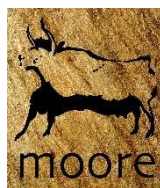


Report for the purposes of
Appropriate Assessment Screening

Project Admiral Castlelost

Prepared by: Moore Group – Environmental Services

27 February 2026



On behalf of Lumcloon Energy Limited (LEL)

Project Proponent	Lumcloon Energy Limited (LEL)
Project	Project Admiral
Title	Report for the purposes of Appropriate Assessment Screening Project Admiral Castlelost

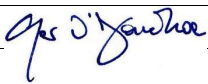
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Table of Contents

1. Introduction	1
1.1. General Introduction.....	1
1.2. Legislative Background - The Habitats and Birds Directives	1
2. Methodology.....	2
2.1. Guidance	3
2.2. Data Sources	4
3. Description of the Proposed Development.....	4
4. Identification of Natura 2000 Sites	10
4.1. Description of Natura Sites Potentially Significantly Affected	10
4.2. Ecological Network Supporting Natura 2000 Sites.....	15
5. Identification of Potential Impacts & Assessment of Significance.....	16
5.1. Assessment of Likely Significant Effects.....	16
5.2. Assessment of Potential In-Combination Effects.....	18
6. Conclusion.....	22
7. References	23

Abbreviations

AA	Appropriate Assessment
ACP	An Coimisiún Pleanála
CEMP	Construction Environmental Management Plan
EEC	European Economic Community
EPA	Environmental Protection Agency
EU	European Union
FWPM	Freshwater Pearl Mussel
GIS	Geographical Information System
LAP	Local Area Plan
NHA	Natural Heritage Area
NIS	Natura Impact Statement
NPWS	National Parks and Wildlife Service
OSI	Ordnance Survey Ireland
pNHA	proposed Natural Heritage Area
SAC	Special Area of Conservation
SPA	Special Protection Area
SuDS	Sustainable Drainage System
UÉ	Uisce Éireann
WFD	Water Framework Directive

1. Introduction

1.1. General Introduction

This report for the purposes of Appropriate Assessment (AA) Screening has been prepared to support a Planning Application for the Proposed Development (described in Section 3 below). This report contains information required for the competent authority to make a determination on Appropriate Assessment (AA) on the potential construction and operation of Data Centre Facility and Decentralised Energy Resource at Gneevebane, Oldtown, Farthingstown, Castlelost, and Kiltotan and Collinstown Rochfortbridge, County Westmeath; (hereafter referred to as the Proposed Development) to significantly affect European sites.

Having regard to the provisions of the Planning and Development Act 2000, as amended (the "Planning Acts") (section 177U), the purpose of a screening exercise under section 177U of the PDA 2000 is to assess, in view of best scientific knowledge, if the proposed development, individually or in combination with other plans or projects is likely to have a significant effect on a European site.

If it cannot be *excluded* on the basis of objective information that the proposed development, individually or in combination with other plans or projects, will have a significant effect on a European site then it is necessary to carry out a Stage 2 appropriate assessment under section 177V of the Planning Acts.

When screening the project, there are two possible outcomes:

- the project poses no potential for the possibility of a significant effect and as such requires no Stage 2 assessment; or
- the project has potential to have a significant effect (or this is uncertain and therefore cannot be excluded) and therefore a Stage 2 Appropriate Assessment of the project is necessary.

This report has been prepared by Moore Group - Environmental Services to enable the competent authority to make a determination on AA screening in relation to the Proposed Development. The report was compiled by Ger O'Donohoe B.Sc. Applied Aquatic Sciences (ATU Galway, 1993) & M.Sc. Environmental Sciences (TCD, 1999) who has over 30 years' experience in environmental impact assessment and has completed numerous Appropriate Assessment Screening Reports and Natura Impact Statements on terrestrial and aquatic habitats for various development types.

1.2. Legislative Background - The Habitats and Birds Directives

Article 6(3) and 6(4) of the Habitats Directive are transposed into Irish Law inter alia by the Part XAB of the Planning Acts (in particular section 177U and 177V) which governs the requirement to carry out appropriate assessment screening and appropriate assessment, where required, per Section 1.1 above.

The Habitats Directive (Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora) is the main legislative instrument for the protection and conservation of biodiversity in the European Union (EU). Under the Habitats Directive, Member States are obliged to designate Special Areas of Conservation (SACs) which contain habitats or species considered important for protection and conservation in a EU context.

The Birds Directive (Council Directive 2009/147/EC on the conservation of wild birds), transposed into Irish law by the Bird and Natural Habitats Regulations 2011 as amended, and the Wildlife Act 1976, as amended, is concerned with the long-term protection and management of all wild bird species and their habitats in the EU. Among other things, the Birds Directive requires that Special Protection Areas (SPAs) be established to protect migratory species and species which are rare, vulnerable, in danger of extinction, or otherwise require special attention.

SACs designated under the Habitats Directive and SPAs, designated under the Birds Directive, form a pan-European network of protected sites known as Natura 2000. The Habitats Directive sets out a unified system for the protection and management of SACs and SPAs. These sites are also referred to as European sites.

Articles 6(3) and 6(4) of the Habitats Directive set out the requirement for an assessment of proposed plans and projects likely to have a significant effect on Natura 2000 sites.

Article 6(3) establishes the requirement to screen all plans and projects and to carry out an appropriate assessment if required (Appropriate Assessment (AA)).

Article 6(3): *“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 subjected to an appropriate assessment of its implications for the site in view of the site’s conservation objectives. In light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.”*

Article 6(4) establishes requirements in cases of imperative reasons of overriding public interest.

2. Methodology

The Commission’s methodological guidance (EC, 2002, 2018, 2021 see Section 2.1 below) promotes a four-stage process to complete the AA and outlines the issues and tests at each stage. An important aspect of the process is that the outcome at each successive stage determines whether a further stage in the process is required.

Stages 1 and 2 deal with the main requirements for assessment under Article 6(3). Stage 3 may be part of Article 6(3) or may be a necessary precursor to Stage 4. Stage 4 is the main derogation step of Article 6(4).

Stage 1 Screening: This stage examines the likely effects of a project either alone or in combination with other plans and projects upon a Natura 2000 site and considers whether it can be objectively concluded that these effects will not be significant. In order to screen out a project, it must be excluded, on the basis of objective information, that the Proposed Development, individually or in combination with other plans or projects, will have a significant effect on a European site.

Stage 2 Appropriate Assessment: This stage considers whether the plan or project, alone or in combination with other projects or plans, will have adverse effects on the integrity of a Natura 2000 site, and includes any mitigation measures necessary to avoid, reduce or offset negative effects. The promoter of the plan or project will be required to submit a Natura Impact Statement, i.e. the report of a targeted professional scientific examination of the plan or project and the relevant Natura 2000 sites, to identify and characterise any possible implications for the site in view of the site's conservation objectives, taking account of in combination effects.

Stage 3 Assessment of Alternative Solutions: This stage examines alternative ways of implementing the project that, where possible, avoid any adverse impacts on the integrity of the Natura 2000 site.

Stage 4 Assessment where no alternative solutions exist and where adverse impacts remain: Where imperative reasons of overriding public interest (IROPI) exist, an assessment to consider whether compensatory measures will or will not effectively offset the damage to the sites will be necessary.

