An Bord Pleanála

Inspector's Report

ABP-307136-20

Development	110kV substation with associated electrical plant, control buildings, welfare facilities, security fencing, additional internal access traces, 110kV overhead line grid connection to existing transmission line on site, which will consist of a 10 year permission.
Location	Lands at Harristown, Castlejordan and Clongall, Co, Meath.
Planning Authority	Meath County Council
Applicant	Lightsource Renewable Energy Ireland Ltd.
Type of Application	Application under the provisions of Section 182A of the Planning and Development Act 2000, as amended
Observer(s)	Meath County Council Department of Communications, Climate Action and Environment
Date of Site Inspection	16th November 2020
Inspector	Niall Haverty

Contents

1.0 Introduction

1.1. An application has been made by Lightsource Renewable Energy Ireland Ltd. under the provisions of section 182A of the Planning and Development Act 2000, as amended ('the Act'), for the development of a 110kV electrical substation, associated electrical and other infrastructure, overhead line grid connection and ancillary site development works in the townlands of Harristown, Castlejordan and Clongall, Co. Meath.

1.2. The purpose of the proposed development is to connect a permitted solar farm (refer to Section 6 below for details) to an existing 110kV overhead transmission line and to thus export electricity from the solar farm, when constructed and operational, to the national grid.

1.3. The proposed development was the subject of pre-application consultation (ABP-304629-19) on foot of which the Board determined that the proposed development would constitute Strategic Infrastructure Development.

2.0 Site Location and Description

2.1. The application site, which has a stated area of 4.86 ha, is irregular in shape and is located in the townlands of Harristown, Castlejordan and Clongall in the south western corner of County Meath, close to the borders of Counties Westmeath, Offaly and Kildare.

2.2. The site is accessed from the L4091 local road to the north, via an existing farm entrance, with this long access track forming part of the application site. The area of the proposed substation development itself is rectangular, and it is located with a large field (referred to as Field 15), which is traversed from north to south by an overhead 110kV transmission line referred to as the Kinnegad to Dunfirth Tee-Rinawade 110kV line.

2.3. The site is c. 6km north of Edenderry and c. 6m south of Kinnegad, with the closest settlement being the small village of Castlejordan, c. 1km to the west of the access track and c. 1.5km north west of the proposed substation site.

2.4. The topography of the surrounding area is relatively flat, with gentle undulations. The area is generally rural in character, with agriculture being the primary land use. The

surrounding fields are generally irregularly shaped and of various sizes and are mostly well defined by mature hedgerows and treelines. The local roads in the area also exhibit a degree of ribbon development, with the closest dwellings – other than the landowner – being located c. 114m to the east of the site entrance and c. 400m south of the proposed substation.

2.5. The Yellow River is located c. 0.8km south of the application site, while the River Boyne is located c. 0.9km east of the application site. These rivers delineate the borders of Counties Offaly and Kildare, respectively.

3.0 Proposed Development

3.1. The proposed development consists of:

- 110kV substation with associated electrical plant;
- control buildings;
- welfare facilities;
- security fencing;
- additional internal access tracks;
- 110kV overhead line grid connection to the existing transmission line with associated angle lattice masts (max. height of c. 20m); and
- all ancillary works.

3.2. Permission is sought for a period of ten years, and the purpose of the proposed development is to enable the construction and operation of the facility which is associated with a permitted solar farm development on the surrounding lands (refer to Section 6 below).

3.3. The application was accompanied by an Environmental Impact Assessment Report (EIAR), a Natura Impact Statement (NIS), related technical appendices, drawings and statutory documents. The Board should note that both the EIAR and NIS relate to the overall development, i.e. the proposed substation development and the permitted solar farm development.

4.0 Submissions and Observations

4.1. Planning Authority

4.1.1. The submission received from the Planning Authority can be summarised as follows:

4.1.2. **Chief Executive's Report:**

- Biodiversity: The Heritage Officer raises no objection.
- Lands, soils and water: The Environment Department raises no objection.
- Flood risk: The Environment Department (Flooding) raises no objection. Water Services Department raises no objection, subject to conditions.
- Landscape and visual impact:
    - The high degree of enclosure provided by hedgerows together with the low scale of the proposed structures ensure it can be accommodated within the landscape without causing significant adverse effects.
    - Proposed mitigation measures help reduce the potential visibility of the proposed development.
    - While the Conservation Officer considers that there is insufficient information, this appears to relate to the potential impact on views to and from nearby protected structures. The LVIA includes photographs showing these views, and due to the low lying site, the existing boundary planting and the relatively low height of the development, it is not considered that the proposed development would impact on visual amenity or on the setting of any nearby protected structures and recorded monuments.
    - While the Conservation Officer recommends conditions in the event of a grant of permission, these are not considered necessary, having regard to the site setting and proposed landscaping measures.
- Archaeological, Architectural and Cultural Heritage: Similar conclusion to Landscape and visual impact section above.

- Solar farms are supported by planning policy. The proposed development is supported in the context of its necessity for the connectivity to the national grid.
- Transportation Department raises no objection, subject to conditions. The principle of the proposed access is already established under the solar farm permission. The additional traffic impact is not considered to be significant. It is therefore not considered necessary to attach the Transportation Department's recommended conditions.
- The Appropriate Assessment conclusion attached to the solar farm planning application is noted. It concluded that the proposed development (entire project), by itself or in combination with other plans and developments in the vicinity, would not be likely to have a significant effect on European Sites.
- Heritage Officer recommends conditions.
- No development contributions are applicable in this instance. It should be noted that a development contribution is attached to the solar farm permission.
- In conclusion, the development proposal accords with National, Regional and Local planning policy, assimilates well into the local landscape and is acceptable from an environmental and traffic perspective.
- The Planning Authority recommends that permission should be granted, subject to the schedule of conditions attached to the report.

4.1.3. Copies of the internal department reports summarised above were included as appendices to the Chief Executive's Report.

4.1.4. **Elected Members:**

4.1.5. It is stated that a presentation was made by a Planning Officer to the Elected Members, and their subsequent comments and views were as follows:

- Members supported the application.
- Asked about the efficiencies between wind energy and solar energy.

- Spoke about the Renewable Electricity Support Scheme and asked that the Board ensure that a community benefit fund be conditioned as part of any grant.

4.2. Prescribed Bodies

4.2.1. One submission was received from the Department of Communications, Climate Action and Environment. It stated that Inland Fisheries Ireland has no objection to the proposed development once it is carried out as per the documentation submitted and as per their 'Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters' (2016).

4.3. Third Party Observations

4.3.1. No third party observations were received.

5.0 Applicant's Response to Submissions

5.1. The applicant's response to the submissions can be summarised as follows:

- Applicant notes that Meath County Council raises no objections to the proposal and that it is supported by MCC and Council members.
- Suggested conditions are acceptable to applicant.
- Applicant notes that Inland Fisheries Ireland are not objecting to the project. The project will be carried out fully as per the IFI Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters.

6.0 Planning History

6.1. **Reg. Ref. TA/181225:** A final grant of permission for a solar farm on lands at Harristown, Castlejordan and Clongall was issued by Meath County Council on 22nd January 2020.

6.2. A ten year planning permission was granted, and the development description comprised the construction, operation and decommissioning of a photovoltaic solar farm comprising photovoltaic panels on ground mounted frames, inverter stations,

customer substation, switchgear substations, field transformers, monitoring house, communications building, single storey storage shed, battery containers, WC, fencing, temporary construction compounds, internal access tracks, CCTV cameras, improvements to the existing entrance, cabling, landscaping and all associated ancillary development works.

7.0 Policy Context

7.1. National Policy

7.1.1. National Planning Framework

7.1.2. National Policy Objective 55 - Promote renewable energy use and generation at appropriate locations within the built and natural environment to meet national objectives towards achieving a low carbon economy by 2050.

7.1.3. National Renewable Energy Plan 2010

7.1.4. The National Renewable Energy Action Plan (NREAP) sets out the Government's strategic approach and measures to deliver on Ireland's 16% target Directive 2009/28/EC. It states that the Government has set a target of 40% electricity consumption from renewable sources by 2020.

7.1.5. Strategy for Renewable Energy 2012-2020

7.1.6. The Strategy states that the Government's overriding energy policy objective is to ensure competitive, secure and sustainable energy for the economy and for society.

7.1.7. Government Policy Statement on the Strategic Importance of Transmission and Other Energy Infrastructure, July 2012

7.1.8. In this policy statement the Government acknowledges the essential need to meet the demand for energy in a safe, secure and continuous manner as it is the lifeblood of the economy and society. It reaffirms the imperative need for development and renewal of the energy networks, in order to meet both economic and social policy goals. The Government endorses, supports and promotes the strategic programmes of the energy infrastructure providers, particularly EirGrid's Grid 25 investment programme across the regions.

7.1.9. White Paper - Ireland's Transition to a Low Carbon Energy Future, 2015-2030

7.1.10. Chapter 5 of the document, “Delivering Sustainable Energy: Efficiency, Renewables, Technology”, sets out government priorities in the area of renewable energy up to 2030. This includes incorporating higher penetration of renewable energy sources.

7.1.11. **Draft Renewable Energy Policy and Development Framework 2016**

7.1.12. The main principles of the Renewable Electricity Policy and Development Framework include:

- Maximise the sustainable use of renewable electricity resources in order to develop progressively more renewable electricity for the domestic and potential, future export markets.
- Assist the achievement of targets for renewable energy, enhance security of energy supply and foster economic growth and employment opportunities.

7.1.13. **Ireland’s Grid Development Strategy – Your Grid, Your Tomorrow, 2017**

7.1.14. This provides a strategic overview for the development of the electricity transmission system. It confirmed the need for investment in the electricity transmission system. All practical technology solutions will be considered with a strategy of optimising existing grid so as to minimise new grid infrastructure.

7.1.15. **Climate Action Plan, 2019**

7.1.16. The plan stresses the importance of decarbonising electricity consumed, by harnessing the significant renewable energy resources. Ensuring the building of renewable rather than fossil fuel generation capacity to help meet the projected growth in electricity demand is essential. Ensuring increased levels of renewable generation will require very substantial new infrastructure, including wind and solar farms, grid reinforcement, storage developments, and interconnection.

7.1.17. To meet the required level of emissions reduction, by 2030 it is required to increase electricity generated from renewable sources to 70% including:

- Up to 1.5 GW of grid-scale solar energy (indicative figure).

7.2. Regional Spatial and Economic Strategy for the Eastern and Midland Region

7.2.1. I note that the Regional Strategic Outcomes contained in the Strategy include ‘Support the Transition to Low Carbon and Clean Energy’ (RSO 9) and ‘A Strong

Economy supported by Enterprise and Innovation' (RSO 12). I also note Regional Policy Objectives RPO 10.20, 10.22 and 10.23, which support the development and strengthening of the electricity network.

