Comhairle Contae Chill Mhantáin
Wicklow County Council

Pleanáil, Forbairt Eacnamaíochta agus Tuaithe
Planning, Economic and Rural Development

Áras An Chontae / County Buildings
Cill Mhantáin / Wicklow
Guthán / Tel. (0404) 20148
Faics / Fax. (0404) 69462
Rphost / Email: plandev@wicklowcoco ie
Suíomh / Website: www.wicklow ie

Highfield Solar Services Limited
Unit 17, The Hyde Building
The Park
Carrickmines
Dublin 18
D18 H393

29th July 2025

RE: Declaration in accordance with Section 5 of the Planning & Development Acts 2000 (As Amended) – EX77/2025 at Killiniskyduff and Templerainy, Kilbride, Co. Wicklow

I enclose herewith Declaration in accordance with Article 5 (2) (A) of the Planning & Development Act 2000.

Where a Declaration is used under this Section any person issued with a Declaration under subsection (2) (a) may, on payment to An Bord Pleanala of such fee as may be prescribed, refer a declaration for review by the Board within four weeks of the date of the issuing of the declaration by the Local Authority.

Is mise, le meas,

pp Leah Nasmith
ADMINISTRATIVE OFFICER
PLANNING, ECONOMIC & RURAL DEVELOPMENT

Comhairle Contae Chill Mhantáin
Wicklow County Council

Pleanáil, Forbairt Eacnamaíochta agus Tuaithe
Planning, Economic and Rural Development

Áras An Chontae / County Buildings
Cill Mhantáin / Wicklow
Guthán / Tel (0404) 20148
Faics / Fax. (0404) 69462
Rphost / Email: plandev@wicklowcoco.ie
Suíomh / Website www.wicklow.ie

DECLARATION IN ACCORDANCE WITH ARTICLE 5 (2) (A) OF THE PLANNING & DEVELOPMENT ACT 2000 AS AMENDED

Applicant: HIGHFIELD SOLAR LTD.

Location: Killiniskyduff and Templerainy, Kilbride, Co. Wicklow

Reference Number: EX 77/2025

CHIEF EXECUTIVE ORDER NO. CE/PERD/2025/807

A question has arisen as to whether "the provision of MV ducting and cabling works for an Underground Electrical Connection linking existing and permitted substations" at Killiniskyduff and Templerainy, Kilbride, Co. Wicklow is or is not exempted development.

Having regard to:

a) The details within Section 5 application No. EX36/17
b) Section 2, 3, 4 of the Planning and Development Act 2000(as amended)
c) Articles 6 and 9 of the Planning and Development Regulations, 2001(as amended)
d) Class 26, of Part 1 Schedule 2 of the Planning and Development Regulations, 2001 as amended

Main Reason with respect to Section 5 Declaration:

i) The provision of MV ducting and cabling works for an underground electrical connection cabling/ ducting works to provide an electrical connection to the ESB substation would accord with the provisions of Schedule 2, Part 1, Class 26 of the Planning and Development Regulations 2001 (as amended).

The Planning Authority considers that "the provision of MV ducting and cabling works for an Underground Electrical Connection linking existing and permitted substations" at Killiniskyduff and Templerainy, Kilbride Co. Wicklow is development and IS exempted development.

Signed: pp Leah Nevin
ADMINISTRATIVE OFFICER
PLANNING, ECONOMIC & RURAL DEVELOPMENT Dated July 2025

WICKLOW COUNTY COUNCIL
PLANNING & DEVELOPMENT ACTS 2000 (As Amended)
SECTION 5
CHIEF EXECUTIVE ORDER NO. CE/PERD/2025/807

Reference Number:	EX 77/2025
Name of Applicant:	HIGHFIELD SOLAR LTD.
Nature of Application:	Section 5 Referral as to whether or not "the provision of MV ducting and cabling works for an Underground Electrical Connection linking existing and permitted substations" at Killiniskyduff and Templerainy, Kilbride Co. Wicklow is or is not development and is or is not exempted development.
Location of Subject Site:	Killiniskyduff and Templerainy, Kilbride, Co. Wicklow

Report from Andrew Spencer, E.P. & Fergal Keogh, S.E.

With respect to the query under section 5 of the Planning & Development Act 2000 as to whether "the provision of MV ducting and cabling works for an Underground Electrical Connection linking existing and permitted substations" **at Killiniskyduff and Templerainy, Kilbride Co. Wicklow** is or is not development or is not exempted development within the meaning of the Planning & Development Acts 2000 (as amended).

Having regard to:

a) The details within Section 5 application No. EX36/17
b) Section 2, 3, 4 of the Planning and Development Act 2000(as amended)
c) Articles 6 and 9 of the Planning and Development Regulations, 2001(as amended)
d) Class 26, of Part 1 Schedule 2 of the Planning and Development Regulations, 2001 as amended

Main Reason with respect to Section 5 Declaration:

i) The provision of MV ducting and cabling works for an underground electrical connection cabling/ ducting works to provide an electrical connection to the ESB substation would accord with the provisions of Schedule 2, Part 1, Class 26 of the Planning and Development Regulations 2001 (as amended).

Recommendation

The Planning Authority considers that "the provision of MV ducting and cabling works for an Underground Electrical Connection linking existing and permitted substations" at Killiniskyduff and Templerainy, Kilbride Co. Wicklow is development and IS exempted development as recommended in the report by the EP.

Signed Leah Nevaue Dated 29 day of July 2025

ORDER:

I HEREBY DECLARE:

That "the provision of MV ducting and cabling works for an Underground Electrical Connection linking existing and permitted substations" at Killiniskyduff and Templerainy, Kilbride Co. Wicklow **is development and IS exempted development** within the meaning of the Planning & Development Act 2000 (as amended).

Signed: _____ Dated 29th day of July 2025

Senior Engineer

Planning, Economic & Rural Development

MEMORANDUM

WICKLOW COUNTY COUNCIL

TO: **Andrew Spencer**
Executive Planner

FROM: **Nicola Fleming**
Staff Officer

RE:- **Application for Certificate of Exemption under Section 5 of the Planning and Development Acts 2000 (as amended).**
EX77/2025

I enclose herewith application for Section 5 Declaration received completed on 3rd July 2025.

The due date on this declaration is 30th July 2025.

Staff Officer
Planning, Economic & Rural Development

Comhairle Contae Chill Mhantáin
Wicklow County Council

Pleanáil, Forbairt Eacnamaíochta agus Tuaithe
Planning, Economic and Rural Development

Áras An Chontae / County Buildings
Cill Mhantáin / Wicklow
Guthán / Tel. (0404) 20148
Faics / Fax. (0404) 69462
Rphost / Email: plandev@wicklowcoco.ie
Suíomh / Website: www.wicklow.ie

4th July 2025

Highfield Solar Services Limited
Unit 17, The Hyde Building
The Park
Carrickmines
Dublin 18
D18 H393

RE: Application for Certificate of Exemption under Section 5 of the Planning and Development Act 2000 (as amended). – EX77/2025

A Chara

I wish to acknowledge receipt on 03/07/2025 details supplied by you in respect of the above Section 5 application. A decision is due in respect of this application by 30/07/2025.

Mise, le meas

Nicola Fleming
Staff Officer
Planning, Economic & Rural Development

TEMPLERAINEY EAST SOLAR FARM, COUNTY WICKLOW

Appropriate Assessment Screening Report

November 2016

Prepared for:

Highfield Solar Limited

By:

Wetland Surveys Ireland Ltd.
Bell Height
Kenmare
Co Kerry
T: + 353 86 8510292
E: info@WetlandSurveysIreland.com
www.WetlandSurveysIreland.com

Document Control Sheet

Client	Highfield Solar Limited
Project Title	Templerainey East Solar Farm
Document Title	Appropriate Assessment Screening Report
Project Number	WS0482
Document No.	TempleraineyEastSolarFarmAA_003

Revision	Status	Author	Review	Approved	Date
001	Draft	BK			22/09/2016
002	Final		PC	PC	10/11/2016
003	Final		PC	PC	18/11/2016
Wetland Surveys Ireland					

CONTENTS

Page

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

1 INTRODUCTION

Wetland Surveys Ireland Ltd. were commissioned by *Highfield Solar Ltd.* to determine the potential impacts, if any, of developing Templerainey East Solar Farm, Arklow, Co. Wicklow, on sites designated as European conservation areas known as Natura 2000 sites (hereafter referred to as European sites).

The nearest European site to the proposed development site is the Buckroney – Brittas Dunes and Fen cSAC (NPWS site code: 000729) located approximately 2.9km north-east of the proposed solar farm site at its nearest point. The aim of this assessment is to determine the appropriateness, or otherwise of the proposed development in the context of the conservation objectives of relevant European sites.

1.1 STATEMENT OF AUTHORITY

This Appropriate Assessment Screening Report (AA) was prepared by Dr Patrick Crushell and Mr. Brendan Kirwan, Ecologists with Wetland Surveys Ireland Ltd. Dr. Crushell (BSc Applied Ecology; MSc Environmental Resource Management, PhD Environmental Sciences, MCIEEM) received an honors degree in Applied Ecology from UCC, a Masters degree in Environmental Resource Management from UCD and defended his PhD at Wageningen University, the Netherlands. He is a Full Member of the Chartered Institute of Ecology and Environmental Management (MCIEEM). Dr Crushell has been working in the area of nature conservation and ecological impact assessment for the past fifteen years. Projects that he has been involved in include wetland inventory surveys; evaluation of proposed designated sites; restoration and management of peatland habitats; baseline ecological surveys and impact assessments of various development proposals including road, quarries, wind-farms, waste facilities, arterial drainage schemes, and residential developments; during and post-construction ecological monitoring.

Brendan Kirwan (BSc Wildlife Biology, ACIEEM) received an honors degree in Wildlife Biology from IT Tralee. He is an Associate Member of the Chartered Institute of Ecology and Environmental Management (ACIEEM). He has experience in the field of ecological assessment and environmental management since graduating in 2012. Since joining Wetland Surveys Ireland in 2013, he has undertaken a wide range of baseline ecology surveys and contributed to impact assessments of various development proposals, in particular within the wind energy and electrical infrastructure sectors.

1.2 STATUTORY CONTEXT

This Appropriate Assessment Screening Report has been prepared in accordance with the European Commission Methodological Guidance on the provision of Article 6(3) and 6(4) of the Habitats Directive 92/43/EEC (European Commission 2002), the European Commission Guidance Managing Natura 2000 Sites (European Commission 2000) and with reference to the

Department of the Environment and Heritage and Local Government guidance on Appropriate Assessment of plans and projects in Ireland (DEHLG 2009) and Natura 2000 (European Commission 2010).The EU Habitats Directive (92/43/EEC) provides the framework for legal protection for habitats and species of European importance. The directive provides the legislative means to establish a network of sites (known as the Natura 2000 network) throughout the EU with the objective of conserving habitats and species deemed to be of community interest. These sites include Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Birds Directive (formally known as the Conservation of Wild Birds Directive 79/409/EEC).

Article 6(3) and 6(4) of the Habitats Directive lays down the procedure to be followed when planning new developments that might affect a European site. This stepwise procedure requires that a plan or project having a likely significant negative effect on a Natura 2000 site undergoes an 'Appropriate Assessment' to study these effects in detail and to see how they relate to the conservation objectives of the site.

Depending on the findings of the Appropriate Assessment, the competent authority agrees to the plan or project as it stands if it has ascertained that it will not adversely affect the integrity of the site(s) concerned.

However, should this assessment have ascertained that there will be an adverse effect it may require one or more of the following, depending on the degree of impact:

- Specific mitigation measures are introduced to remove the negative effects;
- Certain conditions are respected during the construction, operational or decommissioning phases of the project, again to remove the likelihood of negative effects or to reduce them to an insignificant level where they no longer affect the integrity of the site;
- Feasible alternatives are explored instead.

In exceptional circumstances, a plan or project may still be allowed to go ahead under certain conditions, in spite of being assessed as having negative effects on the site provided the procedural safeguards laid down in the Habitats Directive are followed. This may be possible, for instance, if the plan or project is considered to be of overriding public interest and there are no alternatives available. In such cases, compensation measures will need to be implemented to ensure that the overall coherence of European sites is protected.

2 METHODOLOGY

2.1 APPROPRIATE ASSESSMENT

This Appropriate Assessment Screening Report has been prepared in accordance with the following guidance:

- *Appropriate Assessment of Plans and Projects in Ireland.* Guidance for Planning Authorities. Department of the Environment, Heritage and Local Government, 2010.
- 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. European Commission Environment DG, 2002.
- Managing Natura 2000 sites: The Provisions of Article 6 of the Habitats Directive 92/43/EEC. European Commission, 2000.

There are up to four successive stages involved in the Appropriate Assessment process (European Commission 2002). The outcome at each stage determines whether the next stage in the process is required. The following describes each of the four stages:

Stage 1 – Screening

This is the first stage in the process and is carried out to determine the necessity for a more detailed Stage 2 Appropriate Assessment where potential impacts on European sites are deemed to be of significance. The following steps are involved in the Stage 1 Screening:

- Description of the project and site characteristics (existing environment)
- Identification and description of Natura sites that could potentially be affected
- Identification and description of potential impacts
- Assessment of potential impacts
- Exclusion of sites where no significant effects are foreseen

Stage 2 – Appropriate Assessment

This stage involves the consideration of the impact on the integrity of the European site of the project, either alone or in combination with other projects or plans, with respect to the structure and function of the site and its conservation objectives. Additionally, where there are adverse impacts, an assessment of the potential mitigation of those impacts. If adequate mitigation is proposed to ensure no significant adverse impacts on European sites, then the process may end at this stage. However, if the likelihood of significant impacts remains, then the process must proceed to Stage 3.