To ensure that the Proposed Development complies fully with the requirements of Article 6 of the Habitats Directive and all relevant Irish transposing legislation, Moore Group compiled this report to enable the competent authority to make a determination on AA screening in relation to the Proposed Development to determine whether it can be excluded, on the basis of objective information, that the Proposed Development, individually or in combination with other plans or projects, will have a significant effect on a European site(s).

2.1. Guidance

This report has been compiled in accordance with guidance contained in the following documents:

- Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities. (Department of Environment, Heritage and Local Government, 2010 rev.).
- Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities. Circular NPWS 1/10 & PSSP 2/10.
- Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC (EC, 2018).
- Guidance document on the strict protection of animal species of Community interest under the Habitats Directive (EC, 2021).

- Assessment of plans and projects in relation to Natura 2000 sites - Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC (EC, 2021).
- Office of the Planning Regulator (OPR) Practice Note PN01 Appropriate Assessment Screening for Development Management (OPR, 2021).
- Natura Impact Statement Sustainable Residential Development and Compact Settlement Guidelines for Planning Authorities (NPWS, 2024).

2.2. Data Sources

Sources of information that were used to collect data on the Natura 2000 network of sites, and the environment within which they are located, are listed below:

- The following mapping and Geographical Information Systems (GIS) data sources, as required:
 - National Parks & Wildlife (NPWS) protected site boundary data;
 - Ordnance Survey of Ireland (OSI) mapping and aerial photography;
 - OSI/Environmental Protection Agency (EPA) rivers and streams, and catchments;
 - Digital Elevation Model over Europe (EU-DEM);
 - Google Earth and Bing aerial photography 1995-2025;
- Online data available on Natura 2000 sites as held by the National Parks and Wildlife Service (NPWS) from www.npws.ie including:
 - Natura 2000 - Standard Data Form;
 - Conservation Objectives;
 - Site Synopses;
- National Biodiversity Data Centre records;
 - Online database of rare, threatened and protected species;
 - Publicly accessible biodiversity datasets.
- Status of EU Protected Habitats in Ireland. (National Parks & Wildlife Service, 2019); and
- Relevant Development Plans;
 - Westmeath County Development Plan 2021-2027

3. Description of the Proposed Development

The Proposed Development consists of a Data Centre Facility and Decentralised Energy Resource within an overall development boundary area of 243 hectares comprising:

- 1 No. Security control building (floor area 23.5m²).

- 6 No. new data buildings including administration blocks (each 228m x 62m x 18m high), 6 No. MV switch room buildings, within a secure campus having an area of 39 hectares, 1 No. fire water tank (Volume: 2000m³), pump house and proprietary modular water treatment plant.
- 6 No. fuel cell towers (each 89m x 29m x 20m high), 2 No. chilled water tanks (Volume: 1000m³ each), pump house, ancillary water tank (Volume: 2000m³), carbon dioxide process building (30.7m x 15.7m x 11.3m high) and 16 No. carbon dioxide storage tanks (100 tonnes each).
- Ancillary equipment compound including a storage building (30.7m x 10.7m x 9.7m high), 2 No. diesel generators, fire water tank (Volume: 2000m³) and pump house and proprietary modular water treatment plant.
- Above ground gas installation (AGI) compound including a boiler/instrument kiosk, regulator/metal skid kiosk and connection to the existing gas network within the site.
- 33kV IPP building (60.9m x 18.4m x 16.8m high), 1 No. telecoms tower 36m high and compound.
- Fuel cell IPP building (40m x 9.8m x 7.1m high) and compound.
- Solar farm IPP building (30m x 9.8m x 7.1m high) and compound.
- Battery compound including 138 No. battery enclosures & 138 No. medium voltage power stations (MVPS), IPP building (40m x 9.8m x 7.1m high) and fire water tank (Volume: 500m³).
- Proprietary modular water treatment plant serving the solar farm IPP building and battery compound IPP building.
- Solar farm (168 hectares) to the east of the data campus facility including solar arrays measuring (10.2m x 6.9m), (20.4m x 6.9m) & (30.6 x 6.9m), 45 No. medium voltage power stations (MVPS), 5 No. weather stations, river crossings, internal gravel access roads, security fencing and gates, 3 No. temporary construction compounds, cable crossings in the R446, L11272 & L51251 public roads, and cable crossing under the M6 using horizontal directional drilling.
- Connection to public sewer under the R446 public road.
- New emergency only access/egress from the R446 public road.
- Access/egress to the data centre campus facility through the existing Castlelost Flexgen and GIS substation access to the R446.
- Demolition of the existing derelict dwelling and agricultural sheds.
- All associated site works.

There are only two main crossings as shown (Bridge 1 and 2) and these are clear span, see Figure 3a, with no interaction with the water course below, i.e. the Kiltotan-Collinstown stream.

Other proposed crossings of minor field drains will be served by placement of short sections of round precast concrete culvert with minimal intervention in the field drain.

Figure 1 shows the Proposed Development location and Figure 2 shows a detailed view of the Proposed Development boundary on recent aerial photography. Figure 3 shows the layout of the Proposed Development.