7.3. Meath County Development Plan 2013-2019

7.3.1. I note that the Meath County Development Plan 2013-2019 is still in effect.

7.3.2. Chapter 8 relates to energy infrastructure and Section 8.1.2 relates specifically to electricity and gas networks. The following Policies are noted:

- **EC POL 1:** To facilitate energy infrastructure provision, including the development of renewable energy sources at suitable locations so as to provide for further physical and economic development of Meath.
- **EC POL 2:** To support international, national and county initiatives for limiting emissions of greenhouse gases through energy efficiency and the development of renewable energy sources which makes use of the natural resources of the county in an environmentally acceptable manner, where it is consistent with proper planning and sustainable development of the area.
- **EC POL 3:** To encourage the production of energy from renewable sources, such as from biomass, waste material, solar, wave, hydro, geothermal and wind energy, subject to normal proper planning considerations, including in particular the potential impact on areas of environmental or landscape sensitivity and Natura 2000 sites.
- **EC POL 4:** To support the National Climate Change Strategy and, in general, to facilitate measures which seek to reduce emissions of greenhouse gases.
- **EC POL11:** To support and facilitate the development of enhanced electricity and gas supplies, and associated networks, to serve the existing and future needs of the County.
- **EC POL 12:** To co-operate and liaise with statutory and other energy providers in relation to power generation in order to ensure adequate power capacity for the existing and future needs of the County.

- **EC POL 13:** To ensure that energy transmission infrastructure follows best practice with regard to siting and design particularly to ensure the protection of all important recognised landscapes.

7.3.3. Objectives EC OBJ 1 to EC OBJ 4 are also noted.

7.3.4. Appendix 7 includes a Landscape Character Assessment. The application site is located within the South West Lowlands Landscape Character Area (LCA 15). This LCA is of 'High Value' and 'Medium Sensitivity', with "medium potential capacity to accommodate overhead cables, substations and communications masts because views within this LCA are generally short range and limited by topography and vegetation so there are opportunities for choosing locations where visual impacts are minimal".

7.4. Natural Heritage Designations

7.4.1. The application site is not located within or immediately adjacent to any sites with a natural heritage designation.

7.4.2. The only Natural Heritage Area (NHA) within 5km of the site is Blackcastle Bog NHA (000570). With regard to Natura 2000 sites, the River Boyne and River Blackwater SAC and SPA (002299; 004232), Mount Hevey Bog SAC (002342) and The Long Derries, Edenderry SAC (000925) are located within 15km of the site.

8.0 Oral Hearing

8.1. The Board directed on the 23rd July 2020 that an Oral Hearing in respect of the application should not be held.

9.0 Format of Assessment

9.1. As noted in Section 1.0 above, the purpose of the proposed development is to connect a permitted solar farm (Reg. Ref. TA/181225) to an existing 110kV overhead transmission line and to thus export electricity from the solar farm, when constructed and operational, to the national grid.

9.2. For clarity, the proposed 110kV substation and associated development that is the subject of this s182A SID application will hereafter be referred to as the 'substation

development', the wider permitted solar PV generation development will be referred to as the 'solar farm development' and the entire development in combination (i.e. the SID development, the solar farm and the cable wrap) will hereafter be referred to as the 'overall development'.

9.3. As noted above, much of the documentation submitted with the application, including the Environmental Impact Assessment Report and the Natura Impact Statement, relate to the overall development and was previously submitted in connection with the solar farm application.

9.4. Having regard to the requirements of the Planning and Development Act 2000, as amended, there are three parts to my assessment: planning assessment, environmental impact assessment and appropriate assessment. There is an inevitable degree of overlap between the assessments, particularly between the planning assessment and the environmental impact assessment. In the interests of brevity, I have sought to avoid undue repetition where possible, instead indicating where overlaps occur.

10.0 Planning Assessment

10.1. I consider that the key planning issues arising are as follows:

- Principle and planning policy.
- Residential amenity.
- Flood Risk.
- Other issues.

10.2. The issues of Environmental Impact Assessment and Appropriate Assessment are considered separately below in Sections 11 and 12, respectively.

10.3. Principle and Planning Policy

10.3.1. As set out above, the proposed development comprises a 110kV substation and associated electrical and other infrastructure, which is required to connect a permitted solar farm to the national grid. Renewable energy projects are supported 'in principle' at national, regional and local policy levels, with the imperative at all

policy levels being the need to reduce greenhouse gas emissions, reduce reliance on fossil fuels and combat climate change.

10.3.2. EU Directive 2009/28/EC sets a target of 20% of EU energy consumption from renewable sources and a 20% cut in greenhouse gas emissions by 2020. As part of this Directive, Ireland's legally binding target is 16% energy consumption from renewable sources by 2020. The more ambitious national objective, as expressed in the NREAP, is for 40% of electricity consumption to be from renewable sources by 2020. The White Paper entitled 'Ireland's Transition to a low carbon Energy Future 2015-2030' sets out a vision to reduce greenhouse gas emissions by between 80% and 95% compared to 1990 levels by 2050, and notes that solar photovoltaic technology is rapidly becoming cost competitive for electricity generation and that the deployment of solar power in Ireland has the potential to increase energy security, contribute to our renewable energy targets and support economic growth and jobs.

10.3.3. At a local level, the Meath County Development Plan 2013-2019 contains a number of Policies to support reductions in greenhouse gas emissions and to facilitate and encourage renewable energy projects, subject to normal planning criteria. Policies EC POL 1 – EC POL 4 are of particular relevance in this regard. More specifically, the development of improved electricity supplies and power capacity is supported by policies EC POL 11 and EC POL 12, while policy EC POL 13 seeks to ensure that energy transmission infrastructure follows best practice with regard to siting and design.

10.3.4. The application site is located within a large agricultural landholding, upon which permission has been granted for a large solar farm. The proposed development would have significant separation distances from the nearest public roads and residential dwellings (in excess of 400m for the substation), and would be surrounded to the west, north and east by photovoltaic panels and other infrastructure associated with the permitted solar farm. The site is immediately adjacent to an existing 110kV overhead power line and it is not subject to any particular constraints in terms of archaeological, cultural and architectural heritage, landscape designation or land use zoning objectives.

10.3.5. It is clear from the above that there is substantial policy support at national, regional and local level for the development of the electricity network and for renewable

energy projects, such as that which would be facilitated by the proposed development. I therefore consider the proposed development to be acceptable in principle, subject to consideration of the key planning issues outlined in Section 10.1 above, as well as the issues of EIA and AA, as addressed in Sections 11 and 12, respectively.

10.4. Residential Amenity

10.4.1. The application site is located within a large agricultural landholding, and the proposed substation would have separation distances in excess of c. 400m to both the nearest public road and the nearest residential dwellings that are not within the landholding. I note that, unlike the earlier application for the associated solar farm development, no third party observations were made in respect of this application.

10.4.2. With regard to potential construction phase impacts on residential amenity, particularly as a result of noise, dust or construction traffic, I note that the applicant has submitted both an Outline Construction Environmental Management Plan and a Construction Traffic Management Plan (both of which relate to the overall development) and has stated that construction of the 110kV infrastructure is expected to take c. 6 months of the overall 12 month construction programme. Construction traffic access for the proposed development will be via an existing agricultural entrance off the L4091, which will be upgraded to improve sightlines. I also note that the proposed construction compound is located a short distance to the north of the proposed substation site, with similar separation distances from residential dwellings.

10.4.3. I have addressed the issues of noise and dust separately below in Section 11.6, however having regard to the substantial separation distances and the limited duration of the construction period, I do not consider that any significant impacts on residential amenity are likely to occur during the construction phase. Notwithstanding this, given the inter-relationship between the proposed development and the permitted solar farm, I recommend, should the Board be minded to grant permission, that a condition be attached requiring the submission of a Construction Environmental Management Plan for the agreement of the Planning Authority.

10.4.4. Similarly, with regard to the operational phase, noting the separation distances involved, the nature and limited scale of the proposed substation development and its lack of visibility in the wider area (See Section 11.7 below), I do not consider that the proposed development is likely to result in any significant adverse impacts on residential amenity during its operational phase.

10.5. Flood Risk

10.5.1. As noted in Section 2, the application site is located relatively close to the Yellow River (located c. 0.8km to the south) and the River Boyne (located c. 0.9km to the east) The Yellow River is a tributary of the Boyne, and a number of watercourses/drains in the vicinity of the application site drain to the River Boyne. The proposed development, which could be considered essential electrical infrastructure, would constitute a form of highly vulnerable development as defined by the Planning System and Flood Risk Management Guidelines.

10.5.2. Technical Appendix 6.1 of the EIAR comprises a Flood Risk Assessment (FRA) for the overall development (i.e. the permitted solar farm and the proposed substation development). I also note Drawing No. 20205-MWP-SS-00-DR-C-5036 submitted with the application, which illustrates the flood zones on an aerial photograph, relative to the substation development.

10.5.3. The assessment undertaken in the FRA utilised LiDAR topographical data, surveying of cross-sections and hydrological modelling of the River Boyne and watercourses to produce site-specific flood mapping. The flood maps for the 100-year and 1000-year flows are provided in Figure 6.1.10 and 6.1.11 of the FRA and the abovementioned drawing.

10.5.4. It can be seen from the flood mapping produced that the entirety of the application site is outside of the 1 in 100 year and 1 in 1000 year flood zone, and that it can therefore be considered to be located in Flood Zone C ('low probability of flooding'). With regard to the Matrix of vulnerability versus flood zone set out in Table 3.2 of the Flood Risk Management Guidelines, it can be seen that highly vulnerable development is deemed 'appropriate' in Flood Zone C, without a requirement for a Justification Test.

10.5.5. The Planning Authority concurred with this position, with the Environment Department (Flooding) having no objection on condition that the development is sited outside Flood Zones A and B as shown in the application documentation, that there is a 10m buffer zone between the proposed development and drains to facilitate maintenance and that section 50 consent be obtained from the OPW for new or modified watercourse crossings/culverts/bridges.

10.5.6. In conclusion, having regard to the location of the proposed substation development outside of any area identified as being subject to flood risk, I do not consider that the proposed development would be subject to a significant flood risk or that it would result in an increased risk of flooding elsewhere.

10.6. **Other Issues**

10.6.1. Duration of Permission and Decommissioning

10.6.2. I note that the applicant is seeking a 10-year permission. This duration would be consistent with the duration of the permission granted for the solar farm, and I consider it to be appropriate in the circumstances, should the Board be minded to grant permission.

10.6.3. With regard to the lifespan of the proposed development, I note that the permitted solar farm has a permitted operational lifetime of 35 years, after which the site is to be reinstated, unless planning permission has been granted for a further period (Condition 29 of Reg. Ref. TA/181225 refers).

10.6.4. While the proposed substation development is intended to serve this solar farm, it will form a node on the transmission network by virtue of its loop in/loop out connection to the existing overhead transmission line (i.e. the existing 110kV powerline will be severed and routed through the proposed substation). For this reason, I do not consider it necessary to limit the lifetime of the proposed substation development to the lifetime of the solar farm development and consequently I do not consider it necessary to attach a decommissioning and reinstatement condition to any grant of permission.

10.6.5. Development Contributions

10.6.6. The Planning Authority, in their submission to the Board, state that no development contribution is payable, but note that a condition requiring payment of a contribution was attached to the grant of permission for the associated solar farm.

10.6.7. Having regard to the provisions of the Meath County Council Development Contribution Scheme 2016-2021, and more particularly to the Schedule of Charges set out at Section 7 of the Scheme, it appears to me that the proposed development would come within the 'other' category of development, which is defined as "development not coming within any of the foregoing categories e.g. energy storage facilities". The contribution rate for this category of development is €15,000 per hectare. Based on a stated site area of 4.86 ha, this would give rise to a development contribution of €72,900 for the proposed development.

