An Bord Pleanála

Inspector's Report ABP-313895-22

Development	110kV GIS substation with 2 x 110kV underground transmission cables connecting to existing 110kV overhead lines to the N, and 2 x 110kV underground cables connecting to existing Ennis 110kV substation to the W, & associated works.
Location	Toureen & adjacent townlands, Tulla Road, Ennis, Co. Clare.
Planning Authority	Clare County Council TII, GSI & IAA
Applicant(s)	Art Data Centre Ltd.
Type of Application	Permission
Type of Case	SID
Observer(s)	Clare County Council
Date of Site Inspection	3rd September '22 & 13th October '23
Inspector	Karla Mc Bride

1.0 Site Location and Description

1.1. The site is located within the townlands of Toureen and Cahernalough, c.4km to the NE of Ennis in County Clare. The rural site is located on the northside of the Tulla Road (R352) and the site and surrounding area is characterised by agricultural uses. There are several dispersed houses and farm buildings in the vicinity and the lands form part of a larger area that has been designated for future development.

1.2. The site is located to the E of the M18 motorway and the Junction 13 slip road, N of the R352 (Tulla Road) and S of the L4608 local road at Cahernalough and Ballymacahill. It is bound to the N and E by agricultural land, to the W and NW by the Ballymacahill / Spancelhill Stream, and to the S by the Tulla Road. There are several dwelling houses and farm buildings located to the N of the site, and along the Tulla Road to the S, and there is a small residential area located on the westside of the M18. The Ennis 110kV substation is located to the W of the site and the M18 slip road, the site is traversed by several overhead electrical cables and the lands in the E section of the site are traversed by a gas pipeline along a N-S axis. The main vehicular access to the site is off the R352 (Tulla Road) which provides access to a several houses and farms.

1.3. The site forms part of an overall c.60 ha data centre campus site and the overall lands (data centre & substation) mainly slopes up gently from SW to NE. The overall site and field boundaries are defined by mature hedgerows and trees, and there are pockets of woodland around the perimeter of the site and within the W and SW sections. The overall site also contains several ponds, including Toureen Lough (SW). The lands mainly drain S and SW towards the Ballymacahill / Spancelhill Stream which flows between 2 x attenuation ponds associated with the M18 motorway, before discharging SW to the River Fergus and the River Shannon.

1.4. There are many European and nationally designated natural heritage sites in the wider area which include rivers, lakes, bogs, caves and buildings, that have been designated for terrestrial and aquatic habitats and species, water birds, raptors and bats. There are 2 x Recorded Monuments (Ringforts) in the vicinity of the site, and several other features of historical interest in the surrounding area.

1.5. The substation site, which is located to the E of the data centre site, slopes up from W to E, the field boundaries are also defined by mature hedgerows and there is a Ringfort in the adjoining field to the NE.

1.6. 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 within the site of the proposed Art Data Centre facility which is concurrently under consideration by the Board under ABP-314474-22.

2.2. The proposed development would comprise:

- A 110kV gas insulated switchgear (GIS) substation comprising: -
    - Single storey client control building (c.467sq.m.)
    - 2-storey substation building (c.1,431sq.m.)
    - Perimeter security fencing (c.2.6m high)
    - 2 x 110kV hybrid GIS circuit breakers
    - 2 x 110/10kV dual output step down transformers
    - 4 x medium voltage output switch rooms
- 2 x 110kV underground transmission cables connecting to existing 110kV overhead lines to the N.
- 2 x 110kV underground cables connecting to existing Ennis 110kV substation to the W.
- Vehicular access off the R352
- All ancillary site works.

The application was accompanied by the following documents:

- Planning report
- EIAR (incl. Non-Technical Summary)
- AA Screening & NIS reports
- Engineering Planning Report (Drainage & Water Services)

- Construction & Environment Management Plan
- Engineering & Architectural drawings
- Substation & Transmission Line Connections report.