Stage 3 – Assessment of Alternatives

The process which examines alternative ways of achieving the objectives of the plan or project that may avoid adverse impacts on the integrity of the European site.

Stage 4 – Assessment where no Alternative Solutions Exist and where Adverse Impacts Remain

The Habitats Directive promotes a hierarchy of avoidance, mitigation and compensatory measures. First, the project should aim to avoid any impacts on European sites by identifying possible impacts early in the process and designing the project in order to avoid such impacts. Second, mitigation measures should be applied, if necessary, during the AA process to the point where no adverse impacts on the site(s) remain. If the project is still likely to result in impacts on European sites, and no further practicable mitigation is possible, then it must be rejected. If no alternative solutions are identified and the plan is required for imperative reasons of overriding public interest (IROPI test) under Article 6(4) of the Habitats Directive, then compensation measures are required for any remaining adverse effect.

In the case of this Appropriate Assessment Screening Report, it was found that the project does not require Stage 2 Appropriate Assessment.

Data required to carry out the Appropriate Assessment screening was collected through a combination of desktop review of existing datasets and published reports together with a multidisciplinary ecological walkover survey of the site during September 2016.

A standalone Ecological Impact Statement (EcIS) has also been prepared for the project and is included with the application.

3 APPROPRIATE ASSESSMENT SCREENING

3.1 PROJECT DESCRIPTION

The project under consideration in this assessment is the proposed development of a solar farm and associated connection to the electricity grid. The proposed development comprises the development of a photovoltaic (PV) solar farm on ca 22ha of agricultural land. The proposed development also comprises the construction of a single storey substation and the development of a grid connection to Arklow substation ca 2km south of the proposed development site by means of underground cable (UGC). The cable route is proposed to follow an existing tunnel beneath the main road (N11) before traversing a short section of improved grassland, the UGC route will then be confined to a public road to its termination at Arklow substation. The layout of the proposed development is presented in Appendix I of this report.

The proposed development consists of ground mounted solar photovoltaic panels assembled in rows over the existing surface of the development area. The panels will be mounted onto galvanised metal framework racks elevated about the ground surface thereby allowing vegetation to grow beneath the panels. The racks will form south-facing rows (arrays) running east to west across the site with appropriate access points. In order to capture maximum

radiation the panels will be fixed at an angle of 22-30° to the horizontal. The lower edge of the array will be minimum 0.7m in height above ground level whilst the highest edge will be 3.2m. The panels are in an elevated position to allow airflow around the modules. The typical arrangement of panels is illustrated in Plate 1.

The metal framework will be driven into the soil, removing the need for deep foundations; these driven piles are to be extracted during decommissioning. The piles are designed to avoid the use of concrete foundations, keeping the strength that is required by solar design standards while reducing the extent of disturbance. A 20mm gap surrounding all sides of each panel will allow rainwater to drain between the modules.

In addition to the PV panels other components of the development include:

- A small single storey substation building (traditional blockwall construction) will be constructed to connect the Solar Farm to the local grid network;
- Other electrical infrastructure within the site will include:
    - Inverter and transformer stations located on the site to facilitate the correct voltage for the connection of the solar farm to the local grid network. The inverters and transformers will be housed within equipment housing modules made of glass fiber reinforced plastic (GRP) material and placed on shallow concrete plinths. The overall height of the housing modules will be less than 4m;
    - Inverters of different scale located in proximity to the solar modules; and
    - Above ground cable junction boxes/ cabling cabinets facilitating the necessary electrical connections;
- A security fence around the perimeter of the proposed development. There will be a number of CCTV cameras mounted on poles and positioned around the site; and
- A temporary construction and storage compound for the storage of solar panels and other components during construction. Part of this compound and a spare parts container will be retained for storage of spare parts during the operation phase of the solar farm.

Plate 1: Typical arrangement of ground mounted solar photovoltaic panels within solar farm.

3.1.1 Construction Phase

The proposed development occurs on ca 22ha of agricultural land. The duration of construction works is not expected to exceed 44 weeks.

The PV modules will be mounted on metal frames anchored by driven piles, causing minimal ground disturbance. A series of shallow trenches will be excavated to accommodate underground wiring and connection to grid connector cable. Machinery to be used during construction includes a wheeled or tracked excavator, a dump truck, a piling machine, telehandler, and a fuel bowser. There is no requirement for the use of concrete during the installation of the PV modules as the frames which support the panels are pile driven directly into the ground. Shallow concrete plinths will be installed as bases for the transformers, and central inverters. The single storey substation will be of traditional block construction on shallow concrete footings.

In summary, the main elements of the construction phase include:

- Erection of security fence;
- Construction of tracks and associated infrastructure serving the development including installation of pre-cast concrete bridge over the Templerainey River to facilitate site access;
- Construction of shallow concrete plinths for transformers, central inverters, and associated housing;

- Piling of frames into the ground and affixing of frame mounted solar panels (ca 3.2m in height);
- Minor trenching works to accommodate cables (approximate depth of 1m);
- Installation of transformers, central inverters and associated housing;
- Construction of single storey substation; and

Development of a grid connection from the proposed solar farm site to Arklow substation, including the trenched installation of the UGC across the Templerainey River.

Works associated with the UGC installation will be carried out in accordance with the ESB Networks Ducting Specification Manual and Best Industry Practice. Control checks throughout the installation phase will be undertaken by the contractor to ensure compliance with best practice relating to environmental protection. The following environmental controls will be in place during construction to safeguard downstream water quality:

- All works associated with crossing the Templerainey River will be undertaken in accorance with recently published IFI guidance on 'Protection of fisheries during construction works in and adjacent to water' (2016).
- Concrete washing of machines will take place off-site at an appropriate dedicated wash facility that will pose no threat to surface waters.
- Re-fueling of machinery will only be carried out in designated areas removed from any natural watercourses. All fuels used on site will be stored in bunded units. Plant and vehicles will be inspected regularly for leaks. Drip trays will be fitted to all plant machinery.
- Use of weather forecasting to plan dry days for concrete pouring.
- Stockpiling of materials during construction will only occur in suitably designated areas away from watercourses with adequate measures taken to prevent any surface water run-off. Where it is deemed necessary silt traps and silt curtains will be employed to safeguard the protection of watercourses in the vicinity of the proposed works.
- Pre-cast concrete box section culverts will be used for the road crossing of the Templerainey River, the base of culverts will be inserted below the natural bed of the river to ensure no interference with flow rates.
- Inland Fisheries Ireland will be consulted with regards the detailed construction methodology associated with crossing the Templerainey River and no in-stream works without the prior approval of IFI.
- A pre-construction survey will be undertaken at (and immediately above and below) the crossing point of the Templerainey River to develop appropriate mitigation to ensure the adequate protection of aquatic habitats and species.

3.1.2 Operation Phase

The site will function as a solar farm throughout the operational phase which is expected to have a lifetime of up to 30 years. There are no significant emissions (noise, water, etc.) from the project during the operational phase. Routine minor maintenance will be undertaken at regular intervals during the operational phase. For security purposes the site will remain fenced in from the surrounding lands and artificial/security lighting will be in place together with CCTV equipment. Security lighting will be intermittent and localised to the substation areas only; it will be motion controlled and may be augmented using infrared cameras.

Operation Phase

- The presence of fencing around the perimeter of the solar farm may displace fauna species from utilising the site;
- Routine maintenance procedures at the solar farm site; and
- Artificial lighting could potentially impact on resident mammal species, in particular bats.

3.1.3 Decommissioning Phase

The decommissioning phase of the proposed development will include the disconnection of the solar farm from the electricity grid and the removal of the solar farm components. Compared to other power generation technologies, solar farms can be easily decommissioned and removed from the site at the end of the operation phase with the site returned to its original condition. There would be little that the solar farm had existed following decommissioning.

There are several aspects involved with the decommissioning phase:

- Removal of photovoltaic modules, racking and supports;
- Removal of inverter units, substation, transformers, electrical equipment;
- Removal of compounds, fencing, and underground cables;
- Possible demolition of substation (consultation with landowner and statutory agencies);
- Excavation and removal of access roads (consultation with landowner and statutory agencies).

3.2 SITE DESCRIPTION (EXISTING ENVIRONMENT)

A detailed description of the existing ecological environment within and immediately surrounding the proposed development site is presented in the Ecological Impact Statement that accompanies the application. A habitat map of the area following the Fossitt (2000) classification scheme is presented in Figure 1.

The proposed development site occurs within two distinctive land parcels. The northern land parcel comprises cattle grazed improved agricultural grassland. Field boundaries are defined by

willow, hawthorn, and gorse hedgerows within the proposed development area and willow and hawthorn hedgerows along the proposed site boundary.

The southern land parcel comprises improved pasture grazed by cattle and sheep. Hedgerows are more abundant within the southern land parcel with drainage channels commonly occurring along hedgerows. The site drains to the south-east. The Templerainey River forms much of the eastern boundary of the proposed solar farm site. The river drains to the south-east with riparian gallery comprising willow, hawthorn, and ash occurring on either side of the river.

A disused farm building occurs within the south-eastern part of the site with large beech trees occurring immediately west of the structure. A small area of willow scrub occurs within the western section of the northern land parcel.

There are no EU Annex I listed habitats present within or immediately surrounding the site. In addition, those habitats recorded on site are unlikely to support any EU Annex II listed species or Bird Directive Annex I species.

Figure 1: Habitat map of proposed solar farm site.

3.3 IS THE PROJECT NECESSARY TO THE MANAGEMENT OF EUROPEAN SITES

Under the Habitats Directive, projects that are directly connected with or necessary to the management of a European site do not require AA. For this exception to apply, management is required to be interpreted narrowly as nature conservation management in the sense of Article 6(1) of the Habitats Directive. This refers to specific measures to address the ecological requirements of annexed habitats and species (and their habitats) present on a site(s). The relationship should be shown to be direct and not a by-product of the project, even if this might result in positive or beneficial effects for a site(s).

The primary purpose of the project is not the nature conservation management of European sites, but to develop a solar farm. Therefore, the project is not considered by the Habitats Directive to be directly connected with or necessary to the management of European designated sites.

3.4 IDENTIFICATION OF EUROPEAN SITES

This section of the screening process identifies and describes the European sites within a 5km radius of the proposed development or those hydrologically linked downstream. A distance of 5km is considered as a precautionary measure, taking account of the scale and character of the proposed development, to ensure that all potentially affected European sites are included in the screening process (DoEHLG 2009). One European site occurs within 5km of the proposed development; the Buckroney – Brittas Dunes and Fen cSAC (NPWS Site Code: 0729), see Figure 2. The Buckroney – Brittas Dunes and Fen cSAC occurs ca 2.9km north-east of the of the proposed solar farm site at its nearest point

The location of the proposed development in the context of European sites is presented in Figure 2. The qualifying features for the site have been obtained through a review of information available from the National Parks and Wildlife Service (NPWS).

The nearest SPA to the proposed development is the Wicklow Head SPA which is located ca 18km north-east of the proposed development site and is designated for the protection of breeding Kittiwake. Considering the distance removed and the lack of ecological linkages, it is concluded at this stage that there is no potential for impacts on this site to occur.

Since the conservation management objectives for the European sites focus on maintaining the favourable conservation status of the qualifying interests of each site, the screening process concentrated on assessing the potential implications of the proposed development against the qualifying interests of the site. Buckroney – Brittas Dunes and Fen cSAC is further described in the following paragraphs.

3.4.1 Buckroney – Brittas Dunes and Fen cSAC

The proposed solar farm site occurs ca 2.9km south-west of the Buckroney – Brittas Dunes and Fen cSAC. There are no hydrological links between the solar site and the cSAC.

Buckroney-Brittas Dunes and Fen is a complex of coastal habitats comprising two main sand dune systems, Brittas Bay and Buckroney Dunes. This site is important as an extensive sand dune/fen system with well developed plant communities. Several coastal habitats listed on the E.U. Habitats Directive, including two priority habitats - fixed dune and decalcified dune heath - are present. The area contains two legally protected plants, as well as a number of other rare or scarce plant species.

Recognised Threats and Vulnerabilities

Brittas Bay dunes are subject to intensive agricultural and recreational pressures. Stocking at high densities threatens the older dunes and dune heath. The recent development of a golf course on part of Buckroney dunes may threaten the hydrology of the overall system. Buckroney fen is threatened by a general lowering of the water table through drainage and water abstraction. Further reclamation of marginal areas of the fen would be detrimental.

Qualifying Interests (QIs)

The site has been selected by the National Parks and Wildlife Services for the qualifying habitats of conservation interest listed in Table 1 below.

