Inspector's Report ABP-309119-21

Development	110kV "loop in-loop" out substation with underground transmission cables & associated works.
Location	Drumanan and Cornawall, Newbliss, Co. Monaghan
Planning Authority	Monaghan County Council
Applicant(s)	Drumlins Park Ltd.
Type of Application	Permission
Type of Case	SID
Observer(s)	Monaghan County Council Dept. TCAGS&M (DAU) Transport Infrastructure Ireland Geological Survey Ireland Environmental Health Service
Date of Site Inspection	23rd April 2021
Inspector:	Karla Mc Bride

1.0 Site Location and Description

1.1. The site is located in the townlands of Drumanan and Cornawall, c.4km to the S of Newbliss Village and c.8km SE of Clones in County Monaghan. The surrounding undulating drumlin area is rural in character and there are several dispersed houses and farm buildings in the wider area. The site comprises an agricultural field that is bound by hedgerows, trees and fences and access is via a narrow laneway to the N (LT-62012). There is drainage ditch along the W site boundary that flows S towards a watercourse which ultimately drains to the Bunnoe River.

1.2. There are several sensitive lakes and bogs in the surrounding area which are designated pNHAs (incl. Drumgole Lough, Drumcor Lough & Dromore Lakes to the E & W), and several further afield European sites which may have an aquatic or mobile connection to the site (incl. Lough Oughter and Associated Loughs SAC & Lough Oughter Complex SPA to the W). There are several recorded monuments and sites of historic interest in the wider area.

1.3. Photographs and maps on the case file describe the site and surroundings in detail.

2.0 Proposed Development

2.1. This SID application (under Section 182A) relates to the provision of electricity infrastructure to serve the permitted 8 x turbine Drumlins Park windfarm to the W (Reg. Ref. 19/486).

2.2. The proposed development would comprise:

- A 110kV air insulated switchgear (AIS) substation including control buildings, transformers, associated electrical equipment, security fencing & lighting.
- A battery storage compound with associated buildings.
- Ancillary site works including 2 x site entrances & on-site access tracks, and 700m of 110kV underground electricity lines
- An underground 110kV transmission line to the existing 110kV overhead transmission lines to the E (Lisdrum-Shankill) including replacement pole set with 2 x lattice-type end masts (c.18m)

The application was accompanied by the following documents:

- EIAR (Vols. 1 & 2)
- Non-Technical Summary
- Natura Impact Statement (NIS)
- Planning Report
- Engineering & Architectural drawings

The Technical Appendices (Vol.3) included the following:

- Annex 1.8: Schedule of Mitigation Measures
- Annex 3.5: Outline Construction & Environment Management Plan
    - Surface Water Management Plan, and
    - Water Quality Inspection & Monitoring Plan
- Annex 5.1: Photographs
- Annex 5.2: Habitat & Impact Evaluation Criteria
- Annex 9.1-3: Landscape Plan, Photomontages & ZTV

3.0 Observers

3.1. Prescribed Bodies

Transport Infrastructure Ireland:

- No record of consultations on permitted windfarm (19/486)
- Comply with all requirements for transport of abnormal weigh loads.
- Assessment structures along the route required to confirm their capacity to accommodate the abnormal loads.

Geological Survey of Ireland:

- Note presence of 2 x County Geological Sites to the S & E.
- Consult online database to determine the possible interactions with geohazards, including landslides.
- Consult online database to evaluate the interaction between aquifers, groundwater recharge and flood risk management
- Consult with GIS dataset & map viewer.

Dept. TCAGS&M (DAU):

- Address cumulative impacts with permitted windfarm.
- Quantify biodiversity loss & provide habitat replacement measures.
- Substantial distance to SACs should not be considered sufficient mitigation (along with dilution) to ensure no significant effects.
- Avoid cross referencing mitigation measures in EIAR and oCEMP.
- Welcome replanting measures in interest of biodiversity.
- Note presence of several RMs & PSs within 2km radius.

Environmental Health Service:

- Satisfied with EIAR conclusion of no significant adverse impacts.
- Welcome mitigation measures.

3.2. **Planning Authority Report**

The Council report stated that it had no objection to the proposed development, but raised the following concerns:

- Consider the construction of single entrance instead of two.
- Electricity line ducting arrangements have not been provided where ducting intersects with existing culverts/drainage pipes along LT62013.
- Additional details of the surface water drainage system required: -
    - The QBar calculation for the site;
    - The location of the surface water restriction device or throttle;
    - The permitted rate that surface water generated from the construction of impermeable surfaces within the site will be allowed to discharge to the nearest watercourse;
    - Inclusion of a petrol interceptor;
    - Calculations to substantiate the attenuation storage volume required for a 1/100-year storm event

- Details of the sheoughs which should only be used as a clean water drain, whilst check dams & siltation ponds should be incorporated into all sheoughs to ensure maintenance of surface water runoff quality.
- All new drainage pipe installations and the headwall arrangement, require an independent drainage report to justify the size of the pipe required/proposed and shall have regard to surrounding topography, hydrology, 1–100-year storm events and the effects of climate change.
- Pole locations where the overhead cables cross public roads must be located outside the road's clear zone, and agreed prior to erection.
- A minimum separation distance of 20m should be maintained between the storage of excavated material & watercourses or drains.
- Several recorded monuments & protected structures within 2km radius.
- Request attachment of Financial Contribution Condition.
- No objection to proposal provided that matters raised are addressed.

3.3. **Public submissions**

None received.

3.4. **Applicant's response submission**

The Board decided that an Oral Hearing was not required and the submissions from the Prescribed Bodies and County Council were circulated to the applicant for comment and its response is summarised below. The response submission did not raise any new issues that would require any further circulation of documents.

Dept. TCAGS&M (DAU):

- NIS includes all the required information relating to cumulative effects on European sites, and details of mitigation measures.
- The works will require the removal of c. 215m of existing field boundaries & trees which will be replaced with c. 360m of new hedgerow and the bolstering of c. 220m of existing hedgerow, along with c. 0.16 hectares of native trees to the north of the substation (adjacent to LT62013), with a long-term biodiversity gain.

Transport Infrastructure Ireland:

- The substation transformer (66-tonnes) will be delivered on a specially designed 'low-boy' trailer, with a minimum of 7 x axles, to ensure that the loading limits of 10-tonne per axle is not exceeded or constitute an 'abnormal weight load'; the local authorities along the delivery route to obtain any licences and/or permits as may be required; and all other deliveries will be by standard and normal HGVs.
- Given the absence of abnormal loads, there is no requirement to carry out pre-construction structural surveys along the selected electrical component haul route, other than along the local road (LT62013).

Geological Survey of Ireland:

- The EIAR identifies the Rockcorry-Cootehill Ribbed & Mid-Cavan Drumlin Ribbed Moraines, no overlap with any geological heritage site, and further assessment is not warranted.
- Various GSI datasets & records were consulted for the EIAR Land & Soils chapter (incl. for geohazards & landslides), and the site investigations indicate that the clay, gravelly clay and gravelly silt present was firm and cohesive. There are no ground stability issues at the site and landslides are not assessed as likely to occur.
- Little interaction between aquifers, groundwater recharge & flood risk due to the site characteristics & low recharge to underlying aquifers; surface water runoff discharges to ditches which will not be affected as the stormwater drainage system will maintain current discharge rates & avoid flood risks; and an integrated wetlands is not necessary.
- Various GSI databases & datasets were examined and site-specific site investigations were completed at the site to ensure that the project design process was progressed on the basis of best-available data.

Environmental Health Service:

- Welcomes the comments and the recognition of the efficacy of the mitigation measures proposed in the EIAR.

Monaghan County Council:

- Consideration was initially given to the construction of a single site entrance, specific requirements regarding the transfer of electricity substation assets to EirGrid and associated access requirements, alongside recent amendments to EirGrid specifications for 110kV substations, dictate that 2 x separate access points are required.
- The underground line between the substation and end masts will be mainly located within private fields and most ducting works will not interact with existing culverts traversing the LT62013. However, a short section of underground line (c.15m) will adjoin this road as it traverses a private laneway. Drawings contained in Annex 1 of this submission describe typical ducting arrangements which will ensure no adverse effect on the existing drainage regime:
    - should the proposed underground line interact (crossing under or over) with existing culverts or drainage pipes; and
    - where the proposed underground line will interact with existing open drainage ditches within private lands.

- Drainage design revised as per details provided in Annex 2 of this submission and summarised below.
    - *The QBar calculation for the site*: the mean annual peak flood flow rate (QBar) is 2.54 litres/sec (S3.1.1 of Annex 2).
    - *Location of the surface water restriction device or throttle:* incorporated into the surface water drainage design & located to the S of the substation (Drg. DP-JOD-SS-XX-DR-C-1002 in Annex 2), and on the outflow from the attenuation tank to ensure that the rate of surface water discharge does not exceed the capacity of the existing drainage network.
    - *Permitted rate that surface water generated by the impermeable surfaces will be allowed to discharge to nearest watercourse*: Most surfaces are permeable and will allow rainfall to percolate directly to ground and avoid significant volumes of surface water

runoff. However, the building works will create impermeable surfaces (c. 2,214sq.m.) and resultant surface water will be directed to the stormwater drainage network and passed through an oil/petrol interceptor, attenuation tank, and stormbrake before discharging to the existing drainage network (S3.1.2 of Annex 2) at a rate of 2 litres/sec (as described above). This is less than the calculated QBar and will ensure that the existing drainage network has sufficient capacity to accommodate the rate of runoff.

- *Inclusion of a petrol interceptor*: proposed in EIAR S3.4.5 and elaborated on in Annex 2 (Drg. DP-JOD-SS-XX-DR-C-1002)
- *Calculations to substantiate the attenuation storage volume required for a 1/100-year storm event:* details provided in Annex 2 to substantiate the tank design & confirm its suitability under a wide range of storm events, including climate change.
- *Provide details of sheoughs which only be used as a clean water drain, and check dams & siltation ponds should be incorporated to maintain surface water runoff quality:* Only 1 x sheough is proposed resulting from the in-fill of an existing open drainage ditch over which the TSO (EirGrid) building will be located, which constitutes a diversion of the existing drainage network (illustrated in Annex 3). The sheough will maintain the overall drainage regime, it will only contain clean water, and although provision of silt traps is not required, a single trap will be placed at the outfall of the sheough during the construction phase. Check dams are incorporated into the design of the sheough (illustrated in Annex 3). These measures will supplement the EIAR/NIS surface water mitigation measures.
- *Provide an independent drainage report for all new drainage pipe installations and the headwall arrangement to justify the size of the pipe required/proposed, which has regard to surrounding topography, hydrology, 1-100-year storm events &*

the effects of climate change: Report will be prepared prior to the commencement of construction or installation of drainage infrastructure, which will detail the specific design requirements having regard to concerns outlined above.

- *All pole locations where the overhead cables cross public roads must be located outside the road's clear zone:* The lattice-type end masts are located within private lands c.50m from the nearest road, no telecommunications structures will be removed or replaced at the entrances, and the existing pole located within the footprint of the substation will be re-located, none of which will affect the 'clear zone' of the existing local roads.
- *For underground cabling works, maintain a minimum separation distance of 20m between the storage of excavated material and watercourses or drainage channels:* there are no watercourses in the immediate vicinity or within 20m of the underground lines, and no excavated material arising from trench excavations will be temporarily or permanently side-cast and stored within 20m of any natural or manmade drainage ditch.
- *Application of development contributions:* the MCC General Development Contribution Scheme Category does not apply to as Category 3(m) refers to 'Renewable Energy Development (which primary purpose is to supply the national grid)' and the proposal does not generate renewable electricity.

