

3.1.5 End Masts

The proposed on-site 110kV substation will connect to the existing 110kV Ikerrin to Thurles overhead line (OHL). Two proposed end masts (lattice type towers) will be located immediately beneath the existing OHL. The existing OHL conductor will be terminated at these masts to facilitate a new OHL loop connection following the proposed c.2km underground grid connection route leading to the on-site 110kV substation. The following section outlines the construction methodology for the new loop in tower structures which will be constructed underneath the existing 110kV Ikerrin to Thurles OHL:

1. The Steel lattice tower sites are scanned for underground services such as cables etc.
2. A foundation c.4m x 4m is excavated and the formation levels (depths) will be checked by the on-site foreman The excavated material will be temporarily stored close to the excavation and excess material will be used as berms along the grid access track. See Figure 3-2 and Figure 3-3.
3. To aid construction, a concrete pipe is placed into each excavation to allow operatives level the mast at the bottom of the excavation. The frame of the reinforcing bars will be prepared and strapped to a concrete pipe with spacers as required. The reinforcing bars will be lifted into each excavated foundation using the excavator and chains/slings. The base and body section of each tower will then be assembled next to excavation.
4. Concrete trucks will pour concrete directly into each excavation in distinct stages.

5. A third pour for the leg of the tower 1m x 1m and will be 300mm over ground level.
6. Once the main concrete foundation pour is cured after circa five days, metal shuttering is installed to accommodate the placement of concrete around the tower legs. During each pour, the concrete will be vibrated thoroughly using a vibrating poker.
7. Once the concrete is set after the five days the shuttering is removed.
8. The tower foundations will be backfilled one leg at a time with the material already excavated at the location. The backfill will be placed and compacted in layers. All dimensions will be checked following the backfilling process.
9. The existing overhead line will be de-energised by ESB so work can commence on the construction of the towers.
10. An earth mat consisting of copper or aluminium wire will be laid circa 400mm below ground around the tower. This earth mat is a requirement for the electrical connection of the equipment on the tower structure.
11. Once the base section of each tower is completed and the concrete sufficiently cured, it is ready to receive the tower body. Temporary hardstands may be removed and disposed of off site where necessary.
12. A hardstand area for the crane will be created by laying geogrid material on the ground surface and overlaying this geogrid with a suitable grade of aggregate.
13. A physical barrier (Heras Fence Site Boundary) will be put in place to restrict plant from coming too close to the OHL.
14. The towers will be constructed lying flat on the ground beside the recently installed tower base.
15. The conductor will be moved off centre using a stay wire and weights to anchor the stay wire to ground.
16. The tower section will be lifted into place using the crane and guide ropes.
17. The body sections will be bolted into position.
18. The conductor will be centred over the towers and held in place. Once the conductor is secured at both ends it is then cut and attached onto each tower. The small section of conductor in between the two towers will be removed and utilised as connector wire for the new towers. Refer to Figure 3-4 for a constructed tower.

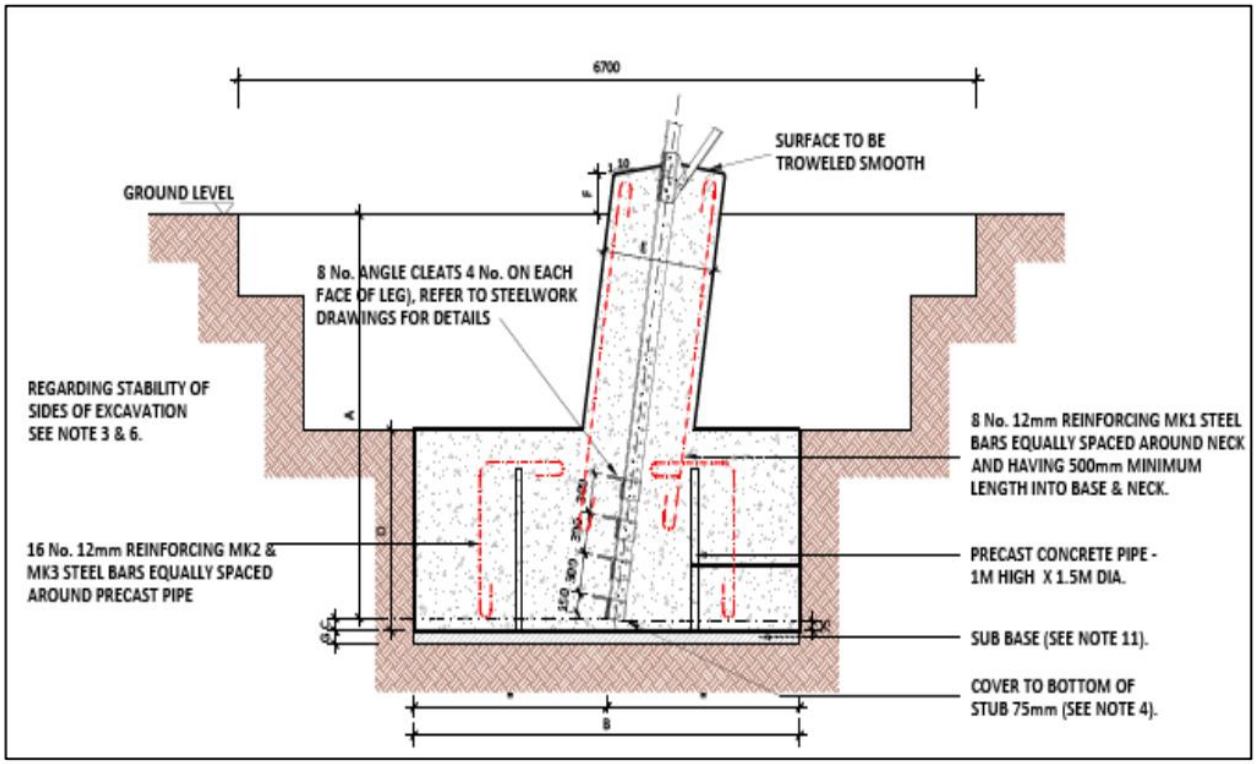


Figure 3-2: New Mast Foundation: Source TII Group

Figure 3-3: Standard 110kV mast foundation excavation. Source: TIi Group

Figure 3-4: Steel Lattice Tower Complete. Source: Applicant, Ardderroo Wind Farm, Co. Galway.

3.1.6 Existing Underground Services

Any underground services encountered along the cable route will be surveyed for level and the ducting will pass over the service provided adequate cover is available. A minimum clearance of 300 mm will be required between the bottom of the ducts and the service in question. If the clearance cannot be achieved the ducting will pass under the service and again 300 mm clearance between the top of the communications duct and bottom of the service will be achieved. In deeper excavations an additional layer of marker tape will be installed between the communications duct and top-level yellow marker tape. If the required separation distances cannot be achieved then a number of alternative options are available such as using steel plates laid across the width of the trench and using 35N concrete surrounding the proposed ducting, with marker tape on the side of the trench. Back fill around any utility services will be with dead sand/pea shingle where appropriate.

Joint bays are typically pre-cast concrete chambers where lengths of cable will be joined to form one continuous cable. Bays are typically 2.5m x 6m x 1.75m pre-cast concrete structures installed below finished ground level. Six joint bays, in groups of two are proposed along the proposed

underground grid connection cable route, at a minimum of 750 metres apart or as otherwise required by ESB/EirGrid and electrical requirements. Two joint bays are proposed to be located in a new track adjacent to the L7039-1 third class road northeast of the proposed 110kV substation. The four remaining joint bays are proposed to be located in a new track in an agricultural field in the townland of Strogue. Therefore, public access/traffic will not be impacted during the placement or maintenance of the proposed joint bays. During construction the joint bay locations will be completely fenced off once constructed and will be covered until cables are being installed. Once the cabling is installed the joint bays will be permanently backfilled with the existing surface re-instated and there will be no discernible evidence of the joint bay on the ground.

In association with joint bays, Communication Chambers are required at every joint bay location to facilitate jointing of the communication cabling. Earth Sheath Link Chambers are also required approximately every second joint bay along the cable route. Earth Sheath Links are used for earthing and bonding cable sheaths of underground electrical cabling, installed in a flat formation, so that the circulating currents and induced voltages are eliminated or reduced. Earth Sheath Link Chambers and Communication Chambers are located in proximity to Joint Bays. Earth Sheath Link Chambers and Communication Chambers will be pre-cast concrete structures with a steel access cover at finished surface level. The locations of the joint bays and chambers are shown on Figure 3-1. Refer to Figure 3-5 above for a standard joint bay.

The precise siting of all Joint Bays, Earth Sheath Link Chambers and Communication Chambers within the underground cabling route corridor assessed is subject to approval by ESBN and/or EirGrid.

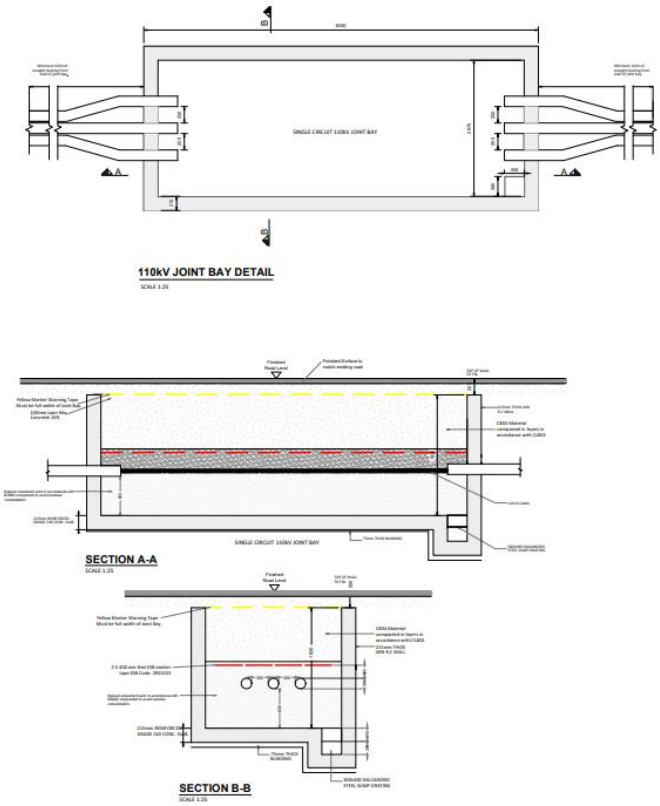


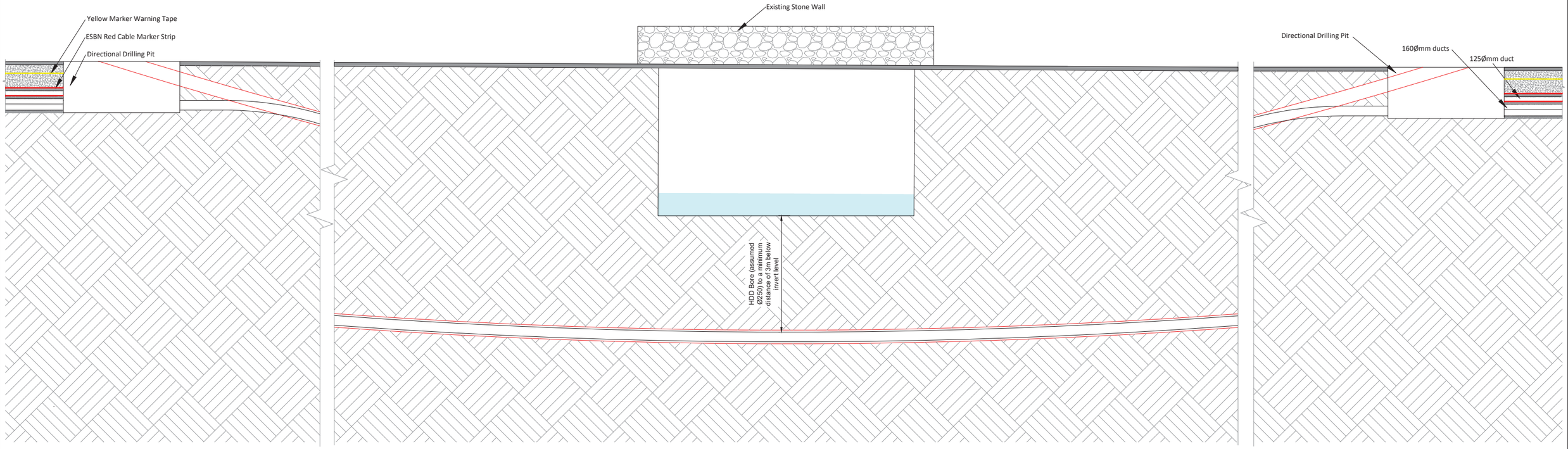
Figure 3-5: Standard Joint Bay

3.1.7 Watercourse Crossings

3.1.7.1 Horizontal Directional Drilling

The Clonmore watercourse crossing is located in the L-7039 road. It is proposed to cross this watercourse via the Horizontal Directional Drilling (HDD) method as described in section 3.2.8.1. This method comprises drilling under obstacles such as bridges, culverts, railways, water courses, etc. to install cable ducts under the obstacle. The directional drilling methodology for the underground grids connection cabling route is further detailed in **Figure 3-6** below.

1. The HDD method of duct installation will be carried out using Vermeer D36 x 50 Directional Drill (approximately 22 tonnes), or similar plant, for the directional drilling at watercourse/culvert crossings. The launch and reception pits will be approximately 0.55m wide, 2.5m long and 1.5m deep.
2. The pits will be excavated with a suitably sized excavator.
3. The drilling rig will be securely anchored to the ground by means of anchor pins which will be attached to the front of the machine. The drill head will then be secured to the first drill rod and the operator shall commence to drill into the launch pit to a suitable angle which will enable him to obtain the depths and pitch required to the line and level of the required profile. Drilling of the pilot bore shall continue with the addition of 3.0m long drill rods, mechanically loaded and connected into position.
4. During the drilling process, a mixture of a natural, inert and fully biodegradable drilling fluid such as Clear Bore™ and water is pumped through the centre of the drill rods to the reamer head and is forced in to void and enables the annulus which has been created to support the surrounding subsoil and thus prevent collapse of the reamed length.
5. Depending on the prevalent ground conditions, it may be necessary to repeat the drilling process by incrementally increasing the size of the reamers. When the reamer enters the launch pit, it is removed from the drill rods which are then passed back up the bore to the reception pit and the next size reamer is attached to the drill rods and the process is repeated until the required bore with the allowable tolerance is achieved.
6. The use of a natural, inert and biodegradable drilling fluid such as Clear Bore™ is intended to negate any adverse impacts arising from the use of other, traditional polymer-based drilling fluids and will be used sparingly as part of the drilling operations. It will be appropriately stored prior to use and deployed in the required amounts to avoid surplus.
7. Should any excess drilling fluid accumulate in the reception or drilling pits, it will be contained and removed from the Site in the same manner as other subsoil materials associated with the drilling process to a licensed recovery facility.
8. Backfilling of launch & reception pits will be conducted in accordance with the normal specification for backfilling excavated trenches. Sufficient controls and monitoring will be put in place during drilling to prevent frack-out, such as the installation of casing at entry points where reduced cover and bearing pressure exits. Sufficient controls and monitoring will be put in place during drilling to prevent frack-out, such as the installation of casing at entry points where reduced cover and bearing pressure exits.



Standard Horizontal Directional Drill Under Exisitng Watercourse Crossing

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Client

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(iv) Information including topographical survey, geotechnical investigation and utility detail used in the design have been provided by others.

(v) All Levels refer to Ordnance Survey Datum, Malin Head.