Table 1: Qualifying interests of the Buckroney – Brittas Dunes and Fen cSAC (source: www.npws.ie)

EU Annex I Habitat [EU Code]
Drift lines [1210]
Perennial vegetation of stony banks [1220]
Mediterranean salt meadows [1410]
Embryonic shifting dunes [2110]
Marram dunes (white dunes) [2120]
Fixed dunes (grey dunes)* [2130]
Decalcified dune heath* [2150]
Dunes with creeping willow [2170]
Dune slack [2190]
Alkaline fen [7230]

*Denotes priority habitat in danger of extinction

Conservation Objectives

The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest. These habitats and species are listed in the Habitats and Birds Directives and Special Areas of Conservation and Special Protection Areas are designated to afford protection to the most vulnerable of them. These two designations are collectively known as the Natura 2000 network.

European and national legislation places a collective obligation on Ireland and its citizens to maintain habitats and species in the Natura 2000 network at favourable conservation condition. The Government and its agencies are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites. The maintenance of habitats and species within European sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.

Favourable conservation status of a habitat is achieved when:

- its natural range, and area it covers within that range, are stable or increasing, and
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- the conservation status of its typical species is favourable.

The favourable conservation status of a species is achieved when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis

In the case of the Buckroney – Brittas Dunes and Fen cSAC neither a conservation management plan nor site specific conservation objectives (SSCOs) are available. Generic conservation objectives for the site have been published (NPWS 2016). The objective that has been set for the site is:

> To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected.

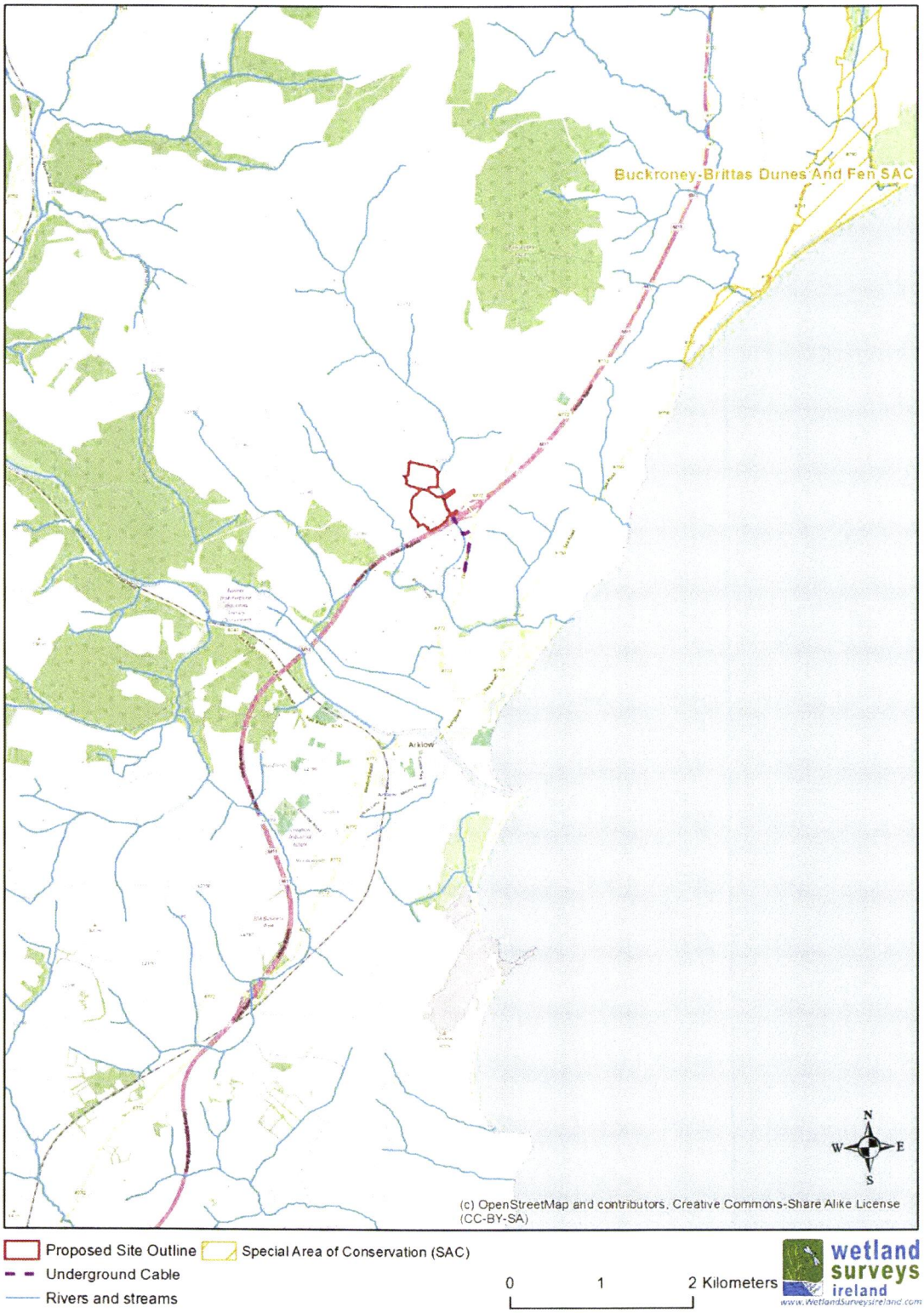


Figure 2: European sites within 5km of the proposed development site.

3.5 IDENTIFICATION AND DESCRIPTION OF POTENTIAL IMPACTS

Ecological receptors of the potentially affected European sites that are sensitive to potential impacts from the proposed development include habitats for which the sites are designated (see Section 3.4 above). The characteristics, location, and scale of the development together with the ecological requirements of the conservation interests of the European site potentially affected have been taken into consideration in identifying potential impacts.

3.5.1 Elements of the proposed Project with Potential to Give Rise to Significant Effects

Construction Phase

- Installation of frames, PV panels and associated works could give rise to habitat loss and alteration within the development site;
- Construction of site access tracks, substation, construction compound, and other site infrastructure could give rise to habitat loss, and disturbance to resident species of fauna;
- Noise, vibration, and light during construction could give rise to disturbance of resident fauna;
- Excavation and earthworks associated with the construction phase could give rise to sediment run-off and potentially impact aquatic receptors downstream; and
- Potential accidental spillage and run-off of hydrocarbons or other harmful substances could lead to deterioration of downstream water quality.

Operational Phase

- The presence of fencing around the perimeter of the solar farm may displace fauna species from utilising the site;
- Routine maintenance of solar farm and associated electricity substation compound may cause temporary disturbance to wildlife; and
- Artificial lighting could potentially impact on resident mammal species, in particular bats.

Decommissioning Phase

- Disassembly and removal of site infrastructure could give rise to temporary disturbance to habitats and fauna.

3.5.2 Direct, Indirect or Secondary Impacts

The potential for impacts to occur through the implementation of the proposed development can be assessed under the following headings (as outlined by guidelines issued by the European Commission (2002)):

- Loss / reduction of habitat area
- Disturbance to key species
- Habitat or species fragmentation
- Reduction in species density
- Changes in key indicators of conservation value such as decrease in water quality and quantity

The qualifying interests and their conservation requirements of each European site are considered together with the characteristics of the proposed development. The outcome of the assessment is summarised in the screening matrix presented in Appendix II.

3.5.2.1 Buckroney – Brittas Dunes and Fen cSAC

The Buckroney – Brittas Dunes and Fen cSAC is located approximately 2.9km north-east of the proposed development site at its nearest point.

Habitats within the solar farm site are of low ecological importance and do not support any EU listed habitats or species for which cSACs or SPAs are designated. Drainage from the development site discharges to the Templerainey River which borders the solar farm site to the east. This river discharges to the sea north of Arklow and is not connected to any designated site downstream.

Considering the distance removed and absence of any hydrological or ecological connectivity between the solar farm site and Buckroney – Brittas Dunes and Fen cSAC potential impact pathways have not been identified. Based on the concept of source-pathway-receptor it can therefore be concluded that there is no likelihood of significant effects on the cSAC resulting from the proposed development of a solar farm at Templerainey East and the site can be excluded from further consideration in the Appropriate Assessment.

3.6 IN-COMBINATION / CUMULATIVE IMPACTS

It is a requirement of Appropriate Assessment that the combined effects of the proposed development together with other plans or projects be considered. A similar solar farm development, Ballycooleen Solar Farm, is located approximately 3km north-west of Templerainey East Solar Farm. The Ballycooleen Solar Farm has been granted planning permission by Bord Pleanála in July 2016 (PL27.246527). Ballycooleen Solar Farm comprises the construction of a Solar PV Energy development within a total site area of up to 13.76 ha to

include similar infrastructure as outlined in Section 3.1.1 above. The Ballycooleen Solar Farm development was subject to an Ecological Impact Assessment (EcIA) and Appropriate Assessment (AA) screening and it was found that the proposed development would not lead to adverse impacts on European sites.

Based on the absence of potential impacts due to the proposed development in isolation it is concluded that there is no potential for cumulative or in-combination impacts to occur.

3.7 CONCLUSION OF SCREENING

In order to determine the potential impacts if any, of the construction of a solar photovoltaic farm at Templerainey East, Arklow, Co. Wicklow on European sites, Appropriate Assessment screening was undertaken. One European site, Buckroney – Brittas Dunes and Fen cSAC, has been identified as occurring within a distance of 5km of the solar farm site. The likely impacts (direct, indirect, and cumulative), which could arise from the development have been examined in the context of a number of factors that could potentially give rise to significant effects on the conservation interest of the European site. It has been determined that the development is sufficiently removed from and ecologically isolated from the site that potential adverse impacts on this or any other European site resulting from the development will not arise.

In conclusion, it has been determined that the proposed development is not directly connected with or necessary to the management of European sites. Secondly, it can be objectively concluded that there are not likely to be any significant effects on the Natura 2000 network of sites resulting from the proposed solar PV farm development and accordingly it is considered that there is no need to proceed to Stage II Appropriate Assessment, in this instance.

A screening matrix summarising the outcome of the screening exercise in relation to the relevant European site is presented in Appendix II.

4 REFERENCES

Department of the Environment, Heritage and Local Government (2009). Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities.

European Commission (2000) Managing Natura 2000 sites: the provisions of Articles 6 of the habitats directive 92/43/EEC. Luxembourg: Office for official publications of the European Communities.

European Commission (2002). Assessment of plans and projects significantly affecting Natura 2000 sites. Methodological guidance on the provisions of articles 6(3) and (4) of the Habitats Directive 92/43/EEC. Luxembourg: Office for official publications of the European Communities.

European Commission (2010). Wind energy development and Natura 2000. Guidance document. Luxembourg: Office for official publications of the European Communities.

Inland Fisheries Ireland (IFI) (2016). Protection of fisheries during construction works in and adjacent to water.

NPWS (2016) Conservation objectives for Buckroney-Brittas Dunes and Fen SAC [000729]. Generic Version 5.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.

Appendix I

Proposed Site Layout Drawing

Appendix II

Completed Appropriate Screening matrix summarising the outcome of AA Screening process

Screening Matrix for the Buckroney – Brittas Dunes and Fen cSAC (Site Code: 000729)

Screening Matrix	
Brief description of the project or the plan	The project under consideration in this assessment is the proposed development of a solar farm and associated connection to the electricity grid. The proposed development comprises the development of a photovoltaic (PV) solar farm on ca 22ha of agricultural land. The proposed development also comprises the construction of a substation and the development of a grid connection to Arklow substation ca 2km to the south- east of the proposed development site by means of underground cable. The cable route is proposed to follow an existing farm tunnel under the main road (N11) then crossing a short section of improved pasture before being confined to a public road before its termination at Arklow substation. Further description of the project is presented in Section 3.1 above
Brief description of the European site	Buckroney – Brittas Dunes and Fen cSAC – see Section 3.4 above. The solar farm site is 2.9km removed from the cSAC. The Buckroney-Brittas Dunes and Fen is a complex of coastal habitats comprising two main sand dune systems, Brittas Bay and Buckroney Dunes. This site is important as an extensive sand dune/fen system with well developed plant communities. Several coastal habitats listed on the E.U. Habitats Directive, including two priority habitats - fixed dune and decalcified dune heath - are present. The area contains two legally protected plants, as well as a number of other rare or scarce plant species.
Describe any likely direct, indirect or secondary impacts of the project (either alone or in-combination with other plans or projects) on the European site by virtue of: • Size and scale; • Land-take; • Distance from the European site or key features of the site;	The Buckroney – Brittas Dunes and Fen cSAC is located approximately 2.9km north-east of the proposed development site at its nearest point. There is no hydrological or other ecological linkage between the solar farm and the cSAC. Considering the distance removed and absence of any hydrological or ecological connectivity between

Screening Matrix	
• Resource requirements (water abstraction etc.); • Emissions (disposal to land, water or air); • Excavation requirements • Transportation requirements • Duration of construction, operation, decommissioning etc.; • Other	the solar farm site and Buckroney – Brittas Dunes and Fen cSAC potential impact pathways have not been identified. Based on the concept of source-pathway-receptor it can therefore be concluded that there is no likelihood of significant effects on the cSAC resulting from the proposed development of a solar farm at Templerainey East and the site can be excluded from further consideration in the Appropriate Assessment process.
Describe any likely changes to the site arising as a result of: • Reduction of habitat area; • Disturbance to key species; • Habitat or species fragmentation; • Reduction in species density; • Changes in key indicators of conservation value (water quality etc.); • Climate change	No potential impacts have been identified.
Describe any likely impacts on the European site as a whole in terms of: • Interference with the key relationships that define the structure of the site; • Interference with key relationships that define the function of the site.	No potential impacts have been identified.
Provide indicators of significance as a result of the identification of effects set out above in terms of: • Loss; • Fragmentation; • Disruption; • Disturbance; • Change to key elements of the site (e.g. water quality etc.).	No potential impacts have been identified.
Describe from above those elements of the project or plan, or combination of elements, where the above impacts are likely to be significant or where the scale or magnitude of impacts is not known.	No potential impacts have been identified.