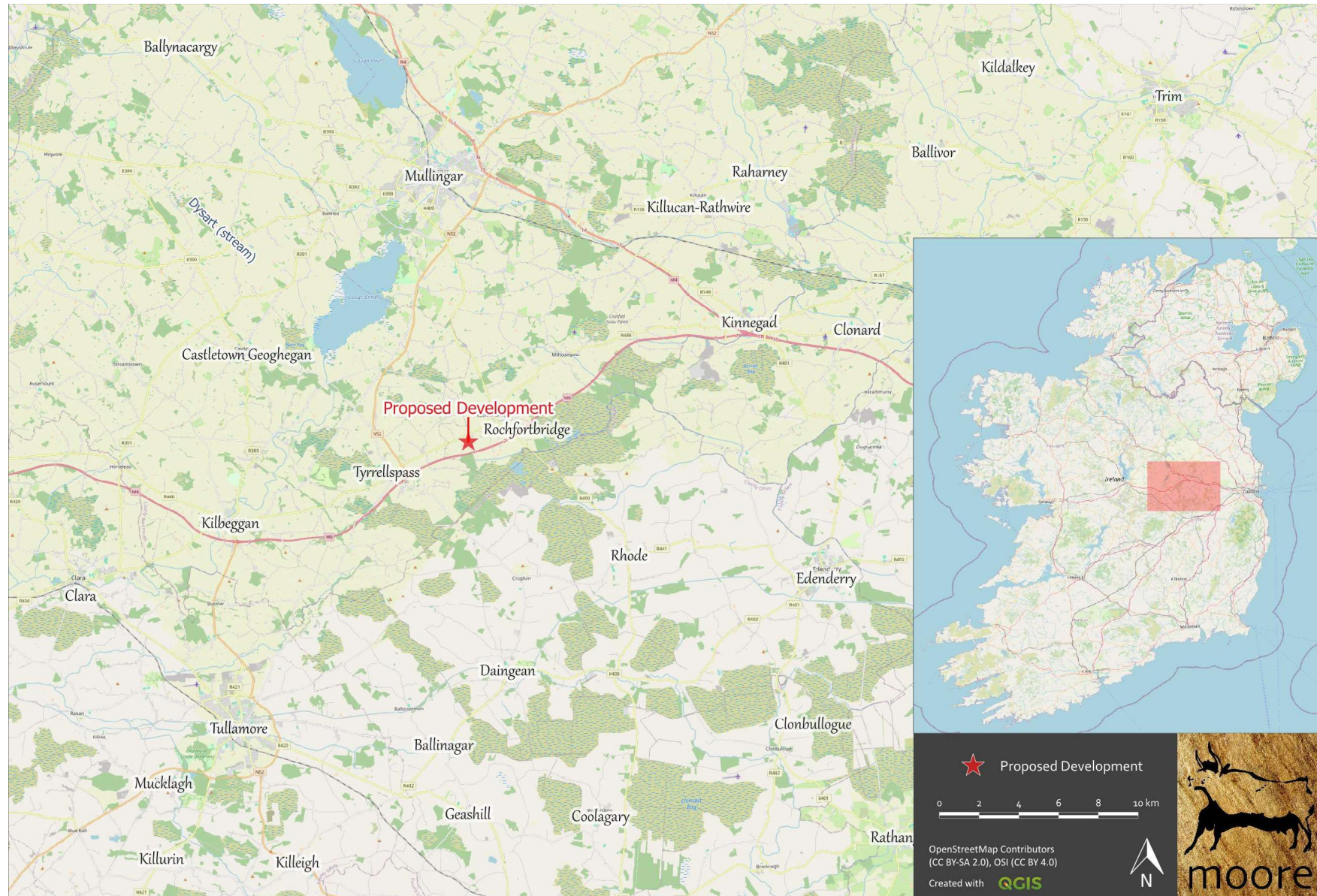


Figure 1. Showing the Proposed Development location at Kiltotan, Collinstown Oldtown, Co. Westmeath.

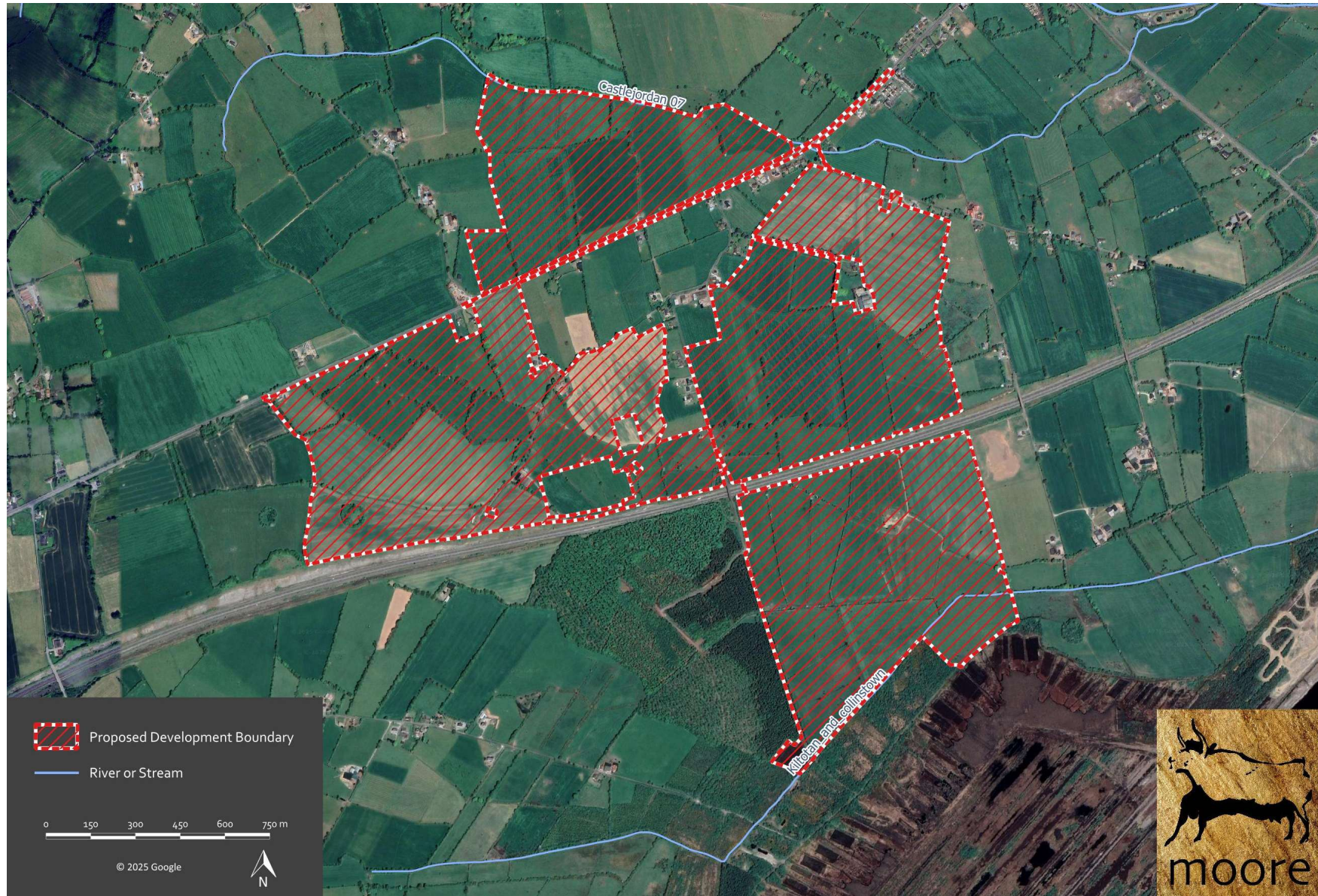


Figure 2. Showing the Proposed Development boundary on recent aerial photography.