Rev	Date	Drn	Chk	Amendment / Issue	App

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Scale: 1:100 @ A3

Created on: 29/07/2025

Sheets: 06 of 10

Project: BORRISBEG RENEWABLE ENERGY DEVELOPMENT

Title: Standard 110 kV Horizontal Directional Drilling Under Existing Watercourse Crossing

File Identifier: IE002700-RPS-00-XX-DR-Z- DG0006-07

Status: S01

Rev: P01

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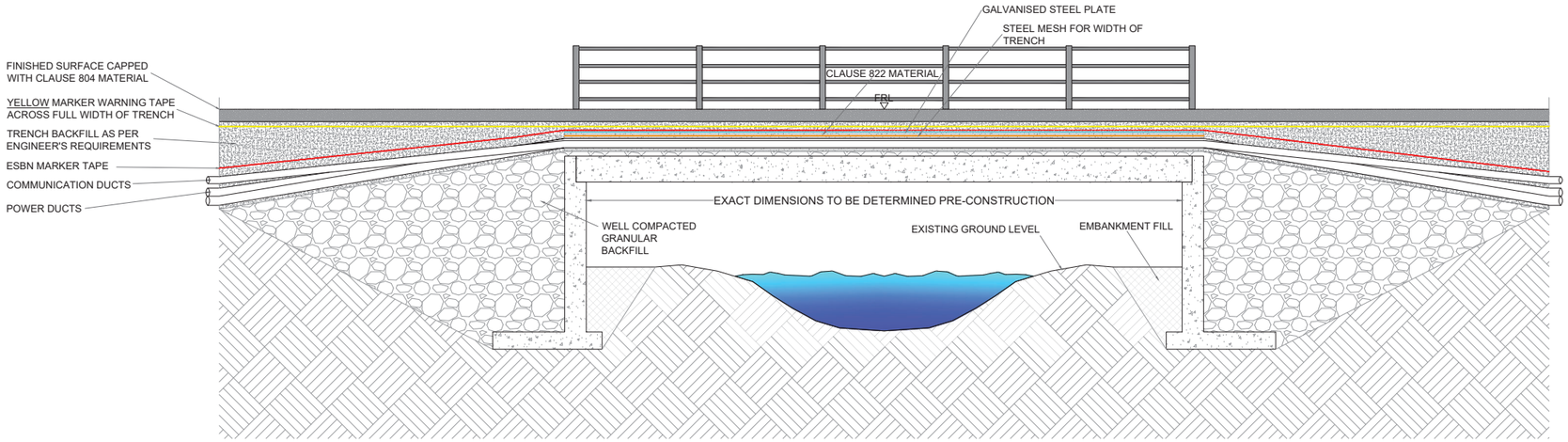
3.1.7.2 Clear Span Watercourse Crossing

It is proposed to construct a clear-span watercourse crossing over the Strogue Stream along the grid connection cable route. The clear-span watercourse crossing methodologies presented below will ensure that no instream works are necessary. The standard construction methodology for the installation of a clear-span watercourse crossing is as follows:

1. The access road on the approach either side of the watercourse will be completed to a formation level which is suitable for the passing of plant and equipment required for the installation of each watercourse crossing.
2. All drainage measures along the proposed road will be installed in advance of the works.
3. A foundation base will be excavated to rock or competent ground with a mechanical excavator with the foundation formed in-situ using a semi-dry concrete lean mix. The base will be excavated along the stream bank with no instream works required.
4. Once the foundation base has been completed, the pre-cast concrete box culvert will be installed using a crane which will be set up on the bank of the watercourse and will be lifted into place from the bank with no contact with the watercourse.
5. Where the box culvert is installed in sections, the joints will be sealed to prevent granular material entering the watercourse,
6. Once the crossing is in position stone backfill will be placed and compacted against the structure up to the required level above the foundations.
7. Underground cabling ducting will be contained within the road make-up of the proposed crossing.

This watercourse crossings will be constructed to the specifications of the OPW bridge design guidelines ’Construction, Replacement or Alteration of Bridges and Culverts - A Guide to Applying for Consent under Section 50 of the Arterial Drainage Act, 1945’, and in consultation with Inland Fisheries Ireland. Confirmatory inspections of the proposed new watercourse crossing location will be carried out by the Project Civil/Structural Engineer and the Project Hydrologist prior to the construction of the crossing Refer to **Figure 3-7** below for details



Clear Span Watercourse Crossing - 110kV - Longitudinal Section

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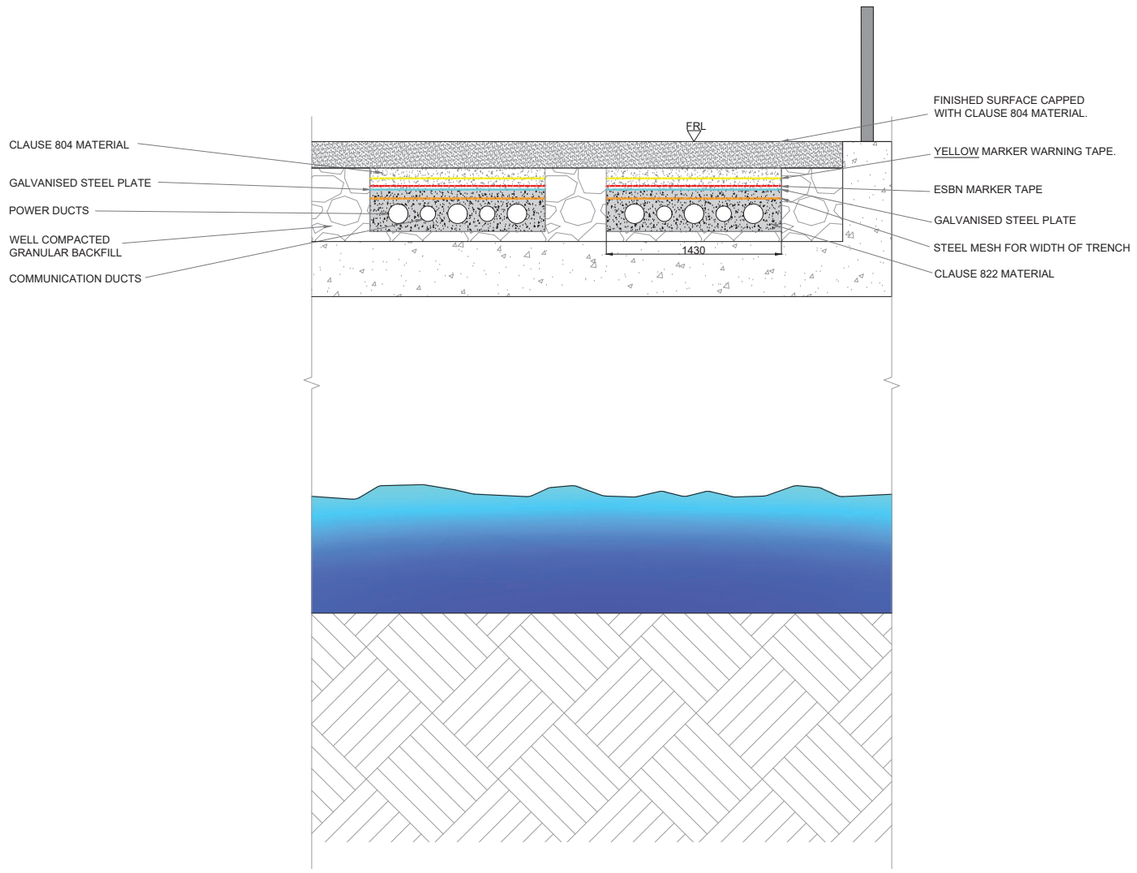

Clear Span Watercourse Crossing - 110kV - Cross Section

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General Notes

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(v) All Levels refer to Ordnance Survey Datum, Malin Head.

(vi) Exact location of cable/joint bay in the road curtilage to be subject to ESB specifications and agreement with Tipperary County Council.

(vii) Final levels may vary depending on local ground conditions

(viii) Layout and arrangements of electrical equipment is shown indicatively and for illustration purposes only as final specifications of buildings and electrical equipment is to be dictated by EirGrid/ESBN requirements.

(ix) Crossings to be sized appropriately for 1 in 100yr flooding.

(x) New culvert crossings to use 900mm pipes, or to be sized to engineer's requirements.

(xi) The exact configuration of the underground cabling will be set by the requirements of the electrical designers at detailed design stage.

Rev	Date	Drn / Chk	Amendment / Issue	App

Client

TETRA TECH

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Project
BORRISBEG RENEWABLE ENERGY DEVELOPMENT

Title
Standard 110kV Clear Span Watercourse Crossing

Model File Identifier
IE002700-RPS-00-XX-DR-Z-XR0005

File Identifier
IE002700-RPS-00-XX-DR-Z- DG0006-04

Created on	Sheets	
29/07/2025	04 of 10	
Scale	Status	Rev
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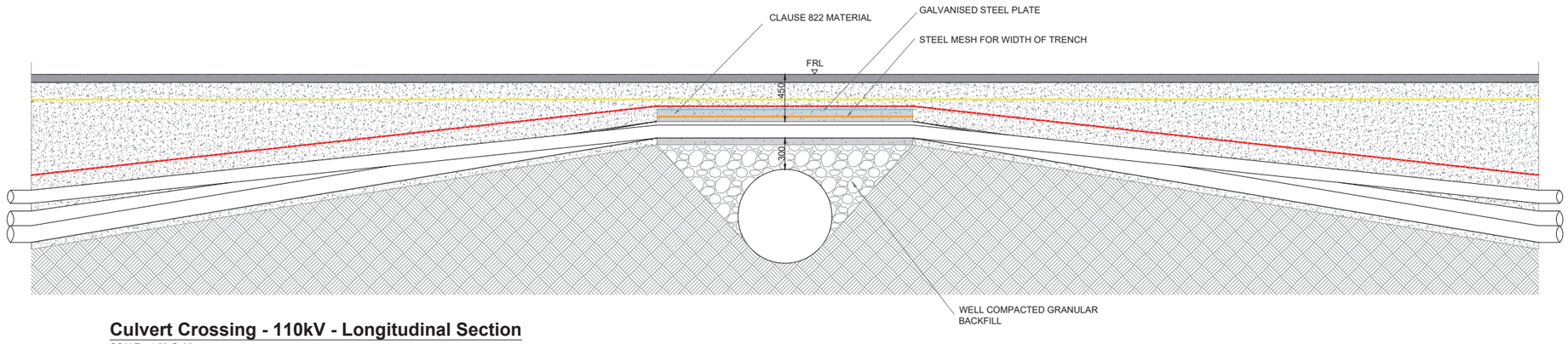
3.1.7.3 Culvert Crossing

All new proposed culverts and proposed culvert upgrades at field drain crossings required for the Proposed Grid Connection, will be suitably sized for the expected peak flows in the watercourse. Some culverts may be installed to manage drainage waters from works areas of the Proposed Grid Connection, particularly where the waters have to be taken from one side of an existing roadway to the other for discharge. All culverts will be inspected regularly to ensure there is no blockage by debris, vegetation or any other material that may impede conveyance. Please see Figure 3-8 below. The culverts will be constructed/upgraded as follows:

1. The access road on the approach to the channel will be completed to a formation level which is suitable for the passing of plant and equipment required for the installation of the culvert and drain crossing.
2. The installation of the culvert will take place in low flow conditions.
3. Where a flow exists, the water running through the channel will be pumped around the water crossing location and back into the channel downstream of the works area.
4. Where over pumping is required, measures will be taken to ensure that the pumped water discharge does not disturb the stream bed with the force of water from the discharge. A steel plate to reduce the force of the flow will be used where appropriate.
5. The Project Engineer will determine the required gradient of the culvert. The pipe must be laid at a gradient that will ensure water is contained within the pipe at all times. Where necessary a rock armour dam will be installed within the stream to reduce flow and ensure an acceptable depth of water remains within the pipe. Where a gradient of 1 – 1.5% is identified, the use of a baffle has been recommended.
6. The bed of the channel will be excavated, if necessary, to achieve the correct line and to allow the pipe to be embedded 300mm into the base of the existing drain.
7. The embedded section will be allowed to fill naturally with existing material within the base of the drain or with suitable drainage material such as gravel or round shingle, where deemed applicable.
8. The culvert will be lowered into place using an excavator with a lifting mechanism.
9. Large stone boulders (approx. 400mm), sourced from the on-site borrow pits, will be placed over the culvert to create a headwall for the culvert and a suitable sub-base for road construction.
10. Smaller 50mm stone, sourced on site will be placed upon the sub-base to construct the road over the water crossing.



Culvert Crossing - 110kV - Longitudinal Section

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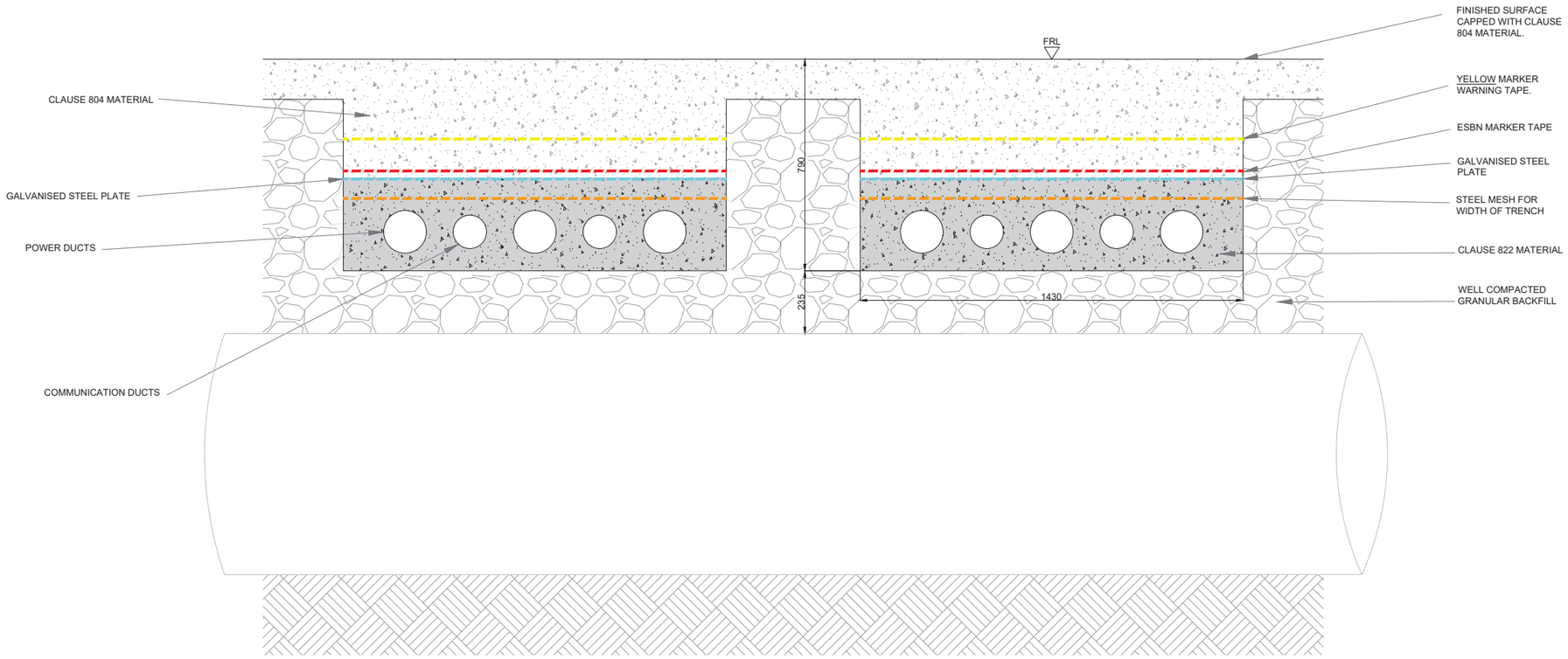

Culvert Crossing - 110kV - Cross Section

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(ix) Crossings to be sized appropriately for 1 in 100yr flooding.

(x) New culvert crossings to use 900mm pipes, or to be sized to engineer's requirements.

(xi) The exact configuration of the underground cabling will be set by the requirements of the electrical designers at detailed design stage.

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Client

TETRA TECH

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Project
BORRISBEG RENEWABLE ENERGY DEVELOPMENT

Title
Standard 110kV Culvert Crossing

Model File Identifier
IE002700-RPS-00-XX-DR-Z-XR0005

File Identifier
IE002700-RPS-00-XX-DR-Z- DG0006-03

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3.2 Operation

A condition of the Consented Wind Farm's grant includes for an operational lifespan of 30 years from the date of full operational commissioning of the proposed turbines. The proposed 110kV substation will consolidate the energy generated by each wind turbine of the Consented Wind Farm and facilitate its export to the national grid. Following the end of the Consented Wind Farm's operational lifespan, the equipment may be replaced with a new technology, subject to planning permission being obtained, or the Consented Wind Farm will be decommissioned fully. However, the Proposed Grid Connection infrastructure will remain in place as it will become part of the National Electricity Grid under the ownership and control of the ESB and EirGrid.

3.2.1 Maintenance

The electricity substation and access tracks will require periodic maintenance. The Substation will be operational 24 hours per day, 7 days a week throughout the year. Substations can be operated remotely and manually. Supervisory operational and monitoring activities will be carried out remotely using a SCADA system, with the aid of computers connected via a telephone modem link. The following maintenance procedures will also be adhered.

- Periodic service and maintenance work which include some vehicle movement.
- For operational and inspection purposes, substation access is required.
- Servicing of the substation equipment will be carried out in accordance with the manufacturer's specifications, which would be expected to entail the following:
  - Six-month service – three-week visit
  - Annual service – six-week visit
  - Weekly visits as required.

It is estimated that 1-2 daily visits will be made to the substation for authorised persons and vehicles to undertake inspections. Occasional technical problems may require maintenance visits by technical staff. During the six-month and annual service visits, some waste (lubricating and cooling oils, packaging from spare parts or equipment, unused paint, etc.) will arise. This will be recorded and removed from the site and reused, recycled or disposed of in accordance with the relevant legislation in an authorised facility. Authorised persons and vehicles (personnel cars) will periodically visit the Site to undertake minor routine maintenance and inspection, if and when required. Although the level of activity required for the maintenance of the Proposed Grid Connection infrastructure is minimal, the impacts associated with traffic volumes for this period are assessed in Chapter 14 Material Assets: Traffic and Transport.

3.2.2 Monitoring

The CEMP sets out a programme of monitoring required for the operational phase of the project. The CEMP should be consulted for detailed information on the monitoring requirements during the operational phase; however, a summary of the key information is provided below:

1. Monthly water sampling and laboratory analysis will be undertaken for the first six months during the operational phase.
2. The drainage system will be monitored in the operational phase until such a time that all areas that have been reinstated become re-vegetated and the natural drainage regime has been restored.

3. Post-construction linear habitat restoration monitoring: Monitoring of minor segments of restored hedgerow which was removed to facilitate the construction of the access track within agricultural lands in the townland of Strogue. Monitoring will occur following the main growing season (i.e., in September) in a given year for the first five years of growth.