NETWORKS

Specification Number:	**18152**
Title:	**Functional Specification for the Installation of Ducts and Ancillary Structures for 20kV Underground Power Cables and Associated Communications Cables for Contestable Projects**
Revision Number:	**2**
Issue Date:	**March 2021**
Latest Review Date:	**March 2026**

(ESB Networks Specifications are subject to change, this specification version shall only be used for the purpose/project for which it was issued by ESB Networks to you)

Approved for issue: **Specifications Manager**

ESB Networks

History of Revisions

Rev No	Date	Revision Content
0	2013	New Document
1	2017	New Drawings
2	March 2021	Review with RCT Comments

Note:

This specification will be reviewed at minimum before the Latest Review Date, but may also be reviewed in the interim. Consequently the "Latest Review Date" does not indicate that this particular version of the Specification is current. Accordingly, only the version of the specification issued by ESB Networks to the user for the particular purpose/project should be used.

ESB Networks Technical Specification Approval

Title	**Functional Specification for the Installation of Ducts and Ancillary Structures for 20kV Underground Power Cables and Associated Communications Cable for Contestable Projects**
	Filehub Spec. No 18152 Rev 2 Date: March 2021
Specification revision number & date	
	Consultant Reference No.. PG___-___-___-___ Rev Date
Produced by:	ESB Networks
DRA Reference.	*DRA 18152 Rev 1*

Eirgrid

Department:	N/A
Accepted.	
Date.	

ESB Networks:

Department	**Network Assets**
Approved	**Networks Assets, Underground Networks**
Date	**01 March 2021**

Table of Contents

1.0 Scope

This document specifies the requirements for the supply and installation of Ducts and Ancillary Structures for 20kV Underground Power Cables and Associated Communications Cables on the ESB Networks Distribution System.

The materials used and construction methods employed shall comply with the requirements of

a) This Specification Number 18152 and also

b) Specification Number 18149 – General Specification for Contestably Built Underground Networks

c) Specification Number 18153 – Functional Specification for the Installation of 20kV Underground Power Cables for Contestable Projects

d) The individual ESB Networks materials Specifications for ducting and cable materials and components and ancillary structures

In the event of any dispute arising from a difference of interpretation regarding the contents of these specifications, ESB Networks interpretation shall be taken as final.

2.0 Cable Route

2.1 Design Review

Cable route design and associated residual risk assessment shall be submitted to ESB Networks for review prior to any works commencing on site.

2.2 Cable Route Design Considerations

Where there are multi circuit situations e.g. near or in electricity switching stations, provision shall be made for separation from other circuits to avoid derating of the existing or proposed cables.

Cable de rating calculations shall be carried out on all cable circuits, including those that deviate from standard construction due to crossing / pinch point /depth etc. effects, full cable rating report including all parameters used for this de rating calculation shall be submitted to ESB Networks for review.

Where more than one circuit / two cables per phase is being installed or where one cable is installed adjacent to an existing cable, the design shall take due account of cable derating due to mutual heating of the cables through cable analysis. The mutual coupling effect of other cables and pipelines must also be taken into account. Where 20kV underground cables cross lower voltage cables, they shall be routed under the lower voltage cables for safety reasons. If it is necessary to bury the cable at greater depth at any point, then the IPP shall take account of this in the rating of the cable as per IEC 60287. The IPP shall take

note of the presence of existing HV & MV underground circuits. The IPP design shall model the impact of neighbouring underground circuits in terms of the new cables rating and the impact on the existing cables ratings. Where it is proposed to cross (over or under) or run in parallel with an existing circuit, the cable system shall be designed to ensure that no de-rating of existing circuits occurs as a result of the proposed cable. Where this scenario arises, the IPP shall demonstrate via detailed cable rating calculations that mitigations have been taken to limit potential de-rating of existing underground circuits. This may include but is not limited to the use of bentonite, the use of a larger cable, the use of Horizontal Directional Drilling to increase thermal separation and thermal independence.

The design of measures proposed to deal with any such situations that deviate from the functional specifications shall be submitted to ESB Networks for review. Early engagement pre-construction with ESB Networks is required for any proposed deviations.

2.3 Cable Route Terrain

ESB Networks policy in relation to the routing of underground cables is that they shall be routed through public roads or public lands. The route of the cable duct shall follow solid stable ground on flat or gently graded slopes not subject to erosion. Trial excavations shall be conducted in advance to determine the suitability of the route.

Where the gradient of the route exceeds 1 in 3 metres, specialist measures shall be designed and implemented to achieve satisfactory long-term duct and cable performance. These specialist measures shall be submitted for review at design stage and reviewed design captured in the Residual Risk register along with construction method statement.

2.4 Bridges / Culverts / Non Standard Terrain / other Services etc.

The IPP shall also note that where the minimum standard clearance requirements cannot be achieved e.g. bridge crossings / culverts etc., then alternate design shall be investigated.

Provision shall be made for additional protection of the cable duct where burial depth to specification cannot be achieved. These additional measures shall be submitted to ESB Networks for review. ESB Networks will provide guidance on each case.

Higher voltage underground cables shall be routed under lower voltage cables for safety reasons.

Prior written agreement is required from the road authorities for proposal of shallow crossings, road level changes in conjunction with Purple Book " Guidelines for Managing Openings in Public Roads".

Refer to drawing pack for standard design requirement.

2.5 Peat

Cable Trenches crossing through peatland shall be avoided if at all possible. Any routes identified through peatland must be reviewed and accepted by ESB Networks on a case by case basis. Should a potential requirement for such an installation be proposed, ESB Networks shall be consulted at the earliest available opportunity. If all other cable route options have been exhausted (to the satisfaction of ESB Networks) then a design may be considered by ESB Networks through peatland. Such design shall be reviewed and accepted by ESB Networks before the IPP can submit the planning permission. The IPP shall submit a detailed feasibility study of the options and their proposal for installation of a short section of the cable route in peatland. The feasibility study shall advise why the other route options are not being progressed and also provide case studies of where a similar peat land cable design has been installed successfully. For all underground cables constructed in peat, regardless of location (e.g. within or beneath a road or otherwise), the IPP shall include the following in the feasibility:

- A desktop study of the route including a review of all existing geotechnical information, outlining all constraints and geotechnical risks

- An outline of all site investigation carried out along the route

- A peat stability risk assessment/peat landslide hazard risk assessment shall be completed that shall consider the risk of peat slides in blanket bog and bog bursts in raised bog.

• In association with the peat stability risk assessment/peat landslide hazard risk assessment a Materials Management Plan shall also be submitted for review by ESB Networks.

• A preliminary peat stability mitigation plan shall also be submitted with the peat stability risk assessment/peat landslide hazard risk assessment outlining how all design, construction and operations risk are to be controlled and/or mitigated

• A feasibility design for the cable route trench the IPP shall include the following in the design submission:

• An outline of any site investigations carried out and the associated findings

• A detailed peat stability mitigation plan shall also be submitted with the peat stability risk assessment/peat landslide hazard risk assessment outlining how all design, construction and operations risk are to be controlled and/or mitigated

• A demonstration that settlement or differential settlement of the cable shall not occur to the extent to which the cable's function or durability could be compromised over the design life.

• Demonstrations that lateral movement due to downhill creep of peat shall not occur.

• Clear outline of any planned site investigation or ground condition verification during the works

• An outline of the construction supervision during the works

• Flooding risk shall be assessed.

Cable pole locations shall be assessed in a similar manner. However, this shall include access and egress routes to the locations. If roads in peatland are proposed to be constructed as "floating roads", the IPP should consider in the design that these are prone to gradual differential settlement leading in time to an undulating surface. Where the cable route is proposed to be constructed in a "floating road", the IPP shall assess whether it will be necessary to replace the floating road with a road founded on mineral soil in order to avoid future settlements or peat instability. The peat stability risk assessment/peat landslide hazard risk assessment shall be carried out by an experienced geotechnical engineer (min. 10 years' experience, Chartered Geotechnical Engineer). The assessment shall be carried out in accordance with all current legislative requirements and guidelines, and at a minimum the Scottish Government Peat Landslide Hazard and Risk Assessments.

Best Practice Guide for Proposed Electricity Generation Developments Specific requirements on the design of any cable route through peatland are listed below:

• A minimum 3 m paved and gated service road designed for heavy traffic will be installed to provide safe access for inspection, maintenance and fault repair along the entire cable route through peatland.

• All materials used must comply with the Transport Infrastructure Ireland (TII) Specification for Road Works and all relevant Irish and European Standards. British Standards may also be used where appropriate and where no equivalent Irish or European Standard is applicable. A maintenance plan listing responsible parties for maintaining the cable, trench, road and gates shall be submitted.

• A drainage design for the route shall be included with the submission. The drainage design shall ensure the continued integrity of the road surface, but it shall be demonstrated that the peatland will not be adversely affected by pollution, by siltation or by changes to the hydrological conditions.

• The service road which accompanies the cable route shall be suitably designed (i.e. if the road is to be used by heavy vehicles or machinery this should reflected in the structural design for the road).

• Peat shall be completely excavated to either competent mineral soil or bedrock at the joint bay locations.

• Joint bays and communication chambers are to be located adjacent the service road.

For any non-standard design, ESB Networks shall receive early notification pre-construction that a non-standard design is being proposed and a formal derogation submitted. The process for seeking acceptance of a non–standard design is more onerous and timelier as more stakeholders are involved in the review. Also, the design may require additional warrantics to mitigate risk if deemed necessary. These reviewed designs shall be captured in the Residual Risk Register along with construction methodology.

2.6 Reinstatement Finishes

The reinstatement and surface finish for trenches, manholes and joint bays shall be agreed in advance by the IPP with the local authority, relevant public body or private landowners.

All reinstatement works shall be in accordance with the TII /Dept of Environment Specification for Road Works and any conditions specified in the Road Opening Licence and/or route consents. If any part of the route impinges on private property, the reinstatement specification shall be as agreed with the Landowner.

Upon completion of the works, a statement of satisfaction with the completed works shall be obtained from the relevant landowners, public body or local

authority. This shall be submitted to ESB Networks before the ownership of the circuit is transferred.

3.0 Duct Installation

3.1 Supervision

All works shall be continuously supervised by competent persons. Each civil crew shall have a designated single competent person responsible for Quality control throughout the installation phase and along the full length of the route.

Quality reports in an agreed template as per General Specification 18149 shall be produced to Lead Project Manager on a weekly basis. Before any duct installation works commence the duct, installation the IPP's contractor shall attend the ESB Networks approved duct installation workshop. The IPP's contractors directly involved with duct installation shall attend.

3.2 Works Included

Duct installation shall also include cleaning, proving, draw rope installation, and sealing of the ducts. It shall also include excavation of joint bays, backfilling around direct buried cable joints (with the cable jointer in attendance) and reinstatement of joint bays and other structures to facilitate cable installation and jointing.

Duct surround sand shall be approved by ESB Networks for use. It shall fulfil the Thermal and grading requirements detailed in section 3.4.1 of this specification.

3.3 Transport, Storage and Handling of Ducts

Great care shall be taken during handling of ducts to avoid damage. Ducts shall be delivered with end caps in place which shall remain in place until installation of the duct to prevent the entry of dirt.

The ducts shall not be stored in a place where they are likely to be in contact with surface water or other foreign matter which could make its way into the ducts. The method of stacking shall be such as to avoid distortion and the integrity of the ducts shall be maintained throughout their site storage and transport. The bales of ducts shall not be stacked over two tiers.

The Quality Assurance management system shall include detailed inspection of delivered ducts and accessories. Each delivery of ducts shall be inspected to ensure compliance with specification and to verify the following:

- Correct labelling
- Duct marking
- Correct dimensions
    - Duct length
    - Duct wall thickness
- Duct ovality

- Duct protection
- Correct packaging on delivery and storage

Ducts which have become discoloured due to external storage and/or UV exposure or damaged from transport or storage shall not be installed.

Refer to duct delivery quality checklist in Appendix 1.