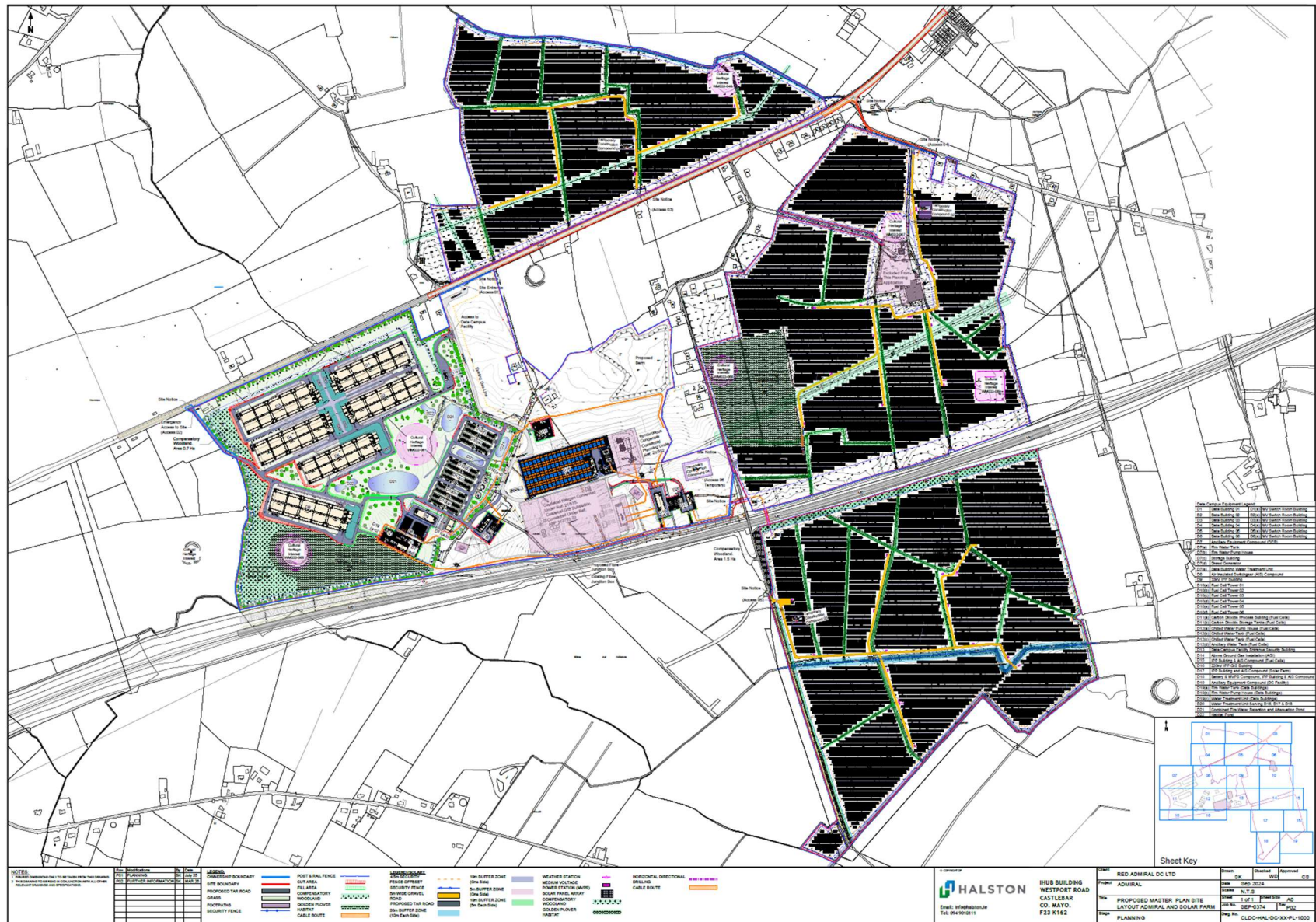


Figure 3. Masterplan of the Proposed Development.

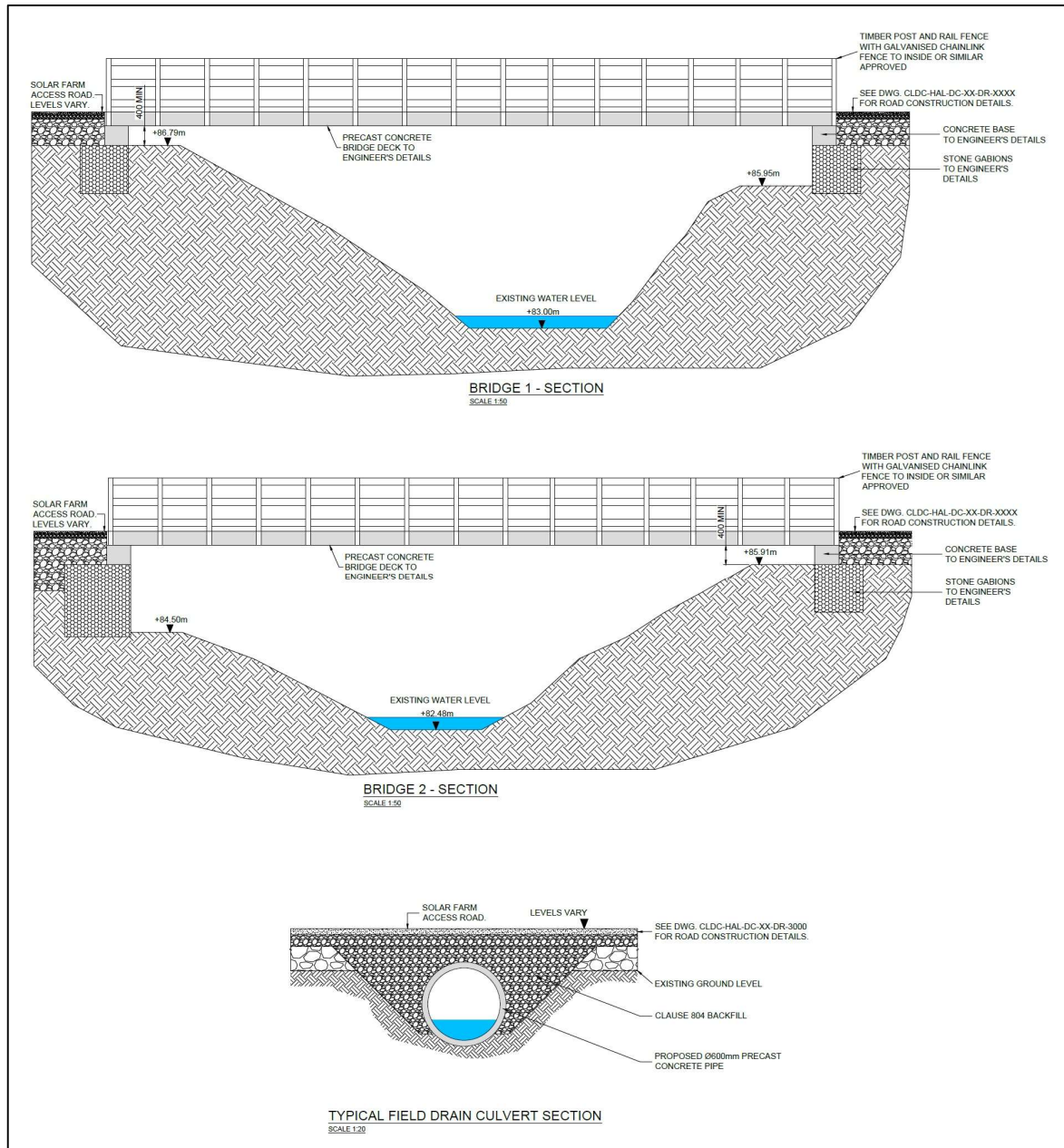


Figure 3a. Details of two clear span bridge crossings and indicative drainage ditch crossing by precast culvert.

4. Identification of Natura 2000 Sites

4.1. Description of Natura Sites Potentially Significantly Affected

A Zone of Influence (Zoi) of a proposed development is the geographical area over which it could affect the receiving environment in a way that could have significant effects on the Qualifying Interests of a European site. In accordance with the OPR Practice Note (2021), PN01, the Zoi should be established on a case-by-case basis using the Source- Pathway-Receptor framework.