10.6.8. Section 7.1.3 of the Scheme sets out exemptions and reductions for certain types of development. I do not consider that the proposed development would fall under any of the exemptions listed and accordingly I recommend that, should the Board be minded to grant permission, that a suitably worded condition be attached requiring the payment of a section 48 development contribution in accordance with the Acts.

10.6.9. Community Fund

10.6.10. The Elected Members asked that the Board ensure that a community benefit fund be conditioned as part of any grant of permission.

10.6.11. This application relates to a substation and associated development required to connect a permitted solar farm to the transmission network. Given the limited scale of the proposed development, and the fact that it does not generate electricity itself, I do not consider it appropriate to attach a condition requiring the establishment of a community benefit fund.

10.6.12. Site Entrance and Phasing of Development

10.6.13. I note that the works to the site access to improve sightlines are permitted under the solar farm permission (Reg. Ref. TA/181225). However, the applicant states that the proposed substation development would be constructed first. For this reason, if the Board is minded to grant permission, I recommend that a suitable condition be included requiring the permitted works to the site entrance to be completed prior to commencement of the substation construction works.

11.0 Environmental Impact Assessment

11.1. Introduction

11.1.1. An EIAR, prepared by Neo Environmental, has been submitted with the application. The cover letter submitted with the application states that the EIAR was produced at the request of Meath County Council during the consent process for the solar farm development. The Board should note that the EIAR relates to the three elements of the overall development, namely:

1. The permitted solar farm development, including battery energy storage system (Granted by Meath County Council in January 2020 under Reg. Ref. TA/181225).
2. The proposed 110kV substation and associated line modifications to the transmission grid (i.e. this application).
3. The fibre optic connection from the proposed substation to the existing ESB substation near Kinnegad, Co. Westmeath[1]. The cover letter accompanying the application states that the ESB will be responsible for the consent and installation of this development element at a later date.

11.1.2. This section of my report comprises an environmental impact assessment of the proposed development. As noted in Section 9 above, some of the matters considered have already been addressed in the Planning Assessment above. This section of the report should therefore be read, where necessary, in conjunction with the relevant sections of the Planning Assessment.

11.2. Format of EIAR

11.2.1. The EIAR comprises 3 No. volumes. Volume 1 is a Non-Technical Summary (NTS), which provides a summary of the EIAR in non-technical language. Volume 2 comprises the main body of the EIAR, including various maps, figures, drawings and tables. Volume 3 comprises a series of technical appendices relating to various

[1] This is stated to entail the wrapping of a fibre optic cable along the existing 110kV overhead transmission line for a distance of c. 5.3km.

chapters of Volume 2. The NIS is included as a separate standalone document. A schedule of Mitigation Measures is contained at Chapter 15 of Volume 2.

11.2.2. This application was submitted after 16th May 2017, the date for transposition of Directive 2014/52/EU amending the 2011 EIA Directive, and therefore the subject application falls within the scope of the amending 2014 EIA Directive (Directive 2014/52/EU).

11.2.3. The EIAR:

- Describes the project and provides information on the site, design, size and particular features of the proposed development;
- Describes the likely significant effects of the project on the environment;
- Describes the features of the project and/or measures envisaged to avoid, prevent, reduce, and if possible, remedy significant impacts;
- Provides a description of the main alternatives studied, and an indication of the main reasons for the choice of alternative put forward, taking into account environmental effects; and
- Includes a non-technical summary of the above information.

11.2.4. As is required under Article 3(1) of the amending Directive, the EIAR describes and assesses the direct and indirect significant effects of the project on the following factors: (a) population and human health; (b) biodiversity with particular attention to the species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC; (c) land, soil, water, air and climate; (d) material assets, cultural heritage and the landscape. It also considers the interaction between the factors referred to in points (a) to (d).

11.2.5. I have carried out an examination of the information presented by the applicant, including the EIAR and the submissions made during the course of the application. A summary of the submissions made by the planning authority and prescribed bodies has been set out at Section 4 of this report and the issues arising are addressed below under the relevant headings, and as appropriate in the reasoned conclusion and recommendation, including conditions.

11.2.6. I am satisfied that the EIAR has been prepared by competent experts to ensure its completeness and quality, and that the information contained in the EIAR and supplementary information provided by the developer is up to date, adequately identifies and describes the direct and indirect effects of the proposed development on the environment, and complies with article 94 of the Planning and Development Regulations 2001, as amended.

11.3. Alternatives

11.3.1. Chapter 2 of the EIAR addresses the alternatives considered. I note that Article 5(1)(d) of the 2014 EIA Directive requires:

> "(d) a description of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the project on the environment;"

11.3.2. Annex IV of the Directive (Information for the EIAR) provides more detail on 'reasonable alternatives':

> "A description of the reasonable alternatives (for example in terms of project design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects."

11.3.3. The EIAR describes the alternatives that were considered under the headings of 'do nothing' alternative, alternative project locations, alternative designs/layouts, alternative technologies and alternative mitigation measures. I note that the alternatives set out in the EIAR primarily relate to the permitted solar farm development, rather than the proposed substation development.

11.3.4. Section 2.6 states that solar farms of the scale that will be served by the proposed development need to be located less than c. 4km from the grid to make them viable and to reduce electrical losses associated with electricity transmission.

11.3.5. The grid connection is addressed at paragraphs 2.22 and 2.23, where it is noted that as the connection will be via an overhead line to the adjacent existing 110kV

overhead line running through the solar farm site, no additional cabling or trenching through additional lands or along roads will be required.

11.3.6. Having regard to the purpose of the proposed development, which is required to connect a permitted solar farm to the transmission network via a loop-in loop-out substation, which will be a node on the transmission network, I consider that the alternatives are limited. The substation is required to be close to the transmission line and close to the solar arrays, and the technology, layout and nature of the substation compound and electrical connection is relatively standard for such transmission projects. Reasonable alternatives are generally, therefore, limited to alternative locations within the site and alternative mitigation measures. I note that the applicant states that 13 versions of the site layout were produced to minimise impacts on the environment and residential receptors. The alternative of connecting to a different off-site transmission line by means of an underground cable was considered but discounted due to the need for additional trenching through neighbouring lands and along public roads and the associated impacts outside the site and on the viability of the project.

11.3.7. The consideration of alternatives is an information requirement of Annex IV of the EIA Directive, and the single most effective means of avoiding significant environmental effects. Having regard to this requirement and its purpose (i.e. avoidance of significant environmental effects) and noting the nature and purpose of the proposed development, I am satisfied that the consideration of alternatives is adequate.

11.4. Population and Human Health

11.4.1. Population and human health are addressed in Chapter 4 of the EIAR. I note that the methodology set out in paragraphs 4.15-4.17 of the EIAR is erroneously copied from the Waste section, although this does not affect the conclusions of my assessment.

11.4.2. The impacts addressed in this section of the EIAR include population, employment, social infrastructure, traffic, health and safety, natural resources and landscape, amenity and tourism. Again, the overall development is assessed, so some elements, such as the glint and glare assessment, are not relevant to the proposed substation development.

11.4.3. The existing environment includes a dispersed rural population, with lands generally in agricultural use. The closest settlement is Castlejordan which is c. 650m west of the overall project site boundary and c. 1.5km from the proposed substation site.

11.4.4. During the construction phase there will be slight positive temporary economic impacts as a result of employment and economic activity generated by the substation development. The numbers to be employed during construction of the overall project are estimated to be 100-115 people. During the operational phase, only a small number of people to be employed to maintain the facility, resulting in a slight positive long-term impact.

11.4.5. Temporary slight negative impacts are likely to arise during the construction phase due to increased traffic movements. For the proposed substation development this is estimated to result in a maximum of 31 HGVs during the peak construction phase. This compares to a total of 1,212 HGVs for the permitted solar farm, with an average of 20 HGVs per day. It is proposed that deliveries will be scheduled outside of peak rush hour times and school pick-up times. In the operational phase this will reduce to 10-15 LGVs per year for the overall development, which is considered to be a long-term imperceptible impact.

11.4.6. With regard to potential health impacts due to air quality impacts, I consider that these will generally relate to the construction phase, since the proposed development will not produce any air emissions during the operational stage. Construction stage emissions to air are primarily related to dust emissions, as well as the use of construction machinery and vehicles. The EIAR considers the impact to be an insignificant negative effect of temporary duration. Having regard to the nature of the proposed development and its separation distance from the closest sensitive receptors, I concur with the applicant's assessment that such impacts will not be significant. In the operational phase, the solar farm served by the proposed substation development will generate c. 43MW of clean energy per annum, offsetting 23,524 tonnes of CO_2 emissions per annum. While the proposed development itself will therefore have a negligible impact on air quality, the cumulative impact of the overall development will be a long-term moderate positive impact.

11.4.7. With regard to noise and vibration, considering the separation distances between the site and the closest residential properties and the temporary nature of the

construction activities, I consider that no significant adverse impacts will arise during the construction phase. During the operational phase, the electrical plant and equipment within the substation will generate noise, however the noise assessment set out in Section 7 of the EIAR considers the impact on noise sensitive receptors to be low to negligible, resulting in a long-term slight to not significant negative effect for the overall development.

11.4.8. The EIAR states that the grid connection work presents the greatest potential for significant effects on the health and safety of construction workers during the construction phase. The proposed development is stated as being designed in accordance with relevant Safety, Health and Welfare at Work legislation, and the EIAR states that with the implementation of best practice measures and compliance with health and safety standards, impacts on workers' health and safety during construction phase will be slight adverse or less. I consider this a reasonable conclusion, noting that the applicant will be required to comply with all relevant health and safety requirements for construction sites, and more particularly for high voltage electrical works. During the operational phase any maintenance/repair works will be undertaken by qualified engineers in accordance with health and safety guidelines. As such, no impact is anticipated.

11.4.9. Paragraphs 4.96 and 4.97 of the EIAR set out a series of mitigation measures, which are primarily related to construction management measures and landscaping works. I note that the measures identified are generally standard good practice measures for construction sites.

11.4.10. No significant residual impacts are predicted following implementation of the mitigation measures and the EIAR contends that the positive impacts for air quality and natural resources will outweigh the non-significant negative impacts identified.

11.4.11. Finally, with respect to potential cumulative impacts, as noted above the EIAR relates to the overall development (i.e. permitted solar farm and proposed substation development). While there is potential for some construction phase negative impacts arising from noise, dust etc. and potential for operational phase positive impacts due to the offsetting of CO_2 emissions, no significant impacts on population and human health are anticipated. With regard to other projects, the EIAR notes that permission was granted in 2017 for the retention and expansion of a quarry c. 515m south of the

site (Reg. Ref. TA/160820). Again, however, no cumulative impacts on population and human health are anticipated.

11.4.12. I have considered the submission of the planning authority and this chapter of the EIAR. I am satisfied that potential effects on population and human health would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the proposed mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects on population or human health.

11.5. Biodiversity

11.5.1. Biodiversity is addressed in Chapter 5 and Appendices 5A and 5B of the EIAR and a Biodiversity Management Plan is also included in Technical Appendix 5.1. A Natura Impact Statement was also submitted with the application, and I have addressed the issue of Appropriate Assessment separately in Section 12.