3.4 Materials

- All ducts and associated installation materials detailed in this specification shall be supplied by an ESB Networks approved manufacturer. Details are available on ESB Networks website: (http://www.esb.ie/esbnetworks/en/download_documents/builders_developers/approved_material.jsp)
- Ducts (Power and Communications) for use at MV shall be 125mm UPVC – see ESB Networks Specification 16113 technical requirements.
- Ducting Templates shall be constructed and used (3 Mtr intervals) to guaranteed minimum required interduct separation and centralisation of ducts in trench. These templates shall be approved by ESB Networks for use,
- Concrete for structural work shall be in accordance with the TII "Specification for Road Works", except where amended below.
- Material for duct bed and surround and trench backfill for standard formation shall be CBGM Category B (Cement Bound Granular Material Category B), 15N/mm2.To obtain this value a minimum of 7 days curing is required in accordance with Series 1000 of the TII "Specification of Road Works". The material should conform to the thermal resistivity requirement of this specification. Proof of conformance to the thermal resistivity requirement of this Specification following ASTM D5334-08, namely 1.0 K.m/Watt) at 0% moisture content, is required during duct installation. Test sheets confirming the thermal properties shall be available for on-site inspection and shall be submitted with the 'as-built' documentation.

- Concrete for road reinstatement shall be grade C40/N20 with a minimum cement content of 350 kg/m3 in accordance with Series 1000 of the TII "Specification for Road Works".
- Concrete for joint bay and communication chambers shall be grade C35/N30 with a minimum cement content of 325 kg/m3.
- Formed finishes to Joint Bays shall be to class F2 and unformed finishes shall be to class U1 in accordance with Clause 1708 of Series 1000 of the TII "Specification for Road Works".
- Pre-Cast Joint Bays and Chambers shall be obtained from approved ESB Networks suppliers only.
- Pea gravel and foam concrete shall not be used for duct surround materials.

The materials supplied and used shall comply with the latest edition of the following ESB Networks Materials Specifications:

Spec No.	Material
16001	Plastic Warning and Protection Tapes, Tiles and Marker Posts
16002	Plastic Cable Ties
16110	Galvanised Steel Cable Protection Covers Plates and Cast Steel Warning Plate
16112	Lubricant for Pulling Power Cables into Cable Ducts
16113	Plastic Ducts and Fittings for Power and Telecommunications Cables

3.4.1 MV Duct Surround & Joint Bay Reinstatement Thermal Sand

Thermal Sand shall be used to backfill around MV ducts, cables and joints, usually in the following locations; cable joint bays, cables on approach to a cable poles and pull pits near substation basements. ESB Networks keeps a live list of pre-approved suppliers around Ireland. New suppliers are added regularly upon completion and passing of the tests set out below.
The thermal sand shall meet the requirements set out in this Specification and ENA Technical Specification 97-1 (latest Revision) section 6.1 (with this Specification taking precedence).
There are 3 main criteria for the thermal sand;

1. It shall have no sharp stones or flints (may damage the cable sheath during compaction).

2. At least 95% shall pass a 4 mm sieve and 100% shall pass an 8 mm sieve.

3. The fully dried sample @ 0% moisture shall have a maximum thermal resistivity of 2.7 K.m/W. This test must be completed by an ESB Networks approved laboratory by the thermal needle probe method as outlined in ASTM D5334. The thermal resistivity @ 2% moisture shall also be recorded.

The IPP shall, before commencement of the project, select samples of sands which fall within the above grading, and subject them to testing for thermal resistivity, particle distribution and dry relative density all at his own cost and submit the following information to ESB Networks for approval prior to commencement of the Works:

- The source or sources of the material
- Certificates of Compliance with the specified grading limits
- Thermal resistivity test results demonstrating the ability of the material to meet the above criteria

3.4.2 Underground Cable Protection Material for Unavoidably Shallow Depths

Wherever the trench layout and burial depth standards set out in this specification cannot be achieved, because of the terrain or the presence of other services, the design for all such deviations from the standards shall be submitted by the IPP for review by ESB Networks.

The following additional materials shall be used in these situations:

Refer to drawing pack for standard design requirement.

3.4.2.1 Heavy Duty Underground Cable Protection Plate

Description:

750mm long x 200mm wide x 6mm thick galvanised steel plate, with red marker strip fixed to top surface. These shall be laid over the power and communication ducts as specified in the design drawings.

3.4.2.2 Surface Cable Markers

Description:

Metallic plate; 300mm x150mm; 4 screw-holes and hold down bolts. These shall be placed on footpaths/fences, bridges, walkways etc., where cable depth is unavoidably shallow. They shall be fitted to solid durable surfaces and shall be fitted flush with their surround when placed on footpaths or walkways, with full embedment of hold down bolts.

3.4.2.3 Marker Posts

Description:

They shall be installed in adequately sized concrete foundations and shall be placed at both sides of river crossings, wherever directional drilling has been used and where burial depth is not to standard. They shall also be used in non-roadway routes and in forestry routes to delineate the duct route.

3.4.2.4 Other items for unavoidably shallow burial depths

For additional mechanical of the duct route, 6mm thick galvanised steel plate and A393 reinforcement mesh may be required, as specified by ESB Networks.

3.5 Trench Layout

The trench layout shall be as per the relevant ESB Networks drawing(s) in the drawings in work pack. The specification of the TII /Dept of Environment, Local Authorities shall be followed for the excavation and reinstatement of the ducted cable trenches.

Where a change in the gradient of the trench is required to accommodate other services, the gradient change shall be as minimal as possible. Ducts shall be laid in straight lines to even gradients.

Ducts may be laid to slow and even curves on plan to avoid an obstruction. If a change in direction is required, bends formed by evenly bending the ducts themselves only shall be used or for bends, the duct shall be braced so that there is no bending or stress on the socket and spigot joining. No heat shall be applied to the ducts when bending ducts. Where the socket and spigot may become over bent preformed bends are available from ESB Networks approved suppliers. The spacing of the ducts shall be in accordance with the drawings in the drawing packs. Refer to section 3.13 of this specification for further guidance.

Natural bends in the ducts shall be as wide and gradual as possible. Clearances from other services shall be strictly observed and shall be maintained at all times.

The duct route shall be designed and constructed to ensure that the cable manufacturer's maximum tensile and sidewall pressure forces shall NOT be exceeded on the relevant MV Cable. Design calculations to confirm this requirement shall be included in the design review submission.

3.6 Joint Bays

Joint bays shall be provided to meet the requirements of standard cable drum lengths and/or as required to limit cable pulling forces. Joint bays shall be no further than 500 m centre to centre apart.

Joint Bay locations shall be chosen with suitable terrain and access to facilitate

- the operation of cable pulling equipment,
- cable jointing
- future operation of the installation and with future traffic management plan in mind. A traffic management plan for each joint bay location shall be submitted to ESB Networks for review. This shall be added to the Residual Risk Register.

The area around Joint bays shall be designed and constructed for joint bay installation, cable pulling and future cable works.

The construction of the joint bays shall be as specified by ESB Networks and pre-cast joint bays shall be sourced from an approved ESB Networks Supplier.

Joint Bay Pre-cabling temporary backfill and reinstatement shall comply ESB Networks standard design requirement.

Refer to drawing pack for standard design requirement.

Joint bays shall be labelled as follows:

From export station facing cable route to ESB Networks station RST left to right and Circuit name.

3.7 Communications Chamber

Communications chambers shall be provided to meet the requirements of standard telecommunications cable drum lengths or as required to limit cable pulling forces.

Communications Chamber locations shall be chosen with suitable terrain and access to facilitate

- the operation of cable pulling equipment,
- cable jointing
- future operation of the installation

and with future traffic management plan in mind. A traffic management plan for each communication chamber location shall be submitted to ESB Networks for review. This shall be added to the Residual Risk Register.

The IPP shall refer to drawing pack for standard design requirement.

The D600 cover shall not be removed from the precast chamber to alter finish ground levels.

3.8 Lubrication Points

Lubrication points shall be provided to ensure cable installation can be carried out without exceeding the manufacturer's maximum permissible cable pulling forces of the proposed cable. Lubrication points shall be installed in cable runs in close proximity to areas of high bend concentration. Optimised positions shall be chosen, e.g. on the crest of steep incline for maximum lubricant dispersion on the route. Lubrication points shall be properly sealed to prevent the ingress of dirt.

Lubrication Point locations shall be chosen with suitable terrain and access to facilitate

- the operation of cable pulling equipment,
- future operation of the installation

The construction of the Lubrication Points shall be as specified by ESB Networks and shall be sourced from an approved ESB Networks Supplier.

3.9 Clearances from Other Services and ESB Networks LV, MV and HV Cables

A minimum clearance of 300mm from outermost duct edge to other 3rd party service shall be strictly observed. A clearance of 600mm from outer most duct edge to transmission high pressure infrastructure services shall be observed.

Deviations from ESB Networks minimum clearances may be unavoidable at "Pinch Points". Where reduced clearances only can be achieved, the design shall be submitted to ESB Networks for review.

Written clarification in respect of reduced clearances shall be obtained from the relevant utility owner and, in the case of LV, MV and HV cables, clarification shall be obtained from ESB Networks and shall be included in the 'as built' documentation.

Cable de rating calculations shall be carried out on all cable circuits affected due to crossing effects, and reasons for this de rating and be submitted to ESB Networks.

3.10 Joining of Ducts

As the duct is installed the socket end shall be towards the duct lay and the inside of the socket and the spigot end shall be cleaned with a dry cloth before being pushed together by hand. A wooden batten shall then be placed across the socket at the leading end. The duct shall be tapped home with a hammer until the ring mark on the duct, indicating the fully "home " position, meets the edge of the socket.

3.11 Cutting of Ducts

Where duct cutting is required, they shall be suitably held, supported and protected during the process. All ends shall be cut square to the longitudinal axis of the pipe and suitably finished (chamfered) with no rough edges.

3.12 Avoidance of Power Duct Crossovers

Duct crossovers shall be prevented and shall be deemed an unacceptable defect. Cables shall not be installed in ducting that contains a crossover of the ducts.

3.13 Bends

Bends in the ducts shall be as large and as gradual as possible to minimise thrust force on socket and the spigot end. Preformed bends shall be installed as per Appendix 2.

The term "Bends", also includes trench offsets/sidesteps both in the horizontal and vertical plane, which may be necessary to avoid obstructions e.g. manholes

or to maintain clearances with other underground services running parallel and diagonal to the trench.

At all trench route deviations/bends, the radius of the overall bend shall be maximised/made uniform over the entire bend. The centre of rotation of the arc shall be chosen so that the bend radius is as large as possible and such that at the start and finish of the bend (i.e. where it meets the straight duct sections) the radius is no worse than that at any intermediate point on the arc.

IPP shall use ESB Networks approved pre-formed bends only, and these are available in angles of 11^0, 22.5^0, 45^0, 90^0. Duct lengths shall not be bent at bend positions – preformed bends in conjunction with straight duct sections shall be used to ensure that there are no cable ripping protruding edges at duct joint positions for any direction of cable pull.

3.14 Avoidance of Crinkling/Flattening of Ducts While Laying Ducts at Bend Positions

The ducts shall be uniformly/regularly supported as they are being formed around the curve to avoid imposing concentrated (point) sidewall forces which result in crinkling or excessive flattening of the ducts at the bend position.

3.15 Trenchless Technology

Should it be necessary to cross obstacles such as bridges, railways, water courses etc. with the cable duct(s), and all possible routes and installation possibilities have been thoroughly examined and are deemed not possible, namely

i. Crossing in the structure
   a. To ESB Networks min standard depth
   b. To ESB Networks standard as per section 2.3
ii. Open crossing
iii. Independent structure

then the method of installing the cable duct(s) by trenchless technology may be accepted by ESB Networks. Details of such locations and the proposed design and mechanical protective measures shall be submitted to ESB Networks for review and comment.

The route length undertaken using trenchless technology shall be an absolute minimum and shall only be that length required to clear the crossing that cannot be undertaken by conventional trenching methods

The design and cable rating calculation report for the proposed crossing by trenchless technology shall be submitted to ESB Networks for review.

The following duct type shall be used for directional drilling for MV ducting and it shall be chamfered to allow correct transition to the standard ducting I.D

Type and Size of Duct

125mm HDPE for Directional Drilling SDR 14.7 (to allow 3x400 sq. 20kv cable)

3.16 Dirt Ingress into the Ducts

Dirt ingress into the ducts shall be prevented as any dirt or pebbles trapped in the ducts may lead to cable failure. During cable pulling, dirt or other sharp objects will be pressed between the duct and cable resulting in deep scores and gashes on the cable sheath which may result in cable failure. Allowing dirt to enter ducts and attempting to remove it later by cleaning the ducts with brushes is not acceptable.

The ingress of dirt into the ducts shall be prevented by the following measures:

- On delivery from the supplier, the ducts shall be fitted with end caps. These shall remain in place to prevent dirt entering on the duct bales.
- When the ducts are installed, rubber bungs shall be immediately fitted to exposed installed duct ends and retained in place at all times. These bungs shall be fitted with an internal D-ring to facilitate the tying of draw rope.
- Trenches, joint bays, pull pits at pole sets, masts and basements shall be kept free of water so as to prevent any risk of the cables and other materials to be laid in the trenches being detrimentally affected.

3.17 ESB Networks Approved Protection Strip, Warning Tape and Marker Posts

ESB Networks Protection Strip (Red) and ESB Networks Warning Tape (Yellow), shall be used at all times as specified in the relevant ESB Networks drawings.

Where ducts are laid, the red protection strip shall be placed on top of the CBGM B / Sand layer. In all situations yellow warning tape shall be placed higher up in the trench, at a distance of not more than 300mm below the finished surface.