3.3 Decommissioning

The Grid Connection infrastructure will remain in place as it will become part of the National Electricity Grid under the ownership and control of the ESB and EirGrid.

4 Ecology Baseline

4.1 Methodology

4.1.1 Identifying Relevant European Sites

In order to determine the potential for LSE, it is necessary to identify the Zone of Influence (ZoI) of the proposed works and the European Sites therein. The ZoI of the proposed works is the geographical area over which it could affect the receiving environment in a way that could have LSEs directly or indirectly on European Site(s). The ZoI is established using the Source-Pathway-Receptor (S-P-R) model.

4.1.2 Source-Pathway-Receptor (S-P-R) Model

The likely effects of the Proposed works on any European Site have been assessed using a S-P-R model where:

- A ‘source’ is defined as the individual element of the Proposed Grid Connection that has the potential to impact upon a European Site, its qualifying features and its conservation objectives.
- A ‘pathway’ is defined as the means or route by which a source can affect the ecological receptor.
- A ‘receptor’ is defined as the SCI of SPAs or the QI of SACs for which conservation objectives
  - have been set for the European Sites being assessed, in addition to any relevant supporting habitat
  - for species listed.

A S-P-R model is a standard tool used in environmental assessment. In order for an effect to be likely, all three elements of this mechanism must be in place. The absence or removal of one of the elements of the mechanism results in no likelihood for the effect to occur. The S-P-R model was used to identify the European Sites, and their QIs/SCIs, to which the Proposed works could be potentially linked

4.1.3 Zone of Influence

The proximity of the Proposed Grid Connection to European Sites and, more importantly, QIs/SCIs of the European Sites is of importance when identifying potentially likely significant effects. A conservative approach has been used, which minimises the risk of overlooking distant or obscure effect pathways, while also avoiding reliance on buffer zones (e.g., 15 km), within which all European Sites should be considered. This approach assesses the complete list of all QIs/SCIs of European Sites in Ireland (i.e., potential receptors), instead of listing European Sites within buffer zones. This follows Irish departmental guidance on AA:

> *“For projects, the distance could be much less than 15 km, and in some cases less than 100m, but this must be evaluated on a case-by-case basis with reference to the nature, size and location of the project, and the sensitivities of the ecological receptors, and the potential for in combination effects” (DoEHLG, 2009; p.32, para 1).*

> *“The zone of influence of a proposed development is the geographical area over which it could affect the receiving environment in a way that could have significant effects on the Qualifying Interests of a European Site. This should be established on a case-by-case basis using the Source-Pathway-Receptor framework and not by arbitrary distances (such as 15 km).” (OPR, 2021; p.8).*

Following the guidance set out by the NRA (2009), the Proposed Grid Connection has been evaluated based on an identified ZoI with regard to the potential impact pathways to ecological feature (e.g., mobile and static). The ZoI of the Proposed Grid Connection on mobile species (e.g., birds, mammals, and fish), and static species and habitats (e.g., saltmarshes, woodlands, and flora) is considered differently. Mobile species have 'range' outside of the European Site in which they are QI/SCI. The range of mobile QI/SCI species varies considerably, from several metres (e.g., in the case of whorl snails Vertigo spp.), to hundreds of kilometres (in the case of migratory wetland birds). Whilst static species and habitats are generally considered to have ZoIs within close proximity of the Proposed Grid Connection, they can be significantly affected at considerable distances from an effect source; for example, where an aquatic QI habitat or plant is located many kilometres downstream from a pollution source.

Hydrological linkages between the Proposed Grid Connection and a European Site (and their QIs/SCIs) can occur over significant distances; however, any effect will be site specific depending on the receiving water environment and nature of the potential impact. As a precautionary measure, a reasonable worst-case ZoI for water pollution from the Proposed Grid Connection is considered to be the surface water subcatchment and any subsequent downstream subcatchments. In this report, the surface water sub catchment is defined at the scale below Catchment Management Unit (CMU), as adopted in the River Basin Management Plan (RBMP) for Ireland 2018-2021 (DoHPLG, 2018) and the Water Action Plan 2024: A River Basin Management Plan for Ireland (DEHLGH, 2024).

Hydrogeological linkages between the Proposed Grid Connection and a European Site (and their QIs/SCIs) are highly variable based on the characteristics of the groundwater body, methodologies used, and the presence of groundwater dependant habitats and species. As a precautionary measure, a reasonable worst-case ZoI for water pollution from the Proposed Grid Connection is considered to capture the entirety of each groundwater body the Proposed Grid Connection overlies. The initial ZoI is therefore combined to capture 20km in the case of SPAs around the site, the sub catchment management unit as a whole and any subsequent downstream sub catchment management units, and the relevant groundwater bodies.

4.1.4 Identification of Likely Significant Effects

The Commission's Notice (EC, 2018) advises that the Appropriate Assessment procedure under Article 6(3) is triggered not by the certainty but by the likelihood of significant effects, arising from plans or projects, regardless of their location inside or outside a protected site. Such likelihood exists if significant effects on the European Site cannot be excluded. The significance of effects should be determined in relation to the specific features and environmental conditions of the European Site concerned by the plan or project, taking particular account of the European Site's conservation objectives and ecological characteristics.

The threshold for a LSE is treated in the screening exercise as being above a *de minimis* level[1]. The opinion of the Advocate General in CJEU case C-258/11 outlines:

> *"The requirement that the effect in question be 'significant' exists in order to lay down a de minimis threshold. Plans or projects that have no appreciable effect on a European Site are thereby excluded. If all plans or projects capable of having any effect whatsoever on the site were to be caught by Article 6(3), activities on or near the site would risk being impossible by reason of legislative overkill."*

In this report, therefore, 'relevant' European Sites are those within the potential ZoI of activities associated

[1] Sweetman v. An Bord Pleanála (Court of Justice of the EU, case C-285/11). A de minimis effect is a level of risk that is too small to be concerned with when considering ecological requirements of an Annex I habitat or a population of Annex II species present on a European Site necessary to ensure their favourable conservation condition. If low level effects on habitats or individuals of species are judged to be in this order of magnitude and that judgment has been made in the absence of reasonable scientific doubt, then those effects are not considered to be likely significant effects.

with the construction and operation of the Proposed Grid Connection, where LSE pathways to European Sites were identified through the source-pathway-receptor model.

A significant effect is triggered when:

- The plan is likely to undermine the European Site's conservation objectives;
- A significant effect cannot be excluded on the basis of objective information; and
- Measures to prevent or offset risk [mitigation measures] would be required.

The Screening for AA (Stage 1) will incorporate the following steps:

- Describing the project or plan;
- Identifying the European Sites potentially affected by the project or plan;

4.2 Ecology Baseline

4.2.1 Desk Study

A desk study was completed in April 2025 to identify relevant European Sites and information regarding their QIs, SCIs and Conservation Objectives etc. This desk study is detailed in **Appendix A**.

4.2.2 Field Survey

The Ecology Survey Area for the Proposed Grid Connection (as illustrated in **Figure 4-1**) was previously surveyed during 2022 and 2023 to inform the planning application for the Consented Wind Farm. An update ecology walkover survey was completed by a qualified ecologist on 7*th* May 2025 to inform the appraisal of the Proposed Grid Connection. The walkover survey focussed on habitats, IAPS, bird and mammals occurrences along the Proposed Grid Connection works footprint (and approximately 20m either side of the footprint where access allowed. In areas where access was limited, visual inspections were undertaken and where backed up by the desktop assessment.

The otter surveys were conducted as per NRA (2009) guidelines (Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes). This involved a search for all otter signs e.g., spraints, scat, prints, slides, trails, couches and holts. The dedicated otter surveys also followed the guidance as set out in NRA (2008) 'Guidelines for the Treatment of Otters Prior to the Construction of National Roads Schemes. A search for Third Schedule Invasive Plant species was also undertaken with cognisance of *The Management of Invasive Alien Plant Species on National Roads* – Technical Guidance. GE-ENV-01105. Transport Infrastructure Ireland.

Legend

Ecology Survey Area

Client

Buirios Ltd

Borrisbeg Grid Connection

Title

Ecology Survey Area

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Issue Details

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4.2.2.1 Survey Findings

4.2.2.1.1 Habitats

Habitats within the Proposed Grid Connection survey area where reassessed in May 2025 to denote if material changes had occurred in the interim between surveys that were carried out for the Consented Wind Farm in 2022 and 2023.

No significant material changes to the original habitat baseline occurred. Two small areas previously noted as agricultural grassland adjacent to the road had been overgrown and colonised with shrubby plants and grasses and are now classified as Dry meadows and grassy verges (GS2). This habitat was found to the south of the Proposed Grid Connection survey area and does not have affinity to any Annex I grassland habitat. This habitat will not be impacted by the Proposed Grid Connection works.

4.2.2.1.2 Habitats in relation to the Proposed Grid Connection

The substation, construction compound, sections of the grid connection cable route and mast locations are located within areas of agricultural grassland (GA1). Species composition here includes ryegrass sp., common dock (*Rumex obtusifolius*), common daisy (*Bellis perennis*), common dandelion (*Taraxacum officinale*), spear thistle (Cirsium vulgare), Cuckoo flower (*Cardamine pratensis*), germander speedwell (*Veronica chamaedrys*), common buttercup (*Ranunculus acris*), cowslip (*Primula veris*) and soft rush (*Juncus effusus*). The grid cable route for the majority of its length will occur on built land (BL3) with little to no vegetation present here save for common daisy and grass species growing in the middle of the road. The grid cable route crosses under the Clonmore Stream (FW2) via HDD drilling and will not interact with the river at this location.

The grid cable route will then cross through hedgerows (WL1) and treelines (WL2) to the south of the Proposed Grid Connection survey area. Species composition within the hedgerows consists of hawthorn (*Crataegus monogyna*), bramble (*Rubus fruticosus*), bush vetch (*Vicia sepium*), common nettle (*Urtica dioica*), alder (*Alnus glutinosa*), blackthorn (*Prunus spinosa*) and ash (*Fraxinus excelsior*) while species composition within the treelines consisted of elm and ash and included aforementioned hedgerow species which included hawthorn, bramble, alder, blackthorn and ash. The grid connection cable route crosses more agricultural grassland and over the Strogue river (FW2) and a number of drainage ditches (FW4) before it terminates at the mast locations. Species composition within the Strogue river was very low with fools' watercress (*Helosciadium nodiflorum*) and common horsetail (*Equisetum arvense*) present instream in slower flowing sections while species within drainage ditches across the Proposed Grid Connection consisted of common horsetail, common reed (*Phragmites australis*) and marsh marigold (*Caltha palustris*). Refer to Figure 4-2 below.

Legend

Ecology Survey Area

Habitats

- BL3
- GA1
- GA2
- GS2
- FW2
- FW4
- WL1
- WL2

Data Sources:

Client

Buirios Ltd

Borrisbeg Grid Connection

Title

Habitats within Ecology Survey Area

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Issue Details

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4.2.2.2 Otter Surveys

No otter signs, couches or holts were encountered during the ecological walkover survey in May 2025 which denotes no change in otter signs within the Site since 2022/2023 surveys

4.2.2.3 Invasive Alien Plant Surveys

No Third Schedule Invasive plants were encountered during the ecological walkover survey in May 2025 which denotes no change in the Third Schedule IAPS of the Site since 2022/2023 surveys.

4.3 European Sites

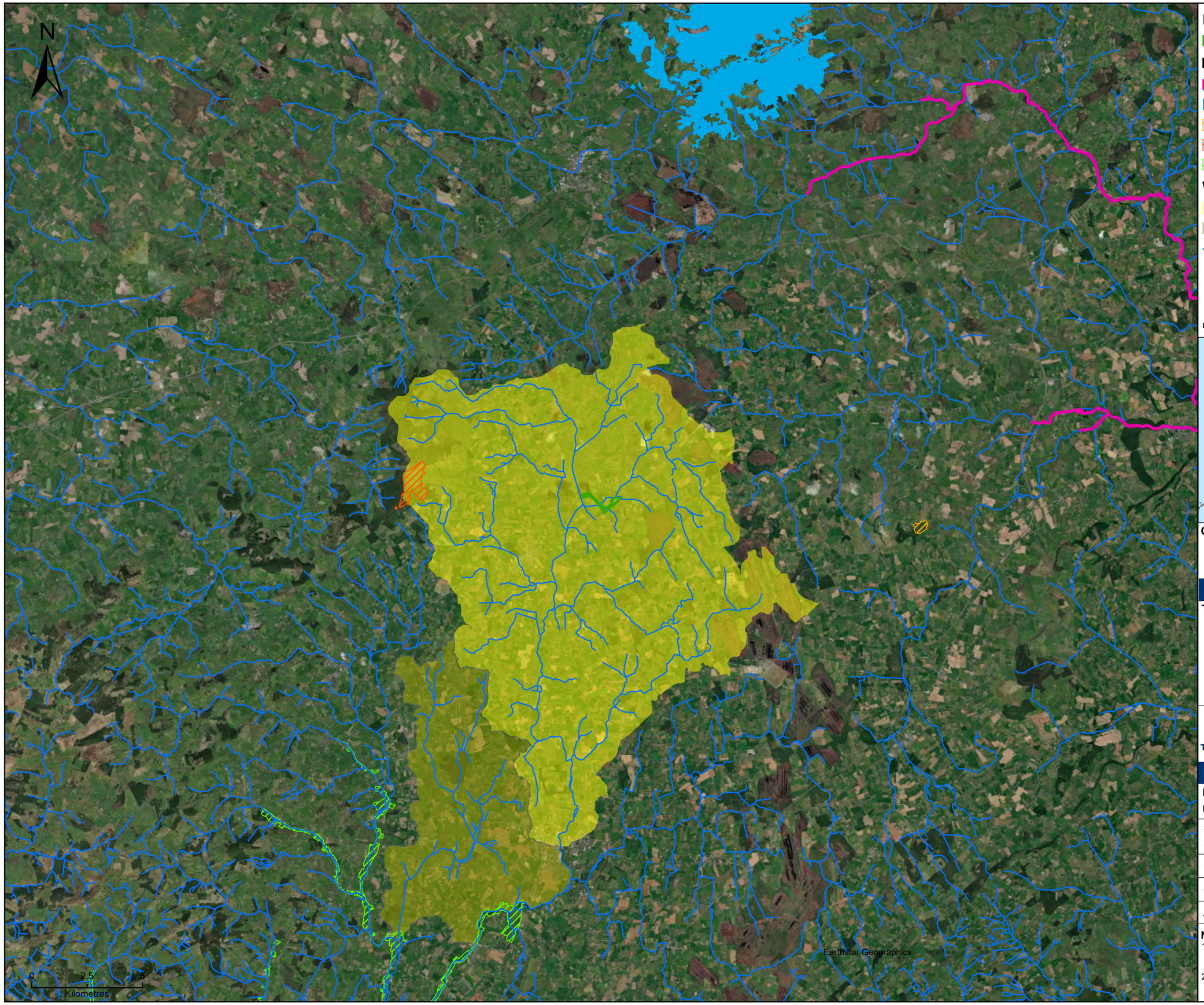
In order to determine the potential for Likely Significant Effects (LSEs), it is necessary to identify the Zone of Influence of the Proposed Grid Connection and the European Sites therein. European Sites identified within the Zone of Influence of the Proposed Grid Connection, their respective Qualifying Interests (QIs/SCIs) and their Conservation Objectives, and a measure of the distance and direction of the European Site from the Proposed Grid Connection survey area are detailed in **Table 4-1** below and illustrated in **Figure 4-3.** The Zone of Influence of the Proposed Project refers to the geographical area over which the Proposed Grid Connection could affect the receiving environment in a way that could have LSEs, either directly or indirectly, on European Site(s). The Zone of Influence is established using the Source-Pathway-Receptor (S-P-R) model (see **Section 4.1.2**) which is a standard tool used in environmental assessment. In order for an effect to be likely, all three elements of this mechanism must be in place. The absence or removal of one of the elements of the mechanism results in no likelihood for the effect to occur. European Sites displayed are those deemed relevant to the Zone of Influence of the Proposed Grid Connection.

Table 4-1: European Sites Located Within the Zone of Influence of the Proposed Grid Connection

European Site (Code)	Qualifying Interest(s) (*Priority Habitat) and Special Conservation Interest(s)	Conservation Objective(s)	Distance and Direction from the Ecology Survey Area
Lower River Suir SAC (002137) (NPWS, 2017)	• Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330] • Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260] • Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430] • Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0] • Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) [91E0] • *Taxus baccata* woods of the British Isles [91J0]	To maintain or restore the favourable conservation condition of the species and habitats listed as Qualifying Interests for this SAC.	SAC is approx. 24.5km downstream of the Proposed Grid Connection survey area and hydrological connectivity exists via existing drainage into watercourses.

European Site (Code)	Qualifying Interest(s) (*Priority Habitat) and Special Conservation Interest(s)	Conservation Objective(s)	Distance and Direction from the Ecology Survey Area
	• Freshwater Pearl Mussel (*Margaritifera margaritifera*) [1029] • White-clawed Crayfish (*Austropotamobius pallipes*) [1092] • Sea Lamprey (*Petromyzon marinus*) [1095] • Brook Lamprey (*Lampetra planeri*) [1096] • River Lamprey (*Lampetra fluviatilis*) [1099] • Twaite Shad (*Alosa fallax fallax*) [1103] • Salmon (*Salmo salar*) [1106] • Otter (*Lutra lutra*) [1355]		
River Nore SPA (004233) (NPWS, 2024)	• Kingfisher (*Alcedo atthis*) [A229]	To maintain the favourable conservation condition of Kingfisher in River Nore SPA	16.1km northeast as the crow flies[2]. No hydrological connection
Slieve Bloom Mountains SPA (004160) (NPWS, 2022)	• Hen Harrier (*Circus cyaneus*) [A082]	To restore the favourable conservation condition of hen harrier in Slieve Bloom Mountains SPA	16.1km north as the crow flies No hydrological connection

[2] As the crow flies refers to the nearest straight line distance.