4.0 Planning History

***ABP-306018-19*:** Following a pre-application consultation the Board determined that the proposed substation constituted SID, potential impacts on visual amenity, residential amenity and the road network were highlighted and a list of Prescribed Bodies was provided for future consultations.

Reg. Ref.19/486: Planning permission granted by the Council for the Drumlins Park 8 x turbine windfarm on lands to the W of the site.

5.0 Policy and Context

5.1. National and Regional policy context

Climate Action Plan 2019

This plan seeks to tackle climate breakdown and achieve net zero greenhouse gas emissions by 2050. The Plan includes a commitment that 70% of all electricity generated will be from renewable sources by 2030, and it contains c.200 actions to ensure Ireland meets its net zero greenhouse gas emissions by 2050.

National Planning Framework – Ireland 2040 (2018)

The NFP seeks to support the development of the electricity from renewable sources, and the need to reduce reliance on fossil fuels and cut carbon emissions.

Regional Spatial & Economic Strategy, the Northern & Western Region (2020)
The RSES also seeks to support the development of the electricity grid which will enable the transmission system to safely accommodate more diverse power flows from surplus regional generation & also facilitate future growth in electricity demand.

The Planning System and Flood Risk Management, 2009

These Guidelines seeks to avoid inappropriate development in areas at risk of flooding and avoid new developments increasing flood risk elsewhere and they advocate a sequential approach to risk assessment and a justification test.

5.2. Local Policy

Monaghan County Development Plan 2019-2025

Core strategy:

Policy CSSO 1: seeks to ensure that new development within the County will provide for sustainable development that enables economic growth, delivery of accessible and high-quality infrastructure and services and guides population growth in accordance with the settlement strategy.

Energy:

Policy EP3: seeks to facilitate the sustainable development, renewal and maintenance of energy generation infrastructure in order to maintain a secure energy supply while protecting the landscape, archaeological and built heritage and having regard to the provisions of the Habitats Directive.

Policy CCP7: seeks to promote and encourage the use of renewable energy in all areas subject to compliance with development management standards and policies

Policy CCP9: seeks to support diversification and innovation in the local economy by endorsing investment in emerging products, services and technologies that assist in the delivery of a low carbon future for County Monaghan.

Natural Heritage:

Policy HCLSO 1: seeks to promote and encourage the conservation and preservation of the natural environment, cultural heritage and amenities.

Policy HLP 8: seeks to ensure the preservation of landscapes, by having regard to the character, value and sensitivity of the landscape as identified in the County Monaghan Landscape Character Assessment (2008).

Policy HLP 9: seeks to protect landscapes and natural environments by ensuring that any new developments in designated sensitive rural landscapes do not detrimentally impact on the character, integrity, distinctiveness or scenic value of the area. (LCT – Drumlin Foothills & Farmed Foothills, and LCA 5 – Monaghan Drumlin Uplands & LCA 7 – Ballybay & Castleblaney Lakelands.

Policy HLP 13: seeks to resist development in or adjacent to any Natura 2000 site where it would result in the deterioration of that habitat or any species reliant on it.

Policy HLP 14: seeks to resist development in or adjacent to a p/NHA where it would result in habitat deterioration or detrimentally impact on any reliant species.

Policy HLP 18: states that development within the vicinity of groundwater or surface water of dependant Natura 2000 sites (Kilroosky Lough Cluster SAC) will not be permitted where there is potential for a likely significant impact upon the groundwater or surface water supply to the Natura 2000 site.

Policy GEP 3: seeks to protect from inappropriate development and maintain the integrity and conservation value of those features in areas of geological interest. There are 2 x GSI sites to the S of the site (Rockcorry -Cootehill Ribbed Morraines).

Views & Prospects:

Policy SRP 1: seeks to prohibit development that would disrupt or adversely affect a view from/along any scenic route as identified in Appendix 5 (none listed).

Archaeology:

Policy BHP 2: seeks to contribute, as appropriate, towards the protection and sympathetic enhancement of archaeological heritage.

Policy PMP 2: seeks to ensure that any development adjacent to an archaeological monument or site shall not be detrimental to the character of the archaeological sites or its setting and shall be sited in a manner which minimises the impact on the monument and its setting. There are 11 x Recorded Monuments located within c.2km of the site which include Ringforts, Enclosures & Earthworks (M0017-043, 044, 055, 056, 061, 062, 064, 065, 066 & 069).

Built Heritage:

Policy BHP 1: seeks to protect and conserve all structures included in the RPS.

Policy BHP 6: seeks to ensure that any new development in the vicinity of a Protected Structure will complement and be sympathetic to the structure and its setting in terms of its design, scale, height massing and use of materials. There are several protected structures located in and around Newbliss Village.

5.3. **Natural Heritage Designations**

The following European sites are located in the surrounding area (c.15-20km):

SACs	**SPAs**
Kilroosky Lough Cluster Lough Oughter & Associated Loughs Maheraveely Marl Upper Lough Erne (UKM	Lough Oughter Complex Upper Lough Erne (UK)

6.0 Planning Assessment

The main issues arising are as follows:

- Principle of development
- Design & layout
- Movement & access
- Flood risk & drainage
- Biodiversity
- Other issues

Section 7.0 contains an Environmental Impact Assessment.

Section 8.0 contains an Appropriate Assessment

6.1 Principle of development

The proposed development would comprise the construction of a 110kV “loop-in-loop-out” air insulated switchgear (AIS) substation and associated electrical equipment and 110kV underground transmission lines. The proposed substation and electrical infrastructure would serve the permitted 8 x turbine windfarm to the W of the site that was granted permission by Monaghan County Council under Reg. Ref. 19/486. The proposed underground transmission lines would connect the proposed substation to the existing 110kV Lisdrum-Shankill overhead lines to the E of the site.

The proposed development would contribute to the achievement of the objectives contained in the Climate Action and Low Carbon Development (Amendment) Act 2021 in relation to achieving a climate neutral economy by no later than 2050, as it would support the connection of a permitted windfarm to the national grid.

The proposed development would comply with national and regional policy as set out in National Planning Framework - Ireland 2040 and the Regional Spatial & Economic Strategy, the Northern & Western Region, 2020 which seek to support the development of electricity infrastructure at appropriate locations.

The proposed development would comply with the Core Strategy of the County Monaghan Development Plan which seeks to develop Monaghan's role in the Northern and Western Region. The proposed development would comply with several Development Plan policies which seek to facilitate the sustainable development, renewal and maintenance of energy generation infrastructure in order to maintain a secure energy supply (EP3), promote and encourage the use of renewable energy (CCP7), and support diversification and innovation in the local economy that assist in the delivery of a low carbon future for the county (CCP9). The proposed substation and most of the underground 110kV transmission cables would be located within agricultural lands that are not covered by any specific land use zoning objectives in the County Monaghan Development Plan. The remaining section of the 110kV transmission cables would traverse under local roads. Compliance with other relevant Development plan policies and objectives (incl. transportation, amenity, heritage & the environment) will be addressed in the following sections of this report.

Having regard to the foregoing, I am satisfied that the proposed development, which would operate in conjunction with a permitted windfarm would comply with relevant national, regional and local planning policy, is acceptable in principle.

6.2 Design and layout

The proposed development would be located within an attractive undulating rural area that is characterised by drumlins and small hedgerow defined fields. The site lies within the transition between 2 x Landscape Character Types – Drumlin Foothills and Farmed Foothills, and within the transition between 2 x Landscape Character Areas, LCA 5 – Monaghan Drumlin Uplands and LCA 7 – Ballybay & Castleblaney Lakelands. The site and surrounding lands are not covered by any sensitive landscape or scenic amenity designations and there are no protected views or prospects in the vicinity.

The site boundaries are defined by a mix of mature hedgerows and trees, and the overall lands slope down gently from W to E and from N to S towards the Bunnoe River. The proposed substation compound would be located in the NW corner of the

lands and to the S of a rural road. It would be located to the E of the permitted Drumlins Park Windfarm and W of a small settlement of detached rural houses. The proposed transmission lines would run underground to connect to the existing 110kV Lisdrum-Shankill overhead line to the E by way of a new c.18m high lattice structure.

The application was accompanied by a Landscape and Visual Impact Assessment and Photomontages (EIAR chapter 9.0 & Appendix 9.1-3). The report described the receiving environment and the character of the surrounding area. It assessed potential visual impacts from several viewpoints (VP1 to VP6) around the site that encompass sensitive receptors (incl. the surrounding rural area & wider road network). The study also included an assessment of cumulative impacts in-combination with the permitted windfarm to the W and existing Lisdrum - Shankill overhead transmission lines to the E. It concluded that the proposed substation would not give rise to any significant visual impacts subject to boundary landscaping.

Having regard to my inspection of the site and surrounding area, and taking account of the scale, height and layout of the proposed substation and lattice structures on undulating agricultural lands within a remote rural area, along with the undergrounding of the transmission lines, and the absence of any sensitive landscape or scenic designations, I am satisfied that the proposed substation and associated transmission infrastructure would not have an adverse impact on the landscape or visual amenities of the area. The main visual impact would be from along the local road to the immediate N of the site and this would diminish over time as the perimeter landscaping and native species planting matures. Cumulative impacts would be local and not significant when the project is considered in-combination with the permitted windfarm to the W and existing overhead transmission lines to the E.

6.3 Movement & access

The concerns raised by Transport Infrastructure Ireland and Monaghan County Council in relation to the proposed access arrangements and the applicant's response to same are noted and summarised in section 3.4 above.

The proposed development would be located within a remote rural area to the SW of Monaghan town in County Monaghan and c.2km to the S of Newbliss Village. The site is located c.16km to the W of the N2 (national primary road), c.5km to the S of the N54 (national secondary road) and c.2km to W of the R189 (regional road). The surrounding area is served by a number of regional (incl. R183 & R188) and local roads. The site is located along a narrow rural road (LT62013) that runs NW to SE between two other local roads. The permitted Drumlins Park Windfarm is located to the W of the LT62013 and there are a small number of detached houses to the E of LT62013. Vehicular access to the site would be via the construction phase access arrangements (c.2km) permitted for the Drumlins Park Windfarm (Reg. Ref. 19/486) off the R189 to the NE and then SE along the LT62013 to the proposed site entrances on the S side of the local road.

The application was accompanied by a transport and access assessment (EIAR chapter 13) which described the existing traffic environment (road network, junctions & condition) along with other developments in the area (incl. the permitted windfarm), and the proposed haul routes for equipment & materials (incl. quarries).

The report dealt with the construction and operational phases of the proposed development. It stated that the construction phase would last 15-18 months, the main vehicular access would be via the R189 (as per the permitted windfarm) and that the LT62013 carriageway would be widened from c.2.5m to c.4m to accommodate construction traffic. It estimated that c.1,772 loads would be delivered to the site over a 15-month period, which equates to an average of c.118/month and 6/day, and that an additional c.25 load would be required to remove equipment and materials form the site post construction. The operational phase would generate no more than 1 or 2 maintenance visits per week.