11.5.2. Table 5.1 lists the consultation undertaken in the preparation of the chapter, with designated sites within the Zone of Influence (ZoI) identified in Table 5.8 and mapped in Figure 5.1. I note that a 5km ZoI was used for nationally designated Natural Heritage Areas (NHAs) and proposed Natural Heritage Areas (pNHAs) with a larger 15km ZoI for European Sites. Neither the application site nor the wider permitted solar farm site are located in or immediately adjacent to any designated sites. The only NHA within the ZoI is Blackcastle Bog NHA (000570), while the River Boyne and River Blackwater SAC and SPA (002299; 004232), Mount Hevey Bog SAC (002342) and The Long Derries, Edenderry SAC (000925) are located within the ZoI. Having regard to the nature and scale of the proposed development and the potential pathways to the European sites, I consider these ZoIs to be acceptable.

11.5.3. A Phase 1 habitats survey of the overall development site, carried out in accordance with the Fossit guidelines, was undertaken with the results mapped in Figure 5.2 of the EIAR. Field 15, within which the proposed substation is located, comprises Improved Agricultural Grassland (GA1) with boundaries demarcated with drainage ditches and treelines (WL2). Tree species include hawthorn, ash, beech, oak, willow, rowan, scots pine and downy birch, with a densely vegetated understory, comprising bramble, cleavers, nettle, Herb-Robert and rosebay willowherb. The EIAR notes that

treelines within the overall development site are noted to have good bat roost and bird nesting potential. No rare, notable or invasive floral species were identified during the survey.

11.5.4. While no detailed bird or bat surveys were undertaken, desk-based research was undertaken and a 'species scoping survey' was undertaken as part of the Phase 1 habitats survey. This identified badger sett entrances, badger prints and otter spraint within the overall development site, a minimum of c. 650m from Field 15 (i.e. the proposed substation site). In addition to otter and badger, the overall development site is considered to have potential for numerous bat species, barn owls, corncrake, yellowhammer and quail. Tree sparrows and robin were also observed during the 'species scoping survey' as well as numerous bumblebee and butterfly species of local importance.

11.5.5. Of the five designated sites within the ZoI, as identified above, only the River Boyne and River Blackwater SAC and SPA have connectivity with the overall development site via hydrological pathways. The remaining three sites have no connectivity with the proposed development site and are located at a considerable remove from the site. Thus no direct or indirect effects on those three sites are anticipated.

11.5.6. I have considered the potential effects on the two European sites in Section 12 below, where I conclude that the proposed development, individually or in combination with other plans or projects would not adversely affect the integrity of those sites, or any other European site, in view of the sites' Conservation Objectives.

11.5.7. With regard to protected and notable species, the EIAR identifies potential significant effects on birds, otters and badgers during construction and decommissioning phases of the overall solar farm development in the absence of mitigation measures, due to disturbance or accidental trapping primarily. No significant effects on bats are predicted, since hedgerows and mature trees are to be retained, and the improved grassland and arable crops that will be lost offer sub-optimal foraging habitat. During the operational phase, no significant effects on any protected or notable species are anticipated. Having regard to the nature of the proposed development, and the associated permitted solar farm that it will serve, I would agree with the applicant that it is the construction and decommissioning phases, rather than the operational phase, that give rise to potential for significant effects.

11.5.8. With regard to the proposed substation development, which forms the basis of this application, this is considered in paragraphs 5.158 – 5.173, and the EIAR again identifies potential significant effects on birds, otters and badgers during the construction phase, in the absence of mitigation measures. The nature of the potential significant effects is described as High Spatial and Short-Term Temporal.

11.5.9. The proposed mitigation measures for the overall development include standard pollution prevention measures and good practice construction measures, the implementation of a Biodiversity Management Plan ('BMP'; refer to Technical Appendix 5.1), 30m buffer zones from badger setts, mammal gates within security fencing, and the covering of excavations or placing of ramps within excavations to provide a means of escape. The BMP includes other measures such as the provision of bat and bird boxes, the creation of more species-rich grassland through wildflower planting and herptile hibernacula and invertebrate hotels. Pre-commencement badger and otter surveys are also proposed to identify any additional mitigation requirements for these species with pre-commencement breeding bird surveys should construction works be undertaken between March and August. Buffer zones will be set in place where nesting birds are identified.

11.5.10. I note that these mitigation measures form part of the permitted solar farm development, with paragraph 5.191 of the EIAR stating that the construction of the proposed substation does not lead to additional impacts from those identified, and that no additional mitigation measures are required.

11.5.11. Post-mitigation, the EIAR considers that residual effects on all aspects of biodiversity will not be significant.

11.5.12. With regard to potential cumulative effects, I consider that the main potential for such effects arises from the overall solar farm development, which I have considered above. With regard to other plans or projects, the only relevant project identified in the EIAR within 5km of the site is a permitted quarry (Reg. Ref. TA/160820). The extraction of aggregates and discharge of water from said quarry is controlled and conditioned as part of its planning permission, and no pollution of watercourses is expected from that development. No significant cumulative effects on Natura 2000 sites or any ecological feature of the site is identified.

11.5.13. Finally, with regard to the submissions of the planning authority, I note that neither the Planning Officer nor the Heritage Officer raised any objection on biodiversity grounds, subject to conditions. Similarly, the only prescribed body to make a submission, Inland Fisheries Ireland, had no objection to the proposed development once it is carried out as per the documentation submitted and as per their 'Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters' (2016).

11.5.14. I have considered the submission of the planning authority and prescribed body and this chapter of the EIAR. I am satisfied that potential effects on biodiversity would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects on biodiversity.

11.6. Land, Soil, Water, Air and Climate

11.6.1. Land, Soils and Water are addressed in Chapter 6 of the EIAR, while Noise and Vibration is addressed in Chapter 7 and Air Quality and Climate is addressed in Chapter 11.

11.6.2. **Land, Soils and Water**

11.6.3. The overall development site (i.e. the permitted solar farm site and the proposed substation site) is currently in agricultural use and extends across 21 No. fields with a total area of 91.44 ha and an elevation between 66m – 71m AOD. The proposed substation site extends to 4.86 ha, and it is located in field 15, a relatively large irregularly shaped field comprising agricultural grassland in pasture use with boundary hedgerows/treelines and drainage ditches/watercourses.

11.6.4. The site is in the south western corner of County Meath, close to the borders of Counties Westmeath, Offaly and Kildare and the topography of the site and surrounding area is relatively flat, with gentle undulations. The River Boyne, to which drainage ditches/watercourses within the site discharge, is located c. 0.9km east of the application site and the Yellow River (a tributary of the Boyne) is located c. 0.8km south of the application site. These rivers delineate the borders of Counties Kildare and Offaly, respectively.

11.6.5. There are stated to be two soil types across the overall development site, alluvium and till derived chiefly from limestone, with oolitic limestone bedrock. The soil classification for the site is stated to be Class 2, indicative of “very permeable soils with shallow groundwater”. GSI mapping indicates a low risk classification for landscape susceptibility on the site.

11.6.6. The overall development site importance is considered to be: ‘extremely high’ for hydrology, due to the River Boyne being designated under Salmonid Regulations; ‘high’ for geology, due to the soils being well-draining; and ‘medium’ for hydrogeology due to the site being underlain by a locally important aquifer.

11.6.7. While the applicant considers the soils to be well-draining, I noted on my site inspection, which followed a period of wet weather, that areas of Field 15 were heavily waterlogged with areas of surface water ponding.

11.6.8. During the construction phase, potential impacts in relation to soil, geology and hydrogeology primarily relate to compaction, erosion, excavation, piling and contamination from spillages and leaks. None of these are considered to result in significant effects. Potential impacts in relation to hydrology relate to contamination of surface water, modification to water run-off, impediments to flow, erosion and sedimentation and in-water works (culvert construction, which forms part of the permitted solar farm development rather than the proposed substation development) These potential effects are considered to be significant, with the potential effects of the in-water works referred to above considered to be profound.

11.6.9. During the operational phase, no significant effects on soil, geology and hydrogeology are anticipated. With regard to hydrology, increased surface water run-off and sedimentation of watercourses is considered to result in a potential profound effect. As noted above, my site inspection suggests that Field 15 is not as free-draining as indicated in the EIAR. I note, however, that as set out in the Drainage Impact Assessment, the substation compound will be formed on a raised base of permeable stone, thus mimicking a soakaway scenario. A soakaway is also proposed to dispose of roof water, and having regard to the issues identified on my site inspection, I recommend that the detailed design of the soakaway should be submitted to the Planning Authority for agreement.

11.6.10. While the EIAR states at paragraph 6.93 that a waterless composting toilet will be provided in Field 15 for use by maintenance staff, I note that the drawings submitted with the subject application indicate a foul waste holding tank within the substation compound with a capacity of 5 cubic metres. This will collect waste from separate WCs and a mess room in the control buildings. Having regard to the location of the proposed development remote from the public wastewater system, and the infrequent use that such facilities will receive, I consider the storage and removal of foul waste to be a reasonable proposal, which is relatively standard for such substations.

11.6.11. In order to mitigate these potential effects, a series of best practice construction management and pollution prevention measures and other specific mitigation measures are proposed. These are summarised in Table 6-12 of the EIAR and set out in more detail in Technical Appendix 6.1 (Flood Risk Assessment), Technical Appendix 6.2 (Drainage Impact Assessment) and Technical Appendix 6.3 (Outline Construction Environmental Management Plan).

11.6.12. Proposed mitigation measures include, *inter alia*:

- Measures for storage of fuels and chemicals (e.g. bunding, buffer zones from watercourses, provision of spill kits).
- Refuelling measures (e.g. designated refuelling area on impermeable surface, checking and maintenance of machinery and vehicles).
- Excavations (e.g. silt traps, side-casting of material with buffer zones from watercourses, separation of topsoil and subsoil, minimising of exposed soil stockpiles, avoidance of earthworks during unsuitable weather conditions, separate storage of any contaminated earth).
- Pollution prevention (e.g. no washing-out of concrete delivery plant, buffer zones, designated concrete storage area, early seeding of embankments, wastewater storage and disposal off-site.

11.6.13. Following the implementation of the identified mitigation measures, the EIAR considers that the residual effects on land, soils and water will not be significant.

11.6.14. With regard to potential cumulative effects, I consider that the main potential for such effects arises from the overall solar farm development, which I have considered

above. With regard to other plans or projects, the only relevant project identified in the EIAR within 5km of the site is a permitted quarry (Reg. Ref. TA/160820). The extraction of aggregates and discharge of water from said quarry is controlled and conditioned as part of its planning permission, and no pollution of watercourses is expected from that development. No significant cumulative effects are considered to arise.

11.6.15. Finally, with regard to the submissions of the planning authority, I note that neither the Planning Officer, Water Services Department nor Environment Department raised any objection, subject to conditions. Similarly, the only prescribed body to make a submission, Inland Fisheries Ireland, had no objection to the proposed development once it is carried out as per the documentation submitted and as per their 'Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters' (2016).

11.6.16. **Noise and Vibration**

11.6.17. The overall development site is mapped in Figure 7.1, with the nearest noise-sensitive receptors (dwelling houses) mapped.

11.6.18. The noise assessment was undertaken utilising Soundplan noise modelling software. I note that no baseline noise monitoring was undertaken, with the applicant instead using a typical rural night-time background level of 35dB, according to the EPA Environmental Management Guidelines.