Legend

Proposed Grid Connection

European Sites

River Nore SPA
Slieve Bloom Mountains SPA
Galmoy Fen SAC
Kilduff, Devilsbit Mountain SAC
Lower River Suir SAC

WFD Subcatchments

Suir_SC_010
Suir_SC_020
EPA Waterbodies

Data Sources: EPA, NPWS

Client

Buirios Ltd

Borrisbeg Grid Connection

Title

European Sites in Zol of the Proposed Grid Connection

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5 Stage 1 – Screening Assessment

5.1 Directly Connected with or Necessary to the Management of European Site(s)

The project, as described in **Section 3** is not directly connected with or necessary for the management of any European Site(s).

5.2 Identifying Relevant European Sites

The ZoI is established using the Source-Pathway-Receptor (S-P-R) model which then identifies Likely Significant Effects to any European Sites considered to have connectivity to the Proposed Grid Connection. The methodology for this is detailed in Section **4.1.1** - **4.1.4.**

5.2.1 Potential Sources

5.2.1.1 Construction Phase

- Habitat loss, deterioration or fragmentation. This includes land take required to construct the Proposed Grid Connection which encompasses the substation and temporary compound, grid route, end masts and access tracks.
- Accidental release of pollutants (e.g., suspended solids, silt, fuels, oils and lubricants) which could be released from the site (e.g., from machinery during construction activities) into the surface water network. This could cause a consequent reduction in water quality in European Sites hydrologically linked via the surface water network to the site during the works.
- Groundwater interference. Groundwater interference is deemed to involve changes in flow, yield and quality of the groundwater body arising from works which may extend into the water table in certain conditions.
- Air pollution from dust and vehicle emissions. Air pollution from construction activities may affect the sensitive habitats in the vicinity of the works. Dust or particles falling onto plants can physically smother the leaves affecting photosynthesis, respiration and transpiration.
- Disturbance of QI/SCI species from the Proposed Grid Connection works. Sources of disturbance include the noise, vibration, dust and vehicle emissions associated with construction traffic and activities and the disturbance arising from the presence and activities of construction personnel. These effects are likely to extend into areas beyond the Proposed Grid Connection footprint.
- Spread of invasive species. The proposed construction activities could lead to the dispersal of scheduled invasive species either via machinery, materials, clothing or wild animals.

5.2.1.2 Operational and Maintenance Phase

- Spread of invasive species. Increased footfall in the area for maintenance works could lead to the dispersal of scheduled invasive species either via clothing, bicycles/scooters or dog walking activity.
- Disturbance of QI/SCI species from the increased footfall for maintenance works. These effects are likely to extend into areas beyond the Proposed Grid Connection footprint.

5.2.2 Potential Pathways

The potential pathways for effects are summarised as follows:

- Hydrological: Downstream changes in surface water quality during works particularly with respect to accidental release of pollutants (e.g., suspended solids, silt, hydrocarbons from a fuel leak, waste material) into the surface water network and subsequently into the River Suir.
- Hydrogeological: Changes in groundwater quality during works particularly with respect to accidental spillages of materials (e.g., from a fuel leak, waste) during excavations which could migrate vertically to the underlying bedrock and laterally within the aquifer.
- Air/land: Direct disturbance from noise or vibration on habitat upon which QI/SCI species or populations are dependent for part of their lifecycle both inside and outside the proposed works boundary, e.g., breeding, foraging or resting sites for certain bird species.
- Air: Disturbance to QI species and habitats and/or SCI species from air pollution such as dust generation from construction activities or emissions from construction vehicles which may affect species/habitats directly e.g. cause breathing difficulties, smother vegetation etc.
- Air: Indirect disturbance of QI and/or SCI species from air pollution such as dust generation from construction activities which may smother vegetation and habitats which these species or populations are dependent upon for part of their lifecycle e.g., breeding, foraging or resting sites for certain bird species.
- Land: Direct disturbance of QI/SCI species or populations because of their movement through or use of habitat within or adjacent to the site boundary for part of their lifecycle (e.g., the disturbance of foraging sites for certain SCI bird species).
- Hydrological/land: Direct disturbance of IAPS infestations during proposed works or movement of pedestrians/cyclists could lead to the dispersal of IAPS fragments via watercourses and/or via machinery, clothing, equipment, pets, bicycles etc. with the capacity to establish new infestations

5.2.3 Potential Receptors (European Sites)

The ZoI “rules” which have been developed specifically for the Proposed Grid Connection (see below) were applied with reference to available databases and mapping for the Natura 2000 network. As detailed above, the rules have been defined following a consideration of the potential sources of impact and defining the potential pathways of effects arising from these impacts upon the receptors. If no such pathway existed or the pathway did not extend sufficiently based on scientific analysis or professional judgement to impinge on the European Site (in whole or part) then no pathway for LSEs was considered to exist.

In order to inform Stage 1 – Screening Assessment, the following ZoI “rules” were used to identify any European Sites that the Proposed Grid Connection may impart LSEs upon:

1. Any European Sites within the boundary of the Proposed Grid Connection works will be automatically considered with regard to potential for LSE. This is to take account of direct impacts and effects.
2. Any European Sites which lie within 200m straight-line measurement of the Proposed Grid Connection works will be automatically considered with regard to potential for LSE. This is to account for:
3. The potential incursion of construction personnel, vehicles or materials beyond the proposed works areas during construction

4. The extent of potential dust-generating effects and pollution from vehicle emissions.
5. Any European Sites which lie within 50m of the Proposed Grid Connection works will be considered with respect to any vibration disturbance effects with regard to potential for LSE on QI or SCI species during construction and operation.
6. Any European Sites which lie within 500m of the Proposed Grid Connection works will be considered with respect to any noise disturbance effects with regard to potential for LSE on QI or SCI species during the construction phase.
7. Any European Sites within the catchment(s) of the Proposed Grid Connection works which support QIs/SCIs which are sensitive to hydrological change (flow or quality) and are downstream of the proposed works area will be automatically considered with regard to potential for LSE.
8. Any European Sites with upstream hydrological connectivity to the Proposed Grid Connection works will be considered with regard to potential for LSE if they support mobile aquatic QI/SCI species which could move through the proposed works area to/from the European Site as part of their lifecycle (e.g. Atlantic salmon) or aquatic species whose life cycle is dependent on mobile aquatic species (e.g. freshwater pearl mussel).
9. Any European Site which supports QI or SCI species which have been shown through survey to be present in ex-situ habitats within/adjacent to the proposed works area will be considered with regard to potential for LSE.
10. Any European Site which supports groundwater dependant ecosystems which is within the same groundwater body as the Proposed Grid Connection works.

5.3 Likely Significant Effects Alone

Applying the ZoI “rules” defined above, S-P-R links between the Proposed Grid Connection and one SAC (Lower River Suir SAC) was identified. An analysis of the application of the ZoI “rules” is summarised in **Table 5-1** below. The Proposed Grid Connection has the potential to have direct, indirect and in combination effects on this European Sites

Table 5-1: Analysis of ZoI Rules for the Proposed Grid Connection

European Site Name and Code	Distance from Proposed Grid Connection survey area	Connectivity
Lower River Suir SAC (Site Code: 002137)	Approximately 24.5km downstream	Yes, due to the application of rule 5 and 8
River Nore SPA (Site Code: 004233)	16.1km northeast as the crow flies. No hydrological connection	No, Kingfisher is the only SCI present. Kingfisher require slow-moving high-quality watercourses with high to medium fish populations. Given that watercourses are historically poor (Q3 in 2023) and the high siltation and low number of fish found during aquatic surveys undertaken within the Proposed Grid Connection survey area in 2022/2023, watercourses within the Proposed Grid Connection area offers a poor-quality habitat for Kingfisher. This SPA it is not considered to have ex-situ habitat within the Proposed Grid Connection. Given the habitat requirements and the distance from the SPA to the Proposed Grid Connection, this SPA it is considered to have no connection to the Proposed Grid Connection.

European Site Name and Code	Distance from Proposed Grid Connection survey area	Connectivity
Slieve Bloom Mountains SPA (Site Code: 004160)	16.1km north as the crow flies. No hydrological connection	No. Hen harrier is the only SCI of this SPA. Ex-situ habitat for hen harrier is not present within the Proposed Grid Connection (Pre thicket forest, open heath and bog). This SPA it is not considered to have ex-situ habitat within the Proposed Grid Connection. Given the habitat requirements and the distance from the SPA to the Proposed Grid Connection, this SPA it is considered to have no connection to the Proposed Grid Connection.

Following the identification of the European Sites which could be subject to LSEs as shown in **Table 5-1**, a detailed analysis was then completed with reference to the Project Description set out in **Section 3** to identify the relevant LSEs which could arise from the Proposed Grid Connection on the Lower River Suir SAC. The analysis is set out in Appendix B.

Based on the results of Appendix B, the Zone of Influence of effects of the Proposed Grid Connection on the Lower River Suir identified as:

- Surface water run-off carrying suspended silt or contaminants into watercourses during the construction of the Proposed Grid Connection. The Suir_SC_010 sub catchment in which the Proposed Grid Connection lies and the downstream Suir_SC_020 sub catchment in which the Lower River Suir SAC is located.

5.3.1 Significance of Impacts on European Sites

5.3.1.1 Surface water run-off carrying suspended silt or contaminants into watercourses

There is potential that surface water run-off generated from the Proposed Grid Connection may enter surrounding watercourse or drainage ditches via overland flow. The following works have been identified as having the potential to generate sediment, soil or polluted runoff that may reach watercourse via overland flow.

- The grid connection cabling route which will be c.2.1km in length running through a dug trench under the local road (predominantly L-7039 with a small section through the R433 and L-7038) and new access tracks across agricultural land.
- Horizontal directional drilling is to occur underneath the Clonmore Stream. Sediment from the drilling will be generated and stored nearby the drilling site.
- At the Strogue watercourse, it is proposed to construct a clear-span watercourse crossing. A foundation base will be excavated to rock or competent ground with a mechanical excavator with the foundation formed in-situ using a semi-dry concrete lean mix. The base will be excavated along the stream bank with no instream works required.
- Culvert installation within drainage ditches along the agricultural land.

Atlantic salmon require at least a Q4 value in terms of water quality as part of their Conservation Objectives. There is potential for impacts on QI species Atlantic salmon, sea lamprey, brook lamprey, river lamprey and twaite shad via pollutants entering the Lower River Suir SAC as surface water runoff.

Otters require no significant decrease in fish biomass as part of their conservation objectives and as such there food source may be impact by surface water runoff where water quality deterioration may result in reduced fisheries production.

Therefore, there is potential for indirect impacts to occur via surface water run-off carrying suspended silt or contaminants into local watercourses. Given the presence of an S-P-R link, there is potential for likely significant effects on the Lower River Suir SAC as a result of the Proposed Grid Connection.

5.4 Likely Significant Effects In-combination

As part of the screening for AA, in addition to the proposed works, other relevant projects and plans in the region must also be considered at this stage. The following sections outline the results of this assessment.

5.4.1 Plans

The plans that are considered in-combination with the proposed works are outlined in Appendix C.

5.4.2 Projects

A search was conducted of planning applications (projects) within the vicinity of the Proposed Grid Connection, using Myplan3, and the Department of Housing, Planning and Local Government EIA portal map viewer4. The search was limited to the ten-year period preceding the date of issue of this report and excluded retention applications (i.e., typically local-scale residential or commercial developments where an impact has already occurred), incomplete, withdrawn, and refused applications. The relevant projects with potential for in-combination adverse effects on the integrity of European sites, are detailed in Appendix C.

Furthermore, a search of An Coimisiún Pleanála's website[5] was undertaken to identify any relevant applications, including Strategic Infrastructure Development (SID), Strategic Housing Development (SHD) and Large-scale Residential Development (LRD) in the past 10 years or in close proximity to the proposed works.

The Forestry Licence Viewer[6] indicates that there are several afforestation licences are either pending or approved in the River Suir catchment. No relevant foreshore applications were identified that could result in an in-combination effect with the proposed works.

5.4.3 In-combination Conclusion

There are several local planning applications at different stages of the planning process were found within and in close proximity to the Ecology Survey Area, with the majority pertaining to extensions, retention permissions and design alterations to previously consented domestic dwelling applications. Adherence to the overarching policies and objectives of Tipperary County Development Plan 2022- 2028 and any future development plans ensure that local planning applications and subsequent grant of planning comply with the core strategy of proper planning and sustainability and with the requirements of relevant EU Directives, National Legislation and environmental considerations. Therefore, there is no potential for adverse in-combination effects on European Sites.

No other plans or projects were identified as having the potential to contribute to cumulative effects on the identified European Sites, in combination with the proposed works which are small scale in nature.

[3] Available online at https://myplan.ie/. Accessed May 2025
[4] Available online at https://housinggovie.maps.arcgis.com/apps/webappviewer/index.html?id=d7d5a3d48f104ecbb206e7e5f84b71f1. Accessed May 2025
[5] Available online at http://www.pleanala.ie/. Accessed July 2025
[6] Available online at https://forestry-maps.apps.rhos.agriculture.gov.ie/ accessed May 2025

5.5 Conclusion of Stage 1 – Screening Assessment

The following conclusions are made at the Stage 1 – Screening Assessment stage:

- The proposed works are not directly connected with or necessary for the management of any European Site.
- The proposed works have the potential to result in LSEs alone and/or in combination on the designated interests of any European Sites
- Due to the LSEs identified, it is concluded that a Stage 2 – Natura Impact Assessment (NIS) **is required**.

6 References

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NPWS (2024) Conservation Objectives: River Nore SPA 004233. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.

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O'Neill, F.H., Martin, J.R., Devaney, F.M. & Perrin, P.M. (2013), The Irish semi-natural grasslands survey 2007-2012. Irish Wildlife Manuals, No. 78. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Ireland.

Stace, C (2010) New Flora of the British Isles. 3rd edn. Cambridge University Press, Cambridge, UK

TCC (2022) Tipperary County Development Plan 2022 – 2028

TCC (2025) County Tipperary Biodiversity Action Plan 2025 – 2030 Discussion Paper found online @ https://consultations.tipperarycoco.ie/sites/default/files/2024-08/County%20Tipperary%20Biodiversity%20Plan%202025-2030-%20Discussion%20Paper.pdf

Appendix A Desk Study

A desk study was completed in April 2025 to identify relevant European Sites and information regarding their QIs, SCIs and Conservation Objectives etc and is detailed below:

While the distributions of the QI habitats for which the European Sites are selected are typically restricted to the individual Site, QI/SCI species can range well beyond the boundaries of the Site *e.g.* bird species or otter (*Lutra lutra*). The desk study established, from available publications and other publicly available resources, the known distributions and potential presences of such species beyond the defined boundaries of the European Sites for which they are listed as QIs/SCIs. The exercise collated information available from the following sources and it informs the source-pathway-receptor (S-P-R) model analysis:

- Surveys of flora, fauna, and habitats available at Heritage Councils mapping website (https://heritagemaps.ie/WebApps/HeritageMaps/index.html). Study area: 2km Grid Square S17M and SI7L.
- Distribution records for relevant QI and SCI species of European Sites held online by the National Biodiversity Data Centre (NBDC) (www.biodiversityireland.ie/). Study area: 2km Grid Square S17M and SI7L.
- Distribution records for QI and SCI species of European Sites held online by the National Parks and Wildlife Service (NPWS) (https://www.npws.ie/). Study area: 2km Grid Square S17M and SI7L.
- Environmental Protection Agency (EPA) online interactive mapping tools (https://gis.epa.ie/EPAMaps) and (https://www.catchments.ie/maps/) for water quality data including surface and ground water quality status, and river catchment boundaries. Study area: groundwater catchment and Water Framework Directive (WFD) Management Units intersected by the Proposed Grid Connection.
- Geological Survey Ireland (GSI) (https://www.gsi.ie/en-ie/Pages/default.aspx). Study area: groundwater catchment and WFD Management Units intersected by the Proposed Grid Connection.
- Information on ranges of Annex I habitats and mobile QI populations in Volume 1 of NPWS' Status of EU Protected Habitats and Species in Ireland (NPWS, 2019a) and associated digital shapefiles. Study area: 2km Grid Square S17M and SI7L.
- Information on the location, nature and design of the Proposed Grid Connection (**Section 3).**
- Information on the River Basin Management Plan 2018 – 2021 – (DHPLG, 2018a) Study area: WFD Management Units intersected by the Proposed Grid Connection.
- Information on the Water Action Plan 2024 (DHLGH, 2024). Study area: WFD Management Units intersected by the Proposed Grid Connection.
- Inland Fisheries Ireland (IFI) and Water Framework Directive (WFD) fish survey data. Study area: WFD Management Units intersected by the Proposed Grid Connection.
- Mapping of European Site boundaries and Conservation Objectives for relevant sites, available online from the NPWS included site synopses, Natura 2000 Standard Data forms and Conservation Objective Supporting Documents where available (https://www.npws.ie/protected-sites). Study area: all sites considered to be connected to the Proposed Grid Connection.
- Office of Public Works (OPW) drainage maintenance maps and data (https://www.floodinfo.ie/map/drainage_map/) Study area: WFD Management Units intersected by the Proposed Grid Connection.