The proposed construction works could have an adverse effect on the surrounding road network and the amenities of nearby houses and farms by way of general disturbance, traffic disruption, road soiling, restricted access, noise and dust. The EIAR contains several mitigation measures to address potential impacts and minimise disturbance. These measures include the implementation of a Traffic Management Plan, traffic diversions (as required), scheduling of traffic movements, wheel washing and road condition monitoring with remedial works (as required). The EIAR predicted that the impact of the proposed substation on the national and local

road network, in combination with the permitted windfarm and other activities in the surrounding area, would be short term during the construction phase and imperceptible in the operational phase.

Having regard to the scale and nature of the proposed development and the character of the surrounding road network (which has adequate spare capacity to accommodate additional traffic volumes), I am satisfied that the proposed development would not give rise to excessive traffic generation along the road network during either the construction or operational phase.

The concerns raised by Monaghan County Council in relation to the provision of 1 instead of 2 site entrances off the local road are noted. The proposed development would comprise 2 x separate compounds for the IPP compound (incl. the battery storage units & associated buildings) and the EIRGRID compound (incl. the substation & associated buildings). The two sections would be separated by a c. 2.95m high palisade fence. The respective site entrances off the local road would be set apart by c.20m and operate independently of one another, and both would provide for adequate visibility along the road. In response the applicant stated that the construction of a single site entrance was considered, however, specific requirements regarding the transfer of electricity substation assets to EirGrid and associated access requirements, alongside recent amendments to EirGrid specifications for 110kV substations, dictate that 2 x separate access points are now required.

Having regard to the rural character of the area, a single vehicular entrance would indeed be preferable, especially in terms of visual amenity and minimising the loss of hedgerows and mature deciduous trees, and it could also result in reduced excavation works along the upward sloping W section of the site. I am not convinced that a single shared access off the local road in conjunction with two separate internal compound entrances cannot be achieved. In the event that the Board concur with this assessment, the westernmost entrance and internal access road should be omitted and the layout of the easternmost internal access road should be amended to provide shared access to both compounds, along with associated amendments to the palisade fence to provide for separate internal access to both compounds. This issue could be addressed by way of a planning condition.

Monaghan County council also raised concerns in relation to the need for the pole locations where the overhead cables cross public roads to be located outside the road's clear zone, and the applicant has confirmed that none of the structures will affect the 'clear zone' of the existing local roads.

The concerns raised by Transport Infrastructure Ireland in relation to the need to engage with the relevant road authorities in relation to the transport of abnormally large loads is noted. However, this is unlikely to be an issue given the nature of the proposed station development as opposed to the nearby windfarm development.

Having regard to the foregoing, I am satisfied that the proposed development, taken in combination with the permitted windfarm and other existing and permitted development in the surrounding area, would not give rise to a traffic hazard or endanger the safety of other road users during the construction and operational phases. This would be subject to the implementation of the EIAR mitigation measures and compliance with relevant planning conditions attached to the permitted Drumlins Park Windfarm (Reg. Ref.19/486).

6.4 Water quality and drainage

The concerns raised by Monaghan County Council in relation to the proposed drainage arrangements and the applicant's response to same are noted and summarised in section 3.4 above.

The proposed development would be located in the Lough Erne surface water catchment within the NW International River Basin District at regional level, and within the Annalee River surface water catchment at local level. The underlying aquifer is designated as Poor which is generally unproductive except for Local Zones. The site and surrounding area are mainly drained by the Bunnoe River to the SE which discharges to the Annalee River which ultimately flows W towards Butlersbridge and Kilroosky Lough Cluster SAC in County Cavan. The drainage ditches that traverse the substation and mast site discharge to the Bunnoe River c.520m and c.125m to the SE, respectively. The Bunnoe River has Poor Status (Q2-3) immediately downstream of the site which improves to Moderate Status (Q3-4) further downstream, and the Annalee River has Good Status (Q4).

The proposed development would be located within in an undulating rural area and the site slopes down from NW to SE in the western section, and from NE to SW in the main section. There is a substantial drainage ditch located along the W section of the site parallel to a hedgerow, the W to E slope is quite steep at this location and the surrounding low-level vegetation is characterised by reeds and water tolerant species.

The application was accompanied by a generic water quality report for the permitted windfarm and proposed substation (EIAR Ch.7) which described the receiving environment, identified potential impacts and proposed mitigation measures. The application was also accompanied by an outline Construction and Environmental Management Plan, a Surface Water Management Plan, and a Water Quality Inspection and Monitoring Plan. The EIAR concluded that the impact of the proposed substation on water quality, in combination with the permitted windfarm and other activities in the surrounding area, would be short term during the construction phase and imperceptible in the operational phase.

Monaghan County Council raised concerns in relation to the proposed water management and drainage arrangements (refer to section 3.3 above) with regard to:- the QBar calculation for the site; the location of the surface water restriction device or throttle; the permitted rate that surface water generated by the impermeable surfaces will be allowed to discharge to nearest watercourse; the inclusion of a petrol interceptor; calculations to substantiate the attenuation storage volume required for a 1/100-year storm event; details of sheoughs (clean water drain only); check dams & siltation ponds should be incorporated to maintain surface water runoff quality; independent drainage report for all new drainage pipe installations and the headwall arrangement; and the maintenance of a minimum separation distance of 20m around underground cabling works between watercourses or drainage channels.

The applicant addressed the concerns raised by the Council and the response is summarised in section 3.4 above. The drainage design was revised accordingly and clarification provided in relation to several matters. The mean annual peak flood flow rate (QBar) was confirmed as is 2.54 litres/sec. Surface water restriction devices will be installed to ensure that the rate of surface water discharge does not exceed the capacity of the existing drainage network. Surface water from new impermeable surfaces will be directed to the stormwater drainage network and passed through an

oil/petrol interceptor, attenuation tank and stormbrake before discharging to the existing drainage network at a rate less than the calculated QBar, which will ensure that the existing drainage network has sufficient capacity to accommodate the rate of runoff under a under a wide range of storm events, including climate change. One sheough will be provided resulting from the in-fill of an existing open drainage ditch which will maintain the overall drainage regime and only contain clean water. A design specific drainage report will be prepared prior to the commencement of construction or installation of drainage infrastructure. There are no watercourses in the immediate vicinity or within 20m of the underground lines.

The construction and excavation works could have an adverse effect on water quality by way of the uncontrolled release of fine sediments into surface water, the culverting of drains and from accidental leaks and spills from fuel stores, plant, equipment and construction vehicles (incl. cement & concrete). Accidental spills from maintenance vehicles during the operational phase could affect surface water run-off and hence downstream water quality. Surface water discharge during the construction phase of the substation and transmission line excavations would be managed by a sediment management plan and there would be no significant discharges during the operational phase.

The measures contained in the outline CEMP, and elaborated on the applicant's response to the concerns raised by the council, which include the management of sediment laden water and accidental spillages during the construction phase, would protect water quality in nearby watercourses and the integrity of the Bunnoe and Annalee Rivers. The drainage arrangements, as clarified by the applicant, are acceptable subject to compliance with EIAR mitigation measures, adherence to the final CEMP and best construction practices.

6.5 Biodiversity

The concerns raised by NPWS in relation to biodiversity and the applicant's response to same are noted and summarised in section 3.4 above.

The proposed development would be located within a remote rural area that is characterised by undulating drumlins and agricultural fields. The site slopes down from NW to SE in the western section, and from NE to SW in the main section. The lands are traversed by 2 x drainage ditches that drain to the Bunnoe River to the SW

which in turn discharges to the Annalee River that ultimately flows W towards Kilroosky Lough Cluster SAC in County Cavan.

The surrounding area comprises agricultural fields defined by native trees, hedgerows and ditches, and thus has potential for terrestrial and aquatic wildlife. The drainage ditch located along the W section of the site parallel to a hedgerow is at the bottom of a steep slope and the surrounding vegetation is characterised by reeds and water tolerant species. There are several bogs and lakes in the wider area that are designated p/NHAs (incl. Drumgole Lough to the W) and there are some further afield European sites to the far N and W (incl. Kilroosky Lough Cluster and Lough Oughter & Associated Loughs SACs, and Lough Oughter Complex SPA).

The application was accompanied by a generic Biodiversity report for the permitted windfarm and proposed substation (EIAR Ch.5) which described the receiving environment (incl. habitats & species), carried out desktop and field surveys, identified potential impacts and proposed mitigation measures. The application was also accompanied by an outline Construction and Environmental Management Plan and Water Quality Inspection & Monitoring Plan). The permitted windfarm and proposed substation sites and environs are characterised by several non-designated habitats (incl. agricultural grassland, wet grassland, hedgerows & riparian corridors). The lands are utilised by a variety of terrestrial and aquatic faunal species (incl. fox, hare, passerine birds, bats, otter & common frog) and the desk top and field surveys did not record the presence of any protected floral species. The EIAR concluded that the impact of the proposed substation on biodiversity, in combination with the permitted windfarm and other activities in the surrounding area, would be short term during the construction phase and negligible in the operational phase.

European sites: section 8.0 of this report deals with potential effects on SACs and SPAs and it includes an Appropriate Assessment. It is possible that the project site may also be hydrologically connected to some further afield designated sites (incl. Kilroosky Lough Cluster and Lough Oughter & Associated Loughs SACs, and Lough Oughter Complex SPA), or that the lands are of value to mobile species (incl. Whooper swan). This concern is also addressed in section 8.0 below.

Natural Heritage Areas: although there is 1 x pNHA (Drumgole Lough) located within a 5km radius of the site, there is no aquatic connection between the sites.

Habitats, flora & fauna:

There are no recorded or designated sensitive habitats or floral species in the vicinity. However, the surrounding mature trees, hedgerows, shrubland, wetlands, ditches and watercourses may be of value to faunal species (incl. fox, hare, passerine birds, bats, otter, common frog, invertebrates & aquatic wildlife) which could be disturbed and displaced during the construction works. However, it is likely they would return to the environs of the site when the works are completed, in which case fencing panels should be erected in such a manner so as allow wildlife to traverse the site. This could be addressed a planning condition. As noted by the NPWS, the proposed boundary landscaping and native species planting will have a positive impact on biodiversity.

Vegetation clearance should not take place during the bird nesting season and preconstruction seasonal surveys should be undertaken for birds, bats, otter and common frog. A Derogation Licence should be sought from the NPWS in the event that any protected species (incl. bats) are present and require relocation to a suitable similar habitat elsewhere. The release of pollutants to watercourses with resultant impacts on water quality, aquatic ecology and fisheries which are susceptible to smothering from suspended sediments would be avoided by way of the EIAR and oCEMP water quality mitigation measures, with no adverse on constituent aquatic species or prey species for Otter anticipated. Artificial lighting should be kept to a minimum so as to minimise disturbance to wildlife, including commuting and foraging bats. Any outstanding concerns not already covered by the mitigation measures could be addressed by way of a planning condition.

6.6 Other issues

Residential amenity: There are no houses located in the vicinity of the substation. The houses located to the E of the site in the vicinity of the connection to the existing 110kV Lisdrum-Shankill overhead cable would experience some disturbance during the cable excavation and connection works in terms of construction traffic, noise and

dust. Construction phase impacts would be managed and mitigated by the measures contained in the oCEMP. No long term impacts anticipated.