Sufficient parallel layers of red marker strip and yellow marking tape shall be used to fully cover and slightly extend beyond the full plan widths of the ducts below it. The layer of backfill immediately underneath the yellow marker tape or red marker strip shall be properly levelled and compacted prior to laying the marker tape and warning strip evenly along the trench.

ESB Networks cable protection and marking materials shall not be used over any other ducting which is not intended for use by ESB Networks.

3.18 Trench backfilling

Provision shall be made to prevent duct movement during the placing of the duct surround by the use of templates. All duct bedding, duct surround and backfill

materials shall be suitably compacted in layers using manually operated vibrating plate which shall not crush the ducts beneath.

3.19 Cleaning, Proving, Roping and Sealing

When the ducts have been installed and backfilled the duct run shall be thoroughly cleaned by pulling the appropriate size of ESB Networks approved duct brush through the duct and shall be proven by pulling the appropriate size of ESB Networks approved mandrel through the duct in the planned direction of the cable pull.

Each duct shall be cleaned and proven at completion/handover AND immediately prior to pulling in the cable winch rope and the cable in the case where the IPP is also responsible for cable installation.

A full set of risk assessment and method statement (RAMS) shall be submitted for review for the duct proving, prior to any activities taking place.

Duct Cleaning – Brushes

Brushes with the specified dimensions only shall be used to ensure that any dirt or debris within ducts is transported out of the ducts rather than being merely loosened up and left within. The brush shall have the following dimensions:

Duct Outside Diameter	**Minimum Length of Brush**	**Brush Code**
125mm UPVC SDR 17.6	250mm	8783254 Diameter 120mm

Brushes shall be cleaned regularly using a power hose. Approved Brushes shall have two sets of brushes per core.

Duct Proving – Mandrel

Proving shall be achieved by pulling a sponge, cleaning brush and mandrel assembly through the duct. The equipment shall have the following dimensions:

Type and size of duct	**Mandrel Code**	**Brush Code**	**Sonde**	**Sponge**
125mm UPVC SDR 17.6	8783229 Diameter 105mm	8783254	required	125mm

125mm HDPE for Directional Drilling SDR 14.7	8783229 Diameter 105mm	8783250	required	125mm

All mandrels are stamped with their size and the corresponding duct size to which they are applicable.

Duct Cleaning – Sponge

A sponge shall be used to remove excess water and pre-lubricate the duct prior to cable pulling.

Duct Proving – General

ESB Networks reserves the right to witness the duct proving tests.

ESB Networks approved duct brushes, mandrels and sponges are designed to provide thorough cleaning and a tight fit. The minimum rope size used shall be 12mm polypropylene. Cleaning and proving shall be carried out using a winch which has a calibrated dynamometer and printout.

- Pulling tension shall not exceed 1 Tonne (10kN).
- The maximum speed for duct proving is 25 m/ minute

The printout results shall be submitted to ESB Networks for review, attached with the Duct proving report in Appendix 4.

Following the duct proving process, water sealing rubber bungs shall be fitted to prevent water, sand or other debris getting into the ducts. The ducts shall then be left roped in preparation for cable pulling.

Use of a Transmitter (Sonde)

A Sonde may be connected close to the mandrel or brush to help locate a blockage quickly. It can be purchased for specific use with a C.A.T. or other precise cable location instruments, equipped with a Sonde detector.

Duct Lubrication Materials

Ducts and cables shall be thoroughly lubricated for all cable pulls. Only ESB Networks approved lubricants which are tested so as not to damage the cable insulations semi-conductive layers and outer sheath shall be used. Petroleum based oils or greases shall not be used for power cables.

The list of approved suppliers is available from the following ESB Networks web site address:

http://www.esb.ie/esbnetworks/en/download_documents/builders_developers/approved_material.jsp

3.20 Recording of Duct Installation

This shall be as specified in ESB Networks General Specification for Contestably Built

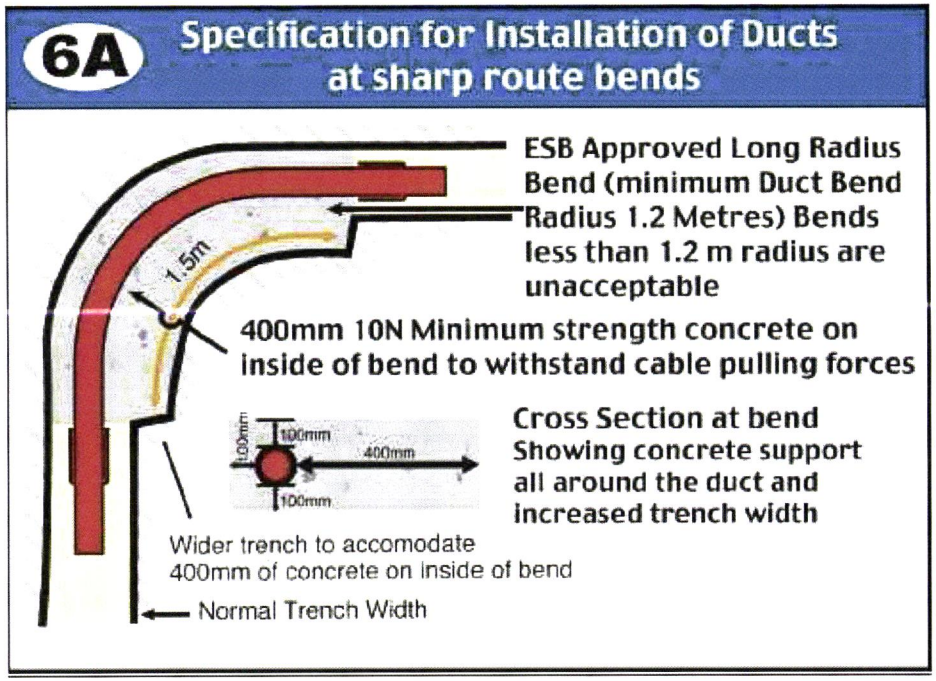
Underground Networks.

Appendix 1. Duct Delivery Checklist

ESB NETWORKS	Duct Inspection Report	**Comment**
1.	Project Name and Worksite	
2.	Date of Delivery to site	
3.	Date and Location of Inspection	
4.	Name of Duct / Coupler Supplier	
5.	Duct Size (110, 125, 160, 200, 250mm)	
6.	Duct Type (uPVC / HDPE)	
7.	Wall thickness	
8.	Duct Length	
9.	Quantity of Ducts	
10.	Quantity of Couplers	
11.	Are Ducts & Couplers Packaged and Secured (Timber struts 3 & Nylon or Plastic Straps)	
12.	Are ducts marked with ESBN Approved Specification No. 16113 marking?	
13.	Are Ducts discoloured?	
14.	Are all ducts fitted with Transportation Caps?	
15.	Are there any visible signs of Damage along lengths of Ducts?	
16.	Are there any visible signs of Damage to ends of Ducts?	
17.	Are duct end chamfered inside and outside?	
18.	Are there any visible signs of damage to couplers?	
19.	Are rubber seals correctly fitted to all Couplers?	
20.	Any others items of Note?	

Signed & Dated	

Appendix 2 Preformed Bend Installation Requirement



Appendix 3 Quality Report Template

Weekly Quality Report

Project Name:

PSCS:

ESB N Rep on Site:

Monday	Tuesday	Wednesday	Thursday	Friday

Location XY coordinates:

Monday	Tuesday	Wednesday	Thursday	Friday

Pictures of works to include: templates, compaction, duct installation, measurements from other services, material used, crews, duct storage, sample copy of delivery dockets, trench build up covering each step etc.

Example of Picture dimension, also clarity required so user can zoom in to assess trench construction and quality.

Drawing Number Used:

Appendix 4 Duct Cleaning / Proving Report

ESB Networks

Ducts Cleaning/Proving Report

Project: _____

Duct ID	Duct Diameter(s) (mm)	Sponge Diameter (mm)	Brush Diameter (mm)	Mandrel Diameter (mm)

Winch Serial No:_____ Calibration date: _____

Direction of proving from: _____ to _____

Typical circuit cross section & Ducts ID	Ducts formation & ID at the start of the pull	Ducts formation & ID at the end of pull

Pre-Taking Over

Duct ID	Duct Designation	Max Pulling Tension (tonnes)	Comments
1			
2			
3			
4			
5			
6			
7			
8			
9			

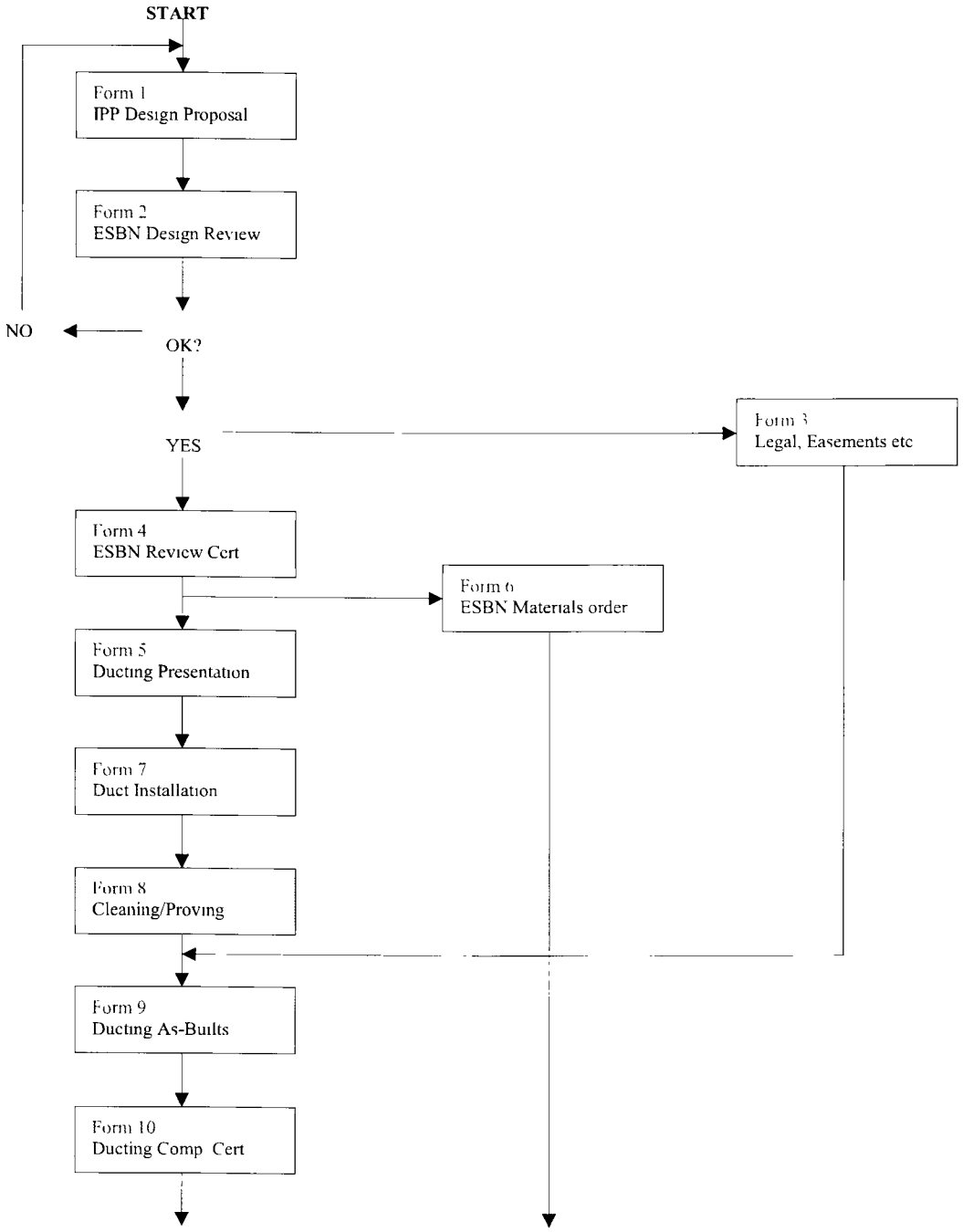
Have the ducts maintained the correct formation?	Yes ☐	No ☐
Rubber bungs fitted after ducts proving?	Yes ☐	No ☐
Have the ducts been cleaned and proved successfully?	Yes ☐	No ☐
Name of Contractor:		
Signed for Contractor:	Date:	
ESB N Supervisor who witnessed the tests:		
Signed for Contractor:	Date:	

Note:

- The proving of the ducts will be deemed as failed if:
- The pulling tension exceeds 1 tonne (10 kN)
- If max speed of 25M/minute is exceeded.
- Mandrel is stuck
- Mandrel is moving with sudden bursts even if the pulling tension is less than maximum specified
- Rope shoots suddenly up the duct
- Ducts do not maintain the same formation as at the start of the pull

Appendix 5 10-20kV Ducting & Cable installation (+ Fibre Cable)

The following flow chart is the project process for a non-contestable 10-20kV & communication ducting and cables. This process is aimed at how ESB Networks and the IPP interact and the roles ESB Networks have.



Cable Installation

Highfield Energy

Planning Department
Wicklow County Council
County Buildings
Whitegates
Wicklow Town
Co. Wicklow

26th June 2025

Our ref: pl034 Templerainey East
Your ref:

Re: Section 5 Application

Dear Sir or Madam,

Highfield Energy Services Limited act as Agents for Highfield Solar Limited.