3.0 **Observers**

3.1. **Prescribed Bodies**

A total of 4 x submissions received from:

- Clare County Council
- Irish Aviation Authority
- Transport infrastructure Ireland
- Geological Survey of Ireland

The main points of interest raised relate to:

- PA satisfied with EIAR content & conclusions.
- Project compiles with planning policy & zoning objectives.
- Ancillary & necessary to the functioning of the data centre.
- Proximate to renewable & other power sources (solar, wind & gas).
- Community gain conditions may be appropriate.
- Consider potential impacts on national road network & M18 junctions.
- Refer to GSI datasets.
- No aviation concerns.

3.2. **Planning Authority Report**

The County Council report stated that it had no objection to the proposed development which complies with planning policy and the ENT3 zoning objective for the site. It noted that the relevant S.48/49 Development Contributions should accord with the Scheme currently in place. subject to a rate of E18.00/sq.m.. It concluded that the proposed development should be permitted as it is ancillary and necessary to the functioning of the proposed data centre.

3.3. Public submissions

No submissions have been received to date.

3.4. Applicant's response to Observers

The Board decided that an Oral Hearing was not required. The observations submissions were circulated to the applicant for comment, and their response raised no new issues. The response was accompanied by the applicants response to the submission received in relation to the data centre appeal under ABP-314474-22).

4.0 Planning History

Appeal site:

ABP-314474-22*:* concurrent planning appeal for the development of a data centre facility by the same applicant (Art Data Centres Ltd.).

ABP-310517-21: ABP determined that development of a substation & associated grid connection at Toureen, Ennis, is a strategic infrastructure development.

5.0 Policy and Context

5.1. National and Regional policy context

National Energy and Climate Plan, 2021-2030

This Plan outlines Irelands energy and climate policies in detail for the period from 2021 to 2030 and looks onwards to 2050. The NECP is a consolidated plan which brings together energy and climate planning into a single process for the first time. It envisages a target of at least 55% renewable energy in electricity by 2030.

Climate Action and Low Carbon Development (Amendment) Act, 2021
Establishes a framework to develop the transition towards a low carbon economy.

Climate Action Plan, 2023

Seeks to tackle climate breakdown and it commits Ireland to a legally binding target of net-zero greenhouse gas emissions by 2050, an emissions reduction of 75% and to meet up to 80% of electricity demand form renewables by 2030.

National Planning Framework – Ireland 2040 (2018)

The NFP seeks to support the development of ICT infrastructure, with particular reference to data centres. NSO 6 seeks to create a strong economy supported by enterprise, innovation and skills which is underpinned by a range of objectives related to job creation, enterprise and innovation.

Regional Spatial & Economic Strategy, the Southern Region (2020)

The RSES also seeks to support the development of ICT infrastructure. RPO 8.23 seeks to support the national objective to promote Ireland as a sustainable international destination for ICT infrastructure such as data centres and associated economic activities at appropriate locations.

Government Statement on the Role of Data Centres in Ireland's Enterprise Strategy, July 2022

This Statement updates and revises the Governments previous Statement on the Role of Data Centres, which supported the development of enabling technology and infrastructure to meet enterprise, economic and social policy goals, whist also recognising that, as large consumers of electricity, data centres also pose challenges to the future planning and operation of a sustainable power system.

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.

National Biodiversity Action Plan, 2022

The Plan sets out actions through which a range of government, civil and private sectors will undertake to achieve Ireland's 'Vision for Biodiversity' and follows on from the work of the first and second National Biodiversity Action Plans. It contains 119 x targeted actions which are underpinned by 7 x strategic objectives.

National Landscape Strategy for Ireland, 2015-2025

This document seeks to integrate landscape into our approach to sustainable development, carry out an evidence-based identification and description of landscape character, provide for an integrated policy framework to protect and manage the landscape and to avoid conflicting policy objectives.

5.2. **Local Policy**

Clare County Development Plan 2023-2029

Settlement hierarchy: Ennis is designated as a Key Town.

CDP6.27: facilitate & support the development of a data centre on the Enterprise zoned lands (ENT3) at Toureen (Data Centres are permissible uses).

Buffer Space: around Toureen Lough & Ballymacahill / Spancelhill Stream

Flood Zone A: Ballymacahill / Spancelhill Stream.

CDP2.6 to 2.13: flood risk assessment & storm water management.