- OPWs national flood information portal, Flood Maps (www.floodinfo.ie). Study area: WFD Management Units intersected by the Proposed Grid Connection.
- Other relevant proposed developments within the vicinity of the Proposed Grid Connection.

A.1 Previous ecological surveys

Ecological surveys were undertaken across a wider study area which incorporated the Proposed Grid Connection in 2022 and 2023 as part of the Consented Wind Farm. The multidisciplinary surveys relevant to the Proposed Grid Connection are detailed below.

A.2 Multi-disciplinary walkover surveys - 2022 and 2023

As part of the survey effort for the Consented Wind Farm, which also included the study area of the Proposed Grid Connection, multidisciplinary walkover surveys were undertaken on the 11th August 2022, 25th August 2022, 18th October 2022, 13th April 2023, 27th April 2023, 11th May 2023 and the 21st September 2023. A comprehensive walkover of the entire site was completed with incidental records also incorporated from other dedicated species/habitat specific surveys including for otter, aquatic invertebrate surveys and quadrat surveys.

The multi-disciplinary walkover surveys comprehensively covered the Proposed Grid Connection footprint and based on the survey findings, further detailed targeted surveys were carried out for features and locations of ecological significance. These surveys were carried out in accordance with NRA Guidelines on Ecological Surveying Techniques for Protected Flora and Fauna on National Road Schemes (NRA, 2009).

During the multidisciplinary surveys, a search for Invasive Alien Species (IAS) listed under the Third Schedule of the European Communities Regulations 2011 (S.I. 477 of 2015) was conducted.

Botanical surveys of the site were also undertaken during the 2022 and 2023 multidisciplinary walkover surveys. Habitats were recorded on site and classified in accordance with Fossitt (2000). The habitat assessment surveys described above in the 2022 and 2023 surveys here were undertaken in accordance with the following guidelines and interpretation documents: NPWS (2019a), NPWS (2019b), Martin *et a*l (2018), O'Neill *et al* (2013), (Stace, 2010) and (British Bryological Society, 2010).

A.2.1 Habitats

Habitats present at and surrounding the Proposed Grid Connection footprint (i.e. the Ecology Survey Area) include the following;

- Buildings and artificial surfaces (BL3)
- Depositing/ lowland river (FW2).
- Improved agricultural grassland (GA1)
- Dry meadows and grassy verges (GS2)
- Hedgerows (WL1)
- Treelines (WL2)

The proposed 110kV substation and its associated temporary construction compound are located within an area of Agricultural grassland (GA1) adjacent to local road L-70391 within the east of the Site. The proposed underground grid connection cabling route continues east from the substation through the Agricultural grassland (GA1) habitat before exiting on to the L7039 local road classified as Buildings and artificial Surfaces (BL3), where it turn south and runs along the road, crossing the R433 and L7038 for a total of 900m. Habitats adjacent to these roads include Amenity grassland (GA2), Buildings and artificial surfaces, Hedgerow (WL1) and Treeline (WL2).

The proposed underground grid connection cabling route crosses the Clonmore (Stream) classified as a depositing/ lowland river (FW2). The road at this river crossing is lined by a managed hedgerow with species including hawthorn (*Crataegus monogyna*) and blackthorn (*Prunus spinosa*) and scattered trees including alder (*Alnus glutinosa*), hawthorn and ash (*Fraxinus excelsior*).

From the L7038, the proposed underground grid connection cabling route enters agricultural grassland (GA1), running parallel to the L7038 for approx. 175m before turning in a northeastern direction. The underground grid connection cable route crosses a tributary of the Clonmore (Stream), the Strogue Stream, which is classified as a Depositing/ lowland River (FW2) and is located within an agricultural grassland and bordered by a treeline (WL2) that consists of hawthorn (Crataegus monogyna) and blackthorn (Prunus spinosa) and scattered trees including ash.

A.2.2 Otter survey

Following a review of the initial site walkover, ecological surveys for constraints identification and the results of the multi-disciplinary walkover survey, areas identified as providing potential habitat for otter were subject to specialist targeted survey. Otter surveys were conducted on the 11th of August 2022, 25th of August 2022, 18th of October 2022, 13th of April 2023, 27th of April 2023, 11th of May 2023 and the 21st of September 2023.

The otter surveys were conducted as per NRA (2009) guidelines (Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes). This involved a search for all otter signs e.g., spraints, scat, prints, slides, trails, couches and holts. In addition to the width of the rivers/watercourses, a 10m riparian buffer (both banks) was include as part of the otter habitat (NPWS 2009). The dedicated otter surveys also followed the guidance as set out in NRA (2008) 'Guidelines for the Treatment of Otters Prior to the Construction of National Roads Schemes' and following CIEEM best practice competencies for species surveys (CIEEM, 2013).

These surveys found no evidence of otter signs, couches or otter holts.

A.2.3 Invasive Alien Plant Surveys

During the multidisciplinary surveys in 2022 and 2023 for the Consented Wind Farm, no Third Schedule Invasive plant species were encountered within the footprint of the Proposed Grid Connection.

A.2.4 Aquatic survey

As part of the survey effort for the Consented Wind Farm, watercourses in proximity to the wind farm and Proposed Grid Connection infrastructure, were subject to biological evaluation and assessment through kick sampling, fish stock assessment (electro-fishing) and white-clawed crayfish surveys between the 28th and 29th September 2022. One aquatic survey site was surveyed within the Site. The sample site (D1) is on the Clonmore stream with the sample taken at the bridge location along the L-7039 road in proximity to where the HDD drilling will occur. The result of this survey is detailed below.

A.2.4.1 Site D1 – Clonmore Stream, Clonmore

Atlantic salmon (*n*=2), brown trout (*n*=12), European eel (*n*=2) and lamprey (*Lampetra* sp.) (*n*=1) were the fish species recorded via electro-fishing at site D1.

Site D1 was of relatively poor value for salmonids, supporting only a low density of Atlantic salmon parr and mixed-cohort brown trout. This reflected the significant siltation at the site in addition to poor hydromorphology. However, some moderate quality nursery and holding habitat was nonetheless present. Spawning substrata for both salmonids and lamprey was not present. Whilst

the site was heavily silted, the generally flocculent nature of the shallow soft sediment deposits rendered them unsuitable for ammocoetes, with only a single *Lampetra* sp. transformer recorded via electro-fishing. Whilst the bridge area provided some good European eel habitat given the presence of boulder refugia, suitability elsewhere at this location was poor.

A.3 Hydrology and Hydrogeology

A.3.1 Relevant Surface Waters

The Site is located within the sub-catchment Suir_SC_010 (Sub-catchment ID: 16_22). which is within the Suir Catchment (Catchment ID: 16).

There are three rivers/streams across the Site which are the Clonmore stream (Suir), the Strogue stream and the River Suir**.**

The WFD status of the Clonmore Stream (Suir)_010, which includes both the Clonmore and the Strogue within the Proposed Grid Connection area, for the 2016-2021 period is classified as "moderate", as assessed via monitoring. The Clonmore Stream (Suir)_010 is also considered to be 'at risk' of not achieving its WFD objectives (based on WFD risk for the 3rd Cycle of the WFD). This status was assessed via monitoring. The WFD status of the Suir_020 for the 2016-2021 period is classified as "poor", as assessed via monitoring. The Suir_020 is also considered to be 'at risk' of not achieving its WFD objectives (based on WFD risk for the 3rd Cycle of the WFD). See **Apx Table 1** for Q-Value assessments of the watercourses within the Proposed Grid Connection.

Apx Table 1: EPA River Q-Value Monitoring for Watercourses within the Vicinity of the Proposed Grid Connection

Local Name	EPA Station Code	EPA Name	Station Name/Monitoring Location	Location in relation to Proposed Grid Connection redline	Most recent Q-value (year)
Clonmore Stream (Suir)	RS16C111000	CLONMORE STREAM (SUIR)_010	Br u/s Suir R confl	At HDD Bridge location within Proposed Grid Connection boundary	3* [7](2023)
Strogue	RS16C111000	CLONMORE STREAM (SUIR)_010	Br u/s Suir R confl	At HDD Bridge location within Proposed Grid Connection boundary	3* (2023)
Suir	RS16S020200	SUIR_020	Knocknageragh Br	Within Proposed Grid Connection boundary approximately 170m west of proposed on-site 110kv electricity substation	3 (2023)

[7] The EPA River quality survey: biological report states that 'asterisk after the Q value (e.g. Q3*) indicates something worthy of special attention, typically heavy siltation of the substratum'.

A.3.2 Relevant Groundwaters

The Proposed Grid Connection is located entirely within the Templemore (IE_SE_G_151) groundwater body (GWB). The Geological Survey Ireland (GSI) summary of initial characterisation document for the Templemore GWB (GSI, 2004) describes the groundwater flow paths within the Templemore groundwater body:

> "The majority of groundwater flow in this aquifer is considered to take place in the upper weathered zone (3m), below this the amount of groundwater flow decreases gradually with depths and large flows are not expected below 10m except in isolated open fractures."

The document (GSI, 2004) further describes the groundwater and surface water interaction within the Templemore GWB as:

> "*Groundwater will discharge locally to streams and rivers crossing the aquifer and also to small springs and seeps. Owing to the poor productivity of the aquifers in this body it is unlikely that any major groundwater - surface water interactions occur. Baseflow to rivers and streams is likely to be relatively low*."

The Ballysteen Formation underlies the majority of the Site are classified by the GSI (www.gsi.ie) as a Locally Important Aquifer (LI), having bedrock which is moderately productive only in local zones. The Lisduff Oolite Member on the south of the Site Locally Important Aquifer - Bedrock which is Generally Moderately Productive. There are no GSI mapped karst features in the area of the Site. Groundwater vulnerability across the Ecology Survey Area has a range of different classes including 'rock near surface of karst', 'extreme', 'high 'and 'moderate'.

A.4 Soils & Geology

The GSI online database[4] was consulted for available edaphic, geological, and hydrological information of the site and its environs. The bedrock present within the Site is composed of dark muddy limestone and shale of the Ballysteen Formation and section of Oolitic limestone of the Lisduff Oolite Member.

A search of the GSI soils database was conducted to establish the underlying soils in the study area. Teagasc soils mapping characterises the majority of the soils in the Site, including the following:

- Coarse loamy drift with siliceous stones;
- Fine loamy drift with limestones;
- Peat; and
- River Alluvium

The dominant subsoil type is Till derived chiefly from limestone with Alluvium also present within the Site.

A.5 Desktop Habitats

A.5.1 2019 Article 17 Annex I Habitats

A search of the NPWS 2019 Article 17 Reporting GIS and Metadata[8] indicated three different Annex I habitats within 5km of the Proposed Grid Connection. These habitats are not listed as QI of any nearby SAC and were recorded outside the confines of any European Site.

- A section of Orchid Rich Calcareous Grassland [6210] and Molina Meadows [6410] is located 2.1km northwest as the crow flies. This habitat is located upstream of the Proposed

[8] NPWS Article 17 GIS and Metadata Downloads https://www.npws.ie/maps-and-data/habitat-and-species-data/article-17

Grid Connection and therefore hydrological connectivity to the Proposed Grid Connection is ruled out for this habitat.

- A section of Residual Alluvial Woodland [91E0] 3.8km west as the crow flies. This habitat is located upstream of a tributary of the Suir which is not within the same river basin as the Proposed Grid Connection and therefore hydrological connectivity to the Proposed Grid Connection is ruled out for this habitat.
- A section of 4.5km Molina meadows [6410]. This habitat is located upstream of a tributary of the Suir which is not within the same river basin as the Proposed Grid Connection and therefore hydrological connectivity to the Proposed Grid Connection is ruled out for this habitat.

A.6 Invasive Alien Plants

A search of the NBDC 2km Grid squares S17L and S17M was undertaken in May 2025, and no Third Schedule Invasive plant species were recorded in either 2km grid square with only a single sycamore (*Acer pseudoplatanus*) record, listed as a medium impact invasive species found in Grid square S17M.

Appendix B Likely Significant Effects Analysis

Apx Table 2: Likely Significant Effects Analysis

European Site	Connectivity	QI/SCI	Conservation Objective (NPWS)	Location Relative to the Proposed Development	Potential Pathway for Impacts	Potential for LSE
Lower River Suir SAC (002298)	The SAC is located approximately 24.5km downstream of the Proposed Grid Connection area via overland flow into drainage ditches and watercourses. Therefore, there is indirect connectivity between the Proposed Grid Connection area and the SAC. The SAC is located within the Templemore GWB (IE_SE_G_151). The scheme area intersects this groundwater body and therefore there is potential for hydrogeological connectivity between the SAC and the scheme area.	Freshwater Pearl Mussel (Margaritifera margaritifera) [1029]	To restore the favourable conservation condition of Freshwater Pearl Mussel in Lower River Suir SAC	This habitat is located in a different catchment of the Proposed Grid Connection	No – This habitat is located in a different catchment to the Proposed Grid Connection.	No
		1092 White-clawed crayfish (*Austropotamobius pallipes*)	To maintain the favourable conservation condition of white-clawed crayfish in Lower River Suir SAC	Records within the CO documents for this SAC show records 24.5km downstream of the Proposed Grid Connection area. This species was not recorded during baseline surveys. Potential for this mobile species to be present in the Suir_SC_010 sub catchment in which the Proposed Grid Connection lies and the downstream Suir_SC_010 in which the Lower River Suir SAC is found, which are connected indirectly via overland flow into drains and streams.	Yes – via hydrological pathways.	Yes
		1095 Sea lamprey (*Petromyzon marinus*)	To restore the favourable conservation condition of sea lamprey in Lower River Suir SAC	Potential for this mobile species to be present in the Suir_SC_010 sub catchment in which the Proposed Grid Connection lies and the downstream Suir_SC_010 in which the Lower River Suir SAC is found, which are connected indirectly via overland flow into drains and streams.	Yes – via hydrological pathways.	Yes
		1096 Brook lamprey (*Lampetra planeri*)	To restore the favourable conservation condition of brook lamprey in Lower River Suir SAC	Potential for this mobile species to be present in the Suir_SC_010 sub catchment in which the Proposed Grid Connection lies and the	Yes – via hydrological pathways.	Yes

European Site	Connectivity	QI/SCI	Conservation Objective (NPWS)	Location Relative to the Proposed Development	Potential Pathway for Impacts	Potential for LSE
				downstream Suir_SC_010 in which the Lower River Suir SAC is found, which are connected indirectly via overland flow into drains and streams.		
		1096 River Lamprey (*Lampetra fluviatilis*)	To restore the favourable conservation condition of River Lamprey in Lower River Suir SAC	Potential for this mobile species to be present in the Suir_SC_010 sub catchment in which the Proposed Grid Connection lies and the downstream Suir_SC_010 in which the Lower River Suir SAC is found, which are connected indirectly via overland flow into drains and streams.	Yes – via hydrological pathways.	Yes
		1103 Twaite Shad (*Alosa fallax fallax*)	To restore the favourable conservation condition of Twaite Shad in Lower River Suir SAC	Potential for this mobile species to be present in the Suir_SC_010 sub catchment in which the Proposed Grid Connection lies and the downstream Suir_SC_010 in which the Lower River Suir SAC is found, which are connected indirectly via overland flow into drains and streams.	Yes – via hydrological pathways.	Yes
		1106 Salmon (*Salmo salar*)	To restore the favourable conservation condition of salmon in Lower River Suir SAC	Potential for this mobile species to be present in the Suir_SC_010 sub catchment in which the Proposed Grid Connection lies and the downstream Suir_SC_010 in which the Lower River Suir SAC is found, which are connected indirectly via overland flow into drains and streams.	Yes – via hydrological pathways.	Yes
		1355 Otter (*Lutra lutra*)	To maintain the favourable conservation condition of otter in Lower River Suir SAC	No otter signs, couches or holts found within thew Proposed Grid Connection. Potential for this mobile species to be present in the Suir_SC_010 sub catchment in	Yes – via hydrological pathways.	Yes

European Site	Connectivity	QI/SCI	Conservation Objective (NPWS)	Location Relative to the Proposed Development	Potential Pathway for Impacts	Potential for LSE
				which the Proposed Grid Connection lies and the downstream Suir_SC_010 in which the Lower River Suir SAC is found, which are connected indirectly via overland flow into drains and streams. Also potential for adverse effects on the food source of otter in the downstream catchments.		
		1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae)	To restore the favourable conservation condition of Atlantic salt meadows (Glauco-Puccinellietalia maritimae) in Lower River Suir SAC	This habitat is mapped >100km downstream of the Proposed Grid Connection	No – not within the ZoI of the Proposed Grid Connection given that this habitat is >100km downstream	No
		3260 Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation	To maintain the favourable conservation condition of Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation in Lower River Suir SAC	This habitat is unmapped but was not found within the Proposed Grid Connection area.	No - The habitat sub types within this Annex I habitat include opposite-leaved pondweed (*Groenlandia densa*) which is found only in brackish conditions. The banks of the Suir, particularly its tidal stretches, support a notable population of the rare *Rumex crispus* subsp. uliginosus. The tidal reaches of the Lower River Suir are >80km downstream of the Proposed Grid Connection.	No
		6430 Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	To maintain the favourable conservation condition of Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels in Lower River Suir SAC	This habitat is unmapped but was not found within the Proposed Grid Connection area.	No - This habitat is not found directly within the Proposed Grid Connection area and therefore direct disturbance is not possible and the threat from disturbed Invasive species does not exist as none are present within the Proposed Grid Connection.	No
		91A0 Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles	To restore the favourable conservation condition of old sessile oak	This habitat is mapped >60km downstream of the Proposed Grid Connection	No – not within the ZoI of the Proposed Grid Connection given that this habitat is >60km downstream	No