The European Commission's "Assessment of plans and projects in relation to Natura 2000 sites guidance on Article 6(3) and (4) of the Methodological Habitats Directive 92/43/EEC" published 28 September 2021 states at section 3.1.3, that:

"Identifying the Natura 2000 sites that may be affected should be done by taking into consideration all aspects of the plan or project that could have potential effects on any Natura 2000 sites located within the zone of influence of the plan or project. This should take into account all of the designating features (species, habitat types) that are significantly present on the sites and their conservation objectives. In particular, it should identify:

- any Natura 2000 sites geographically overlapping with any of the actions or aspects of the plan or project in any of its phases, or adjacent to them;*
- any Natura 2000 sites within the likely zone of influence of the plan or project Natura 2000 sites located in the surroundings of the plan or project (or at some distance) that could still be indirectly affected by aspects of the project, including as regards the use of natural resources (e.g. water) and various types of waste, discharge or emissions of substances or energy;*
- Natura 2000 sites in the surroundings of the plan or project (or at some distance) which host fauna that can move to the project area and then suffer mortality or other impacts (e.g. loss of feeding areas, reduction of home range);*
- Natura 2000 sites whose connectivity or ecological continuity can be affected by the plan or project".*

The range of Natura 2000 sites to be assessed, i.e. the zone in which impacts from the plan or project may arise, will depend on the nature of the plan or project and the distance at which effects may occur. For Natura 2000 sites located downstream along rivers or wetlands fed by aquifers, it may be that a plan or project can affect water flows, fish migration and so forth, even at a great distance. Emissions of pollutants may also have effects over a long distance. Some projects or plans that do not directly affect Natura 2000 sites may still have a significant impact on them if they cause a barrier effect or prevent ecological linkages. This may happen, for example, when plans affect features of the landscape that connect Natura 2000 sites or that may obstruct the

movements of species or disrupt the continuity of a fluvial or woodland ecosystem. To determine the possible effects of the plan or project on Natura 2000 sites, it is necessary to identify not only the relevant sites but also the habitats and species that are significantly present within them, as well as the site objectives.

The Zone of Influence may be determined by considering the Proposed Development's potential connectivity with European sites, in terms of:

- Nature, scale, timing and duration of all aspects of the proposed works and possible impacts, including the nature and size of excavations, storage of materials, flat/sloping sites;
- Distance and nature of potential pathways (dilution and dispersion; intervening 'buffer' lands, roads etc.); and
- Location of ecological features and their sensitivity to the possible impacts.

The potential for source pathway receptor connectivity is firstly identified through GIS interrogation and detailed information is then provided on sites with connectivity. European sites that are located within a potential Zone of Influence of the Proposed Development are listed in Table 1 and presented in Figure 4 below. Spatial boundary data on the Natura 2000 network was extracted from the NPWS website (www.npws.ie) on 27 February 2026. This data was interrogated using GIS analysis to provide mapping, distances, locations and pathways to all sites of conservation concern including pNHAs, NHA and European sites.

Table 1 European Sites located the potential Zone of Influence¹ of the Proposed Development.

Site Code	Site name	Distance (km) ²
000582	Raheenmore Bog SAC	5.12
000685	Lough Ennell SAC	5.62
001831	Split Hills And Long Hill Esker SAC	6.47
002205	Wooddown Bog SAC	13.40
004044	Lough Ennell SPA	6.30
002299	River Boyne and River Blackwater SAC	18.4
004232	River Boyne and River Blackwater SPA	18.5

The nearest European site to the Proposed Development is the Raheenmore Bog SAC (Site Code 000582), which is located just over 5.12km to the south. It is designated for raised bog habitats and with no mobile species indicated as conservation objectives and no hydrological connectivity to the proposed development it can be excluded from the assessment at this preliminary stage. Wooddown Bog SAC is located c.13.5km to the north and designated for degraded raised bog habitats and with no mobile species indicated as conservation objectives and no hydrological connectivity to the proposed development it can be excluded from the assessment at this preliminary stage.

¹ All European sites potentially connected irrespective of the nature or scale of the Proposed Development.

² Distances indicated are the closest geographical distance between the Proposed Development and the European site boundary, as made available by the NPWS. Connectivity along hydrological pathways may be significantly greater.

The Proposed Development is located in a separate catchment to Lough Ennell, and with no hydrological connectivity and no mobile species, the Lough Ennell SAC is excluded from the assessment at this preliminary stage.

There is no hydrological connectivity to the Lough Ennell SPA and there are no supporting habitats for two of the three Special Conservation Interest Annexed Bird species (Pochard and Tufted Duck) and limited supporting habitats for Coot at the Proposed Development site. There is no potential for significant *ex situ* effects, the Lough Ennell SPA is excluded from the assessment at this preliminary stage.

The Proposed Development is located within the hydrological catchment of the Castlejordan and Yellow River which flow northeast to the River Boyne with its associated European sites, the River Boyne and River Blackwater SAC (Site Code 002299) and the River Boyne and River Blackwater SPA (Site Code 004232), which are located just over 18km directly but c.31.5 river km downstream of the Proposed Development.

The Qualifying Interests (QIs) and Special Conservation Interests (SCIs) of the European sites in the Zone of influence of the Proposed Development are provided in Table 2 below.

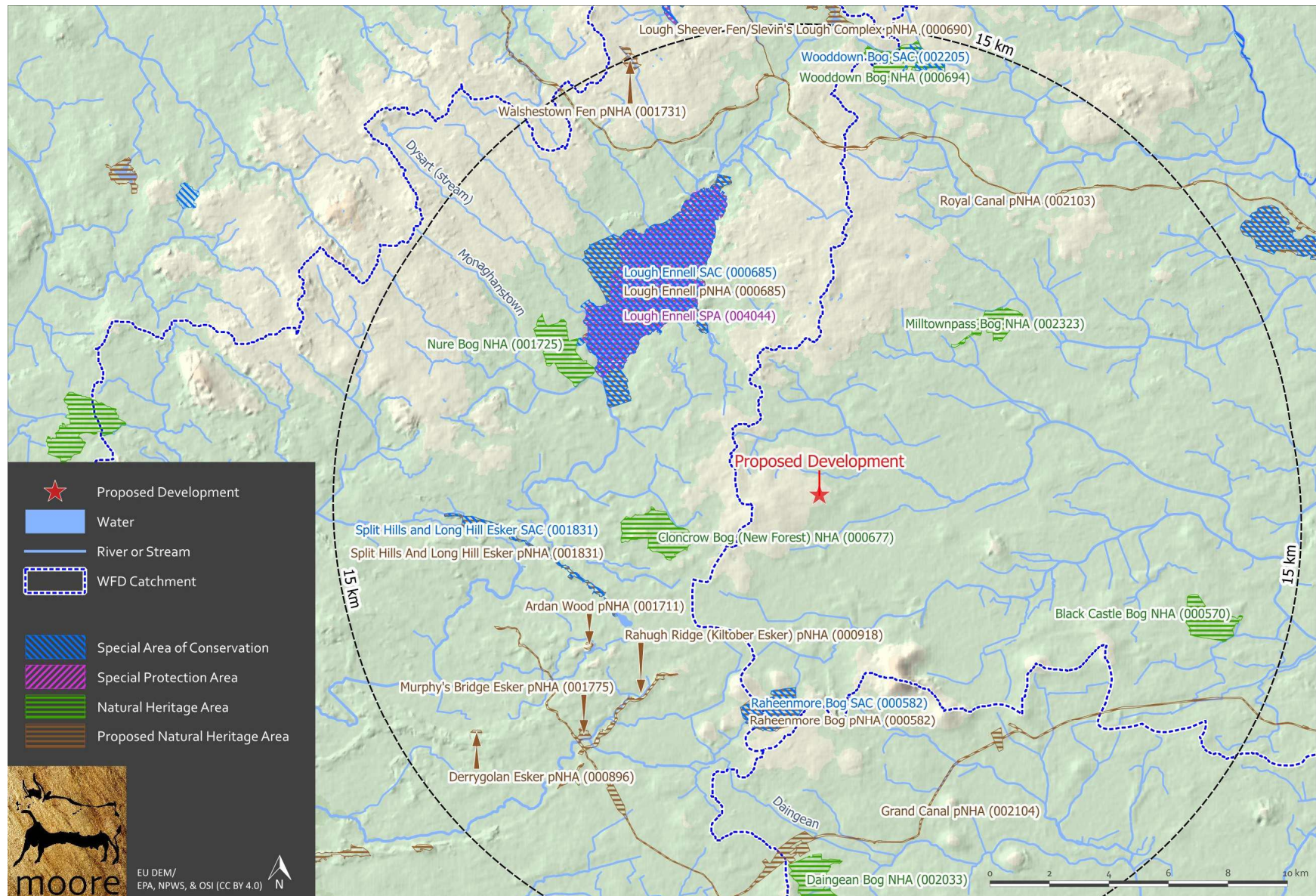


Figure 4. Showing European sites and NHAs/pNHAs within the wider potential zone of influence of the Proposed Development.