CDP11.26: deals with the WFD & RBM, protection of groundwater & surface water resources, achieve & maintain at least good water quality status, consider proposals where it can be clearly demonstrated the requirements of the RBM Plan will be met.

CDP11.27-33: protection & sustainable use of surface & ground water resources, provision of water & wastewater services, Ennis & Environs water supplies.

CDP11.40-42: noise pollution, air quality & light pollution (incl. impacts on bats).

CDP11.44 - 51: energy security, supply networks, renewable energy & storage.

Landscape Character Type: Low Drumlin Farmland (LDF).

Landscape Character Area: Ennis / Tulla Drumlin Farmland (13 & 12).

Working Landscapes: lands within 10km of the N18/M18 (CDP14.3).

CDP15.1: protect biodiversity & implement the National Biodiversity Action Plan, All Ireland Pollinator Plan, and the County Heritage & Biodiversity Plans.

CDP15.3 to 6: protect European, National & County Geological sites.

CDP15.8 to 22 protect non-designated sites & biodiversity.

CDP15.28: deals with Dark Sky Reserve Designations.

CDP16.1-7: protect architectural heritage.

CDP8-12: protect archaeological heritage.

Ennis Municipal District Settlement Plans, Interim Version, April 2023

Transformational Sites TS9 – Data Centre: A site located in the Toureen area on the eastern side of Ennis has been zoned for enterprise use (ENT3). This zoning offers great potential in the short to medium term and can accommodate the economic activities required to grow Ennis as a location for significant employment. The zoning would provide for a data centre campus arrangement that can allow for future growth and the delivery of premises that may need to differ from normal commercial developments due to the changing nature of IT and data centre services.

5.3. Natural Heritage Designations

The following 23 x European sites are located within a c.15km radius of the site:

Lower River Shannon SAC	Moyree River System SAC
Ballyallia Lake SAC	Ballycullinan, Old Domestic Building SAC
Old Domestic Building (Keevagh) SAC	East Burren Complex SAC
Dromore Woods & Loughs SAC	Ballycullinan Lake SAC
Old Domestic Buildings, Rylane SAC	Ballyogan Lough SAC
Newgrove House SAC	Lough Gash Turlough SAC
Newhall & Edenvale Complex SAC	Knockanira House SAC
Toonagh Estate SAC	Kilkishen House SAC
Poulnagordon Cave (Quin) SAC	Ballialia Lough SPA
Poulnadatig Cave SAC	Slieve Aughty Mountains SPA
Old Farm Buildings, Ballmacrogan SAC	River Shannon & River Fergus SPA
	Corofin Wetlands SPA

The following Natural Heritage sites are located within c.15km radius of the site:

Oysterman's Marsh NHA	Pouladig Cave pNHA
Maghera Mountain Bogs NHA	Poulnagordon Cave (Quin) pNHA
Newpark House (Ennis) pNHA	Ballycullinan Lake pNHA
Ballyallia Lake pNHA	Dromoland Lough pNHA
Durra Castle pNHA	Moyree River System pNHA
Inchicronan Lough pNHA	East Burren Complex pNHA
Old Domestic Building (Keevagh) pNHA	Ballyogan Lough pNHA
Dromore Woods & Loughs pNHA	Ballycar Lough pNHA
Lough Cleggan pNHA	Fin Lough pNHA
Fergus Estuary-Inner Shannon, N Shore pNHA	Lough Cullaunyheeda pNHA
Cahircalla Wood pNHA	Rosroe Lough pNHA
Newll & Edenvale Complex pNHA	Lough Gash Turlough pNHA

6.0 Planning Assessment

This assessment should be considered in conjunction with R314474-22 for the proposed data centre under ABP-314474-22.

The main issues arising are as follows:

- Principle of development
- Design & layout
- Residential amenity
- Movement & access
- Flood risk & drainage
- Biodiversity
- Other issues
- Screening for AA

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 Gas Insulated Switchgear (GIS) substation along with underground transmission links to the proposed data centre (ABP-314474-22) and the existing Ennis 110kV substation to the W. The proposed electrical infrastructure would operate in conjunction with the proposed data centre storage facility on the overall lands. This facility would comprise 6 x data halls and ancillary structures), it was granted permission by Clare County Council (21/757) and is now before the Board on appeal (ABP-314474-22). The data centre development does not include a substation or transmission lines to the Ennis 110kV substation.