11.6.19. 23 No. noise-sensitive receptors ('NSRs') were identified within the study area. 21 of the NSRs are considered to have a high sensitivity, with the remaining 2 No. NSRs (NSR 9 and 11) being assigned a medium sensitivity as they are owned by the application site landowner.

11.6.20. The noise assessment assesses the solar farm and substation together. During the construction phase, the activities that are considered to have the most potential to result in adverse noise effects are the constructions of tracks and hardstanding areas and the installation of the solar panel mounting frames, which do not form part of the proposed development before the Board, as well as HGV construction traffic.

11.6.21. The EIAR consider the construction phase noise effects to be of slight significance, while no significant vibration effects are predicted.

11.6.22. During the operational phase, the main sources of noise are stated to be AC units, battery storage area and the proposed substation, with the transformer being the dominant noise source.

11.6.23. Predicted noise impacts at the NSRs are set out in Table 7-7 of the EIAR, with a sound footprint illustrated in Figure 7.2. The predicted impacts include a 2dB rating penalty to allow for tonal characteristics.

11.6.24. While no significant construction phase noise effects are anticipated, and thus no mitigation measures required, the EIAR sets out some good practice measures, including limited working hours, phasing of noisy operations and management of deliveries.

11.6.25. The cumulative effects are assessed with reference to the combined solar farm and substation/grid connection, and the permitted retention and expansion of a small quarry (Reg. Ref. TA/160820) located to the south. No significant cumulative effects are anticipated and having regard to the nature of the proposed development and the information set out in the EIAR I would concur with this conclusion.

11.6.26. **Air Quality and Climate**

11.6.27. The application site is located in a rural area, and can be considered to lie within the EPA's Air Quality Zone D 'remainder of the Country' (Zones A – C relate to cities and urban areas).

11.6.28. The main air pollutants which must be monitored are NO_x, SO_2, CO, benzene and particulate matter. The EIAR sets out air quality results for the nearest EPA monitoring station, which is located at Mullingar weather station, c. 22km north west of the application site. Monitoring at that location concluded that no limit values were exceeded during the 3-year measurement period, with NO_2, SO_2, CO and benzene recorded at 'below lower assessment threshold' and PM10 'below upper assessment threshold'. With regard to dust, while there is no statutory limit, the EPA recommends a maximum level of 350mg/m^2/day of dust deposition.

11.6.29. During the construction and decommissioning phases, HGV traffic, plant and machinery, generators and staff vehicles may impact on air quality due to exhaust fumes. Dust will also be generated by construction activities. While these effects are

not anticipated to be significant, the EIAR sets out a series of mitigation measures, which generally comprise best practice construction methods. These include:

- Traffic management to minimise stationery vehicles, limit speed and encouragement of car pooling.
- Covering of loads in/out of the site.
- Inspections of vehicles to ensure fuel efficiency and switching off of vehicles not in use.
- Minimising use of generators.
- Use of local supplies and resources where possible.
- Wheel-washing of vehicles and damping down of roads.
- Covering of soil stockpiles when left for extended periods of time.

11.6.30. During the operational phase no significant level of emissions is anticipated, due to the nature of the proposed development. Maintenance visits to the site will be limited and the overall development (i.e. permitted solar farm and proposed substation development) is stated as having a long-term slight positive effect on air quality and climate change due to the displacement of fossil fuels which will result in a long-term reduction in levels of NO_x, CO, SO_2, benzene and PM.

11.6.31. **Conclusion on Land, Soil, Water, Air and Climate**

11.6.32. I have considered the submission of the planning authority and these chapters of the EIAR. I am satisfied that potential effects on land, soil, water, air and climate would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects on land, soil, water, air and climate.

11.7. Material Assets, Cultural Heritage and the Landscape

11.7.1. Landscape and Visual Impact is addressed in Chapter 8 of the EIAR, while Material Assets is addressed in Chapter 9, and Archaeological, Architectural Heritage and Cultural Heritage is addressed in Chapter 10. Resources and Waste Management is addressed in Chapter 12.

11.7.2. **Material Assets**

11.7.3. The main material assets identified in the EIAR as being subject to potential environmental impacts are traffic and transportation, aviation and utilities. Potential aviation impacts relate to glint and glare from the permitted solar farm, rather than the proposed substation, and so are not relevant to this assessment.

11.7.4. With regard to utilities, the proposed development will generally be unmanned when operational and other than the connection to the electricity transmission network it will not generate any significant demand for other utility services. The proposed development includes welfare facilities (WCs and kitchen) for maintenance workers within the control buildings and the application form states that an existing well will be used for a water supply and the drawings illustrate a foul water holding tank which will be emptied and tankered off-site. The location of the well is not indicated, however the level of water usage is likely to be minimal, with reference to the nature of the proposed development and the infrequent maintenance visits. A separate composting toilet within Field 15 has also been permitted as part of the associated solar farm development. The application site is a greenfield location, and no existing utilities will be affected by the construction or operation of the proposed development, with the exception of the 110kV overhead line which the proposed development will supply electrical power to. I concur with the applicant that no significant effects on utilities are likely and note that no specific mitigation measures are proposed for utilities.

11.7.5. With regard to traffic and transportation, I note that a Construction Traffic Management Plan (CTMP) is included as Technical Appendix 9.1. This outlines the proposed one-way haul route to the site during the construction phase, with vehicles coming from Dublin travelling along the M4/M6, then south along the Ballinabrackey Road (L8021) for 7km, before turning left onto the L4091 and turning right into the site after c. 1km. On leaving the site, vehicles will turn right and travel east towards the R401 Edenderry to Kinnegad Road, where they will re-join the M4 back to Dublin. It should be noted that the CTMP relates to the overall development (i.e. permitted solar farm and proposed substation development).

11.7.6. It is proposed that the substation and grid connection construction works will be undertaken first, over a six-month period, with the permitted solar farm development

taking a further six months to construct. The construction traffic associated with each element will therefore be consecutive over a one year period, rather than cumulative.

11.7.7. Existing traffic levels on the local and regional roads which form the haul routes are generally low, with the exception of the portion of the L8021 local road between the Lagan Cement plant/ quarry and the M4/M6, which experiences a high level of HGV traffic. Due to the one-way haul routes proposed, only traffic arriving to the site from the Motorway will pass the Lagan plant, with traffic leaving the site turning to the east and joining the Motorway at Kinnegad.

11.7.8. The construction phase traffic for the proposed substation is stated to reach a maximum peak of 31 vehicles (HGV and staff combined), with a caveat that more visits may be required due to site conditions, weather conditions etc. The EIAR considers this to be a temporary slight adverse effect, and having regard to the nature of the development and the receiving environment, I would concur with this assessment, i.e. that the construction phase effects will not be significant.

11.7.9. During the operational phase, there will be minimal traffic associated with the substation development due to its unmanned nature. Any traffic will be associated with routine and intermittent maintenance/repair work. No significant traffic and transport effects during the operational phase are therefore likely to occur.

11.7.10. The cumulative effects are assessed with reference to the combined solar farm and substation/grid connection, and the permitted retention and expansion of a small quarry (Reg. Ref. TA/160820) located to the south. No cumulative significant effects are anticipated and having regard to the nature of the proposed development and the information set out in the EIAR I would concur with this conclusion.

11.7.11. **Cultural Heritage**

11.7.12. Figure 10.2 of the EIAR identifies all of the National Monuments in State care ('NMSC') and Historic Gardens and Designed Landscapes ('HGDL') within 5km of the overall development site. Figure 10.3 identifies the protected structures, National Inventory of Architectural Heritage sites and monuments listed in the Record of Monuments and Places within 2km of the overall development site. These heritage assets are set out in a Table in Appendix 10B.

11.7.13. Field 15, within which the proposed substation development is located, is considered to have a moderate potential for archaeological remains due to the presence of former buildings and boundaries on historic maps which were removed in the 19th century. The potential for construction phase impacts upon archaeology is also considered to be moderate, due to the requirement for groundworks such as topsoil stripping, foundations, foul holding tank etc.

11.7.14. With regard to the identified heritage assets, no significant effects are predicted from the proposed substation development. I note that the Planning Authority's Architectural Conservation Officer considered that there was insufficient information to assess the impact of the proposed development on a number of protected structures (Harristown House, Castlejordan Bridge and Clongall Bridge). The Planning Officer, with reference to the LVIA and photomontages included in the EIAR, did not share these concerns and did not consider that the proposed development would impact on the setting of any nearby protected structures and recorded monuments.

11.7.15. Having inspected the site and surrounding area, and having regard to the information contained in the EIAR, I consider that the substantial separation distances and the screening provided by existing boundary planting will be sufficient to prevent any significant degree of intervisibility between the proposed development and the heritage assets. Thus, I consider that the proposed development will not result in significant effects on cultural heritage.

11.7.16. In order to mitigate the identified moderate potential for direct effects on unknown sub-surface archaeology within Field 15, it is proposed to undertake archaeological trial testing and/or monitoring during the construction phase. Such testing should be explicitly required by way of condition, should the Board be minded to grant permission. Following mitigation, no significant residual effects are anticipated.

11.7.17. Cumulative impacts are addressed with reference to the associated solar farm and a permitted quarry operation (Reg. Ref. TA/160820). No cumulative direct effects are anticipated upon known assets, while cumulative indirect effects are primarily considered to be visual in nature. These visual effects are considered in the following section of my report, but I consider that no significant direct or indirect cumulative effects on archaeological or cultural heritage resources are likely to occur.

11.7.18. **Landscape**

11.7.19. The application site and the surrounding area is located in the area identified in the Meath Landscape Character Assessment as the 'Southwest Lowlands Landscape Character Area' (LCA 15). This LCA is described as being characterised by rolling hills interspersed with beech copses and well-wooded hedgerows dividing rough pasture. Views within the area are stated to be generally limited by the complex topography and mature vegetation except at the tops of drumlins and canal bridges.

11.7.20. The LCA is described as having 'medium' potential capacity to accommodate overhead cables, substations and communications masts because views are generally short range and limited by topography and vegetation so there are opportunities for choosing locations where visual impacts are minimal.

11.7.21. The EIAR considers a 5km study zone, which extends into Counties Offaly and Kildare, due to the site's location close to the County boundaries. The majority of the County Offaly lands within the study zone are classified as 'low sensitivity' in the Offaly CDP, with one large area of bogland classified as 'high sensitivity' and several smaller areas of cutaway bogland classified as 'medium sensitivity'. The County Kildare lands within the study zone consist of the 'North Western Lowlands LCA'. This is identified in the Kildare CDP as being of 'low sensitivity' with the capacity to generally accommodate a wide range of uses without significant adverse effects on the appearance or character of the area. The LCA is also identified as having 'High compatibility' for major powerlines and solar development. The LCAs for the three Counties are illustrated in Figure 8.3 of the EIAR.

11.7.22. A number of Historic Gardens and Designed Landscapes are also identified within the study area and are illustrated on Figure 8.4, together with the Zone of Theoretical Visibility (ZTV) for the overall development.