Geology: The Rockcorry-Cootehill Moraines geological site is located to the S and E of the proposed development (it is stated to form part of the largest ribbed moraine in the world). The concerns raised by Monaghan County Council and the applicant's response to same are noted and summarised in section 3.4 above. GSI have indicated that this site and its constituent features would not be affected by the project which is located outside its boundaries.

Archaeology: There are several Recorded Monuments within a c.2km radius of the proposed development (incl. Ringforts, Enclosures & Earthworks) and there may be potential for undiscovered archaeological artefacts within the site. The concerns raised by Monaghan County Council and the applicant's response to same are noted and summarised in section 3.4 above. The standard archaeological monitoring condition should be attached.

Built heritage: There are several protected structures located in and around Newbliss Village which would not be affected by the proposed development. The concerns raised by Monaghan County Council and the applicant's response to same are noted and summarised in section 3.4 above.

Flood risk: The OPW maps have no record of any flood events in the vicinity of the proposed development and the site does not lie within a PFRA Flood Zone, although Historical 6" Maps indicate that the lands to the NW of the windfarm site are liable to flooding. The substation lands may be susceptible to localised pluvial flooding and the W section in the vicinity of the drainage ditch may be prone to localised fluvial flooding. The embedded design measures, drainage arrangements and mitigation measures would ensure that the proposed development would not give rise to any downstream flooding, or adverse impacts on the substation infrastructure.

Cumulative impacts: The proposal would function in tandem with the permitted windfarm to the W of the site during the construction and operational phases. There are no other plans or projects of significance in the surrounding rural area.

Construction works: The proposed works should be carried out in accordance with an agreed Construction Methodology and Environmental Management Plan.

Conditions: Any conditions recommended by Monaghan County Council should be attached as appropriate.

Financial contributions: The concerns raised by Monaghan County Council and the applicant's response to same are noted and summarised in section 3.4 above. Contributions are not normally required for substations and transmission lines.

7.0 ENVIRONMENTAL IMPACT ASSESSMENT

7.1 Introduction

This section of the report deals with the potential environmental impacts of the proposed development during the construction and operational phases of the development.

This section should be read in conjunction with Section 6.0 (Planning Assessment) and Section 8.0 (Appropriate Assessment) of this report.

7.2 Compliance legislative requirements

Directive 2011/92/EU was amended by Directive 2014/52/EU. Drumlins Park Ltd. has submitted an Environmental Impact Assessment Report (EIAR) which is presented in a 'grouped format' comprising the following:

- Non-Technical Summary
- Main Statement
- Technical Appendices
- Photomontages

It is submitted by the applicant that the EIAR has also been prepared in accordance with the EU (Planning and Development) (Environmental Impact Assessment) Regulations 2018 that came into effect on 1st September 2018, and which the Board will be aware, transposed by Directive 2014/52/EU into Irish planning law. As is required under Article 3(1) of the EIA Directive 2011/92/EU amended by Directive 2014/52/EU, the EIAR identifies, describes and assesses in an appropriate manner, the direct and indirect significant effects of the project on the following environmental factors: (a) population and human health; (b) biodiversity, with particular attention to 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 and it equally considers the interaction between the factors referred to in points (a) to (d).

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 applicant, adequately identifies and describes the direct, indirect and cumulative effects of the proposed development on the environment and complies with all relevant the requirements. I am also satisfied that the information contained in the EIAR complies with article 94 of the Planning and Development Regulations 2000, as amended, and the provisions of Article 5 of the EIA Directive 2014. I have carried out an examination of the information presented by the applicant, including the EIAR, and the written submissions.

The EIAR describes the proposed development, including information on the site and the project size and design. A description of the main alternatives studied by the applicant and alternative locations considered, is provided and the reasons for the preferred choice. The impact of the proposed development was assessed under all the relevant headings with respect to population and human health; noise, air and climate; biodiversity; landscape; land, geology and soils; hydrology and hydrogeology; roads and traffic; material assets and cultural heritage; interactions of impacts; and the suggested mitigation measures are set out at the end of each chapter.

The content and scope of the EIAR is in compliance with Planning Regulations. No likely significant adverse impacts were identified in the EIAR.

7.3 Consideration of Reasonable Alternatives

The consideration of reasonable alternatives was considered in Chapter 2.0 of the EIAR in relation to the proposed substation, 110kV underground transmission cables and connecting pylons. The “Do-Nothing” alternative was not considered as the purpose of the proposed development is to connect a permitted windfarm to the national grid. The following alternatives were considered with respect to the proposed development.

- Alternative grid connection options
- Alternative substation locations
- Alternative substation design technologies

The EIAR concluded that the proposed development represents the optimum solution taking into account access to land, cost and environmental effects. Having examined the alternatives and the weighting system that was applied in the EIAR analysis, I would concur with this conclusion.

7.4 Summary of Likely Significant Effects

Section 6.0 of this report identifies, describes and assesses the main planning issues arising from the proposed development and it should be considered in conjunction with the following environmental impact assessment (EIA).

The EIA identifies and summarises the likely significant effects of the proposed development on the environment with respect to several key receptors in the receiving environment. It identifies the main mitigation measures and any residual impacts following the implementation of these measures together with any planning conditions recommended in section 6.0 of this report, and it reaches a conclusion with respect to each of the receptors. It assesses cumulative impacts, identifies interactions between the receptors, and considers the risks associated with major accidents and/or disasters. The EIA reaches a Reasoned Conclusion.

For ease of reference the EIA is presented in a tabular format with respect to:

- Population and Human Health
- Air and Climate
- Landscape
- Biodiversity
- Land soil and water
- Material assets
- Cultural heritage

Population and human health	
EIAR sections 4, 8, 9, 11 & 13 dealt with population & human health; air quality; landscape, noise & vibration; and traffic & transportation. The EIAR described the receiving environment and identified potential impacts on human beings, human health, local amenities, and health & safety. The EIAR did not predict any significant adverse impacts on human beings, population, or human health as a result of dust emissions, noise & vibration, visual intrusion or traffic movements during the construction and operational phases, subject to implementation of mitigation measures which mainly relate to the management of traffic and construction works.	
Submissions	***Concerns raised***
None	None
Potential impacts	***Assessment & mitigation measures***
Potential for the following impacts on human beings during the construction and operational phases of the proposed development. ***Residential amenity:*** potential minor localised impacts on amenity. ***Visual:*** potential minor localised visual impacts on nearby houses during the construction & operational phases.	The surrounding area is sparely populated however there are some detached houses to the E in the vicinity of the rural access road and the Lisdrum-Shankill overhead transmission line. There would be no significant adverse effects on amenity by way overshadowing, overlooking or visual intrusion. Refer to section 6.2 of this report for detailed analysis of landscape & visual impacts which concluded that there would be no significant adverse effects. The substation would be located within an undulating rural area and the lands slope gently to the S. The substation would not be visually obtrusive or overbearing having regard to its scale, height and location within a remote rural area and the future maturation of the perimeter landscaping.

Noise & vibration**:** potential for localised noise impacts on residential amenities from construction activities & minor disturbance during operational phase.	Noise emissions during the construction phase are predicted to be less than the prevailing ambient noise levels at the nearest sensitive receptors. There will be no significant additional noise generated during the operational phase.
Dust: Potential for dust & air quality impacts during construction phase.	Dust emissions during the construction phase are not expected to travel a substantial distance (c.200m) from the site and dust and would usually be deposited within c.50m of the works (depending on prevailing weather conditions). There would be no significant dust emissions during the operational phase. Having regard to the relatively small scale and nature of the proposed development and to the separation distances to the nearest houses, I am satisfied that the proposed substation would not have any significant long-term effects (noise & dust) during the construction or operational phases. This would be subject to compliance with the EIAR mitigation measures, compliance with best construction practices and adherence to an agreed CEMP.
Traffic: Construction and operational traffic volumes have potential for localised air quality impacts & road safety.	Refer to section 6.3 of this report for a detailed analysis of movement & access impacts. The local road network has sufficient capacity to assimilate the additional traffic volumes associated with the construction & operational

Health & safety: Potential for adverse impacts on health & safety from on-site accidents.	phases. The vehicular access arrangements are acceptable, and adequate on-site car parking would be provided. This concern would be addressed by way of compliance with all relevant health and safety legislation.
Residual Effects: There will be some increase in noise, dust & traffic emissions during the construction & operational phases however predicted levels are within guidance limit values. Residual impacts are not predicted to be significant subject to the implementation of mitigation measures.	
Cumulative Impacts: Minor impacts would occur in-combination with the construction of the permitted windfarm, but none predicted during the operational phase.	
Conclusion: No written submissions were made in relation to population & human health. I am satisfied that any impacts identified in this section of the report have been appropriately addressed in terms of the application and that no significant adverse effect on population & human health is likely to arise.	

Air and Climate	
EIAR sections 9 & 13 and associated Technical Appendices dealt with air quality and traffic & transportation. The EIAR described the receiving environment and identified potential impacts on air quality. It did not predict any significant adverse impacts on air and climate as a result of dust emissions or traffic movements during the construction and operational phases, subject to implementation of mitigation measures.	
Submissions	***Concerns raised***
Planning Authority & TII	Dust & traffic emissions Energy demand & climate change
Potential impacts	***Assessment & mitigation measures***
Dust: Potential short term localised impacts on air quality resulting from dust emissions during the construction phase.	Dust emissions during the construction phase are not expected to travel more c.200m from the site and dust and would be mainly be deposited within c.50m of the works (depending on prevailing weather conditions). There would be no dust emissions during the operational phase. Having regard to the relatively small scale and nature of the proposed development and to the separation distances to the nearest sensitive receptors, I am satisfied that the proposed substation would not have any significant long-term effects during the construction or operational phases. This would be subject to compliance with the EIAR mitigation measures, compliance with best construction practices and adherence to an agreed CEMP.

Traffic emissions: Potential short term localised impacts on air quality resulting from increased traffic volumes during construction & operational phases.	Refer to section 6.3 of this report for a detailed analysis of movement & access impacts. The national, regional & local road network has sufficient capacity to assimilate the additional traffic volumes associated with the construction & operational phases. The proposed development would not have any significant long-term effects during the construction or operational phases. This would be subject to compliance with the EIAR mitigation measures, compliance with best construction practices and adherence to an agreed CEMP which should contain a Traffic Management Plan.
Climate & energy: Potential for long terms positive impacts on achievement of Climate Change & carbon emission reduction targets (EU & National).	The proposed substation would serve to connect a permitted windfarm to the electricity grid which will contribute to the achievement of the achieve a climate neutral economy by no later than 2050.
Residual Effects: There will be some increase in dust & traffic emissions during the construction phase however predicted levels are within guidance limit values and residual impacts are not predicted to be significant, subject to the implementation of mitigation measures.	
Cumulative Impacts: Minor impacts would occur in-combination with the construction of the permitted windfarm, but none predicted during the operational phase.	
Conclusion: I have considered all the written submissions made in relation to air and climate, in addition to those specifically identified in this section of the report. I am satisfied that they have been appropriately addressed in terms of the application and that no significant adverse effect is likely to arise.	