Table 2 Identification of relevant European sites using Source-Pathway-Receptor model and compilation of information on QIs and conservation objectives. *Priority Habitats

European Site name, Site code and Conservation Objectives	Location Relative to the Proposed Development Site	Connectivity – Source-Pathway-Receptor	Considered further in Screening – Y/N
<p>River Boyne and River Blackwater SAC (002299)</p> <p>The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest:</p> <p>1099 River Lamprey <i>Lampetra fluviatilis</i></p> <p>1106 Salmon <i>Salmo salar</i></p> <p>1355 Otter <i>Lutra lutra</i></p> <p>7230 Alkaline fens</p> <p>91E0 Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>)*</p> <p>NPWS (2021) Conservation Objectives: River Boyne and River Blackwater SAC 002299. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.</p>	<p>31.5 river km downstream.</p>	<p>There is a very tentative pathway from the Solar Farm aspect of the Proposed Development via the Castlejordan and Yellow River which flows northeast to the River Boyne albeit at a very large distance downstream, over 30 river km.</p> <p>The main lamprey populations in the River Boyne are currently protected within the existing SAC boundary area³.</p> <p>Salmon spawn in clean gravels. There is restricted habitat for salmon in the Boyne and the water courses located adjacent to the Proposed Development do not support spawning habitat.</p> <p>The water courses located adjacent to the Proposed Development do not support suitable foraging habitat for Otters. No signs of resting places or markers such as spraints were recorded during Ecological Surveys presented in the Proposed Development EIAR.</p> <p>The main areas of alkaline fen in the SAC are documented to occur in the vicinity of Lough Shesk, Freekan Lough, Newtown Lough in the upper reaches of the Stonyford River and are outside the zone of influence of the Proposed Development.</p> <p>Alluvial forests are located at Tullyallen near Drogheda and outside the zone of influence of the Proposed Development.</p>	<p>Yes, see Table 3, below.</p>
<p>River Boyne and River Blackwater SPA (004232)</p> <p>The overall aim of the Birds Directive is to maintain or restore the favourable conservation status of habitats and species of community interest:</p> <p>A229 Kingfisher <i>Alcedo atthis</i></p> <p>NPWS (2024) Conservation Objectives: River Boyne and River Blackwater SPA 004232. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.</p>	<p>31.5 river km downstream.</p>	<p>The Kingfisher habitats in the River Boyne are considered to be outside the zone of influence of the Proposed Development.</p>	<p>No</p>

³ O'Connor W. (2006) A survey of juvenile lamprey populations in the Boyne Catchment. Irish Wildlife Manuals, No. 24 National Parks and Wildlife Service, Department of Environment, Heritage and Local Government, Dublin, Ireland.

4.2. Ecological Network Supporting Natura 2000 Sites

An analysis of the proposed Natural Heritage Areas (pNHA) and designated Natural Heritage Areas (NHA) in terms of their role in supporting the species using Natura 2000 sites was undertaken. It was assumed that these supporting roles mainly related to mobile fauna such as mammals and birds which may use pNHAs and NHAs as “stepping stones” between Natura 2000 sites.

Article 10 of the Habitats Directive and the Habitats Regulations 2011 place a high degree of importance on such non-Natura 2000 areas as features that connect the Natura 2000 network. Features such as ponds, woodlands and important hedgerows were taken into account during the preparation of this AA Screening report.

The majority of NHAs and pNHAs identified in Figure 4 are located outside the Zone of Influence. There are no areas of supporting habitat that will be affected by the Proposed Development.

The following NHAs have no connectivity and are considered to be outside the zone of influence of the Proposed Development:

000570	Black Castle Bog NHA	11.43km
000677	Cloncrow Bog (New Forest) NHA	3.15km
000694	Wooddown Bog NHA	13.25km
001725	Nure Bog NHA	7.60km
002033	Daingean Bog NHA	10.55km
002323	Milltownpass Bog NHA	5.68km

The following pNHAs have no connectivity and are considered to be outside the zone of influence of the Proposed Development:

Raheenmore Bog	5.13km
Lough Ennell	5.62 km
Lough Sheever Fen/Slevin's Lough Complex	14.70 km
Derrygolan Esker	12.42 km
Rahugh Ridge (Kiltober Esker)	6.30 km
Ardan Wood	7.67 km

Walshestown Fen	14.59 km
Murphy's Bridge Esker	8.90 km
Split Hills And Long Hill Esker	6.48 km
Royal Canal	10.84 km
Grand Canal	8.36 km

There are no other areas of conservation concern that would be affected by the Proposed Development.

5. Identification of Potential Impacts & Assessment of Significance

The Proposed Development is not directly connected with or necessary to the management of the sites considered in the assessment and therefore potential impacts must be identified and considered.

5.1. Assessment of Likely Significant Effects

The consideration of all potential direct and indirect impacts that may result in significant effects on the conservation objectives of a European site, taking into account the size and scale of the Proposed Development are presented in Table 3.

Table 3 Assessment of Likely Significant Effects.

Identification of all potential direct and indirect impacts that may result in significant effects on the conservation objectives of a European site, taking into account the size and scale of the project.	
Impacts:	Significance of Impacts:
Construction phase e.g. Vegetation clearance Demolition Surface water runoff from soil excavation/infill/landscaping (including borrow pits) Dust, noise, vibration	There will be earth movement and construction work associated with the Data Centre aspect of the Proposed Development. However, these works will be confined to the central western portion of the site where surface water goes to ground. There will be earth movement during site preparation for the Solar Panels, however, there will be no discharge of silt laden or contaminated surface water to the Kiltotan Stream or Castlejordan River downstream.