European Site	Connectivity	QI/SCI	Conservation Objective (NPWS)	Location Relative to the Proposed Development	Potential Pathway for Impacts	Potential for LSE
			woods with *Ilex* and *Blechnum* in the British Isles in Lower River Suir SAC			
		91E0 Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae)*	To restore the favourable conservation condition of alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) in Lower River Suir SAC	This habitat is mapped >100km downstream of the Proposed Grid Connection	No – not within the ZoI of the Proposed Grid Connection given that this habitat is >100km downstream	No

*Indicates a priority habitat under the Habitats Directive

Appendix C Plans and Projects

C.1 Plans

The plans that are considered in-combination with the proposed works are outlined in below and include:

- National Development Plan 2021-2030
- Tipperary County Development Plan 2022- 2028
- Water Action Plan 2024: A River Basin Management Plan for Ireland
- National Biodiversity Action Plan 2023-2030
- Climate Action Plan 2024-2029
- County Tipperary Biodiversity Action Plan 2025 - 2030 Discussion Paper
- All-Ireland Pollinator Plan 2021-2025

C.1.1 National Development Plan 2021-2030

The National Development Plan (NDP) states "*As an integral part of the NDP Review, for the first time ever, an assessment has been undertaken of the impact that each of the Exchequer-funded measures contained in the NDP is likely to have on climate and environmental outcomes. When developing measures for inclusion in the NDP, Departments were asked to undertake a qualitative self-assessment of the impact each measure is likely to have on seven specified climate and environmental outcomes:*

- Climate Mitigation – the likely impact of the measure on greenhouse gas emissions;
- Climate Adaptation – the contribution the measure will make to Ireland's climate resilience;
- Water Quality – any difference the measure may make to pollution levels in waterways ;
- Air Quality – any difference the measure may make to air pollution levels;
- Waste & Circular Economy – what change in waste levels might be expected of the measure;
- Nature & Biodiversity – what impact the measure may have on biological diversity; and
- Just Transition – will the measure contribute to employment that is compatible with Ireland's long-term climate and environmental objectives?

……This encourages Departments to consider the wide climate and environmental impacts of all their spending plans and builds a base which can be built upon."

Due to the implementation of this assessment within the NDP structure and due to the strategic, high-level nature of the NDP, it is considered highly unlikely that impacts arising from the implementation of the NDP will act in-combination with impacts of the Proposed Grid Connection to result in likely significant effects to the natural environment.

C.1.2 Tipperary County Development Plan 2022- 2028

The current Tipperary County Development Plan 2022- 2028 (TCC, 2022) sits beneath the National Development Plan and the Regional Spatial and Economic Strategy 2020-2032 as per planning hierarchy. These plans, which were subject to SEA and AA, are the main planning framework within Tipperary County, although the National Planning Framework and the subsequent Regional Spatial and Economic Strategy 2020-2032 (RSES) provide additional guidance.

The Tipperary County Development Plan 2022- 2028 contains a considerable number of protective measures/objectives for the protection of the environment and specifically European sites. Thus, the in-

combination effects from the Tipperary County Development Plan 2022- 2028 with the Proposed Grid Connection are not predicted to result in any likely significant effects on any European site(s).

C.1.3 Water Action Plan 2024: A River Basin Management Plan for Ireland

The Water Framework Directive (WFD) provides a framework for the protection and improvement of rivers, lakes, marine and groundwaters in addition to water-dependent habitats. The aim of the WFD is to prevent any deterioration in the existing status of water quality, including the protection of good and high-water quality status where it exists. The Water Action Plan 2024 sets out a proposed framework for the protection and improvement of Ireland's water environment in line with WFD objectives.

There are binding obligations on all Irish local authorities, including Tipperary County Council, to achieve at least good status of surface waters, under the terms of the EU Water Framework Directive 2000/60/EC. The implementation of the Water Action Plan 2024 seeks compliance with the environmental objectives set under the plan, which will be documented for each water body. This includes compliance with the European Communities (Surface Waters) Regulations S.I. No. 272 of 2009 (as amended). The implementation of the Water Action Plan 2024 and achievement or maintenance of environmental objectives which will be set for the receiving water bodies will have a positive impact on water dependent habitats and species within European sites.

The Water Action Plan 2024 is the third River Basin Management Plan for Ireland, and it outlines the measures the Irish government and other sectors are taking to improve water quality in Ireland's groundwater, rivers, lakes, estuarine and coastal waters and provide sustainable management of our water resources. It sets out a roadmap to restore Ireland's water bodies to the equivalent of 'good status' or better and to protect water from any further deterioration. The plan focuses on protecting and restoring water quality by preventing and reducing pollution, by restoring the natural ecosystem functions of rivers and by continuing to invest in water infrastructure.

The Water Action Plan 2024 outlines the approach that Ireland will take to protect waters. As the overall aim of the Water Action Plan is to protect and/or restore waters in Ireland, there are no predicted in-combination effects from the Water Action Plan with the Proposed Grid Connection on any European site(s).

C.1.4 National Biodiversity Action Plan 2023-2030

The 4th NBAP has been developed with the support, advice and input of the interdepartmental Biodiversity Working Group and the independent Biodiversity Forum. Ireland's 2nd National Biodiversity Conference was held to gather insights and recommendations for the development of the NBAP and a public consultation process was held to provide further opportunities to engage with the Plan. This National Biodiversity Action Plan 2023-2030 builds upon the achievements of the previous Plan. It will continue to implement actions within the framework of five strategic objectives, while addressing new and emerging issues:

- Objective 1 - Adopt a Whole of Government, Whole of Society Approach to Biodiversity
- Objective 2 - Meet Urgent Conservation and Restoration Needs
- Objective 3 - Secure Nature's Contribution to People
- Objective 4 - Enhance the Evidence Base for Action on Biodiversity
- Objective 5 - Strengthen Ireland's Contribution to International Biodiversity Initiatives

The Wildlife (Amendment) Act 2023 introduced a new public sector duty on biodiversity. The legislation provides that every public body, as listed in the Act, is obliged to have regard to the objectives and targets in the National Biodiversity Action Plan.

As the overall aim of the NBAP is to protect biodiversity and to continue and improve the transposition of the EU Habitats Directive and the EU Birds Directive into national legislation, there are no predicted in-combination impacts from the NBAP 2023-2030 with the Proposed Grid Connection.

C.1.5 Climate Action Plan 2024-2029

Climate Action Plan 2025 (CAP25) is the third statutory annual update to Ireland's Climate Action Plan under the Climate Action and Low Carbon Development (Amendment) Act 2021.. The Plan lays out a roadmap of actions which will ultimately lead to meeting our national climate objective of pursuing and achieving, by no later than the end of the year 2050, the transition to a climate resilient, biodiversity rich, environmentally sustainable and climate neutral economy. It aligns with the legally binding economy-wide carbon budgets and sectoral emissions ceilings that were agreed by Government in July 2022.

Climate Action Plan 2025 builds upon last year's Plan by refining and updating the measures and actions required to deliver the carbon budgets and sectoral emissions ceilings and it should be read in conjunction with Climate Action Plan 2024. The Plan provides a roadmap for taking decisive action to halve Ireland's emissions by 2030 and achieve climate neutrality by no later than 2050, as committed to in the Climate Action and Low Carbon Development (Amendment) Act 2021

The CAP25 will build on the measures and technologies set out in previous CAPs, in addition to setting out specific actions required to achieve emissions targets over the coming years. This plan is cognizant of the link between climate change and biodiversity loss and underscores the need to safeguard biodiversity and ecosystems as a fundamental part of climate resilient development. With this in mind, no negative in-combination impacts with the Proposed Grid Connection are predicted

C.1.6 County Tipperary Biodiversity Action Plan 2025 - 2030 Discussion Paper (TCC, 2025)

The aims of the County Tipperary Biodiversity Action Plan are to;

- Increase awareness of biodiversity and implications of its loss
- Embed biodiversity into all Local Authority Policies and Plans
- Identify locally important habitats and species
- Develop plans to restore habitats
- Support communities with biodiversity conservation projects

Given these objectives, including the inclusion of a local action that is cognizant of the conservation objectives of internationally protected sites, no negative in-combination impacts with the proposed works are predicted.

C.1.7 All-Ireland Pollinator Plan 2021-2025

The first All-Ireland Pollinator Plan (2015-2020) was initiated by Dr Úna FitzPatrick (National Biodiversity Data Centre) and Prof. Jane Stout (Trinity College Dublin) and then developed by a 15-member All-Ireland steering group. The final Plan was produced by the steering group following a consultation phase, which included both public and stakeholder engagement. This new version, for 2021- 2025, was developed by the Steering Group, listed below, to build on the successful delivery of the 81 actions in the first Plan. Development included a 6-month open consultation, during which feedback could be submitted. Partner organisations, who committed to actions in the 2015-2020 Plan, agreed to new actions for 2021-2025. Potential new partner organisations were also contacted during the development phase. The second version of the AIPP builds on the success of the first phase and identifies a total of 186 actions.

The plan emphasises the importance of pollinators and aims to bring about a landscape where pollinators can thrive and flourish into the future and therefore no negative in-combination impacts with the Proposed Grid Connection are predicted.

C.2 Projects

Apx Table 3: Planning Search Results – Projects

Project Details	Applicant Name Development Address Brief Development Description	Comments
Planning Reference: **201236** Decision Date: 26/01/2021 Decision: Granted with conditions Location relative to the Site: Approximately 1.1km northeast as the crow flies.	Board of Management, Clonmore National School Clonmore National School, Clonmore, Templemore, Co. Tipperary Construction of an astroturf playing area with security fencing, floodlighting and ancillary works	The planners report for the development states 'The proposed development has been screened as to the requirement for AA and it has been determined that AA is not required'
Planning Reference: **2260331** Decision Date: 16/08/2022 Decision: Granted with conditions Location relative to the Site: Approximately 1.1km east as the crow flies.	Ballymore Farms Ltd Ballysorrell Big, Clonmore Templemore, Co Tipperary, E41EY40 an extension to an existing cow cubicle shed and all other associated site works.	The planners report for the development states 'The proposed development has been screened as to the requirement for AA and it has been determined that AA is not required'
Planning Reference: **2260725** Decision Date: 26/03/2023 Decision: Granted with conditions Location relative to the SIte: Approximately 1.1km east as the crow flies	Ballymore Farms Ltd Ballysorrell Big, Clonmore Templemore, Co Tipperary, E41EY40 A) Demolition of existing milking parlour & dungsted B) Erection of a milk silo, 2 no. meal bins, 3 no. water storage tanks and 1 no. wash down water tank C) Construction of an extension to existing cubicle shed with an underground slatted tank D) Construction of an extension to silage pit E) Construction of a dungsted F) Construction of milking parlour, collecting yard, handling & drafting area with underground slatted tank G) Construction of an extension to calving shed and all associated site works	The planners report for the development states 'The proposal has been assessed having regard to the requirements of the EU Habitat Directive. The proposed development has been screened for AA and it has been determined that an AA is not required.
Planning Reference: **2360059** Decision Date: 31/01/2023 Decision: Granted with conditions	The Board of Management of Clonmore National School Clonmore, Templemore, Co. Tipperary, E41 XW82 A prefabricated building including all associated site works and RETENTION permission is also sought for an existing storage shed	The planners report for the development states 'The proposal has been assessed having regard to the requirements of the EU Habitat Directive. The proposed development has been screened for AA and it has been determined that an AA is not required

Project Details	Applicant Name Development Address Brief Development Description	Comments
Location relative to the SIte: Approximately 1.1km northeast as the crow flies		
Planning Reference: **2460341** Decision Date: 24/07/2024 Decision: Granted with conditions Location relative to the Site: Approximately 3.1km south as the crow flies	Castleiney Development Association Castleiney Village, Templemore, Co. Tipperary, E41 X386 The renovation and upgrades to the existing Ball Alley which is a protected structure. The works include resurfacing of the floor, constructions of a concrete stub wall to the rear, installation of a glass wall to the rear and reinstatement of the netting to the existing structure	The planners report for the development states 'The proposal has been assessed having regard to the requirements of the EU Habitat Directive. The proposed development has been screened for AA and it has been determined that an AA is not required
ABP Reference: **318704** Decision Date: 24/07/2024 Decision: Granted with conditions Location relative to the Site: Directly adjacent to the Proposed Scheme.	Buirios Limited Borrisbeg and adjacent townlands, near Templemore town in Co. Tipperary 10-year development of 9 Wind Turbines and associated infrastructure	The planners report for the development states 'The NIS concludes that, in view of best scientific knowledge and on the basis of objective information, the proposed project will not adversely affect the Qualifying Interests associated with the screened in European Site, Lower River Suir SAC [002137]. The conclusion is drawn on the basis that potential pathways for effect have been robustly blocked through measures to avoid impacts and the incorporation of best practice/mitigation measures into the project design. Having reviewed the documents, submissions, and consultations, I am satisfied that the information allows for a complete assessment of any adverse effects of the development, on the conservation objectives of the Lower River Suir SAC [002137], alone, or in combination with other plans and projects:'
ABP Reference: **PL92.247086** Decision Date: 15/03/2017 Decision: Granted with conditions	David and Elaine Moore Gurteen, Castleiney, Templemore, Co. Tipperary House, garage and all associated site works.	The planners report for the development states 'it is therefore reasonable to conclude on the basis of the information on the file, which I consider adequate in order to issue a screening determination, that the proposed development,

Project Details	Applicant Name Development Address Brief Development Description	Comments
Location relative to the Site: 2.7km south as the crow flies.		individually or in combination with other plans or projects would not be likely to have a significant effect on European site no. 000934 or any other European site, in view of the site's Conservation Objectives, and a Stage 2 Appropriate Assessment (and a submission of an NIS), is not therefore required'.

Appendix B Desk Study

A desk study was completed in April 2025 to identify relevant European Sites and information regarding their QIs, SCIs and Conservation Objectives etc and is detailed below:

While the distributions of the QI habitats for which the European Sites are selected are typically restricted to the individual Site, QI/SCI species can range well beyond the boundaries of the Site *e.g.* bird species or otter (*Lutra lutra*). The desk study established, from available publications and other publicly available resources, the known distributions and potential presences of such species beyond the defined boundaries of the European Sites for which they are listed as QIs/SCIs. The exercise collated information available from the following sources and it informs the source-pathway-receptor (S-P-R) model analysis:

- Surveys of flora, fauna, and habitats available at Heritage Councils mapping website (https://heritagemaps.ie/WebApps/HeritageMaps/index.html). Study area: 2km Grid Square S17M and SI7L.
- Distribution records for relevant QI and SCI species of European Sites held online by the National Biodiversity Data Centre (NBDC) (www.biodiversityireland.ie/). Study area: 2km Grid Square S17M and SI7L.
- Distribution records for QI and SCI species of European Sites held online by the National Parks and Wildlife Service (NPWS) (https://www.npws.ie/). Study area: 2km Grid Square S17M and SI7L.
- Environmental Protection Agency (EPA) online interactive mapping tools (https://gis.epa.ie/EPAMaps) and (https://www.catchments.ie/maps/) for water quality data including surface and ground water quality status, and river catchment boundaries. Study area: groundwater catchment and Water Framework Directive (WFD) Management Units intersected by the Proposed Grid Connection.
- Geological Survey Ireland (GSI) (https://www.gsi.ie/en-ie/Pages/default.aspx). Study area: groundwater catchment and WFD Management Units intersected by the Proposed Grid Connection.
- Information on ranges of Annex I habitats and mobile QI populations in Volume 1 of NPWS' Status of EU Protected Habitats and Species in Ireland (NPWS, 2019a) and associated digital shapefiles. Study area: 2km Grid Square S17M and SI7L.
- Information on the location, nature and design of the Proposed Grid Connection (**Section 3).**
- Information on the River Basin Management Plan 2018 – 2021 – (DHPLG, 2018a) Study area: WFD Management Units intersected by the Proposed Grid Connection.
- Information on the Water Action Plan 2024 (DHLGH, 2024). Study area: WFD Management Units intersected by the Proposed Grid Connection.
- Inland Fisheries Ireland (IFI) and Water Framework Directive (WFD) fish survey data. Study area: WFD Management Units intersected by the Proposed Grid Connection.
- Mapping of European Site boundaries and Conservation Objectives for relevant sites, available online from the NPWS included site synopses, Natura 2000 Standard Data forms and Conservation Objective Supporting Documents where available (https://www.npws.ie/protected-sites). Study area: all sites considered to be connected to the Proposed Grid Connection.
- Office of Public Works (OPW) drainage maintenance maps and data (https://www.floodinfo.ie/map/drainage_map/) Study area: WFD Management Units intersected by the Proposed Grid Connection.