This letter accompanies an application for exempted development of underground MV cabling and ducting linking existing and proposed substations at, respectively, Killiniskyduff and Templerainy, Kilbride, Co. Wicklow.

Please find attached;

- 1no. completed application form signed by the agent;
- 1no. copy of the Site Location drawing (Figure 1.0 @ 1:2500)
- 1no. copy of the Block Plan and Site Layouts (Figures 1.1 & 1.2 @ 1:500);
- 1no. copy of further plans and particulars (there is a schedule of the planning drawings attached);
- The fee which has been calculated;
- 1no. copy of an Appropriate Assessment Screening Report in relation to the proposed works.

If there are any issues with the information presented or you have any queries while processing this application please contact me as required and I will give every assistance possible, my details are below.

Yours faithfully,

Ben Ralph
Highfield Energy Services
Mob: 085 8155638
Email: ben.ralph@highfieldenergy.com

Sch le of Drawings & Specifications

Title	*Drawing Size*	*Drawing No.*	*Scale*
Site Location	A1	FIGURE 1.0	1:2500
Block Plan for Site Layouts	A1	FIGURE 1.1	1:2500
Site Layout Plan– Block Plan A	A1	FIGURE 1.2 (Block -A)	1:500
Site Layout Plan– Block Plan B	A1	FIGURE 1.2 (Block -B)	1:500
Site Layout Plan– Block Plan C	A1	FIGURE 1.2 (Block -C)	1:500
ESB Networks Specifications 10-20kV Ducting	NA	NA	NA

Wicklow County Council
County Buildings
Wicklow
0404-20100

03/07/2025 11 19 17

Receipt No L1/0/347783

HIGHFIELD ENERGY SERVICES LTD
UNIT 17
THE HYDE BUILDING
THE PARK
CARRICKMINES
DUBLIN

EXEMPTION CERTIFICATES	80 00
GOODS 80 00	
VAT Exempt/Non-vatable	

Total	80 00 EUR

Tendered
Cheque 80 00
pl034 TEMPLERAINEY EAST

Change 0 00

Issued By Ruth Graham
From Customer Service Hub
Vat reg No 0015233H

Wicklow County Council
County Buildings
Wicklow
Co Wicklow
Telephone 0404 20148
Fax 0404 69462

Office Use Only

Date Received _____

Fee Received _____

APPLICATION FORM FOR A DECLARATION IN ACCORDANCE WITH SECTION 5 OF THE PLANNING & DEVELOPMENT ACTS 2000(AS AMENDED) AS TO WHAT IS OR IS NOT DEVELOPMENT OR IS OR IS NOT EXEMPTED DEVELOPMENT

1. Applicant Details

(a) Name of applicant: Highfield Solar Limited

Address of applicant: Unit 17, The Hyde Building, the Park, Carrickmines,

Dublin 18, D18 H393

Note Phone number and email to be filled in on separate page.

2. Agents Details (Where Applicable)

(b) Name of Agent (where applicable) Ben Ralph, Highfield Energy Services Limited

Address of Agent : Unit 17, The Hyde Building, the Park, Carrickmines,

Dublin 18, D18 H393

Note Phone number and email to be filled in on separate page.

3. Declaration Details

i. Location of Development subject of Declaration
Templerainey & Killiniskyduff, Kilbride, Co. Wicklow

ii. Are you the owner and/or occupier of these lands at the location under i. above ?
Yes/(No.) Tenant

iii. If 'No' to ii above, please supply the Name and Address of the Owner, and or occupier
Mr. Eric Hall, Barniskey, Avoca, Co. Wicklow
Mr. Thomas Hyland, Fionn Barra, Coolgreaney Road, Arklow, Co. Wicklow

iv. Section 5 of the Planning and Development Act provides that : If any question arises as to what, in any particular case, is or is not development and is or is not exempted development, within the meaning of this act, any person may, an payment of the prescribed fee, request in writing from the relevant planning authority a declaration on that question. You should therefore set out the query for which you seek the Section 5 Declaration
Are the underground MV ducting and cabling works outlined in the attached submission considered Development works and, if so, are these works Exempted Development?

Additional details may be submitted by way of separate submission.

v. Indication of the Sections of the Planning and Development Act or Planning Regulations you consider relevant to the Declaration
Section 5 of the Planning and Development Act 2000-2015
Class 26 of Part 1 of Schedule 2 (Article 6) of the Planning and Development Regulations 01 as amended

Additional details may be submitted by way of separate submission.

vi. Does the Declaration relate to a Protected Structure or is it within the curtilage of a Protected Structure (or proposed protected structure) ? No

vii. List of Plans, Drawings submitted with this Declaration Application

1 - Site Location Map (Scale 1:2500)
2 - Block Plan (Scale 1:2500) & Site Layout Plans (1:500)
3 - Plans & Sections - See ESB Technical Standards below
4 - Functional Specification for the Installation of Ducts and Ancillary Structures for 20kV Underground Power Cables and Associated Communications Cables for Contestable Projects.
5 - Appropriate Assessment Screening Report

viii. Fee of € 80 Attached ? Yes

Signed : _____ Dated : 29/05/2025

Additional Notes :

As a guide the minimum information requirements for the most common types of referrals under Section 5 are listed below :

A. Extension to dwelling - Class 1 Part 1 of Schedule 2

- Site Location Map
- Floor area of structure in question - whether proposed or existing.
- Floor area of all relevant structures e.g. previous extensions.
- Floor plans and elevations of relevant structures.
- Site Layout Plan showing distance to boundaries, rear garden area, adjoining dwellings/structures etc.

B. Land Reclamation -

The provisions of Article 8 of the Planning and Development Regulations 2001 (as amended) now applies to land reclamation, other than works to wetlands which are still

governed by Schedule 2, Part 3, Class 11. Note in addition to confirmation of exemption status under the Planning and Development Act 2000(as amended) there is a certification process with respect to land reclamation works as set out under the European Communities (Environmental Impact Assessment) (Agriculture) Regulations 2011 S.I. 456 of 2011. You should therefore seek advice from the Department of Agriculture, Fisheries and Food.

Any Section 5 Declaration should include a location map delineating the location of and exact area of lands to be reclaimed, and an indication of the character of the land.

C. Farm Structures - Class 6 -Class 10 Part 3 of Schedule 2.

- Site layout plan showing location of structure and any adjoining farm structures and any dwellings within 100m of the farm structure.
- Gross floor area of the farm structure
- Floor plan and elevational details of Farm Structure and Full details of the gross floor area of the proposed structure.
- Details of gross floor area of structures of similar type within the same farmyard complex or within 100metres of that complex.

WICKLOW COUNTY COUNCIL
PLANNING DEPARTMENT
Section 5 – Application for declaration of Exemption Certificate

REF:	**EX 77/2025**
NAME:	**HIGHFIELD SOLAR LTD.**
DEVELOPMENT:	**UNDERGROUND DUCTING AND CABLING**
LOCATION:	**CO.WICKLOW**

Site:
Cabling route between substation at Templerainey being part of the the Solar farm permitted under PRR161285 ad the substation at Killiniskeyduff Arklow, c.2km in length which proposes to cross under the M11 motorway at Junction 20.

Relevant Planning History
Subject site:
161285 - Ten year permission for the construction of a solar PV Energy development within a total site area of up to 21.5 ha, to include one single storey electrical substation building, electrical transformer / inverter station modules, solar PV panels ground mounted on steel support structures, access roads, fencing and associated electrical cabling, ducting and ancillary infrastructure – Grant.

EX36/17 Underground MV Ducting and Cabling – Exempt.

Adjoining/connecting ducting:
EX35/2020 - Underground MV Ducting and Cabling – Exempt.

Question:
The applicant has applied to see whether or not the following is or is not development; and is or is not exempted development:

the provision of MV ducting and cabling works for an Underground Electrical Connection linking existing and proposed substations at Killiniskyduff and Templerainy.

Relevant legislation:
Planning and Development Act 2000 (as amended)
Section 2: (1) In this Act, except where the context otherwise requires- "works" includes any act or operation of construction, excavation, demolition, extension, alteration, repair or renewal and, in relation to a protected structure or proposed protected structure, includes any act or operation involving the application or removal of plaster, paint, wallpaper, tiles or other material to or from the surfaces of
the interior or exterior of a structure .

. *'structure': means any building, structure, excavation, or other thing constructed or made on, in or under and land, or any part of a structure so defined, and -*

(a) where the context so admits, includes the land on, in or under which the structure is situate, and ...
"statutory undertaker" means a person, for the time being, authorised by or under any enactment or instrument under an enactment to-

(a) construct or operate a railway, canal, inland navigation, dock, harbour or airport,

(b) provide, or carry out works for the provision of, gas, electricity or telecommunications services, or

(c) provide services connected with, or carry out works for the purposes of the carrying on of the activities of, any public undertaking;

Section 3:
3.-(1) In this Act, "development" means, except where the context otherwise requires, the carrying out of any works on, in, over or under land or the making of any material change in the use of any structures or other land.
Section 4(2) provides that the Minister may by regulations provide any class of development to be exempted development. The Regulations which are applicable in this case are the Planning and Development Regulations

Planning and Development Regulations 2001{as amended).
Article 6
(1) Subject to article 9, development of a class specified in column 1 of Part 1 of Schedule 2 shall be exempted development for the purposes of the Act, provided that such development complies with the conditions and limitations specified in column 2 of the said Part 1 opposite the mention of that class in the said column 1.

Article 9(1) - Note see Regulations for full Article
Development to which article 6 relates shall not be exempted development for the purposes of the Act(

a) if the carrying out of such development would –

(viiA) consist of or comprise the excavation, alteration or demolition of any archaeological monument included in the Record of Monuments and Places,

(viiB) comprise development in relation to which a planning authority or An Bord Pleanala is the competent authority in relation to appropriate assessment and the development would require an appropriate assessment

(viiC) consist of or comprise development which would be likely to have an adverse impact on an area designated as a natural

Assessment:
The query under Section 5 of the Planning and Development Act 2000 (as amended) is whether the provision of MV ducting and cabling works for an Underground Electrical Connection linking existing and proposed substations at Killiniskyduff and Templerainy is or is not exempted development.

The applicant has submitted an AA screening report, originally submitted with planning application 161285 and exempted development application EX36/17. This exempted development application is effectively a repeat of exempted development granted under EX36/17 with a slight alteration, being the moving of the line of cabling and ducting works c. 25m further east of the Templerainey River at the crossing of the M11 near Junction 20. In the intervening period a Section 5 application, EX35/2020, for the provision of MV ducting and cabling works for an underground electrical connection linking the substation at Templerainey (granted under PRR161285) to a substation (also in Templrainey) permitted in conjunction with the solar farm granted permission under 171440 and also being developed by Highfield Solar, was deemed exempt. In addition to the aforementioned developments, permission has been granted under PRR2460393 for a Battery Energy Storage System to cater for the energy storage requirements of the permitted solar farms 161285 and 171440.

The path of the proposed ducting cabling is the same as that proposed under EX36/17, extending from the permitted substation at Templerainey to the Arkow Substation in the Townland of Killinskeyduff, which is c.2 km to the south east. From the Templrainey substation it will follow an existing farm tunnel under the main (N11) then cross a short section of improved grassland before being confined to a public road before its termination at Arkow substation.

The first assessment is to establish whether or not such works are development within the remit of Section 3 of the Planning and Development Act 2000(as amended). In this regard, Section 3 of the Planning and Development Act provides that:
"development" means, except where the context otherwise requires, the carrying out of any works on, in, over or under land or the making of any material change in the use of any structures or other land.

As per Section 2 of the Act::

"works" includes any act or operation of construction, excavation, demolition, extension, alteration, repair or renewal and, in relation to a protected structure or proposed protected structure, includes any act or operation involving the application or removal of plaster, paint, wallpaper, tiles or other material to or from the surfaces of the interior or exterior of a structure.
With regard to the above, it is considered that the provision of an underground electrical cable connection which would involve excavation/ trenching, would fall within the definition of works, and as such would constitute 'development' under the meaning of the Act.

The second stage of the assessment is to determine whether the works involved in the provision of an underground electrical cable connection from the sub-station within the permitted Coolboy Solar Farm to Arklow, Killinskeyduff 220kv substation is or is not exempted development.

In this regard it is noted that Class 26 of Part 1 of Schedule 2 of the Planning and Development Regulations 2001 (as amended) provides an exemption for:

The carrying out by any undertaker authorized to provide an electricity service of development consisting of the laying underground of mains, pipes, cables or other apparatus for the purposes of the undertaking.

The submitted works for an underground connection by Highfield Solar Ltd is considered to come within the description set out under Class 26. Highfield Solar Ltd would it is considered come within the definition of undertaker having regard to the provisions of the Electricity Regulation Act 1999, and as they have been authorised by reference to PRR16/1285 and PRR171440 to construct a solar farm for the provision of electricity.