<p>Lighting disturbance</p> <p>Impact on groundwater/dewatering</p> <p>Storage of excavated/construction materials</p> <p>Access to site</p> <p>Pests</p>	<p>There are only two main crossings (Bridge 1 and 2) and these are clear span, with no interaction with the water course below, i.e. the Kiltotan-Collinstown stream.</p> <p>Other proposed crossings of minor field drains will be served by placement of short sections of round precast concrete culvert with minimal intervention in the field drain.</p> <p>The possibility of contaminated surface water reaching the River Boyne is extremely low given the design of the solar panels to be set back from all water courses, the very large distance downstream over 30 river km and the high degree of dilution in that distance.</p> <p>To this end, the River Boyne and two associated European sites are considered to be outside the Zone of Influence of the Proposed Development.</p>
<p>Operational phase e.g.</p> <p>Direct emission to air and water</p> <p>Surface water runoff containing contaminant or sediment</p> <p>Lighting disturbance</p> <p>Noise/vibration</p> <p>Changes to water/groundwater due to drainage or abstraction</p> <p>Presence of people, vehicles and activities</p> <p>Physical presence of structures (e.g. collision risks)</p> <p>Potential for accidents or incidents</p>	<p>All foul and surface water runoff, once the facility is operational, will be contained on site and discharged to urban drainage systems.</p> <p>There is no real likelihood of any significant effects on European Sites in the wider catchment area.</p> <p>The facility is located at a distance of removal such that there will be no disturbance to qualifying interest species in any European sites.</p> <p>Solar farms can be mistaken as water by birds and aquatic species, and this issue has been addressed by appropriate design. Insects that lay eggs on water, (e.g. mayflies, stoneflies) may mistake solar panels for water bodies, due to reflection of polarised light .</p> <p>Under certain circumstances, insects have been found to lay eggs on their surfaces, reducing their reproductive success and food availability for birds, fish and other aquatic invertebrates. A laboratory study undertaken by Grief & Siemers (2010) showed that that bats attempted to drink from the panels and occasionally collided with them. If plates were vertically aligned, they often crashed into them when attempting to fly through them. There is evidence that this potential effect can be mitigated by a non-polarising white grid, partitioning on solar panels to reduce or eliminate their reflection of polarised light . Thus, this measure has been included as a design feature to avoid potential effects on commuting bats.</p> <p>RSPB (2014) states ‘Solar farms can be mistaken as water by birds and aquatic species, and this issue has been addressed by appropriate design. Insects that lay eggs on water, (e.g. mayflies, stoneflies) may mistake solar panels for water bodies, due to reflection of polarised light’. It should be noted they also state they are in favour of solar given the impacts climate change is having on bird life.</p> <p>There are only three Special Conservation Interest Annexed Bird species listed for European sites in the zone of influence. Given,</p>

	there are no supporting habitats for two of (Pochard and Tufted Duck) and limited supporting habitats for Coot at the Proposed Development site and the above listed design features, there are no predicted negative effects on these birds.
Describe any likely changes to the European site:	
<p>Examples of the type of changes to give consideration to include:</p> <p>Reduction or fragmentation of habitat area</p> <p>Disturbance to QI species</p> <p>Habitat or species fragmentation</p> <p>Reduction or fragmentation in species density</p> <p>Changes in key indicators of conservation status value (water quality etc.)</p> <p>Changes to areas of sensitivity or threats to QI</p> <p>Interference with the key relationships that define the structure or ecological function of the site</p>	<p>None.</p> <p>The Proposed Development site is not located adjacent or within a European site, therefore there is no risk of habitat loss or fragmentation or any effects on QI habitats or species directly or ex-situ.</p> <p>It can be noted that the level of development recorded during fieldwork and distance from the regional SPAs do not present opportunities to support the bird species for which the Lough Ennell SPA is designated.</p>

5.2. Assessment of Potential In-Combination Effects

Cumulative effects are described by the EPA as *the addition of many minor or insignificant effects, including effects of other projects, to create larger, more significant effects*. In combination effects are considered in the appropriate assessment process as an assessment of the potential adverse effects of a plan or project in combination with other plans or projects. The underlying intention of the in-combination provision is to take account of cumulative effects.

As part of the Screening for an Appropriate Assessment, in addition to the Proposed Development, other relevant plans and projects in the area must also be considered at this stage. This step aims to identify at this early stage any possible significant in-combination effects of the Proposed Development with other such plans and projects on European sites.

A review of the National Planning Application Database was undertaken. The database was then queried for developments granted planning permission within 1000m of the Proposed Development within the last three years, these are presented in Table 4 below.

Table 4. Planning applications granted permission in the vicinity of the Proposed Development.

Planning Ref.	Description of development	Comments
22247	development and construction of a logistics warehouse at the site of the former site compound for the M6 Motorway project, a site of 2.99 Hectares. The development which will consist of the construction of a logistics warehouse (956.20 sqm) with a maximum ridge height of 9.80 m for the supply and distribution of parts for large plant and machinery and two storey office within the building, covered parts storage area, associated trade counter, car parking, external loading and unloading area, and all associated site works and services including the construction of a realigned site entrance, site services and all associated site works above and below ground to accommodate the proposed works including new treatment system and percolation area	No potential for in-combination effects given the Proposed Development will have no effect on any European site.
2360032	retention of existing extension to the front and rear to include on ground floor, kitchen, dining, living area, utility, hot press, boiler, bathroom, bedroom with wardrobe and stairs and on the first floor two bedrooms, bathroom, landing and storage area with 4 velux windows and two chimneys with all ancillary site works	No potential for in-combination effects given the Proposed Development will have no effect on any European site.
2360151	development which will consist of the restoration and renovation of the existing Glebe House, its courtyard, stables, hayshed, walled garden and ancillary outbuildings and the reinstatement of the original avenue and entrance, landscaping and all associated site works and services	No potential for in-combination effects given the Proposed Development will have no effect on any European site.
2360204	installation of flood lighting to our two, new playing pitches (currently under construction). Permission is also sought to extend our exercise/walkway track to the perimeter of our new pitches complete with exercise stations, lighting and all associated site works	No potential for in-combination effects given the Proposed Development will have no effect on any European site.
2360253	development which will consist of the: demolition of the existing two-storey school building and its extensions including demolition of two-storey Block 2 (c. 1,894.7 sq.m), single-storey Block 3 (c. 760.4 sq.m), two-storey Block 4 (c. 531.0 sq.m), two-storey Block 5 (c. 1,187.4 sq.m), and two-storey Block 6 (c. 440.6 sq.m) within south-eastern corner of site; removal of all temporary classroom accommodation (c. 720.0 sq.m); partial demolition (c. 1,206.4 sq.m) and refurbishment (c. 550.6 sq.m) of two-storey Block 1 at junction of Castlelost Road and Main Street; extension of Block 1 to provide a new sports facility (c. 891.0 sq.m) (single-storey foyer and double height hall); demolition of 1 no. single-storey extension and 2 no. single-storey outbuildings (totalling c. 128.8 sq.m) to rear of the former Convent of Mercy (a protected structure); refurbishment of the one to three-storey former Convent of Mercy (c. 924.7 sq.m) (a protected structure), including construction of a two-storey (c. 33.0 sq.m) extension to the rear to provide a vertical circulation core for universal access to upper floors; refurbishment of the two-storey former Convent of Mercy House (145.2 sq.m), including construction of a	No potential for in-combination effects given the Proposed Development will have no effect on any European site.