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 Southern Region, 2020 and the Government Statement on the Role of

Data Centres in Ireland's Enterprise Strategy, July 2022, the which seek to support the development of ICT infrastructure, including the provision of data centres and electricity infrastructure at appropriate locations.

The proposed substation and 110kV transmission line would be located on lands that are covered by the extensive ENT3 zoning objective in the County Development Plan which seeks to provide for enterprise and related uses which include data centres. The remaining section of the 110kV transmission lines would traverse agricultural lands to the N. Energy Installations are permitted in principle within ENT3 zone and the proposed development would comply with this objective. The proposal would also comply with several Development Plan objectives which seek to respond to the needs of enterprises activities and the provision of electricity infrastructure.

Refer to Section 7.1 of R314474 in respect of the concurrent data centre appeal under ABP-314474-22 for a more detailed assessment of compliance with national, regional and local planning and energy polices.

Having regard to the foregoing, I am satisfied that the proposed development, which would operate in conjunction with a proposed data storage facility 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 a transitioning rural area that is characterised by agricultural uses, and the lands have been zoned ENT3 in the current Development Plan for Enterprise uses. 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 hedgerows, trees and stonewalls. The overall lands are gently undulating and slope up from SW to NE, whilst the substation lands are locally steep.

The proposed substation would be located in the mid- E corner of the overall lands, to the N of the R352 Tulla Road and to the S and SE of 2 x nearby dwelling houses and farm buildings. It would be located to the E of the proposed data centre buildings, S of the proposed Energy Centre and N of the proposed Vertical Farm

building (all under ABP-314474-22). The proposed transmission lines would run underground to the E and overground to the N. The existing Ennis 110kV substation is located to the W of the proposed data centre site and W of the Junction 13 off the M18. There are several dispersed houses to the S along the R 352 (Tulla Road).

The application was accompanied by a Landscape and Visual; Impact Assessment and Photographs (EIAR section 10 & Technical Appendix 10.1). The report described the receiving environment and the character of the surrounding area. It assessed potential visual impacts from several viewpoints that encompass sensitive receptors (incl. the surrounding road network, residential areas, community buildings & rural areas). The study concluded that the substation would not give rise to any significant visual impacts.

Refer to Section 7.2 of R314474 in respect of the concurrent data centre appeal under ABP-314474-22 for a more detailed assessment of visual impact.

Having regard to my inspection of the site and surrounding area, and taking account of the scale, height and layout of the proposed substation on lands that are zoned for ENT3 for enterprise uses along with its' position within the overall data centre campus, and the screening properties of the perimeter landscaped berms (under ABP-314474-22), along with the partial undergrounding of transmission lines, I am satisfied that the proposed substation and associated transmission infrastructure would not have an adverse impact on the visual or amenities of the area.

6.3. **Residential amenity**

The application was accompanied by an EIAR, and sections 4, 8, 9, 10 and 12 dealt with human health and population, air quality, noise, landscape and traffic. Technical Appendix 8.1-8.2 contained the air dispersion modelling results, Technical Appendix 9.1 - 9.5 contained noise survey and modelling results, Technical Appendix 10.1 and Annex 10.1 contained LVIA Viewpoints and Photomontage Views, and Technical Appendix 12.1 - 12.6 contained traffic survey and modelling results. The EIAR described the existing environment and surrounding low density residential uses, and it dealt with the construction and operational phases of the development.

There are several detached houses located along the R352 (Tulla Road) to the SW, and two to the N and NW, which would not be overlooked or overshadowed by the proposed substation because of the substantial separation distances. As previously stated in section 6.2 above, the proposed substation development would not be visually obtrusive or overbearing having regard to its scale, height and location, and the presence of landscaped berms around the site boundaries (under ABP-314474-22). The proposed development would not seriously injure the residential amenities of any houses in the vicinity.