Landscape	
EIAR section 9.0 and associated Technical Appendices & Photomontages, undertook an assessment of landscape and visual effects. The EIAR described the receiving environment and identified potential impacts on the landscape and visual amenity from several viewpoints (incl. the local and wider road network). The EIAR did not predict any significant adverse impacts on landscape during the construction and operational phases, subject to implementation of mitigation measures (incl. landscaping).	
Submissions	***Concerns raised***
None	None raised.
Potential impacts	***Assessment & mitigation measures***
There is potential for the following impacts on the landscape during the construction and operational phases of the proposed development. ***Landscape:*** Potential for minor localised visual impacts on the surrounding countryside. ***Residential amenity***: Potential for minor localised visual impacts on houses to E during the construction phase (incl. cranes) and the c.18m high lattice pylon structures during the operational phase. ***Road network***: Potential for minor localised visual impacts along the local road network during Both phases.	The substation & lattice pylon structures would be located within a remote rural area that is characterised by drumlins and an undulating patchwork of hedgerow defined fields. The lands are flat with a gentle slope to the S. The substation would not lie within a sensitive landscape, there are no designated scenic routes in the wider area or protected views across the site. The site boundaries would be defined by native species landscaping with no adverse impacts on views from the surrounding and wider road network or residential areas anticipated. Refer to section 6.2 of this report for a detailed analysis of visual impacts which concluded that there would be no significant adverse effects on the landscape or visual amenity.

Heritage features: Potential for minor localised visual impacts on heritage features in the wider area during the operational phase.	There would be no adverse effects on the character or setting of protected structures or any other heritage features in the surrounding area, having regard to the separation distance to the nearest features, the undergrounding of transmission cables, the native species landscaping and the separation distance to the pylons located to the NE.
Residual Effects: Impacts predicted to be minor subject to implementation of mitigation measures (including perimeter landscaping).	
Cumulative Impacts: Minor visual impacts in-combination with the permitted windfarm and existing Lisdrum-Shankill overhead transmission line.	
Conclusion: No written submissions were made in relation to landscape. I am satisfied that any impacts identified in this section of the report have been appropriately addressed in terms of the application and that no significant adverse effect on the landscape is likely to arise.	

Biodiversity	
EIAR sections 5, 6 & 7 and associated Technical Appendices dealt with: - biodiversity; water quality & hydrogeology; land, soils & geology; and an outline Construction & Environmental Management Plan was prepared. Desk top studies & field surveys were undertaken, and a NIS was prepared (Refer to section 8.0). The EIAR described the receiving environment which comprises agricultural fields defined by hedgerows, trees and ditches. It did not identify any sensitive sites or the presence of any protected plant or animal species resident within the site, although it noted that the lands are frequented by passerine bird species, possibly used by foraging & commuting bats, and that Otter commutes along the nearby Bunnoe River to the SE. The EIAR did not predict any significant adverse impacts on biodiversity during the construction and operational phases, subject to the implementation of mitigation measures to protect water ground and surface quality.	
Submissions	***Concerns raised***
NPWS	Welcome boundary treatment planting. Don't mix EIAR & CEMP mitigation measures. Distance is not a determinant impact.
Potential impacts	***Assessment & mitigation measures***
The site comprises agricultural grazing land which is defined by trees and hedgerows & traversed by ditches. It has a downstream aquatic connection to the Bunnoe Stream (substation, transmission lines & pylons), and hence the Annalee River. Birds & foraging & commuting Bats utilise the site and Otter forages along the Bunnoe River. There is potential for the following impacts on Biodiversity during the construction and operational phases.	The site & surrounding lands are not covered by any sensitive heritage designations. The site contains native species mature tree hedgerows & drainage ditches and there is evidence that it has been used by several species of animal (incl. otter, hare, birds, bats & frog). Refer to sections 6.4 & 6.5 of this report for a detailed analysis of impacts on water quality & biodiversity.

European sites: Potential aquatic or mobile connections to sensitive sites***.***	Refer to Section 8.0 of this report (AA) which concluded that the works would not result in the loss, disturbance or damage to any designated sites, habitats, or species during either the construction or operational phases.
Habitats: Potential for permanent localised loss of or alteration to non-designated habitats during the construction phase.	Several non-designated habitats (incl. hedgerows, drainage ditches & wetlands) would be permanently lost or altered. Given their lack of sensitivity, and the proposal to plant native tree and hedgerow species along the landscaped perimeter, the overall long-term adverse impact would not be significant.
Flora: Potential for permanent localised loss of non-designated species during construction phase.	Several non-designated plant species would be permanently lost but given their lack of sensitivity and the proposal to plant native tree and hedgerow species along the landscaped perimeter, the overall long-term impact would not be significant.
Fauna: Potential for minor localised disturbance to several species of animal during the construction & operational phases.	Several species of animal would be disturbed during the construction phase (incl. foxes, rabbits, hares, otter, birds & foraging/ commuting bats). Some may eventually return and habituate to activity on the site in the long term during the operational phase, having regard to the proposed planting of the landscaped perimeter with native species trees & hedges. Several species of bird frequent the site (mainly passerine). Vegetation clearance

	during the construction phase would take place outside of the nesting season for birds. Any loss of foraging habitat would be compensated in the long-term by the planting of the perimeter with native species. Foraging bats could be adversely affected by vegetation clearance during the construction phase and artificial lighting during both phases. There was no evidence of roosting or nesting activity within the overall lands. EIAR mitigation measures include pre-construction bat surveys and minimal artificial lighting. and A NPWS Derogation Licence is required to enable relocation if necessary. Wildlife mitigation measures should include pre-construction surveys and the avoidance of artificial lighting. Fencing panels should be erected in such a manner so as allow wildlife to traverse the site.
Aquatic species: Potential for localised loss of, or disturbance to freshwater species as a result of a deterioration in water quality due to sedimentation, spillages and surface water runoff during the construction operational phases (substation & cable excavations).	The lands drain to the River Bunnoe via gravity and on-site drainage ditches, which ultimately discharge to the Annalee River which supports fisheries (incl. Perch, Pike, Roach, Bream & Trout). The surface water drainage arrangements and adherence to best construction practices would protect water quality (incl. aquatic species & fisheries) in the downstream watercourses from contamination during the construction & operational phases.

	The proposed development would not have any significant long-term effects on aquatic species during the construction or operational phases. This would be subject to the implementation of surface water management arrangements, compliance with EIAR mitigation measures, adherence to best construction practices and an agreed CEMP.
Residual Effects: Impacts predicted to be minor subject to implementation of mitigation measures.	
Cumulative Impacts: Minor impacts would occur in-combination with the construction of the permitted windfarm, but none predicted during the operational phase.	
Conclusion: I have considered all the written submissions made in relation to biodiversity, in addition to those specifically identified in this section of the report. I am satisfied that they have been appropriately addressed in terms of the application and that no significant adverse effect is likely to arise.	

Land, soil and water	
EIAR sections 6 & 7 and associated Appendices dealt with: - land & soil and water. The EIAR described the receiving environment and several desktop studies, field surveys & ground investigation tests were undertaken (in conjunction with the permitted windfarm). The site comprises agricultural lands underlain by shale bedrock, the aquifer vulnerability rating is Poor and generally unproductive except for Local Zones. The site elevations range from c.99mOD to c.105mOD. The site drains to Bunnoe River via gravity & on-site ditches, and hence to the Annalee River, with no sensitive hydrogeological features in the immediate vicinity. The EIAR described the proposed excavation & construction works for the substation and underground cables. It identified potential impacts (incl. soil erosion, contamination & compaction, accidental sediment & chemical discharges to ground & surface water during the construction phase, and surface water run-off during the operational phase). The EIAR also contained an outline CEMP, Spoil Management Plan, Surface Water Management Plan and Water Quality Management & Monitoring Plan. The EIAR did not predict any significant adverse impacts on land, soil or water during the construction & operational phases, subject to implementation of mitigation measures (incl. spoil management & reuse for landscaping, containment & management measures for surface water & fuels, and an emergency response plan).	
Submissions	***Concerns raised***
Planning Authority	Drainage arrangements.
Potential impacts	***Assessment & mitigation measures***
There is potential for the following impacts on land, soil & water in relation to the works associated with the construction & operation of the proposed substation and the installation of underground cables. ***Soils:*** potential for soil erosion, compaction & contamination during the excavation part of the	The overall lands comprise gently sloping agricultural grazing land that are underlain by shale bedrock at a depth of c.2.6m and traversed by drainage ditches. The lands drain to the Bunnoe River via gravity & the on-site ditches which discharges to the Annalee River. The EIAR oCEMP, Spoil Management & Surface Water Management Plans contains measures to prevent soil erosion &

construction phase.	contamination, and it is proposed to reuse excavated soils as infill and landscaping. Adherence to best construction practice should ensure that excessive compaction does not occur outside the footprint of the works.
Water quality: Potential pollution of watercourses (with resultant impacts on aquatic ecology) by sediments released during construction works & by run-off, accidental fuel spillages or leaks during the construction & operational phases.	The surface water management arrangements & EIAR mitigation measures would protect ground and surface water quality in nearby watercourses (incl. aquatic species) from contamination by sediment laden run-off and chemical spills during the construction & operational phases. These measures include sediment traps, spillage kits and appropriate disposal of any contaminated soil waste.
Ground & surface water contamination: Potential impacts resulting from surface water run-off, and leakage & spillages from vehicles during the construction phase (substation, underground cables & pylons), and potential impacts from surface water run-off and by accidental fuel spillages or leaks (from vehicles) during the operational phase.	Adherence to best construction practice and the methodologies contained in the agreed CEMP (incl. the surface water, site drainage and spoil management plans) and compliance with all relevant regulations would ensure the protection of ground & surface water quality during the construction & operational phases.
Flood risk: Potential impacts resulting from uncontrolled surface water runoff within and down slope of the site, on nearby watercourses.	Refer to section 6.6 of this report which dealt with the flood risk and concluded that no adverse flood risk impacts are anticipated during the construction & operational phases.

Residual Effects: Residual impacts are not predicted to be significant subject to the implementation of mitigation measures.
Cumulative Impacts: Minor impacts would occur in-combination with the construction of the permitted windfarm, but none predicted during the operational phase.
Conclusion: I have considered all the written submissions made in relation to land, soil & water, in addition to those specifically identified in this section of the report. I am satisfied that they have been appropriately addressed in terms of the application and that no significant adverse effect is likely to arise.

Material assets	
EIAR sections 13 and associated technical appendices dealt with traffic & transportation and material assets (incl. access, power supply, telecommunications, water supply & wastewater management). The EIAR described the receiving environment (incl. the road network & existing and future access arrangements) and several desktop studies and traffic surveys were undertaken. The EIAR described the site as comprising agricultural fields located within a rural area. It described the proposed movement, access, and service arrangements. It identified some minor traffic impacts during the construction and operational phases. The EIAR did not predict any significant adverse impacts on material assets during the construction & operational phases, subject to implementation of mitigation measures.	
Submissions	***Concerns raised***
TII & Planning Authority	Abnormal loads Site entrance
Potential impacts	***Assessment & mitigation measures***
There is potential for the following impacts on material assets in relation to the construction & operational phases of the proposed development. ***Traffic***: Construction & operational traffic have potential for localised impacts on the road network & traffic safety.	The proposed development would be located within a remote rural area and to the E of the permitted Drumlins Park Windfarm. The site & surrounding area is connected to the local, regional and national road network. Refer to section 6.3 of this report for a detailed analysis of movement & access impacts. The national, regional & local road network has sufficient capacity to assimilate the additional traffic volumes associated with the construction & operational phases. The vehicular access off the local road is acceptable, subject to the omission of one of the entrances. Adequate on-site car parking would be provided during both phases. No adverse impacts anticipated.