- OPWs national flood information portal, Flood Maps (www.floodinfo.ie). Study area: WFD Management Units intersected by the Proposed Grid Connection.
- Other relevant proposed developments within the vicinity of the Proposed Grid Connection.

Previous ecological surveys

Ecological surveys were undertaken across a wider study area which incorporated the Proposed Grid Connection in 2022 and 2023 as part of a separate planning application for a proposed wind farm which has since been consented (ABP - PA92.318704), hereafter referred to as the 'Consented Wind Farm'. The multidisciplinary surveys relevant to the Proposed Grid Connection are detailed below.

Multi-disciplinary walkover surveys - 2022 and 2023

As part of the survey effort for the adjacent Consented Wind Farm (ABP - PA92.318704), which also included the study area of the Proposed Grid Connection, multidisciplinary walkover surveys were undertaken on the 11th August 2022, 25th August 2022, 18th October 2022, 13th April 2023, 27th April 2023, 11th May 2023 and the 21st September 2023. A comprehensive walkover of the entire site was completed with incidental records also incorporated from other dedicated species/habitat specific surveys including for otter, aquatic invertebrate surveys and quadrat surveys.

The multi-disciplinary walkover surveys comprehensively covered the Proposed Grid Connection footprint and based on the survey findings, further detailed targeted surveys were carried out for features and locations of ecological significance. These surveys were carried out in accordance with NRA Guidelines on Ecological Surveying Techniques for Protected Flora and Fauna on National Road Schemes (NRA, 2009).

During the multidisciplinary surveys, a search for Invasive Alien Species (IAS) listed under the Third Schedule of the European Communities Regulations 2011 (S.I. 477 of 2015) was conducted.

Botanical surveys of the site were also undertaken during the 2022 and 2023 multidisciplinary walkover surveys. Habitats were recorded on site and classified in accordance with Fossitt (2000). The habitat assessment surveys described above in the 2022 and 2023 surveys here were undertaken in accordance with the following guidelines and interpretation documents: NPWS (2019a), NPWS (2019b), Martin *et a*l (2018), O'Neill *et al* (2013), (Stace, 2010) and (British Bryological Society, 2010).

Habitats

Habitats present at and surrounding the Proposed Grid Connection footprint (Proposed Grid Connection survey area) include the following;

- Buildings and artificial surfaces (BL3)
- Depositing/ lowland river (FW2).
- Improved agricultural grassland (GA1)
- Dry meadows and grassy verges (GS2)
- Hedgerows (WL1)
- Treelines (WL2)

The proposed 110kV substation and its associated temporary construction compound are located within an area of Agricultural grassland (GA1) adjacent to local road L-70391 within the east of the Site. The proposed underground grid connection cable route continues east from the substation through the Agricultural grassland (GA1) habitat before exiting south on to the L-7039 local road classified as Buildings and artificial Surfaces (BL3), running along the road, crossing the R433 and L-7038. The grid route along the road network totals 900m. Habitats adjacent to these roads include Amenity grassland (GA2), Buildings and artificial surfaces, Hedgerow (WL1) and Treeline (WL2).

The proposed underground grid connection cable route crosses the Clonmore (Stream) classified as a depositing/ lowland river (FW2). The road at this river crossing is lined by a managed hedgerow with species including hawthorn (*Crataegus monogyna*) and blackthorn (*Prunus spinosa*) and scattered trees including alder (*Alnus glutinosa*), hawthorn and ash (*Fraxinus excelsior*).

From the L-7038, the proposed underground grid connection cable route enters agricultural grassland (GA1), running parallel to the L-7038 for approx. 175m before turning in a northeastern direction. The underground grid connection cable route crosses a tributary of the Clonmore (Stream), the Strogue Stream, which is classified as a Depositing/ lowland River (FW2) and is located within an agricultural grassland and bordered by a treeline (WL2) that consists of hawthorn (Crataegus monogyna) and blackthorn (Prunus spinosa) and scattered trees including ash.

Otter survey

Following a review of the initial site walkover, ecological surveys for constraints identification and the results of the multi-disciplinary walkover survey, areas identified as providing potential habitat for otter were subject to specialist targeted survey. Otter surveys were conducted on the 11th of August 2022, 25th of August 2022, 18th of October 2022, 13th of April 2023, 27th of April 2023, 11th of May 2023 and the 21st of September 2023.

The otter surveys were conducted as per NRA (2009) guidelines (Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes). This involved a search for all otter signs e.g., spraints, scat, prints, slides, trails, couches and holts. In addition to the width of the rivers/watercourses, a 10m riparian buffer (both banks) was include as part of the otter habitat (NPWS 2009). The dedicated otter surveys also followed the guidance as set out in NRA (2008) 'Guidelines for the Treatment of Otters Prior to the Construction of National Roads Schemes' and following CIEEM best practice competencies for species surveys (CIEEM, 2013).

These surveys found no evidence of otter signs, couches or otter holts.

Invasive Alien Plant Surveys

During the multidisciplinary surveys in 2022 and 2023 for the adjacent Borrisbeg Windfarm project (ABP - PA92.318704), no Third Schedule Invasive plant species were encountered within the footprint of the Proposed Grid Connection.

Aquatic survey

As part of the survey effort for the Consented Wind Farm, watercourses in proximity to the wind farm and Proposed Grid Connection infrastructure, were subject to biological evaluation and assessment through kick sampling, fish stock assessment (electro-fishing) and white-clawed crayfish surveys between the 28th and 29th September 2022. One aquatic survey site was surveyed on within Proposed Grid Connection Survey Boundary. The sample site (D1) is on the Clonmore stream with the sample taken at the bridge location along the L-7039 road in proximity to where the HDD drilling will occur. The result of this survey is detailed below.

Site D1 – Clonmore Stream, Clonmore

Atlantic salmon (*n*=2), brown trout (*n*=12), European eel (*n*=2) and lamprey (*Lampetra* sp.) (*n*=1) were the fish species recorded via electro-fishing at site D1.

Site D1 was of relatively poor value for salmonids, supporting only a low density of Atlantic salmon parr and mixed-cohort brown trout. This reflected the significant siltation at the site in addition to poor hydromorphology. However, some moderate quality nursery and holding habitat was nonetheless present. Spawning substrata for both salmonids and lamprey was not present. Whilst the site was heavily silted, the generally flocculent nature of the shallow soft sediment deposits rendered them unsuitable for ammocoetes, with only a single *Lampetra* sp. transformer recorded via electro-fishing. Whilst the bridge area provided some good European eel habitat given the presence of boulder refugia, suitability elsewhere at this location was poor.

Hydrology and Hydrogeology

Relevant Surface Waters

The Proposed Grid Connection Survey Boundary is located within the sub-catchment Suir_SC_010 (Sub-catchment ID: 16_22). which is within the Suir Catchment (Catchment ID: 16).

There are three rivers/streams across the Proposed Grid Connection Survey Boundary which are the Clonmore stream (Suir), the Strogue stream and the River Suir**.**

The WFD status of the Clonmore Stream (Suir)_010, which includes both the Clonmore and the Strogue within the Proposed Grid Connection area, for the 2016-2021 period is classified as “moderate”, as assessed via monitoring. The Clonmore Stream (Suir)_010 is also considered to be ‘at risk’ of not achieving its WFD objectives (based on WFD risk for the 3rd Cycle of the WFD). This status was assessed via monitoring. The WFD status of the Suir_020 for the 2016-2021 period is classified as “poor”, as assessed via monitoring. The Suir_020 is also considered to be ‘at risk’ of not achieving its WFD objectives (based on WFD risk for the 3rd Cycle of the WFD). See **Apx Table 1** for Q-Value assessments of the watercourses within the Proposed Grid Connection.

Apx Table 1: EPA River Q-Value Monitoring for Watercourses within the Vicinity of the Proposed Grid Connection

1. Local Name	2. EPA Station Code	3. EPA Name	3. Station Name/Monitoring Location	4. Location in relation to Proposed Grid Connection redline	5. Most recent Q-value (year)
Clonmore Stream (Suir)	RS16C 111000	CLONMORE STREAM (SUIR)_010	Br u/s Suir R confl	At HDD Bridge location within Proposed Grid Connection boundary	3* [5](2023)
Strogue	RS16C111000	CLONMORE STREAM (SUIR)_010	Br u/s Suir R confl	At HDD Bridge location within Proposed Grid Connection boundary	3* (2023)
Suir	RS16S020200	SUIR_020	Knocknageragh Br	Within Proposed Grid Connection boundary approximately 170m west of proposed on-site 110kv electricity substation	3 (2023)

[5] The EPA River quality survey: biological report states that ‘asterisk after the Q value (e.g. Q3*) indicates something worthy of special attention, typically heavy siltation of the substratum’.

Relevant Groundwaters

The Proposed Grid Connection is located entirely within the Templemore (IE_SE_G_151) groundwater body (GWB). The Geological Survey Ireland (GSI) summary of initial characterisation document for the Templemore GWB (GSI, 2004) describes the groundwater flow paths within the Templemore groundwater body:

> *"The majority of groundwater flow in this aquifer is considered to take place in the upper weathered zone (3m), below this the amount of groundwater flow decreases gradually with depths and large flows are not expected below 10m except in isolated open fractures."*

The document (GSI, 2004) further describes the groundwater and surface water interaction within the Templemore GWB as:

> *"Groundwater will discharge locally to streams and rivers crossing the aquifer and also to small springs and seeps. Owing to the poor productivity of the aquifers in this body it is unlikely that any major groundwater - surface water interactions occur. Baseflow to rivers and streams is likely to be relatively low."*

The Ballysteen Formation underlies the majority of the Site are classified by the GSI (www.gsi.ie) as a Locally Important Aquifer (LI), having bedrock which is moderately productive only in local zones. The Lisduff Oolite Member on the south of the Site Locally Important Aquifer - Bedrock which is Generally Moderately Productive. There are no GSI mapped karst features in the area of the Site. Groundwater vulnerability across the Ecology Study area has a range of different classes including 'rock near surface of karst', 'extreme', 'high 'and 'moderate'.

Soils & Geology

The GSI online database[4] was consulted for available edaphic, geological, and hydrological information of the site and its environs. The bedrock present within the Proposed Grid Connection survey area is composed of dark muddy limestone and shale of the Ballysteen Formation and section of Oolithic limestone of the Lisduff Oolite Member.

A search of the GSI soils database was conducted to establish the underlying soils in the study area. Teagasc soils mapping characterises the majority of the soils in the Proposed Grid Connection survey area, including the following:

- Coarse loamy drift with siliceous stones;
- Fine loamy drift with limestones;
- Peat; and
- River Alluvium

The dominant subsoil type is Till derived chiefly from limestone with Alluvium also present within the Proposed Grid Connection survey area.

Desktop Habitats

2019 Article 17 Annex I Habitats

A search of the NPWS 2019 Article 17 Reporting GIS and Metadata[6] indicated three different Annex I habitats within 5km of the Proposed Grid Connection. These habitats are not listed as QI of any nearby SAC and were recorded outside the confines of any European Site.

[6] NPWS Article 17 GIS and Metadata Downloads https://www.npws.ie/maps-and-data/habitat-and-species-data/article-17

- A section of Orchid Rich Calcareous Grassland [6210] and Molina Meadows [6410] is located 2.1km northwest as the crow flies. This habitat is located upstream of the Proposed Grid Connection and therefore hydrological connectivity to the Proposed Grid Connection is ruled out for this habitat.
- A section of Residual Alluvial Woodland [91E0] 3.8km west as the crow flies. This habitat is located upstream of a tributary of the Suir which is not within the same river basin as the Proposed Grid Connection and therefore hydrological connectivity to the Proposed Grid Connection is ruled out for this habitat.
- A section of 4.5km Molina meadows [6410]. This habitat is located upstream of a tributary of the Suir which is not within the same river basin as the Proposed Grid Connection and therefore hydrological connectivity to the Proposed Grid Connection is ruled out for this habitat.

Invasive Alien Plants

A search of the NBDC 2km Grid squares S17L and S17M was undertaken in May 2025, and no Third Schedule Invasive plant species were recorded in either 2km grid square with only a single sycamore (*Acer pseudoplatanus*) record, listed as a medium impact invasive species found in Grid square S17M.

Appendix C Likely Significant Effects Analysis

Apx Table 2: Likely Significant Effects Analysis

European Site	Connectivity	QI/SCI	Conservation Objective (NPWS)	Location Relative to the Proposed Development	Potential Pathway for Impacts	Potential for LSE
Lower River Suir SAC (002137)	The is located ~18km south and downstream of the Proposed Grid Connection along the River Suir. The length of the hydrological flowpath between the Site and this SAC is approximately 24.5km. There is an indirect connection, as groundwater at the Site is expected to discharge locally to streams and rivers crossing the aquifer such as the River Suir. The SAC is located within the Templemore GWB (IE_SE_G_151). The scheme area intersects this groundwater body and therefore there is potential for hydrogeologica	Freshwater Pearl Mussel (Margaritifera margaritifera) [1029]	To restore the favourable conservation condition of Freshwater Pearl Mussel in Lower River Suir SAC	This habitat is located in a different catchment of the Proposed Grid Connection	No – This habitat is located in a different catchment to the Proposed Grid Connection.	No
		1092 White-clawed crayfish (*Austropotamobius pallipes*)	To maintain the favourable conservation condition of white-clawed crayfish in Lower River Suir SAC	Records within the CO documents for this SAC show records 24.5km downstream of the Proposed Grid Connection area. This species was not recorded during baseline surveys. Potential for this mobile species to be present in the Suir_SC_010 sub catchment in which the Proposed Grid Connection lies and the	Yes – via hydrological pathways.	Yes

European Site	Connectivity	QI/SCI	Conservation Objective (NPWS)	Location Relative to the Proposed Development	Potential Pathway for Impacts	Potential for LSE
	l connectivity between the SAC and the scheme area.			downstream Suir_SC_010 in which the Lower River Suir SAC is found, which are connected indirectly via overland flow into drains and streams.		
		1095 Sea lamprey (*Petromyzon marinus*)	To restore the favourable conservation condition of sea lamprey in Lower River Suir SAC	Potential for this mobile species to be present in the Suir_SC_010 sub catchment in which the Proposed Grid Connection lies and the downstream Suir_SC_010 in which the Lower River Suir SAC is found, which are connected indirectly via overland flow into drains and streams.	Yes – via hydrological pathways.	Yes
		1096 Brook lamprey (*Lampetra planeri*)	To restore the favourable conservation condition of brook lamprey in	Potential for this mobile species to be present in the Suir_SC_010 sub	Yes – via hydrological pathways.	Yes

European Site	Connectivity	QI/SCI	Conservation Objective (NPWS)	Location Relative to the Proposed Development	Potential Pathway for Impacts	Potential for LSE
			Lower River Suir SAC	catchment in which the Proposed Grid Connection lies and the downstream Suir_SC_010 in which the Lower River Suir SAC is found, which are connected indirectly via overland flow into drains and streams.		
		1096 River Lamprey (*Lampetra fluviatilis*)	To restore the favourable conservation condition of River Lamprey in Lower River Suir SAC	Potential for this mobile species to be present in the Suir_SC_010 sub catchment in which the Proposed Grid Connection lies and the downstream Suir_SC_010 in which the Lower River Suir SAC is found, which are connected indirectly via overland flow into drains and streams.	Yes – via hydrological pathways.	Yes

European Site	Connectivity	QI/SCI	Conservation Objective (NPWS)	Location Relative to the Proposed Development	Potential Pathway for Impacts	Potential for LSE
		1103 Twaite Shad (*Alosa fallax fallax*)	To restore the favourable conservation condition of Twaite Shad in Lower River Suir SAC	Potential for this mobile species to be present in the Suir_SC_010 sub catchment in which the Proposed Grid Connection lies and the downstream Suir_SC_010 in which the Lower River Suir SAC is found, which are connected indirectly via overland flow into drains and streams.	Yes – via hydrological pathways.	Yes
		1106 Salmon (*Salmo salar*)	To restore the favourable conservation condition of salmon in Lower River Suir SAC	Potential for this mobile species to be present in the Suir_SC_010 sub catchment in which the Proposed Grid Connection lies and the downstream Suir_SC_010 in which the Lower River Suir SAC is found, which are	Yes – via hydrological pathways.	Yes

European Site	Connectivity	QI/SCI	Conservation Objective (NPWS)	Location Relative to the Proposed Development	Potential Pathway for Impacts	Potential for LSE
				connected indirectly via overland flow into drains and streams.		
		1355 Otter (*Lutra lutra*)	To maintain the favourable conservation condition of otter in Lower River Suir SAC	No otter signs, couches or holts found within thew Proposed Grid Connection. Potential for this mobile species to be present in the Suir_SC_010 sub catchment in which the Proposed Grid Connection lies and the downstream Suir_SC_010 in which the Lower River Suir SAC is found, which are connected indirectly via overland flow into drains and streams. Also potential for adverse effects on the food source of otter in the	Yes – via hydrological pathways.	Yes