Article 9 examination:
The most relevant exclusions identified under Article 9 restricting the Exemptions as set out in Schedule 2: Part 1 are examined below:

(viiA) consist of or comprise the excavation, alteration or demolition of any archaeological monument included in the Record of Monuments and Places,

The cabling is within the 50m buffer for WI040-049 which is a burnt mound excavated as part of the Arklow bypass scheme. It is considered that the cabling will not impact on this record given that it is within the line of the farm tunnel which would already have been subject to archaeological monitoring as part of the road scheme.

The cabling will therefore not result in the excavation/ alteration or demolition of any archaeological monument.

(viiB) comprise development in relation to which a planning authority or An Bord Pleanala is the competent authority in relation to appropriate assessment and the development would require an appropriate assessment

A screening report was submitted with respect to the proposed development under PRR 16/1685 and this report has been resubmitted as part of this Exemption Declaration. As part of that AA report examination was also undertaken of the proposed underground cabling. The cabling/ ducting proposed is located on lands which are not within or adjacent to any Natura 2000 site. The closest Natura 2000 site is the Buckroney- Brittas Dunes and Fen (c. 3km

north east), with the Slaney River Valley SAC at its closest point c. 14km to the south. From examination it is apparent that there is no direct link to either of these Natura 2000 sites.

It is considered that given the nature of the works that the provision of cabling will not give rise to any negative impacts on any Natura 2000 site and therefore the need to proceed to the Second Stage i.e. Appropriate Assessment is not considered necessary in this instance.

In light of the above, it is considered that the provisions of Article 9 of the Planning and Development Regulations 2001(as amended) do not apply in this instance, and therefore the development would be exempted development.

Need for EIA:
The development of a solar farm and the provision of underground electric cabling would not come within any of the prescribed development as set out in Schedule 5 of the Planning and Development Regulations 2001 (as amended).

Roads:
Respecting the previous exempted development application EX36/17 and potential issues raised by TII & Transport & Road Infrastructure Section of WCC and the need for consultation with TII and Wicklow County Council, it is highlighted that the Declaration would not abrogate the responsibility of the applicants to receive all other consents necessary to proceed with the works, and in this regard the applicants should be informed of same with the Declaration.

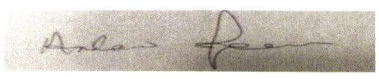
Recommendation:
With respect to the query under Section 5 of the Planning and Development Act 2000, as to whether:
The provision of MV ducting and cabling works for an Underground Electrical Connection linking existing and permitted substations at Killiniskyduff and Templerainy, Kilbride Co. Wicklow is or is not development and is or is not exempted development

The Planning Authority considers that:
The provision of MV ducting and cabling works for an Underground Electrical Connection linking existing and proposed substations is development and **IS** exempted development

Main Considerations with respect to Section 5 Declaration:
a) The details within Section 5 application No. EX36/17
b) Section 2, 3,4 of the Planning and Development Act 2000(as amended)
c) Articles 6 and 9 of the Planning and Development Regulations, 2001(as amended)
d) Class 26, of Part 1 Schedule 2 of the Planning and Development Regulations, 2001 as amended

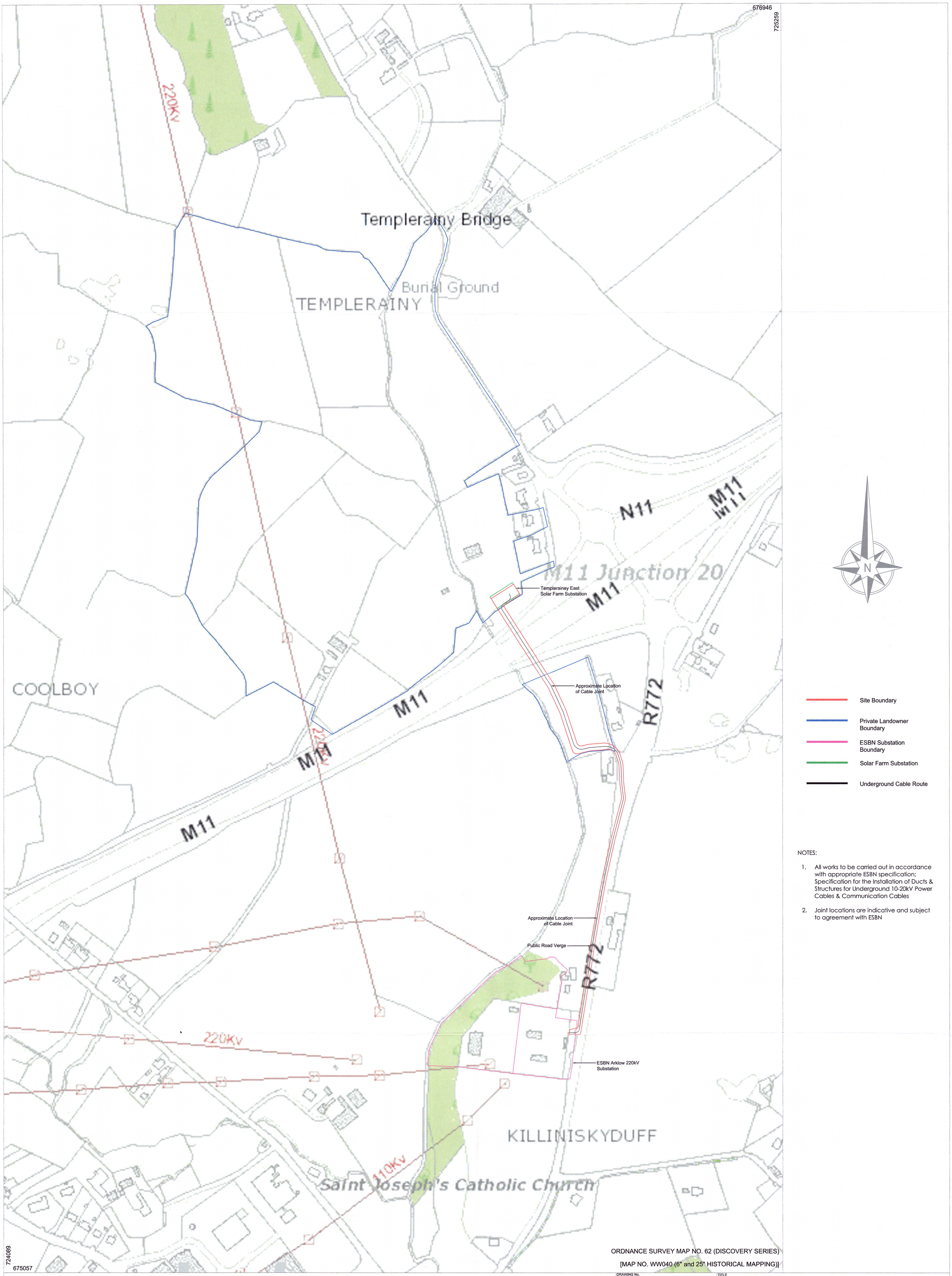
Main Reasons with respect to Section 5 Declaration:
1. The provision of MV ducting and cabling works for an underground electrical connection cabling/ ducting works to provide an electrical connection to the ESB substation would accord with the provisions of Schedule 2, Part 1, Class 26 of the Planning and Development Regulations 2001 (as amended).

Please send copy of the Declaration to the TII and Transport & Roads Infrastructure Section and the following should be included with the cover letter issuing with the Section 5 Declaration a copy of which should also be sent to the TII and Transport &Roads Infrastructure Section.



Andrew Spencer Executive Planner
25/7/2025

Agreed as modified
29/07/25
Issue declaration 2



NOTES:

1. All works to be carried out in accordance with appropriate ESBN specification; Specification for the Installation of Ducts & Structures for Underground 10-20kV Power Cables & Communication Cables
2. Joint locations are indicative and subject to agreement with ESBN

ORDNANCE SURVEY MAP NO. 62 (DISCOVERY SERIES)

[MAP NO. WW040 (6" and 25" HISTORICAL MAPPING)]

scale 1:2500

100 m 200 m 300 m 400 m 500 m

PREPARED BY:

Highfield energy

Highfield Energy Services Ltd
email: info@highfieldenergy.com

PREPARED FOR:

HIGHFIELD SOLAR

DRAWING No. FIGURE 1.0

PAPER SIZE (SCALE) A1 (1:2500)

DATE 21/05/2018

REVISION (BY) C (TB)

TITLE LOCATION MAP

PROJECT GRID CONNECTION ROUTE

676946

725259

70 m

60 m

50 m

Templerainy Bridge

50 m

50 m

220Kv

Burial Ground

TEMPLERAINY

BLOCK A

Templerainey East
Solar Farm Substation

M11 Junction 20

N11

M11

M11

40 m

Approximate Location
of Cable Joint

BLOCK B

R772

30 m

COOLBOY

M11

M11

M11

BLOCK C

Approximate Location
of Cable Joint

Public Road Verge

30 m

R772

ESBN Arklow 220kV
Substation

220Kv

KILLINISKYDUFF

110Kv

Saint Joseph's Catholic Church

30 m

724089

675057

N

Site Boundary

Private Landowner Boundary

ESBN Substation Boundary

Solar Farm Substation

Underground Cable Route

NOTES:

1. All works to be carried out in accordance with appropriate ESBN specification; Specification for the Installation of Ducts & Structures for Underground 10-20kV Power Cables & Communication Cables
2. Joint locations are indicative and subject to agreement with ESBN

ORDNANCE SURVEY MAP NO. 62 (DISCOVERY SERIES)

[MAP NO. WW040 (6" and 25" HISTORICAL MAPPING)]

scale 1:2500

100 m 200 m 300 m 400 m 500 m

PREPARED BY:

Highfield energy

Highfield Energy Services Ltd
email: info@highfieldenergy.com

PREPARED FOR:

HIGHFIELD SOLAR

DRAWING No.: FIGURE 1.1

PAPER SIZE (SCALE): A1 (1:2500)

DATE: 21/05/2025

REVISION (BY): C (TB)

TITLE: BLOCK PLAN

PROJECT: GRID CONNECTION ROUTE

676155

725029

Templerainey East
Solar Farm Substation

40 m

Approximate Location
of Cable Joint

30 m

N

Site Boundary

Private Landowner Boundary

ESBN Substation Boundary

Solar Farm Substation

Underground Cable Route

NOTES:

1. All works to be carried out in accordance with appropriate ESBN specification; Specification for the Installation of Ducts & Structures for Underground 10-20kV Power Cables & Communication Cables
2. Joint locations are indicative and subject to agreement with ESBN

724794

675777

ORDNANCE SURVEY MAP NO. 62 (DISCOVERY SERIES)

[MAP NO. WW040 (6" and 25" HISTORICAL MAPPING)]

scale 1:500

25 m 50 m 75 m 100 m

PREPARED BY:

Highfield energy

Highfield Energy Services Ltd
email: info@highfieldenergy.com

PREPARED FOR:

HIGHFIELD SOLAR

DRAWING No. FIGURE 1.2 (A)

PAPER SIZE (SCALE) A1 (1:500)

DATE 21/05/2025

REVISION (BY) C (TB)

TITLE SITE LAYOUT - BLOCK A

PROJECT GRID CONNECTION ROUTE

675906

725040

38

N

Site Boundary

Private Landowner Boundary

ESBN Substation Boundary

Solar Farm Substation

Underground Cable Route

NOTES:

1. All works to be carried out in accordance with appropriate ESBN specification; Specification for the Installation of Ducts & Structures for Underground 10-20kV Power Cables & Communication Cables
2. Joint locations are indicative and subject to agreement with ESBN

Approximate Location of Cable Joint

Public Road Verge

724805

675528

ORDNANCE SURVEY MAP NO. 62 (DISCOVERY SERIES)

[MAP NO. WW040 (6" and 25" HISTORICAL MAPPING)]

scale 1:500

25 m 50 m 75 m 100 m

PREPARED BY:

Highfield energy

Highfield Energy Services Ltd
email: info@highfieldenergy.com

PREPARED FOR:

HIGHFIELD SOLAR

DRAWING No. FIGURE 1.2 (B)

PAPER SIZE (SCALE) A1 (1:500)

DATE 21/05/2025

REVISION (BY) C (TB)

TITLE SITE LAYOUT - BLOCK B

PROJECT GRID CONNECTION ROUTE

675657

725051

Approximate Location of Cable Joint

Public Road Verge

N

Site Boundary

Private Landowner Boundary

ESBN Substation Boundary

Solar Farm Substation

Underground Cable Route

NOTES:

1. All works to be carried out in accordance with appropriate ESBN specification; Specification for the Installation of Ducts & Structures for Underground 10-20kV Power Cables & Communication Cables
2. Joint locations are indicative and subject to agreement with ESBN

ESBN Arklow 220kV Substation

724816

675279

ORDNANCE SURVEY MAP NO. 62 (DISCOVERY SERIES)

[MAP NO. WW040 (6" and 25" HISTORICAL MAPPING)]

scale 1:500

25 m 50 m 75 m 100 m

PREPARED BY:

Highfield energy

Highfield Energy Services Ltd
email: info@highfieldenergy.com

PREPARED FOR:

HIGHFIELD SOLAR

DRAWING No. FIGURE 1.2 (C)

PAPER SIZE (SCALE) A1 (1:500)

DATE 21/05/2025

REVISION (BY) C (TB)

TITLE SITE LAYOUT - BLOCK C

PROJECT GRID CONNECTION ROUTE