Planning Ref.	Description of development	Comments
	single-storey (c. 14.6 sq.m) extension to the rear to provide universal access; construction of a three-storey school building (c. 9,068 sq.m); relocation of grotto; upgrades to the existing vehicular and pedestrian entrance to the site off Castlelost Road and provision of new school gates; provision of a car park containing 90 no. car parking spaces; provision of 100 no. sheltered bicycle spaces; implementation of traffic management measures including a new pedestrian crossing across Castlelost Road; provision of external play and amenity areas; provision of a garden and reflection area adjacent to the Convent Graveyard (a protected structure); provision of site landscaping, boundary treatment and site lighting; provision of a covered work area, bin stores, storage shelters, and associated drainage, attenuation and other site services; and all related site development works	
2360316	construction of a single storey dwelling and a new domestic entrance onto the public roadway. Permission is also sought to connect to the existing foul sewer mains and all associated site works at the above address	No potential for in-combination effects given the Proposed Development will have no effect on any European site.
2360317	demolition of the bedroom section and chimneys to the existing dwelling house, the derelict stone storage and turf shed buildings including the dog run area and to construct in its place a new single storey pitched roof extension to the front, side and rear with a flat roof link corridor, including internal and external renovations/alterations as shown all to the existing dwelling house, the decommissioning of the existing septic tank which is to be replaced with a new treatment plant and soil polishing filter, new boundary treatments and all ancillary site works and services. Retention permission is also sought for the as built detached lean-to garage/storage with open carport roof structure	No potential for in-combination effects given the Proposed Development will have no effect on any European site.
2360442	development which will consist of (i) the construction of a new Administration/Control Building at a new location within the site in lieu of the IPP Building granted under planning Ref. No. 21/515, (ii) the construction of a new Workshop Building at a new location within the site in lieu of the Administration/Workshop Building granted under Planning Ref. No. 21/515, and (iii) associated minor changes to internal roads, civil engineering, drainage, landscaping, lighting, car parking, and site works. The development alterations are with respect to Planning Ref No. 21/515, which is a development that is for the purpose of an activity requiring an Industrial Emissions Licence from the Environmental Protection Agency (EPA)	No potential for in-combination effects given the Proposed Development will have no effect on any European site.
2460053	development which will consist of alterations to the development consented under Westmeath Planning Case Ref. 21/515 (parent permission) and are as follows: (i) reconfiguration of structures and pipework within the above ground installation (AGI) compound, (ii) increase the size of gas oil (secondary fuel) storage tanks and bund and realignment of tanks within the	No potential for in-combination effects given the Proposed Development will have no effect on any European site.

Planning Ref.	Description of development	Comments
	bund, (iii) remove one consented emergency diesel generator from the development layout and reposition of the second consented emergency diesel generator alongside an LV switchroom, (iv) reposition palisade fence associated with ancillary equipment compound approximately 15m to the west, (v) reconfigure and reposition fuel pumps (polishing and forwarding), MCC equipment, fire water pump, fire water tank and air compressor adjacent to the southern side of the secondary fuel storage bund, (vi) remove water treatment module and ammonia storage tank from the development layout, (vii) remove two distribution transformers from the development layout and reposition the remaining three consented distribution transformers to the ancillary equipment compound to the west, (viii) remove five gas turbine selective catalytic reduction (SCR) units and associated ancillary components (fans), (ix) reposition of two high voltage (HV) transformers within the HV transformer compound and installation of a third HV transformer in lieu of the HV transformer consented under Planning Permission Ref. 21/532, and (x) associated minor changes to internal roads, civil engineering, drainage, landscaping, lighting, car parking, and site works. The development alterations relate to Westmeath Planning Case Ref. 21/515, which is a development that is for an activity requiring an Industrial Emissions Licence from the Environmental Protection Agency (EPA)	
2460131	the upgrade and extension of existing dwelling and to upgrade existing entrance to public road, to replace existing septic tank and soak hole with new septic tank and percolation area, and all associated site works	No potential for in-combination effects given the Proposed Development will have no effect on any European site.
2460218	change of use of building from beauty Salon to After school service to include an after school room 1, entrance lobby, kitchen, two w.c.s with lobby, boiler, hot press with play area, bike rack & car parking with all ancillary site works	No potential for in-combination effects given the Proposed Development will have no effect on any European site.
2460238	construction of a first floor extension, containing bedroom and bathroom and all associated site works at our family home	No potential for in-combination effects given the Proposed Development will have no effect on any European site.

There are no predicted in-combination effects given that it is predicted that the Proposed Development will have no effect on any European site.

The Westmeath County Development Plan in complying with the requirements of the Habitats Directive requires that all Projects and Plans that could affect the Natura 2000 sites in the same zone of influence of the Proposed Development site would be initially screened for Appropriate Assessment and if requiring Stage 2 AA, that appropriate employable mitigation measures would be put in place to avoid, reduce or ameliorate negative impacts. In this way any, in-combination impacts with Plans or Projects for the proposed development area and surrounding townlands in which the proposed development site is located, would be avoided.

The listed developments have been granted permission in most cases with conditions relating to sustainable development by the consenting authority in compliance with the relevant Local Authority Development Plan and in compliance with the Local Authority requirement for regard to the Habitats Directive. The development cannot have received planning permission without having met the consenting authority requirement in this regard. There are no predicted in-combination effects given that it is predicted that the Proposed Development will have no effect on any European site.

In addition to these listed proposed developments other Projects in the zone of influence considered include:

- Gas Piggling Station development (Ref no 25/60006); (Operational)
- Underground Gas transmission line connection which was an application to the Commission for Regulation of Utilities (CRU) (Operational)
- Yellow River Wind Farm (Operational)

These developments were tested at either AA Screening or Stage 2 AA and significant effects excluded. The Proposed Development will not have a significant effect on local Biodiversity or on any European site and therefore in-combination effects with these developments can be excluded.

Any new applications for the Proposed Development area will be assessed on a case-by-case basis *initially* by Westmeath County Council which will determine the requirement for AA Screening as per the requirements of Article 6(3) of the Habitats Directive.

6. Conclusion

There are no predicted effects on any European sites given:

- the intervening land uses and distance from European sites,
- the lack of direct connections with regard to the Source-Pathway-Receptor model,
- here are no predicted emissions to air, water or the environment during the construction or operational phases that would result in significant effects.

It has been objectively concluded by Moore Group Environmental Services that:

1. The Proposed Development is not directly connected with, or necessary to the conservation management of the European sites considered in this assessment.
2. The Proposed Development is unlikely to either directly or indirectly significantly affect the Qualifying interests or Conservation Objectives of the European sites considered in this assessment.

3. The Proposed Development, alone or in combination with other projects, is not likely to have significant effects on the European sites considered in this assessment in view of their conservation objectives.
4. It is possible to conclude that significant effects can be excluded at the screening stage.

It can be *excluded*, on the basis of objective information, that the Proposed Development, individually or in combination with other plans or projects, will have a significant effect on a European site.

An appropriate assessment is not, therefore, required.

A final determination will be made by the competent authority in this regard.

7. References

Department of the Environment, Heritage and Local Government (2010) Guidance on Appropriate Assessment of Plans and Projects in Ireland (as amended February 2010).

European Commission (2007) Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC: Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interests, compensatory measures, overall coherence and opinion of the Commission. European Commission, Brussels.

European Commission (2018) Managing Natura 2000 sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC.

European Commission (2021) Assessment of plans and projects in relation to Natura 2000 sites - Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC, Brussels 28.9.21.

European Commission (2021) Guidance document on the strict protection of animal species of Community interest under the Habitats Directive, Brussels 12.10.21.

NPWS (2019) The Status of EU Protected Habitats and Species in Ireland. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin.

NPWS (2026) National Parks and Wildlife Service Metadata available online at <https://www.npws.ie/maps-and-data>

Office-of-the-Planning-Regulator (2021) Appropriate Assessment Screening for Development Management OPR Practice Note PN01. March 2021