11.7.23. While the proposed substation development will result in the permanent loss of an area of pastureland within Field 15 to hardstanding, with associated electrical plant and equipment, it will be well-contained by the established field boundaries, and will be perceived as part of the surrounding solar farm, should elements of it be visible. Given the character of the landscape, and the location of the proposed development, there will be a high degree of enclosure with extremely limited views of the proposed development from outside of the overall site. The existing agricultural use of Field 15

will be retained over the operational phase of the permitted solar farm, and having regard to the character of the landscape surrounding the application site, which is identified as having 'medium' potential capacity for substations, I am satisfied that there will be no significant effects on landscape arising from the proposed development.

11.7.24. With regard to potential visual impacts, it is noted that there are no designated scenic views or scenic routes within the 5km study area. The assessment undertaken in the EIAR included the development of a ZTV for the overall development and the identification of 11 No. viewpoints considered to be reflective of representative views experienced from various visual receptor types, with a further 3 No. from or near to local heritage assets. The viewpoints are listed in Table 8.4 of the EIAR and illustrated in Figures 8.5a and 8.5b. Having inspected the application site and surrounding area, I consider the selection of viewpoints to be reasonable.

11.7.25. The proposed substation development will not be visible from the majority of identified viewpoints. At Viewpoint 9, which is a location along a lane to the south of Field 15, views of the substation structures will be largely obscured by the existing boundary hedgerows, however partial views of the upper portions of the electricity masts may be visible. This is described in the EIAR as a slight adverse effect, due to its limited visibility. Similar glimpses of the upper portion of the electricity masts may be visible from other locations in the vicinity, however the location of the proposed substation development within the overall development site, and the strong field boundary planting will serve to screen and heavily restrict any views of the development from outside of the site. Where the upper portions of the electricity masts are visible, they will be seen in the context of an existing line of electricity masts and as such, they will not be a new element in the landscape. I also note that there will be no significant intervisibility between the proposed development and the identified heritage assets in the vicinity.

11.7.26. While no significant visual effects are anticipated for the substation development, the EIAR identifies a number of mitigation measures, including construction stage measures common with the permitted solar farm which seek to minimise disturbance and protect field boundaries and a commitment to only switch on lighting within the compound during routine servicing. No additional mitigation planting is proposed, other than that already permitted as part of the solar farm development.

11.7.27. The residual visual effects of the proposed development are considered to remain slight adverse.

11.7.28. With regard to cumulative effects. This chapter of the EIAR provides an assessment of the overall development (i.e. permitted solar farm and proposed substation development). No significant residual landscape or visual impacts are predicted. The EIAR also considers the cumulative effects with other solar farms in the wider area and with a permitted quarry development. No significant cumulative effects are identified, and having regard to the nature, scale and location of the proposed development as well as the landscape character and visual amenities of the area, I would concur with this conclusion.

11.7.29. **Conclusion on Material Assets, Cultural Heritage and the Landscape**

11.7.30. I have considered the submission of the planning authority and these chapters of the EIAR. I am satisfied that potential effects on material assets, cultural heritage and landscape would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects on material assets, cultural heritage and landscape.

11.8. The Interaction between the Above Factors.

11.8.1. The interactions between the above factors is addressed in Chapter 13 of the EIAR and again relate to the overall development, rather than just the proposed substation development. Generally the interactions relate to construction phase effects, and result in minor positive or negative interactions. No significant interactions are identified. The interactions between the factors are tabulated in Table 13-1 of the EIAR.

11.8.2. Having regard to the nature of the proposed development, the receiving environment and the foregoing chapters of the EIAR, I am satisfied that the summary of the potential for interactions between environmental factors is reasonable.

11.9. Fibre Optic Cable Wrap

11.9.1. Chapter 14 of the EIAR relates to the wrapping of a fibre optic cable along an existing ESB line for the internet connection for the proposed development. This fibre optic wrap will run along the overhead line for c. 5.3km to the Kinnegad 110kV substation. It notes that the fibre wrap will be undertaken by ESB and that it does not form part of the proposed development. For completeness, however, the potential effects are assessed as part of the EIAR.

11.9.2. A description of the fibre wrap, and the methodology for its installation is set out in Sections 14.4 to 14.10 of the EIAR. It will take c. 10 days to complete by 2 No. four-person crews.

11.9.3. The only potential significant effect identified is associated with the health and safety risks to workers during the construction phase due to working at height with electrical cables. With the implementation of appropriate health and safety standards, this is considered to result in a residual slight temporary effect.

11.9.4. I do not consider that any further cumulative assessment issues arise from the proposed fibre optic cable wrap.

11.10. Reasoned Conclusion

11.10.1. Having regard to the examination of environmental information contained above, and to the submission by the planning authority and prescribed bodies it is considered that the main significant direct and indirect effects of the proposed development on the environment are as follows:

- **Population and Human Health:** Potentially significant health and safety risks to construction workers, due to working at heights and with high voltage electrical infrastructure. This will be mitigated through best-practice construction methods and compliance with health and safety standards, resulting a slight adverse residual effect. Potential air quality, dust and noise impacts on human health will be mitigated through compliance with a Construction Environmental Management Plan, best practice construction methods and distance to sensitive receptors.

- **Biodiversity:** Potential significant effects on birds, otters and badgers during construction and decommissioning phases due, primarily, to disturbance or accidental trapping. These potential effects will be mitigated through standard pollution prevention measures and good practice construction measures, the implementation of a Biodiversity Management Plan, buffer zones, mammal gates and the covering of excavations or provision of ramps. Pre-commencement badger, otter and bird surveys are also proposed.
- **Land, Soils, Water, Air and Climate:** Potential significant hydrological effects are identified, due to construction phase contamination of surface water, modification to run-off patterns, impediments to flow, erosion and sedimentation. During the operational phase, increased surface water run-off and sedimentation of watercourses is also considered to result in potentially significant effects. These effects will be mitigated by a series of best practice construction management and pollution prevention measures and other specific measures outlined in the Flood Risk Assessment, Drainage Impact Assessment and Outline Construction Environmental Management Plan.
- **Material Assets, Cultural Heritage and the Landscape:** The location of the proposed substation is of moderate potential for unknown archaeological remains, due to the presence of former buildings and boundaries on historic mapping. This will be mitigated through archaeological testing and monitoring during the construction phase.

12.0 Appropriate Assessment

12.1. Introduction

12.1.1. The requirements of Article 6(3) as related to appropriate assessment of a project under part XAB, sections 177U and 177V of the Planning and Development Act 2000, as amended), are considered fully in this section. The areas addressed in this section are as follows:

- Compliance with Article 6(3) of the EU Habitats Directive
- Screening the need for appropriate assessment

- The Natura Impact Statement and associated documents
- Appropriate assessment of implications of the proposed development on the integrity each European site

12.2. Compliance with Article 6(3) of the EU Habitats Directive

12.2.1. The Habitats Directive deals with the Conservation of Natural Habitats and of Wild Fauna and Flora throughout the European Union. Article 6(3) of this Directive requires that any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. The competent authority must be satisfied that the proposal will not adversely affect the integrity of the European site before consent can be given.

12.2.2. The proposed development is not directly connected to or necessary to the management of any European site and therefore is subject to the provisions of Article 6(3).

12.3. Brief description of the development

12.3.1. The proposed development is described in Section 3 above.

12.3.2. The application was accompanied by a Stage 2 Natura Impact Statement (NIS), prepared by Neo Environmental. I note that the NIS relates to the overall development, i.e. the permitted solar farm development, the proposed electricity substation development which forms the basis of this application and the fibre optic cable wrap which is not part of this application. A description of the overall project is set out on pages 6-8 of the NIS and in Section 1 of the EIAR.

12.3.3. Section 1.1 of the NIS states that it was produced in response to a request for further information issued by Meath County Council for the solar farm planning application (Reg. Ref. TA/181225). I note from the planning file for that application that a Stage 1 Screening Statement had originally been submitted with the solar farm planning

application but had been deemed by the Planning Authority to be inadequate. That Stage 1 Screening Statement was not submitted with the subject application.

12.3.4. The project description set out in the NIS includes measures incorporated into the design, such as buffers from watercourses and hedgerows, use of swales and silt traps. A Biodiversity Management Plan and Outline Construction Environmental Management Plan are also included as Appendices 5.1 and 6.3, respectively, of the EIAR. Again, these design measures and Plans relate to the overall development, rather than specifically to the proposed substation development.

12.3.5. The overall development site is described in sections 2.8 to 2.17 of the NIS, with field numbering and habitat mapping illustrated in Figures 2 and 3 respectively. Field 15, within which the proposed substation development is located is identified as being Improved Agricultural Grassland (GA1), in use as pasture, and bounded by Treelines (WL2) and drainage ditches (FW4). No rare, notable or invasive floral species were identified during the habitat survey.

12.3.6. Taking account of the characteristics of the proposed development in terms of its location and the scale of works, the following issues are considered for examination in terms of implications for likely significant effects on European sites:

- Construction related – uncontrolled surface water/silt runoff and construction related pollution.
- Habitat disturbance /species disturbance (construction and operational).

12.4. Submissions and Observations

12.4.1. Section 2.21 of the NIS indicates that consultation was only had with Meath County Council.

12.4.2. I note that no third party observations were received, while the only submissions from prescribed bodies were from the Department of Communications, Climate Action and Environment and Meath County Council. The Department's submission stated that Inland Fisheries Ireland has no objection to the proposed development once it is carried out as per the documentation submitted and as per their 'Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters' (2016). The Planning Authority's submission accepted the conclusions of the

applicant's NIS, with the Heritage Officer stating in her report that, in her opinion, it can be concluded that there will be no significant effects (direct or indirect) on the qualifying interest of any Natura 2000 sites, either individually or in combination with other plans or projects.

12.5. Screening the Need for Appropriate Assessment

12.5.1. The development site is not located in or immediately adjacent to a European site. A summary of European Sites that occur within the 15 km study zone identified by the applicant is presented in Table 12.1 below, along with their qualifying interests.

12.5.2. While the proposed development that forms the basis of this application is relatively limited in scale and extent and is at a significant remove from the nearest European Sites, I consider that it nevertheless has the possibility, in combination with the associated permitted solar farm development, to result in significant effects on the River Boyne and River Blackwater SAC and SPA, due to the hydrological pathway between the application site and the European Sites. Table 12.1 below summarises the potential significant effects in view of the conservation objectives of those sites.

12.5.3. Having regard to the information presented in the NIS, submissions, the nature, size and location of the proposed development and its likely direct, indirect and cumulative effects, the source-pathway-receptor principle and sensitivities of the ecological receptors, I concur with the applicant's screening determination that no other European Sites could be affected by the proposed development. No reliance on avoidance measures or any form of mitigation is required in reaching this conclusion.

12.6. Appropriate Assessment Screening Determination

12.6.1. Following the screening process, it has been determined that Appropriate Assessment is required as it cannot be excluded on the basis of objective information that the proposed development individually or in-combination with other plans or projects will have a significant effect on the following European sites (i.e. there is the possibility of significant effect):

- River Boyne and River Blackwater SAC (Site Code 002299).

- River Boyne and River Blackwater SPA (Site Code 004232).

12.6.2. The possibility of significant effects on other European sites) has been excluded on the basis of objective information. The following European sites have been screened out for the need for appropriate assessment.

- Mount Hevey Bog SAC (Site Code 002342).
- The Long Derries, Edenderry SAC (Site Code 000925).