European Site	Connectivity	QI/SCI	Conservation Objective (NPWS)	Location Relative to the Proposed Development	Potential Pathway for Impacts	Potential for LSE
				downstream catchments.		
		1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae)	To restore the favourable conservation condition of Atlantic salt meadows (Glauco-Puccinellietalia maritimae) in Lower River Suir SAC	This habitat is mapped >100km downstream of the Proposed Grid Connection	No – not within the ZoI of the Proposed Grid Connection given that this habitat is >100km downstream	No
		3260 Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation	To maintain the favourable conservation condition of Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation in Lower River Suir SAC	This habitat is unmapped but was not found within the Proposed Grid Connection area.	No - The habitat sub types within this Annex I habitat include opposite-leaved pondweed (*Groenlandia densa*) which is found only in brackish conditions. The banks of the Suir, particularly its tidal stretches, support a notable population of the rare *Rumex crispus* subsp. uliginosus. The tidal reaches of the Lower River Suir are >80km	No

European Site	Connectivity	QI/SCI	Conservation Objective (NPWS)	Location Relative to the Proposed Development	Potential Pathway for Impacts	Potential for LSE
					downstream of the Proposed Grid Connection.	
		6430 Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	To maintain the favourable conservation condition of Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels in Lower River Suir SAC	This habitat is unmapped but was not found within the Proposed Grid Connection area.	No - This habitat is not found directly within the Proposed Grid Connection area and therefore direct disturbance is not possible and the threat from disturbed Invasive species does not exist as none are present within the Proposed Grid Connection.	No
		91A0 Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles	To restore the favourable conservation condition of old sessile oak woods with *Ilex* and *Blechnum* in the British Isles in Lower River Suir SAC	This habitat is mapped >60km downstream of the Proposed Grid Connection	No – not within the ZoI of the Proposed Grid Connection given that this habitat is >60km downstream	No
		91E0 Alluvial forests with	To restore the	This habitat is mapped	No – not within the	No

European Site	Connectivity	QI/SCI	Conservation Objective (NPWS)	Location Relative to the Proposed Development	Potential Pathway for Impacts	Potential for LSE
		Alnus glutinosa and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae)*	favourable conservation condition of alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) in Lower River Suir SAC	>100km downstream of the Proposed Grid Connection	ZoI of the Proposed Grid Connection given that this habitat is >100km downstream	

*Indicates a priority habitat under the Habitats Directive

Apx Table 3: European Sites ruled out due to lack of connectivity to the Proposed Grid Connection

European Site Name and Code	Distance from Proposed Grid Connection survey area	Connectivity
River Nore SPA (Site Code: 004233)	16.1km northeast as the crow flies. No hydrological connection	No, Kingfisher is the only SCI present. Kingfisher require slow-moving high-quality watercourses with high to medium fish populations. Given that watercourses are historically poor (Q3 in 2023) and the high siltation and low number of fish found during aquatic surveys undertaken within the Proposed Grid Connection survey area in 2022/2023, watercourses within the Proposed Grid Connection area offers a poor-quality habitat for Kingfisher. This SPA it is not considered to have ex-situ habitat within the Proposed Grid Connection. Given the habitat requirements and the distance from the SPA to the Proposed Grid Connection, this SPA it is considered to have no connection to the Proposed Grid Connection.
Slieve Bloom Mountains SPA (Site Code: 004160)	16.1km north as the crow flies. No hydrological connection	No. Hen harrier is the only SCI of this SPA. Ex-situ habitat for hen harrier is not present within the Proposed Grid Connection (Pre thicket forest, open heath and bog). This SPA it is not considered to have ex-situ habitat within the Proposed Grid Connection. Given the habitat requirements and the distance from

	the SPA to the Proposed Grid Connection, this SPA it is considered to have no connection to the Proposed Grid Connection.

Appendix D CO of the QI receptors potentially affected by the Proposed Grid Connection

Apx Table 4: Conservation Objectives of the QI receptors potentially affected by the Proposed Grid Connection

European Site (Code)	Qualifying Interest(s)	Conservation Objective(s)
Lower River Suir SAC (002137) (NPWS, 2017)	Sea Lamprey (*Petromyzon marinus*) [1095]	To restore the favourable conservation condition of Sea Lamprey in Lower River Suir SAC.
	Brook Lamprey (*Lampetra planeri*) [1096]	To restore the favourable conservation condition of Brook Lamprey in Lower River Suir SAC.
	River Lamprey (*Lampetra fluviatilis*) [1099	To restore the favourable conservation condition of River Lamprey in Lower River Suir SAC.
	Twaite Shad (*Alosa fallax fallax*) [1103]	To restore the favourable conservation condition of Twaite Shad in Lower River Suir SAC.
	Salmon (*Salmo salar*) [1106]	To restore the favourable conservation condition of Atlantic Salmon in Lower River Suir SAC.
	Otter (*Lutra lutra*) [1355]	To maintain the favourable conservation condition of Otter in Lower River Suir SAC.

Appendix E Plans and Projects

Plans

The plans that are considered in-combination with the proposed works are outlined in below and include:

- National Development Plan 2021-2030
- Tipperary County Development Plan 2022- 2028
- Water Action Plan 2024: A River Basin Management Plan for Ireland
- National Biodiversity Action Plan 2023-2030
- Climate Action Plan 2024-2029
- County Tipperary Biodiversity Action Plan 2025 - 2030 Discussion Paper
- All-Ireland Pollinator Plan 2021-2025
-

National Development Plan 2021-2030

The National Development Plan (NDP) states "*As an integral part of the NDP Review, for the first time ever, an assessment has been undertaken of the impact that each of the Exchequer-funded measures contained in the NDP is likely to have on climate and environmental outcomes. When developing measures for inclusion in the NDP, Departments were asked to undertake a qualitative self-assessment of the impact each measure is likely to have on seven specified climate and environmental outcomes:*

- Climate Mitigation – the likely impact of the measure on greenhouse gas emissions;
- Climate Adaptation – the contribution the measure will make to Ireland's climate resilience;
- Water Quality – any difference the measure may make to pollution levels in waterways ;
- Air Quality – any difference the measure may make to air pollution levels;
- Waste & Circular Economy – what change in waste levels might be expected of the measure;
- Nature & Biodiversity – what impact the measure may have on biological diversity; and
- Just Transition – will the measure contribute to employment that is compatible with Ireland's long-term climate and environmental objectives?

……*This encourages Departments to consider the wide climate and environmental impacts of all their spending plans and builds a base which can be built upon*."

Due to the implementation of this assessment within the NDP structure and due to the strategic, high-level nature of the NDP, it is considered highly unlikely that impacts arising from the implementation of the NDP will act in-combination with impacts of the Proposed Grid Connection to result in likely significant effects to the natural environment.

Tipperary County Development Plan 2022- 2028

The current Tipperary County Development Plan 2022- 2028 (TCC, 2022) sits beneath the National Development Plan and the Regional Spatial and Economic Strategy 2020-2032 as per planning hierarchy. These plans, which were subject to SEA and AA, are the main planning framework within Tipperary County, although the National Planning Framework and the subsequent Regional Spatial and Economic Strategy 2020-2032 (RSES) provide additional guidance.

The Tipperary County Development Plan 2022- 2028 contains a considerable number of protective measures/objectives for the protection of the environment and specifically European sites. Thus, the in-

combination effects from the Tipperary County Development Plan 2022- 2028 with the Proposed Grid Connection are not predicted to result in any likely significant effects on any European site(s).

Water Action Plan 2024: A River Basin Management Plan for Ireland

The Water Framework Directive (WFD) provides a framework for the protection and improvement of rivers, lakes, marine and groundwaters in addition to water-dependent habitats. The aim of the WFD is to prevent any deterioration in the existing status of water quality, including the protection of good and high-water quality status where it exists. The Water Action Plan 2024 sets out a proposed framework for the protection and improvement of Ireland's water environment in line with WFD objectives.

There are binding obligations on all Irish local authorities, including Tipperary County Council, to achieve at least good status of surface waters, under the terms of the EU Water Framework Directive 2000/60/EC. The implementation of the Water Action Plan 2024 seeks compliance with the environmental objectives set under the plan, which will be documented for each water body. This includes compliance with the European Communities (Surface Waters) Regulations S.I. No. 272 of 2009 (as amended). The implementation of the Water Action Plan 2024 and achievement or maintenance of environmental objectives which will be set for the receiving water bodies will have a positive impact on water dependent habitats and species within European sites.

The Water Action Plan 2024 is the third River Basin Management Plan for Ireland, and it outlines the measures the Irish government and other sectors are taking to improve water quality in Ireland's groundwater, rivers, lakes, estuarine and coastal waters and provide sustainable management of our water resources. It sets out a roadmap to restore Ireland's water bodies to the equivalent of 'good status' or better and to protect water from any further deterioration. The plan focuses on protecting and restoring water quality by preventing and reducing pollution, by restoring the natural ecosystem functions of rivers and by continuing to invest in water infrastructure.

The Water Action Plan 2024 outlines the approach that Ireland will take to protect waters. As the overall aim of the Water Action Plan is to protect and/or restore waters in Ireland, there are no predicted in-combination effects from the Water Action Plan with the Proposed Grid Connection on any European site(s).

National Biodiversity Action Plan 2023-2030

The 4th NBAP has been developed with the support, advice and input of the interdepartmental Biodiversity Working Group and the independent Biodiversity Forum. Ireland's 2nd National Biodiversity Conference was held to gather insights and recommendations for the development of the NBAP and a public consultation process was held to provide further opportunities to engage with the Plan. This National Biodiversity Action Plan 2023-2030 builds upon the achievements of the previous Plan. It will continue to implement actions within the framework of five strategic objectives, while addressing new and emerging issues:

- Objective 1 - Adopt a Whole of Government, Whole of Society Approach to Biodiversity
- Objective 2 - Meet Urgent Conservation and Restoration Needs
- Objective 3 - Secure Nature's Contribution to People
- Objective 4 - Enhance the Evidence Base for Action on Biodiversity
- Objective 5 - Strengthen Ireland's Contribution to International Biodiversity Initiatives

The Wildlife (Amendment) Act 2023 introduced a new public sector duty on biodiversity. The legislation provides that every public body, as listed in the Act, is obliged to have regard to the objectives and targets in the National Biodiversity Action Plan.

As the overall aim of the NBAP is to protect biodiversity and to continue and improve the transposition of the EU Habitats Directive and the EU Birds Directive into national legislation, there are no predicted in-combination impacts from the NBAP 2023-2030 with the Proposed Grid Connection.

Climate Action Plan 2024-2029

Climate Action Plan (CAP) 2023 is the second annual update to Ireland's Climate Action Plan 2019. The plan is the first to be prepared under the Climate Action and Low Carbon Development (Amendment) Act 2021. Under this act, Ireland's national climate objective requires the State to pursue and achieve, by no later than the end of the year 2050, the transition to a climate-resilient, biodiversity-rich, environmentally sustainable and climate-neutral economy.

The CAP 2023 will build on the measures and technologies set out in previous CAPs, in addition to setting out specific actions required to achieve emissions targets over the coming years. This plan is cognizant of the link between climate change and biodiversity loss and underscores the need to safeguard biodiversity and ecosystems as a fundamental part of climate resilient development. With this in mind, no negative in-combination impacts with the Proposed Grid Connection are predicted.

County Tipperary Biodiversity Action Plan 2025 - 2030 Discussion Paper (TCC, 2025)

The aims of the County Tipperary Biodiversity Action Plan are to;

- Increase awareness of biodiversity and implications of its loss
- Embed biodiversity into all Local Authority Policies and Plans
- Identify locally important habitats and species
- Develop plans to restore habitats
- Support communities with biodiversity conservation projects

Given these objectives, including the inclusion of a local action that is cognizant of the conservation objectives of internationally protected sites, no negative in-combination impacts with the proposed works are predicted.

All-Ireland Pollinator Plan 2021-2025

The first All-Ireland Pollinator Plan (2015-2020) was initiated by Dr Úna FitzPatrick (National Biodiversity Data Centre) and Prof. Jane Stout (Trinity College Dublin) and then developed by a 15-member All-Ireland steering group. The final Plan was produced by the steering group following a consultation phase, which included both public and stakeholder engagement. This new version, for 2021- 2025, was developed by the Steering Group, listed below, to build on the successful delivery of the 81 actions in the first Plan. Development included a 6-month open consultation, during which feedback could be submitted. Partner organisations, who committed to actions in the 2015-2020 Plan, agreed to new actions for 2021-2025. Potential new partner organisations were also contacted during the development phase. The second version of the AIPP builds on the success of the first phase and identifies a total of 186 actions.

The plan emphasises the importance of pollinators and aims to bring about a landscape where pollinators can thrive and flourish into the future and therefore no negative in-combination impacts with the Proposed Grid Connection are predicted.

8.1 Projects

Apx Table 5: Planning Search Results – Projects

Project Details	Applicant Name Development Address Brief Development Description	Comments
The Consented Wind Farm ABP Reference: **318704** Decision Date: 24/07/2024 Decision: Granted with conditions Location relative to Proposed Grid Connection survey area: Directly adjacent to the Proposed Grid Connection. The Proposed Grid Connection is required to transmit the renewable energy from the Consented Wind Farm to the National Grid. Should the Proposed Gird Connection not receive a grant, the Consented Wind Farm will not be constructed.	Buirios Limited Borrisbeg and adjacent townlands, near Templemore town in Co. Tipperary 10-year development of 9 Wind Turbines and associated infrastructure	The planners report for the development states 'The NIS concludes that, in view of best scientific knowledge and on the basis of objective information, the proposed project will not adversely affect the Qualifying Interests associated with the screened in European Site, Lower River Suir SAC [002137]. The conclusion is drawn on the basis that potential pathways for effect have been robustly blocked through measures to avoid impacts and the incorporation of best practice/mitigation measures into the project design. Having reviewed the documents, submissions, and consultations, I am satisfied that the information allows for a complete assessment of any adverse effects of the development, on the conservation objectives of the Lower River Suir SAC [002137], alone, or in combination with other plans and projects:'
Planning Reference: **201236** Decision Date: 26/01/2021	Board of Management, Clonmore National School Clonmore National School, Clonmore, Templemore, Co. Tipperary	The planners report for the development states 'The proposed development has been screened as to the requirement for AA and it has been determined that AA is not required'

Project Details	Applicant Name Development Address Brief Development Description	Comments
Decision: Granted with conditions Location relative to Proposed Grid Connection survey area: Approximately 1.1km northeast as the crow flies.	Construction of an astroturf playing area with security fencing, floodlighting and ancillary works	
Planning Reference: **2260331** Decision Date: 16/08/2022 Decision: Granted with conditions Location relative to Proposed Grid Connection survey area: Approximately 1.1km east as the crow flies.	Ballymore Farms Ltd Ballysorrell Big, Clonmore Templemore, Co Tipperary, E41EY40 an extension to an existing cow cubicle shed and all other associated site works.	The planners report for the development states 'The proposed development has been screened as to the requirement for AA and it has been determined that AA is not required'
Planning Reference: **2260725** Decision Date: 26/03/2023 Decision: Granted with conditions Location relative to Proposed Grid Connection survey area: Approximately 1.1km east as the crow flies	Ballymore Farms Ltd Ballysorrell Big, Clonmore Templemore, Co Tipperary, E41EY40 A) Demolition of existing milking parlour & dungsted B) Erection of a milk silo, 2 no. meal bins, 3 no. water storage tanks and 1 no. wash down water tank C) Construction of an extension to existing cubicle shed with an underground slatted tank D) Construction of an extension to silage pit E) Construction of a dungsted F) Construction of milking parlour, collecting yard, handling & drafting area with underground slatted tank G) Construction of an extension to calving shed and all associated site works	The planners report for the development states 'The proposal has been assessed having regard to the requirements of the EU Habitat Directive. The proposed development has been screened for AA and it has been determined that an AA is not required.
Planning Reference: **2360059**	The Board of Management of Clonmore National School	The planners report for the development states 'The proposal has been assessed having regard to

Project Details	Applicant Name Development Address Brief Development Description	Comments
Decision Date: 31/01/2023 Decision: Granted with conditions Location relative to Proposed Grid Connection survey area: Approximately 1.1km northeast as the crow flies	Clonmore, Templemore, Co. Tipperary, E41 XW82 A prefabricated building including all associated site works and RETENTION permission is also sought for an existing storage shed	the requirements of the EU Habitat Directive. The proposed development has been screened for AA and it has been determined that an AA is not required
Planning Reference: **2460341** Decision Date: 24/07/2024 Decision: Granted with conditions Location relative to Proposed Grid Connection survey area: Approximately 3.1km south as the crow flies	Castleiney Development Association Castleiney Village, Templemore, Co. Tipperary, E41 X386 The renovation and upgrades to the existing Ball Alley which is a protected structure. The works include resurfacing of the floor, constructions of a concrete stub wall to the rear, installation of a glass wall to the rear and reinstatement of the netting to the existing structure	The planners report for the development states 'The proposal has been assessed having regard to the requirements of the EU Habitat Directive. The proposed development has been screened for AA and it has been determined that an AA is not required
ABP Reference: **PL92.247086** Decision Date: 15/03/2017 Decision: Granted with conditions Location relative to Proposed Grid Connection survey area: 2.7km south as the crow flies.	David and Elaine Moore Gurteen, Castleiney, Templemore, Co. Tipperary House, garage and all associated site works.	The planners report for the development states 'it is therefore reasonable to conclude on the basis of the information on the file, which I consider adequate in order to issue a screening determination, that the proposed development, individually or in combination with other plans or projects would not be likely to have a significant effect on European site no. 000934 or any other European site, in view of the site's Conservation Objectives, and a Stage 2 Appropriate Assessment (and a

Project Details	Applicant Name Development Address Brief Development Description	Comments
		submission of an NIS), is not therefore required'.