Utilities & resources: Potential impacts on utilities in the surrounding area (incl. transmission lines) and resources (incl. farming, fishing, forestry & quarries).	Proposed substation would connect a permitted windfarm to the national grid via the existing 110kV transmission line with no adverse impacts anticipated. The loss of agricultural lands within the footprint of the project would be permanent. There would be no significant adverse impacts on agriculture post construction. Fisheries would be protected by the implementation of the EIAR and CEMP water quality protection mitigation measures. No impacts on forestry or quarries in the wider area predicted.
Telecommunications: potential interference with TV, broadband & mobile phone signals	No adverse impacts anticipated.
Aviation: Potential impacts during the construction phase (cranes).	Impacts not likely to be significant given the substantial distance to the nearest airports.
Residual Effects: Residual impacts are not predicted to be significant subject to the implementation of mitigation measures.	
Cumulative Impacts: Minor impacts would occur in-combination with the construction of the permitted windfarm, but none predicted during the operational phase.	
Conclusion: I have considered all the written submissions made in relation to material assets, in addition to those specifically identified in this section of the report. I am satisfied that they have been appropriately addressed in terms of the application and that no significant adverse effect is likely to arise.	

Cultural heritage	
EIAR sections 9 & 10 and associated technical appendices dealt with landscape & visual impact; and archaeology, architectural & cultural heritage. The EIAR described the receiving environment as comprising agricultural fields located within a remote rural area and it identified several Recorded Monuments & cultural artefacts in the wider area (incl. Ringforts, Enclosures & Earthworks). The EIAR described the proposed development and identified potential impacts on cultural heritage around the site. It did not predict any significant adverse impacts during the construction & operational phases, subject to implementation of mitigation measures (incl. testing, monitoring & recording).	
Submissions	***Concerns raised***
GIS & DAU MCC Heritage Officer	Geological sites of interest Recorded monuments Protected structures
Potential impacts	***Assessment & mitigation measures***
Geology: Potential impacts on recorded features of geological interest in the wider area. ***Archaeology:*** Potential impacts on recorded and as yet undiscovered artefacts.	The proposed development would not adversely affect the recorded Rockcorry-Cootehill Moraines geological site to the S & E of the site given the substantial separation distance. The site is not covered by any sensitive designations and the proposed development would not have an adverse impact on any recorded archaeological heritage in the wider area site given the substantial separation distance (incl. Ringforts, Enclosures & Earthworks). The potential for adverse impacts on as yet undiscovered artifacts would be by the of EIAR mitigation measures & compliance with planning conditions (incl. (incl. testing, monitoring & recording).

Heritage features: Potential impact on character & setting of local heritage features (incl. bridges).	Refer to section 6.2, and the EIA Landscape section of this report which concluded that the proposed development would not have any adverse impacts on any nearby features.
Residual Effects: Residual impacts are not predicted to be significant subject to the implementation of mitigation measures.	
Cumulative Impacts: None predicted	
Conclusion: I have considered all the written submissions made in relation to cultural heritage, in addition to those specifically identified in this section of the report. I am satisfied that they have been appropriately addressed in terms of the application and that no significant adverse effect is likely to arise.	

7.5 Cumulative Impacts

There are several existing, permitted or proposed plans and projects within a 20km radius of the proposed development that have the potential to result in-combination effects with the proposed development on the receiving environment. These are addressed in each of the EIAR chapters. However, the main project relates to the recently permitted Drumlins Park Windfarm to the W of the site which would operate in conjunction with the proposed substation and transmission lines. Having regard to the nature, scale and location of the various projects I am satisfied that adverse cumulative effects can be avoided, managed and mitigated by the embedded measures which form part of the proposed development, EIAR mitigations measures, and recommended conditions. There is, therefore, nothing to prevent the granting of approval on the grounds of cumulative effects.

7.6 Interactions and Interrelationships

I have also considered the interrelationships between the key receptors and whether this might as a whole affect the environment, even though the effects may be acceptable when considered on an individual basis. In particular, the potential arises for the following interactions and interrelationships.

Population and human health:

- Noise and dust
- Air quality and climate
- Roads and traffic (air quality, safety & disturbance)

Air & climate

- Noise and dust
- Roads and traffic (emissions)
- Population and Human Health

Landscape

- Population and Human Health (visual amenity)
- Material Assets and Cultural Heritage

Biodiversity:

- Hydrology (water quality & fisheries)
- Population and human health (water quality)
- Soils and geology (water quality)

Land, Soil and Water:

- Air quality
- Biodiversity (terrestrial & aquatic)
- Population & Human Health

Material Assets and Cultural Heritage:

- Population & human health
- Landscape (visual amenity & landscape character)
- Roads and traffic (disturbance & safety)

In conclusion, I am satisfied that any such impacts can be avoided, managed and mitigated by the measures which form part of the proposed development.

7.7 Risks associated with major accidents and/or disasters

No outstanding risks associated with major accidents or disasters identified and the potential impacts associated with climate change have been factored into most sections of the EIAR.

7.8 Reasoned Conclusion

Having regard to the examination of environmental information contained above, and in particular to the EIAR and the submissions from the planning authority and prescribed bodies in the course of the application, it is considered that the main significant direct and indirect effects of the proposed development on the environment have been identified in section 6.0 and section 7.0 of this report. It is considered that the proposed development would not give rise to any significant

direct or indirect impacts of the environment, and the minor direct and indirect impacts are as follows.

- The ***risk of pollution of ground and surface waters during the construction phase*** through a lack of control of surface water during excavation and construction, the mobilisation of sediments and other materials during excavation and construction and the necessity to undertake construction activities in the vicinity of existing watercourses. The construction of the proposed project could also potentially impact negatively on ground and surface waters by way of contamination through accidents and spillages. These impacts would be mitigated by the agreement of measures within a Construction and Environment Management Plan, and the implementation of mitigation measures related to control and management of sediments, accidental spills and contamination, and drainage management.

- The proposed project would give rise to a minor localised increase in ***vehicle movements and resulting traffic impacts*** during the construction and operational phases. These impacts would be mitigated by the agreement of measures within a Construction and Environment Management Plan.
- The project could give rise to minor localised impacts on ***residential amenity*** during the construction (noise, dust, traffic safety & general disturbance) phase. These impacts would be mitigated by the implementation of measures related to the protection of air quality, control of noise and dust, traffic management, and the perimeter native species landscaping.

8.0 Appropriate Assessment

8.1 Compliance with Articles 6(3) of the EU Habitats Directive

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.

8.2 Natura Impact Statement

The application was accompanied by a Natura Impact Statement (NIS) which contained a Stage 1 Appropriate Assessment Screening and a Stage 2 Appropriate Assessment (AA). The report described the site, receiving environment (incl. habitats, species, watercourses & water quality) and the proposed development. It utilised the data collected as part of the EIAR desktop (incl. NPWS, EPA, IFI & NBWS datasets) and specific field surveys (incl. wintering & breeding bird and QI flora & fauna surveys) for the proposed development and associated Drumlins Park Windfarm. It also had regard to the consultation responses (incl. NPWS, IFI, EPA & NBDC) and relevant bird survey guidelines (incl. SNH 2017).

The ***AA Screening*** identified 6 x European sites that have the potential to be affected by the proposed development within a 15km radius of the site:

- Kilroosky Lough Cluster SAC
- Magheraveely Marl Lough SAC
- Lough Oughter & Associated Loughs SAC
- Upper Lough Erne SAC (UK)
- Upper Lough Erne SPA (UK)
- Lough Oughter Complex SPA

The ***NIS*** listed the Conservation Objectives, Qualifying Interests and Special Conservation Interests for each of these sites. It identified the potential sources of direct and indirect impacts on the sites, and assessed the potential impacts relative to the Conservation Objectives for each site. Two of the six European sites were screened out from further assessment because of the absence of a downstream hydrological connection (Kilroosky Lough Cluster & Magheraveely Marl Loughs SAC). It had regard to the EIAR water quality assessments and ecological surveys and concluded that the proposed development, will have no direct, indirect or cumulative impacts on the conservation status or integrity of any European site.

8.3 AA Screening Assessment

The main issues related to ecology and the concerns raised by the parties are summarised and addressed in section 4.0 of this report, section 6.5 deals with Biodiversity and section 7.0 contains an environmental impact assessment. These sections should be read in conjunction with this assessment.

The proposed development would not be located within a European site and it is not relevant to the maintenance of any European sites. There are 6 x European sites located within a c.15km radius of the proposed development, and 4 x sites located within the Zone of Influence (i.e. the area over which an impact can have a potential effect in relation to proximity of European sites and the mobility of faunal species from further afield sites). The Qualifying Interests and Special Conservation Interests, and approximate straight line and estimated aquatic separation distances from the project site to these European sites are listed below.

European site	Site code	QIs & SCIs	Separation distance	Link
Upper Lough Erne SAC	UK0016614	Natural eutrophic lakes Old sessile oak woods Alluvial forests & Otter	c.12.5km W (straight-line) c.48.5km (aquatic via River Bunnoe)	**Yes**
Kilroosky Cluster SAC	001786	Hard Oligo-mesotrophic waters Calcareous & Alkaline fens White-clawed crayfish	c.8.1km NW	**No**

Maheraveely Marl Loughs SAC	UK0016621	Hard Oligo-mesotrophic waters Calcareous & Alkaline fens White-clawed crayfish	c.8.9km NW (straight-line)	**No**
Lough Oughter & Associated Loughs SAC	000007	Natural eutrophic lakes Bog woodland Otter	c.11.4km SW c.21.7km (aquatic via River Bunnoe)	**Yes**
Upper Lough Erne SPA	UK9020071	Whooper swan	c.7.7km W c.48.5km (aquatic via River Bunnoe)	**Yes**
Lough Oughter Complex SPA	0094048	Whooper swan Great crested grebe Wigeon Wetland & waterbirds	c.18.1km SW c.26.7km (aquatic via River Bunnoe)	**Yes**

The potential effects relate to:

- Transport of pollutants (incl. sediments & chemicals) in ground or surface water flowing into the European sites via on-site tributaries.

- Ex-situ impacts on QI species outside the European sites but which are an integral and connected part of the population of qualifying interest species.

- Loss of foraging lands for mammals and interference with flight lines of bird species associated with the European sites.

Two of these sites can be screened out of any further assessment because of the absence of an aquatic connection between the proposed development and the European sites (Kilroosky Lough Cluster SAC & Maheraveely Marl Loughs SAC). The remaining 4 x European sites should be screened in for further assessment because of their proximity to the proposed development and associated construction works, the nature of the European site, the presence of an aquatic connection and the potential presence of Qualifying Interests and/or Special Conservation Interests in the vicinity of the project.

- Upper Lough Erne SAC (UK)
- Lough Oughter & Associated Loughs SAC
- Upper Lough Erne SPA (UK)
- Lough Oughter Complex SPA

AA Screening Conclusion

In conclusion, having regard to the nature and scale of the proposed development, the proximity of the project to the European sites, to the nature of the qualifying interest habitats and species, and the special conservation interest species, and the conservation objectives of the European sites, and to the available information as presented in the EIAR regarding ground and surface water pathways and mobile connections between the project and the European sites, and other information available, it is my opinion that the proposed development has the potential to affect 4 x European sites having regard to the conservation objectives of the relevant sites, and that progression to a Stage 2 Appropriate Assessment is required.