12.6.3. Measures intended to reduce or avoid significant effects have not been considered in the screening process.

Table 12.1: AA Screening Summary Matrix: European Sites for which there is a possibility of significant effects (or where the possibility of significant effects cannot be excluded without further assessment)

European Site name [Site Code] Qualifying Interest/Special Conservation Interest	Distance (km)	Is there a possibility of significant effects in view of the conservation objectives of the site?		
		Habitat Loss/Modification	Water quality/pollution	Disturbance/ Displacement
River Boyne and River Blackwater SAC [002299] • Alkaline fens [7230] • Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0] • Lampetra fluviatilis (River Lamprey) [1099] • Salmo salar (Salmon) [1106] • Lutra lutra (Otter) [1355]	9.8	No Due to distance from habitat features.	Yes Construction related run-off: contaminants, silt, increased turbidity.	Yes Potential disturbance or displacement of salmon, otter and lamprey species due to water quality impacts during construction or disturbance to otter foraging routes along connecting watercourses.
River Boyne and River Blackwater SPA [004232] • Kingfisher (Alcedo atthis) [A229]	9.8	No Due to distance from habitat features	Yes Construction related run-off: contaminants, silt, increased turbidity.	Yes Potential disturbance or displacement of Kingfisher due to water quality impacts during construction.
Mount Hevey Bog SAC [002342]	7.8	No	No	N/A

• Active raised bogs [7110] • Degraded raised bogs still capable of natural regeneration [7120] • Depressions on peat substrates of the Rhynchosporion [7150]		Due to distance from and lack of connections to the habitat for which this site is designated.	Due to distance and limited scale of the works proposed.	No species are listed as qualifying interests of this SAC
The Long Derries, Edenderry SAC [000925] • Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) [6210]	10.1	No Due to distance from and lack of connections to the habitat for which this site is designated.	No Due to distance and lack of hydrological connections to the habitat for which this site is designated.	N/A No species are listed as qualifying interests of this SAC

12.7. The Natura Impact Statement

12.7.1. As noted above, the application included a NIS (Neo Environmental, 14/02/20) which examines and assesses potential adverse effects of the proposed development and the associated permitted solar farm on the River Boyne and River Blackwater SAC (Site Code 002299) and the River Boyne and River Blackwater SPA (Site Code 004232).

12.7.2. The NIS is stated as having been informed by best practice guidance for such assessments, a desktop and literature study, including NPWS databases, site synopses, Natura 2000 Data Forms and conservation objectives and EPA mapping, a habitat survey of the site and consultation with Meath County Council.

12.7.3. Section 6 of the NIS contains an assessment of the potential impacts of the proposed development on the identified European Sites, while Section 7 addresses in combination effects and Section 8 sets out a series of mitigation measures.

12.7.4. The NIS concluded that there will be no significant effects to the integrity of the River Boyne and River Blackwater SPA and SAC, and that the implementation of the mitigation measures set out in the NIS will reduce any impacts further.

12.7.5. Having reviewed the NIS, all supporting documentation and submissions, I am satisfied that the information allows for a complete assessment of any adverse effects of the proposed development on the conservation objectives of the abovementioned European sites alone, or in combination with other plans and projects.

12.8. Appropriate Assessment of Implications of the Proposed Development

12.8.1. The following is a summary of the objective scientific assessment of the implications of the project on the qualifying interest features of the European sites using the best scientific knowledge in the field. All aspects of the project which could result in significant effects are assessed and mitigation measures designed to avoid or reduce any adverse effects are considered and assessed.

12.8.2. I have had regard to the following guidance:

- DoEHLG (2009). Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. Department of the Environment, Heritage and Local Government, National Parks and Wildlife Service. Dublin
- EC (2002) Assessment of plans and projects significantly affecting Natura 2000 sites. Methodological guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive 92/43/EC
- EC (2018) Managing Natura 2000 sites. The provisions of Article 6 of the Habitats Directive 92/43/EEC

12.8.3. Relevant European sites

12.8.4. The following sites are subject to Appropriate Assessment:

- River Boyne and River Blackwater SAC (Site Code 002299).
- River Boyne and River Blackwater SPA (Site Code 004232).

12.8.5. A description of these sites and their Conservation Objectives and Qualifying Interests/Special Conservation Interests are set out in the NIS and summarised in Tables 12.2 and 12.3 of this report as part of my assessment. I have also examined the Natura 2000 data forms and other supporting documents for these sites available through the NPWS website (www.npws.ie).

12.8.6. Aspects of the proposed development

12.8.7. The application site is located at a significant remove from the abovementioned European Sites, and as such any potential impacts are likely to be indirect rather than direct. I consider that the main aspects of the proposed development that could adversely affect the conservation objectives of the European Sites include:

- Impacts to water quality through excavation/construction related pollution or silt run-off events.
- Disturbance and or displacement of species listed as qualifying interests due to potential water quality impacts during construction or disturbance of foraging routes/habitats.

12.8.8. Tables 12.2 and 12.3 summarise the Appropriate Assessment and site integrity test. The conservation objectives for the two European Sites, which I note are generic, have been examined and assessed with regard to the identified potential significant

effects and all aspects of the project (alone and in combination with other plans and projects). Mitigation measures proposed to avoid and reduce impacts to a non-significant level have been assessed, and clear, precise and definitive conclusions reached in terms of adverse effects on the integrity of European sites.

12.9. Appropriate Assessment Conclusion

12.9.1. The proposed development has been considered in light of the assessment requirements of Sections 177U and 177V of the Planning and Development Act 2000, as amended.

12.9.2. Having carried out screening for Appropriate Assessment of the project, it was concluded that the proposed development in combination with the associated permitted solar farm development may have a significant effect on the River Boyne and River Blackwater SAC and/or SPA (Site Codes 002299 and 004232, respectively). Consequently, an Appropriate Assessment was required of the implications of the project on the qualifying features of those sites in light of their conservation objectives.

12.9.3. Following an Appropriate Assessment, it has been ascertained that the proposed development, individually or in combination with other plans or projects would not adversely affect the integrity of the River Boyne and River Blackwater SAC or SPA (Site Codes 002299 and 004232, respectively), or any other European site, in view of the sites' Conservation Objectives.

12.9.4. This conclusion is based on a complete assessment of all aspects of the proposed project and there is no reasonable doubt as to the absence of adverse effects.

Tables 12.2 and 12.3: Summary of Appropriate Assessment of implications of the proposed development on the integrity of European Sites alone and in combination with other plans and projects in view of the sites' Conservation Objectives.

Table 12.2: River Boyne and River Blackwater SAC [002299]

Summary of Key issues that could give rise to adverse effects:

- **Water quality impacts due to pollutants or soil/silt run-off during construction phase**
- **Disturbance of QI species**

Conservation Objectives: https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002299.pdf

Summary of Appropriate Assessment					
Qualifying Interest feature	**Conservation Objectives** **Targets and attributes**	**Potential adverse effects**	**Mitigation measures**	**In-combination effects**	**Can adverse effects on integrity be excluded?**
Alkaline fens [7230]	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. Only generic Conservation Objectives are defined for this SAC, with no	None. Habitat is not located within likely Zone of Influence of proposed development.	N/A	None	Yes Habitat not within ZoI
Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0]		None. Habitat is not located within likely Zone of Influence of proposed development.	N/A	None	Yes Habitat not within ZoI

Lampetra fluviatilis (River Lamprey) [1099]	published targets or attributes.	No direct effect due to distance. Site is hydrologically linked to SAC, and River Lamprey are sensitive to indirect effects from pollution of watercourses with chemicals, silt, contaminants etc. during construction phase.	Best practice pollution prevention methods are set out in the Construction Environmental Management Plan. Buffer zones along watercourses. Ecological Clerk of Works to be appointed to monitor compliance with mitigation measures and conditions.	No likely significant in-combination effects. The permitted solar farm will utilise the same CEMP, mitigation measures and Ecological Clerk of Works	No direct effects No doubt as to the effectiveness or implementation of mitigation measures proposed to prevent indirect effects.
Salmo salar (Salmon) [1106]		No direct effect due to distance. Site is hydrologically linked to SAC, and Salmon are sensitive to indirect effects from pollution of watercourses with chemicals, silt, contaminants etc. during construction phase.	Best practice pollution prevention methods are set out in the Construction Environmental Management Plan. Buffer zones along watercourses. Ecological Clerk of Works to be appointed to monitor compliance with mitigation measures and conditions.	No likely significant in-combination effects. The permitted solar farm will utilise the same CEMP, mitigation measures and Ecological Clerk of Works	Yes No direct effects No doubt as to the effectiveness or implementation of mitigation measures proposed to prevent indirect effects.
Lutra lutra (Otter) [1355]		Site is hydrologically linked to SAC, and otters may be sensitive to indirect effects from pollution of watercourses with chemicals, silt, contaminants etc. during construction phase.	Best practice pollution prevention methods are set out in the Construction Environmental Management Plan. Pre-construction survey. Mammal gates within security fencing.	No likely significant in-combination effects. The permitted solar farm will utilise the same CEMP, mitigation measures and	Yes No direct effects No doubt as to the effectiveness or implementation of mitigation measures proposed to prevent indirect effects.

		Disturbance to foraging habitats due to highly mobile nature of species. Accidental trapping in excavations.	Ramps placed in excavations overnight as means of escape. Ecological Clerk of Works to be appointed to monitor compliance with mitigation measures and conditions.	Ecological Clerk of Works	
Overall conclusion: Integrity test Following the implementation of mitigation, the construction and operation of the proposed development will not adversely affect the integrity of the River Boyne and River Blackwater SAC in light of the site's Conservation Objectives. No reasonable scientific doubt remains as to the absence of such effects.					

Table 12.3: River Boyne and River Blackwater SPA [004232]

Summary of Key issues that could give rise to adverse effects:

- **Water quality impacts due to pollutants or soil/silt run-off during construction phase**
- **Disturbance of QI species**

Conservation Objectives: https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004232.pdf

Summary of Appropriate Assessment

Qualifying Interest feature	Conservation Objectives Targets and attributes	Potential adverse effects	Mitigation measures	In-combination effects	Can adverse effects on integrity be excluded?
Kingfisher (Alcedo atthis) [A229]	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA. Only generic Conservation Objectives are defined for this SAC, with no published targets or attributes.	No direct effect due to distance. Site is hydrologically linked to SPA, and Kingfisher is sensitive to indirect effects from pollution of watercourses with chemicals, silt, contaminants etc. during construction phase.	Best practice pollution prevention methods are set out in the Construction Environmental Management Plan. Ecological Clerk of Works to be appointed to monitor compliance with mitigation measures and conditions.	No likely significant in-combination effects. The permitted solar farm will utilise the same CEMP, mitigation measures and Ecological Clerk of Works	Yes. No adverse effects on population or distribution of this species due to distance and robust water pollution control measures during construction phase. No doubt as to the effectiveness or implementation of mitigation measures proposed to prevent indirect effects.

Overall conclusion: Integrity test

Following the implementation of mitigation, the construction and operation of the proposed development will not adversely affect the integrity of the River Boyne and River Blackwater SPA in light of the site's Conservation Objectives. No reasonable scientific doubt remains as to the absence of such effects.

13.0 **Recommendation**

13.1. Having regard to the foregoing I recommend that permission for the proposed development be granted, subject to conditions, for the following reasons and considerations.