9.4 Appropriate Assessment

The relevant details for the four remaining European sites within the Zone of Influence of the proposed development are summarised below:

Site name	Conservation Objectives	QIs/SCIs	Attributes & Features
Upper Lough Erne SAC (UK)	To maintain (or restore where appropriate) these habitats to favourable condition.	Natural eutrophic lakes.	Maintain & enhance water quality and a natural hydrological regime. Maintain community types, species diversity, characteristics & composition. Minimal sediment load & protect lake substrate. Minimal environmental disturbance.
		Old sessile oak woods & Alluvial forests	Maintain & enhance extent, species, structure & diversity.
		Otter	Maintain population & distribution. Maintain extent & quality of habitat (incl. the chemical & biological water quality and all associated wetland habitats).

Upper Lough Erne SPA (UK)	To maintain each feature in favourable condition.	Whooper swan	No decrease in wintering population and maintain habitat extent & components
Lough Oughter & Associated Loughs SAC	To maintain (or restore where appropriate) these habitats to favourable condition.	Natural eutrophic lakes Bog woodland Otter	None specified.
Lough Oughter Complex SPA	To maintain or restore the favourable conservation condition of the SCI bird species	Whooper swan Great crested grebe Wigeon Wetland & Waterbirds	None specified.

Favourable Conservation Status is achieved when:

1. ***Habitats***

- The natural range (and area covered) is stable or increasing,
- The specific structure and functions which are necessary for its long-term maintenance exist now and for the foreseeable future,
- The conservation status of its typical species is favourable.

2. ***Species***

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

Upper Lough Erne SAC & SPA:

This extensive UK designated SAC and SPA is located to the NW of the proposed development in NI. According to the UK Joint Nature Conservation Committee (JNCC) site synopsis, Upper Lough Erne is a very large natural eutrophic lake situated in a drumlin landscape and has a predominantly limestone catchment, the lake has a very long shoreline and numerous associated satellite lakes and it contains a variety of freshwater, wetland and woodlands habitats. The site also regularly supports large numbers of nationally important over-wintering and breeding birds and internationally important numbers of wintering Whooper swan. The European sites are proximate to the Lough Oughter and Associated Lake SAC and Lough Oughter SPA in the RoI.

The site contains one of the largest areas of semi-natural woodland remaining in NI and drier soils support mature stands of old sessile oak woods, which are particularly well-developed to the S of the lough. It also contains the most extensive area of alluvial forests in NI which occurs in scattered stands around the edges of the lough. Fluctuating water levels and variations in exposure, substrate and management have resulted in the formation of a wide range of wet woodland communities. This site represents Otter in NI which holds one of the strongest populations in the UK, and the surrounding countryside and relatively unpolluted watercourses and waterbodies supports the otter population within the SAC.

The SAC has been designated for its importance to 3 x habitats (Natural eutrophic lakes, Old sessile oak woods & Alluvial forests) and 1 x species (Otter). It is noted that the applicant's NIS report referenced 3 x other habitats (Bog woodlands, Alkaline fens & Molinia meadows) which are not listed in the UK JNCC document as QI habitats. The SPA has been designated for 1 x species (Whooper swan) and it includes the Upper Lough Erne Ramsar site.

There would be no **direct** effects on the SAC or SPA as a result of the proposed works which are separated by a straight-line distance of c.12km and c.8km respectively, and an estimated aquatic distance of c.48km (via the River Bunnoe).

There is potential for **indirect** effects on these European sites during the ***construction phase*** as a result of: - water pollution from the unmitigated release of fine sediments in runoff during construction work and hydrocarbons by way of accidental spillages from machinery; general disturbance from construction activity; and disturbance to or loss of foraging habitat in the absence of appropriate mitigation measures. There is potential for **indirect** adverse effects during the ***operational phase*** as a result of: water pollution from hydrocarbons in runoff from vehicles; general disturbance from human activities; habitat deterioration; and loss of foraging habitat, in the absence of mitigation measures.

The EIAR/NIS contains several ***mitigation measures*** which would serve to protect the SAC and SPA from adverse effects, and these include: -

- Surface water and drainage management measures to protect water quality for QI habitats and species (& prey species), including, interceptor ditches, storm brakes and adherence to best construction practice (Natural eutrophic lakes & Otter).
- Timing and seasonality of works (Otter & Whooper swan).
- Pre-construction surveys (Otter & Whooper swan).
- Appointment of Project Ecologist to oversee works.

Natural eutrophic lakes: The development site would drain to the River Bunnoe to the S via on-site drainage ditches over a distance of c.125m and the River Bunnoe ultimately discharges to Upper Lough Erne to the NW via a series of watercourses over an aquatic distance of c.48km. Notwithstanding the concerns raised by NPWS in relation to distance and dilution, I am satisfied that following the implementation of the mitigation measures (incl. drainage arrangements & management of surface water runoff) the proposed development would not have an adverse impact on water quality in the nearby River Bunnoe during any of the phases of development. Therefore, there would be no resultant adverse effects on this QI habitat or its UK JNCC listed features (incl. water quality, hydrological regime, community types, species diversity, characteristics & composition, sediment load & lake substrate).

Old sessile oak woods: There would be no connection between the development site and this QI habitat which would not be adversely affected by any of the phases of the development including its UK JNCC listed features (incl. the maintenance & enhancement of the Oak woods, constituent species, structure & diversity).

Alluvial forests: There would be no connection between the development site and this QI habitat which would not be adversely affected by any of the phases of the development including its UK JNCC listed features (incl. the maintenance & enhancement of the constituent species, structure & diversity).

Otter: The development site would drain to the River Bunnoe to the S via on-site drainage ditches over a distance of c.125m, and the River Bunnoe ultimately discharges to Upper Lough Erne to the NW via a series of watercourses over an aquatic distance of c.48km. Notwithstanding the concerns raised by NPWS in relation to distance and dilution, I am satisfied that following the implementation of the mitigation measures (incl. the measures to protect water quality and hence the availability of prey species) the proposed development would not have an adverse impact on this species in the nearby River Bunnoe during any of the phases of development. Therefore, there would be no resultant adverse effects on this QI species or its UK JNCC listed features (incl. maintenance of species population & distribution, extent & quality of habitat and water quality). No adverse ex-situ effects are predicted for the distribution of this species outside of this UK SAC within the RoI with respect to NPWS attributes and targets for similar European sites (incl. availability of fish biomass, barriers to connectivity, distribution, extent of freshwater and terrestrial habitat and couching sites and holts), following the implementation of the mitigation measures.

Whooper swan: The proposed substation would be located c.8km from the site boundary of this SPA and potential impacts include a diminution of water quality and hence prey species, and collision risk with overhead power lines. The EIAR/NIS field surveys for the proposed development and associated Drumlins Park Windfarm did not record any significant presence of Whooper swan flying over, foraging, staging or resting on or in the vicinity of the site which does not contain optimal habitat for this species. The substation would be connected to the existing overhead powerline to

the E via underground cables which would negate the risks associated with collisions, and the water quality management mitigation measures outlined above would protect the availability of prey species. There would be no resultant adverse effects on this SCI species or its UK JNCC listed features (incl. no decrease in wintering population and maintenance of habitat extent & components). No adverse ex-situ effects are predicted for the distribution of this species outside of this UK SPA within the RoI with respect to NPWS attributes and targets for similar European sites (incl. stable population trends & no decrease in distribution) following the implementation of the mitigation measures (incl. pre-construction surveys).

Having regard to the foregoing, it can be reasonably concluded on the basis of best scientific knowledge therefore that the proposed development will not adversely affect the integrity of the Upper Lough Erne SAC and SPA in view of the sites' Conservation Objectives.

In relation to ***In-combination effects***, the Natura 2000 Standard Data Form lists several threats to the Upper Lough Erne SAC and SPA which are of high to medium importance (incl. changes to hydraulic conditions, surface water runoff, agricultural discharges, invasive species, water sports, grazing & hunting). Several projects are being progressed in the wider area (incl. energy projects, recreational works along with small scale urban & rural developments). Having regard to the nature and scale of the proposed development, and subject to the full implementation of the mitigation measures, and to the previous conclusion of no adverse effects on the European sites, I am satisfied that there would be no in-combination effects.

Lough Oughter & Associated Loughs SAC and Lough Oughter Complex SPA

This extensive SAC and SPA is located to the NW of the proposed development in County Cavan. According to the NPWS Site Synopsis, this SAC and SPA occupy much of the lowland drumlin belt in north and central Cavan between Upper Lough Erne, Killeshandra and Cavan town, to the NW of the proposed development. The sites comprise a maze of waterways, islands, small lakes and peninsulas including some 90 x inter-drumlin lakes and 14 x basins in the course of the Erne River. The

European sites are also located proximate to the extensive UK designated Upper Lough Erne SAC and SPA in NI.

The site supports a substantial population of water birds including internationally important numbers of Whooper Swan and nationally important numbers of Tufted Duck and Cormorant, as well as important numbers of species (incl. Greenland White-fronted Goose, Great Crested Grebe, Wigeon, Teal & Pochard). The SAC has been designated for its importance to 2 x habitats (Natural eutrophic lakes & Bog woodland) and 1 x species (Otter). The SPA which has been designated for several bird species (Whooper swan, Great crested grebe, Wigeon and Wetland & Waterbirds), and Wildfowl Sanctuaries exist at Inchin Lough, Derrygid Lough, Farnham Lough, Derrybrick Lough, Derrinishbeg Lough and Annagh Lough.

There would be no **direct** effects on the SAC or SPA as a result of the proposed works which are separated by a straight-line distance of c.11km and c.18km respectively and an estimated aquatic distance of c.22km an 27km respectively (via River Bunnoe).

There is potential for **indirect** effects on these European sites during the ***construction phase*** as a result of: - water pollution from the unmitigated release of fine sediments in runoff during construction work and hydrocarbons by way of accidental spillages from machinery; general disturbance from construction activity; and disturbance to or loss of foraging habitat in the absence of appropriate mitigation measures. There is potential for **indirect** adverse effects during the ***operational phase*** as a result of: water pollution from hydrocarbons in runoff from vehicles; general disturbance from human activities; habitat deterioration; and loss of foraging habitat, in the absence of mitigation measures.

The NPWS Conservation Objectives do not list any key attributes or targets for the QI habitats and species or SCI species, however the generic attributes for other similar SACs and SPAs to the assessment of potential effects will be utilised.

Following the implementation of the ***mitigation measures*** which include: -

- Surface water and drainage management measures to protect water quality for species (incl. prey species), including storm brakes, interceptor ditches, and best construction practice.
- Timing and seasonality of works.
- Pre-construction surveys.
- Appointment of Project Ecologist to oversee works.

Natural eutrophic lakes: The development site would drain to the River Bunnoe to the S via on-site drainage ditches over a distance of c.125m, and the River Bunnoe ultimately discharges to Lough Oughter to the W via a series of watercourses over an aquatic distance of c.22km. Notwithstanding the concerns raised by NPWS in relation to distance and dilution, I am satisfied that following the implementation of the mitigation measures (incl. drainage arrangements & management of surface water runoff) the proposed development would not have an adverse impact on water quality in the nearby River Bunnoe during any of the phases of development. Therefore, there would be no resultant adverse effects on this QI habitat with respect to NPWS attributes and targets for similar European sites (incl. stable habitat area & distribution, typical species, vegetation composition & distribution, hydrological regime & lake substrate, water quality & turbidity and quality of fringe habitats).

Bog woodland: There would be no connection between the development site and this QI habitat which would not be adversely affected by any of the phases of the development with respect to NPWS attributes and targets for similar European sites (incl. stable habitat area & distribution, vegetation composition & woodland structure).

Otter: The development site would drain to the River Bunnoe to the S via on-site drainage ditches over a distance of c.125m, and the River Bunnoe ultimately discharges to Lough Oughter to the W via a series of watercourses over an aquatic distance of c.22km. Notwithstanding the concerns raised by NPWS in relation to distance and dilution, I am satisfied that following the implementation of the

mitigation measures (incl. the measures to protect water quality and hence the availability of prey species) the proposed development would not have an adverse impact this species in the nearby River Bunnoe during any of the phases of development. Therefore, there would be no resultant adverse effects on this QI species with respect to NPWS attributes and targets for similar European sites (incl. availability of fish biomass, barriers to connectivity, distribution, extent of freshwater and terrestrial habitat and couching sites and holts), following the implementation of the mitigation measures.

Whooper swan, Great crested grebe, Wigeon and Wetland & Waterbirds:
The proposed substation would be located c.18km from the site boundary of this SPA and potential impacts include a diminution of water quality and hence prey species, loss of foraging grounds and collision risk with overhead power lines. The EIAR/NIS field surveys for the proposed development and associated Drumlins Park Windfarm did not record any significant presence of Whooper swan, Great crested grebe, Wigeon and Wetland & Waterbirds flying over, foraging, staging, nesting or resting on or in the vicinity of the site which does not contain optimal habitat for these species. Most of the SCI species prefer to frequent and feed along the coastline along some species overwinter along inland water ways. The substation would be connected to the existing overhead powerline to the E via underground cables which would negate the risks associated with collisions, and the water quality management mitigation measures outlined above would protect the availability of prey species. There would be no resultant adverse effects on these SCI species with respect to NPWS attributes and targets for similar European sites (incl. stable population trends & no decrease in distribution) following implementation of the mitigation measures (incl. pre-construction surveys).

Having regard to the foregoing, it can be reasonably concluded on the basis of best scientific knowledge therefore that the proposed development will not adversely affect the integrity of the Lough Oughter & Associated Loughs SAC and Lough Oughter Complex SPA in view of the sites' Conservation Objectives.

In relation to ***In-combination effects***, the NPWS Natura Standard Data Form lists several threats to the Lough Oughter & Associated Loughs SAC and Lough Oughter Complex SPA which are of high to medium importance (incl. changes to hydraulic conditions, surface water runoff, agricultural discharges, invasive species, water sports, grazing & hunting). Several projects are being progressed in the wider area (incl. energy projects, recreational works and with small scale urban & rural developments). Having regard to the nature and scale of the proposed development, and subject to the full implementation of the mitigation measures, and to the previous conclusion of no adverse effects on the European sites, I am satisfied that there would be no in-combination effects.

Conclusion:

In relation to the ***NIS***, I am satisfied that the applicant has described the receiving environment, identified the European sites within the Zone of Influence, and provided sufficient information to assess potential effects during the construction and operational phases on the Qualifying Interest and Special Conservation Interest habitats and species before and after the implementation of mitigation measures. I am satisfied that the NIS was informed by relevant and robust desktop and site surveys and prepared in accordance with all relevant guidelines. I concur with the conclusions of the NIS as summarised above.

I concur with the conclusions reached in the NIS that the proposed substation development will have no adverse effects (direct, indirect or in-combination) on the Conservation Objectives, Qualifying Interests or Special Conservation Interests for the Upper Lough Erne SAC, Upper Lough Erne SPA, Lough Oughter & Associated Loughs SAC and Lough Oughter Complex SPA**,** or for any other European Site.

9.5 Appropriate Assessment conclusion:

I consider it reasonable to conclude on the basis of the information on the file, which I consider adequate in order to carry out a Stage 2 Appropriate Assessment, that the proposed development, individually or in combination with other plans or projects would not adversely affect the integrity of the European site Nos. UK0016614, UK0016621, 000007 and 0094048, or any other European site, in view of the site's Conservation Objectives.

9.0 Recommendation

Arising from my assessment of this planning application I recommend that planning permission should be granted for the proposed development for the reasons and considerations set down below, and subject to the attached conditions.

10.0 Reasons and Considerations

Having regard to:

a. The National Planning Framework – Ireland 2040,
b. The Regional Spatial and Economic Strategy for the Northern and Western Region, 2020,
c. The policies of the planning authority as set out in the Monaghan County Development Plan 2019 - 2025,
d. The distance to dwellings or other sensitive receptors,
e. The submissions made in connection with the application,
f. The likely consequences for the environment and the proper planning and sustainable development of the area in which it is proposed to carry out the proposed development and the likely significant effects of the proposed development on European Sites,
g. The report and recommendation of the Inspector.

Proper planning and sustainable development:

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.

Environmental Impact Assessment:

The Board completed an environmental impact assessment of the proposed development taking account of:

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

(b) the Environmental Impact Assessment Report (EIAR) and associated documentation submitted in support of the application,

(c) the submissions received from the prescribed bodies and planning authority, and

(d) the Inspector's report.

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. 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. The Board considered that the main significant direct and indirect effects of the proposed development on the environment are, and would be mitigated, as follows:

- The risk of pollution of ground and surface waters during the construction phase which would be mitigated by the implementation of measures set out in the Environmental Impact Assessment Report (EIAR) and the outline Construction and Environment Management Plan (oCEMP) which include specific provisions relating to groundwater, surface water and drainage.

- Noise, vibration and dust during the construction and/or the operational phases would be mitigated by the implementation of the measures set out in the Environmental Impact Assessment Report (EIAR) and the outline Construction and Environment Management Plan (oCEMP) which include specific provisions relating to the control of dust and noise.
- The increase in vehicle movements and resulting traffic during the construction and operational phases would be mitigated by the implementation of the measures set out in the Environmental Impact Assessment Report (EIAR) and the outline Construction and Environment Management Plan (oCEMP).
- The impacts on residential amenity during the construction and operational phases would be mitigated by the implementation of the measures set out in the Environmental Impact Assessment Report (EIAR) and the outline Construction and Environment Management Plan (oCEMP) which include specific provisions relating to the control and management of dust, noise, water quality and traffic movement.

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

Appropriate Assessment:

The Board noted that the proposed development is not directly connected with or necessary to the management of a European Site. In completing the Appropriate Assessment, the Board accepted and adopted the assessment and conclusion carried out in the Inspector's report in respect of the identification of the European sites which could potentially be affected, and the identification and assessment of the potential likely significant effects of the proposed development, either individually or in combination with other plans or projects, on these European sites in view of the site's Conservation Objectives. The Board was satisfied that

the proposed development, either individually or in combination with other plans or projects, would not be likely to have a significant effect on any European sites, in view of the site's Conservation Objectives.

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. The mitigation measures identified in the EIAR, NIS and other plans and particulars submitted with the planning application, including the applicant's response submission to the concerns raised by the Observers shall be implemented in full by the developer, except as may otherwise be required in order to comply with the conditions of this permission.
   Reason: In the interest of clarity and protection of the environment during the construction and operational phases of the proposed development.

3. The developer shall comply with the following general requirements:
   (a) No 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 the road.
   (c) Each fencing panel shall be erected such that for a minimum of 300 millimetres of its length, its bottom edge is no less than 150 millimetres from ground level.
   (d) Cables within the site shall be located underground.

Reason: In the interest of clarity, of visual and residential amenity, to allow wildlife to continue to have access to and through the site, and to minimise impacts on drainage patterns and surface water quality.

4. The developer shall comply with the following nature conservation requirements:
    a. No felling or vegetation removal shall take place during the period 1st March to 31st August.
    b. A pre-construction mammal survey shall be carried out by a suitably qualified ecologist to check for the presence of any protected species (incl. otter, birds, bats & common frog).
    c. Any destruction of bat roosting sites or relocation of bat species shall be carried out by a suitably qualified ecologist under a Derogation Licence granted by the Minister for Housing, Local Government and Heritage.

    Reason: In the interest of biodiversity and nature conservation.

5. The landscaping proposals shall be carried out within the first planting season following commencement of construction of the proposed development. All existing hedgerows (except at access track openings) 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.

6. Water supply and drainage arrangements, including the attenuation and disposal of surface water, shall comply with the requirements of Irish Water and the planning authority for such works and services as appropriate.

    Reason: In the interest of public health and to ensure a proper standard of development.

7. 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.

8. The developer shall comply with the following specific transportation requirements:

   a. Omit the western vehicular entrance off the local road to the battery storage compound and internal access track.
   b. Amend the layout of the westernmost internal access track to the substation compound to provide for two separate internal access points to the substation compound and adjacent battery storage compound.

   Details shall be submitted to the planning authority for written agreement prior to development commencing.

   Reason: In the interest of visual amenity, the protection of trees and hedgerows, and the proper planning and sustainable development of the area.

9. The construction of the development shall be managed in accordance with a final Construction and Environmental Management Plan, which shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. This plan shall provide details of intended construction practice for the development, including hours of working, noise management measures, traffic management, protection of wayleaves, an invasive species management plan and off-site disposal of construction /demolition waste.
   Reason: In the interests of public safety and residential amenity.

10. Site development and building works shall be carried out only between the hours of 0800 to 1900 Mondays to Fridays inclusive, between 0800 to 1400 hours on Saturdays and not at all on Sundays and public holidays. Deviation from these times will only be allowed in exceptional circumstances where prior written approval has been received from the planning authority. **Reason:** In order to safeguard the residential amenities of property in the vicinity.

11. The site development and construction works shall be carried out such a manner as to ensure that the adjoining roads 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.

12. The developer shall comply with the following archaeological requirements:

    (a) Pre-development archaeological testing shall be undertaken by a suitably qualified archaeologist, licensed under the National Monuments Acts 1930-2004. No sub-surface work shall be undertaken in the absence of the archaeologist without his/her written consent.

    (b) A report, containing the results of the assessment, shall be submitted to the planning authority and, arising from this assessment, the developer shall agree in writing with the planning authority details regarding any further archaeological requirements (including, if necessary, archaeological excavation) prior to commencement of construction works. A copy of the report shall be submitted to the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.

    (c) The planning authority and the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs shall be notified in writing at least four weeks prior to the commencement of any site operation (including hydrological and geotechnical investigations) relating to the proposed development.

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 area and to secure the preservation (in-situ or by record) and protection of any archaeological remains that may exist within the site.

13. Prior to commencement of development, the developer shall lodge with the planning authority a bond of an insurance company, a cash deposit, or other security to secure the provision and satisfactory completion of the development, coupled with an agreement empowering the planning authority to apply such security or part thereof to the satisfactory completion of any part of the development.

    Reason: To ensure the satisfactory completion of the development.

Karla Mc Bride
Senior Planning Inspector
5th August 2021