14.0 **Reasons and Considerations**

14.1. In coming to its decision, the Board had regard to:

(a) the nature, scale and extent of the proposed development,

(b) the characteristics of the site and of the general vicinity,

(c) the national targets for renewable energy contribution of 40% gross electricity consumption by 2020,

(d) national and local policy support for developing renewable energy, in particular:

- Government's Strategy for Renewable Energy, 2012-2020,
- National Planning Framework, 2018,
- Delivering a Sustainable Energy Future for Ireland - the Energy Policy Framework, 2007-2020,
- Government Policy Statement on the Strategic Importance of Transmission and Other Energy Infrastructure 2012,
- Climate Action Plan, 2019
- Regional Spatial and Economic Strategy for the Eastern and Midlands Region
- Policies EC POL1 – 4 and EC POL 11 – 13 of the Meath County Development Plan, 2013-2019,

(e) the location of the proposed development within the Southwest Lowlands Landscape Character area as set out in the Development Plan, which is identified as having 'medium' capacity to accommodate overhead cables and substations,

(f) the distance to dwellings or other sensitive receptors from the proposed development,

(g) the planning history of the immediate area including proximity to the permitted solar farm (Reg. Ref. TA/181225). This development will serve as the grid connection for this generating asset infrastructure,

(h) the submissions on file including those from prescribed bodies and the Planning Authority,

(i) the Environmental Impact Assessment Report submitted,

(j) the Natura impact statement submitted,

(k) the report of the Inspector.

14.2. **Environmental Impact Assessment**

14.3. The Board completed an environmental impact assessment of the proposed development taking into account

- The nature, scale and extent of the proposed development;
- The environmental impact assessment report and associated documentation submitted in support of the application;
- The submissions made in the course of the application; and
- The Inspector's report.

14.4. The Board considered that the environmental impact assessment report, supported by the documentation submitted by the applicant, adequately considers alternatives to the proposed development and identifies and describes adequately the direct, indirect, secondary and cumulative effects of the proposed development on the environment.

14.5. The Board agreed with the examination, set out in the Inspector's report, of the information contained in the environmental impact assessment report and associated documentation submitted by the applicant and submissions made in the course of the application.

14.6. The Board considered, and agreed with the Inspectors reasoned conclusions, that the main significant direct and indirect effects of the proposed development on the environment are as follows:

- **Population and Human Health:** Potentially significant health and safety risks to construction workers, due to working at heights and with high voltage electrical infrastructure. This will be mitigated through best-practice construction methods and compliance with health and safety standards, resulting a slight adverse residual effect. Potential air quality, dust and noise impacts on human health will be mitigated through compliance with a Construction Environmental Management Plan, best practice construction methods and distance to sensitive receptors.
- **Biodiversity:** Potential significant effects on birds, otters and badgers during construction and decommissioning phases due, primarily, to disturbance or accidental trapping. These potential effects will be mitigated through standard pollution prevention measures and good practice construction measures, the implementation of a Biodiversity Management Plan, buffer zones, mammal gates and the covering of excavations or provision of ramps. Pre-commencement badger, otter and bird surveys are also proposed.
- **Land, Soils, Water, Air and Climate:** Potential significant hydrological effects are identified, due to construction phase contamination of surface water, modification to run-off patterns, impediments to flow, erosion and sedimentation. During the operational phase, increased surface water run-off and sedimentation of watercourses is also considered to result in potentially significant effects. These effects will be mitigated by a series of best practice construction management and pollution prevention measures and other specific measures outlined in the Flood Risk Assessment, Drainage Impact Assessment and Outline Construction Environmental Management Plan.
- **Material Assets, Cultural Heritage and the Landscape:** The location of the proposed substation is of moderate potential for unknown archaeological remains, due to the presence of former buildings and boundaries on historic mapping. This will be mitigated through archaeological testing and monitoring during the construction phase. The Board completed an environmental

impact assessment in relation to the proposed development and concluded that, subject to the implementation of the mitigation measures set out in the Environmental Impact Assessment Report, and subject to compliance with the conditions set out below, the effects on the environment of the proposed development, by itself and in combination with other development in the vicinity, would be acceptable. In doing so, the Board adopted the report and conclusions of the Inspector.

14.7. **Appropriate Assessment - Stage 1**

14.8. The Board considered the Natura Impact Statement and all the other relevant submissions and carried out both an appropriate assessment screening exercise and an appropriate assessment in relation to the potential effects of the proposed development on designated European Sites. The Board agreed with and adopted the screening assessment and conclusion carried out in the Inspector's report that the only European sites in respect of which the proposed development has the potential to have a significant effect are the River Boyne and River Blackwater SAC (Site Code 002299) and the River Boyne and River Blackwater SPA (Site Code 004232).

14.9. **Appropriate Assessment – Stage 2**

14.10. The Board considered the Natura Impact Statement and associated documentation submitted with the application, the mitigation measures contained therein, the submissions on file, and the Inspector's assessment. The Board completed an appropriate assessment of the implications of the proposed development for the European Sites, namely, the River Boyne and River Blackwater SAC (Site Code 002299) and the River Boyne and River Blackwater SPA (Site Code 004232), in view of the sites' conservation objectives. The Board considered that the information before it was adequate to allow the carrying out of an appropriate assessment. In completing the appropriate assessment, the Board considered, in particular, the following:

(i) the likely direct and indirect impacts arising from the proposed development both individually or in combination with other plans or projects,

(ii) the mitigation measures which are included as part of the current proposal, and

(iii) the conservation objectives for the European Sites.

14.11. In completing the Appropriate Assessment, the Board accepted and adopted the Appropriate Assessment carried out in the Inspector's report in respect of the potential effects of the proposed development on the aforementioned European Sites, having regard to the sites' Conservation Objectives.

14.12. In overall conclusion, the Board was satisfied that the proposed development, by itself or in combination with other plans or projects, would not adversely affect the integrity of the European Sites, in view of the sites' Conservation Objectives.

14.13. **Proper Planning and Sustainable Development**

14.14. It is considered that subject to compliance with the conditions set out below the proposed development would accord with European, national, regional and local planning and related policy, it would not have an unacceptable impact on the landscape or ecology, it would not seriously injure the visual or residential amenities of the area or of property in the vicinity, and it would be acceptable in terms of traffic safety and convenience. The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area.

15.0 Conditions

1. The development shall be carried out and completed in accordance with the plans and particulars lodged with the application, except as may otherwise be required in order to comply with the following conditions. Where such conditions require details to be agreed with the planning authority, the developer shall agree such details in writing with the planning authority prior to commencement of development and the development shall be carried out and completed in accordance with the agreed particulars.

   Reason: In the interest of clarity.

2. All of the environmental, construction and ecological mitigation and monitoring measures set out in the Environmental Impact Assessment Report and the Natura Impact Statement, and other particulars submitted with the application shall be implemented by the developer in conjunction with the timelines set out

therein, except as may otherwise be required in order to comply with the conditions of this order.

Reason: In the interest of clarity and the protection of the environment during the construction and operational phases of the development.

3. The period during which the development may be carried out shall be 10 years from the date of this Order.

   Reason: In the interest of clarity and having regard to the sale and nature of the proposed development.

4. No works permitted by this grant of permission shall commence until such time as the works to improve sightlines at the existing access onto the L4091 local road, permitted under planning permission Reg. Ref. TA/181225, have been implemented.

   Reason: In the interest of traffic safety.

5. Water supply and drainage arrangements, including the attenuation and disposal of surface water, shall comply with the requirements of the planning authority for such works in respect of both the construction and operation phases of the proposed development.

   Reason: In the interest of environmental protection and public health.

6. The developer shall comply with the following requirements:

   (a) No additional artificial lighting shall be installed or operated on site unless authorised by a prior grant of planning permission.

   (b) CCTV cameras shall be fixed and angled to face into the site and shall not be directed towards adjoining property or roads.

   (c) Cables within the site shall be located underground.

   (d) All fencing, gates and exposed metalwork shall be dark green in colour. The roofs of the buildings within the substation compound shall be dark grey or black and the external walls shall be finished in neutral colours such as grey or off-white.

   Reason: In the interest of clarity, of visual and residential amenity.

7. The landscaping proposals shall be carried out within the first planting season following commencement of construction of the proposed development. All existing hedgerows shall be retained. The landscaping and screening shall be maintained at regular intervals. Any trees or shrubs planted in accordance with this condition which are removed, die, become seriously damaged or diseased within two years of planting shall be replaced by trees or shrubs of similar size and species to those original required to be planted.

   Reason: To assist in screening the proposed development from view and to blend it into its surroundings in the interest of visual amenity.

8. The developer shall comply with the transportation requirements of the planning authority for such works and services as appropriate.

   Reason: In the interest of traffic and pedestrian safety.

9. Prior to commencement of development, a detailed Construction Environmental Management Plan (CEMP) for the construction phase shall be submitted to and agreed in writing with the planning authority, generally in accordance with the Outline CEMP included in the Environmental Impact Assessment Report. The CEMP shall incorporate the following:

   (a) a detailed plan for the construction phase incorporating, inter alia, construction programme, supervisory measures, noise, dust and surface water management measures including appointment of a site noise liaison officer, construction hours and the management, transport and disposal of construction waste;

   (b) a comprehensive programme for the implementation of all monitoring commitments made in the application and supporting documentation during the construction period;

   (c) an emergency response plan; and

   (d) proposals in relation to public information and communication.

   A record of daily checks that the works are being undertaken in accordance with the Construction Environmental Management Plan shall be kept for inspection by the planning authority.

   Reason: In the interest of environmental protection and orderly development.

10. The site development and construction works shall be carried out such a manner as to ensure that the adjoining streets are kept clear of debris, soil and other material and cleaning works shall be carried on the adjoining public roads by the developer and at the developer's expense on a daily basis.

    Reason: To protect the residential amenities of property in the vicinity.

11. The developer shall facilitate the preservation, recording and protection of archaeological materials or features that may exist within the site. site. In this regard, the developer shall –

    (a) notify the planning authority in writing at least four weeks prior to the commencement of any site operation (including hydrological and geotechnical investigations) relating to the proposed development,

    (b) employ a suitably-qualified archaeologist who shall monitor all site investigations and other excavation works, and

    (c) provide arrangements, acceptable to the planning authority, for the recording and for the removal of any archaeological material which the authority considers appropriate to remove.

    In default of agreement on any of these requirements, the matter shall be referred to An Bord Pleanála for determination.

    Reason: In order to conserve the archaeological heritage of the site and to secure the preservation and protection of any remains that may exist within the site.

12. The developer shall pay to the planning authority a financial contribution in respect of public infrastructure and facilities benefiting development in the area of the planning authority that is provided or intended to be provided by or on behalf of the authority in accordance with the terms of the Development Contribution Scheme made under section 48 of the Planning and Development Act 2000, as amended. The contribution shall be paid prior to commencement of development or in such phased payments as the planning authority may facilitate and shall be subject to any applicable indexation provisions of the Scheme at the time of payment. Details of the application of the terms of the Scheme shall be agreed between the planning authority and the developer or, in default of such

agreement, the matter shall be referred to An Bord Pleanála to determine the proper application of the terms of the Scheme.

Reason: It is a requirement of the Planning and Development Act 2000, as amended, that a condition requiring a contribution in accordance with the Development Contribution Scheme made under section 48 of the Act be applied to the permission.

Niall Haverty
Senior Planning Inspector

2nd December 2020