Although there would be some general disturbance to surrounding residential properties during the construction phases (incl. noise, dust & traffic), the impacts would be temporary and not adverse subject to the implementation of the EIAR mitigation measures (incl. a CEMP & TMP), adherence to best construction practices and compliance with recommended conditions (incl. hours of operation). Although the operational substation would give rise to low levels of noise during this phase, the impacts on surrounding residential amenities would not be adverse relative to the separation distances and screening which would be provided by landscaping and berms.

Refer to Section 7.3 of R314474 in respect of the concurrent data centre appeal under ABP-314474-22 for a more detailed assessment of residential impacts.

6.4. **Movement & access**

The application was accompanied by a traffic and transportation assessment (EIAR section 12 & Technical Appendix 12.1 to 12.6) which described the existing traffic environment (road network, traffic volumes & car parking provision) along with other developments in the surrounding area (existing & proposed). The EIAR dealt with the construction and operational phases of the proposed development. It estimated future growth and trip generation rates and predicted that the impact of the proposed substation on the national and local road network, in combination with the proposed data centre and other developments on the area, would be short term during the construction phase and imperceptible in the operational phase. Vehicular access to

the site would be off the R352 to the S and along the existing and upgraded access road during the construction and 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 or give rise to a traffic hazard or endanger the safety of other road users.

Refer to Section 7.4 of R3314474 in respect of the concurrent data centre appeal under ABP-314474-22 for a more detailed assessment of transportation impacts and vehicular access requirements. All of the relevant transportation conditions under ABP-314474-22 should be attached to any grant of permission for the substation.

6.5. **Flood risk and drainage**

The overall lands (incl. data centre & substation) and surrounding area mainly drain W and SW to the Ballymachill / Spancelhill Stream, although the substation site partly drains S towards the Tulla Road and beyond via underlying karst features.

Sections 5 and 6 of the EIAR dealt with hydrogeology and hydrology, and Technical Appendices 5.2 to 5.5 contained hydrographs, dye tracer test results and piling drawings. The application was also accompanied by an Engineering Planning Report (Drainage & Water Services) and a Construction and Environmental Management Plan. A Flood Risk Assessment was not provided for the substation as the concurrent data centre appeal under ABP-314474-22 was accompanied by a detailed Site-Specific Flood Risk Assessment, which undertook a detailed examination of flood risk impacts for the overall lands. This report concluded that the proposed data centre campus (and substation) is located within Flood Zone C where there is a low probability of fluvial flooding (even when Climate Change is factored into the equation).

Refer to section 7.1.5 of R314474 for a more detailed assessment of flood risk impacts. I am satisfied that the proposed development would not give rise to a flood risk subject to the implementation of surface water management arrangements.

The Engineering Planning Report described the surface and foul water drainage and water supply elements of the proposed development. It stated that the substation and data centre campus would be connected the existing water supply and foul sewer arrangements along the R352. Surface water discharge during the construction phase of the substation and transmission line excavations would be managed by a Drainage Management Plan for the entire site. There would be no significant discharge during the operational phase. The measures contained in the EIAR, CEMP and Engineering Planning Report, which provide for the management of sediment laden water and accidental spillages during the construction phase, would protect ground and surface water quality in nearby and downstream waterbodies. The proposed arrangements are acceptable, subject to compliance with the EIAR mitigation measures.

Refer to Section 7.1.5 of R314474 in respect of the concurrent data centre appeal under ABP-314474-22 for a more detailed description of the drainage arrangements, measures to protect ground and surface water quality, and assessment of flood risk impacts. All relevant surface water management conditions under ABP-314474-22 should be attached to any grant of planning permission for the substation.

6.6. **Biodiversity**

The site comprises lands that are in agricultural use and the field boundaries are manly defined by hedgerows, trees and stone walls. The area has potential for foraging and nesting birds, and foraging bats, 3 x badger setts have been recorded in the overall c.60ha site including in the E section, and otter may be present in the vicinity of the on-site and nearby waterbodies in the W section of the overall lands.

Sections 5, 6 and 7 of the EIAR dealt with hydrogeology, hydrology, water quality and biodiversity, and Technical Appendices 7.1 to 7.8 contained the results of the ecological surveys (incl. habitats, flora, birds & bats). The overall lands are mainly in agricultural use and traversed by hedgerows, however there is a myriad of other habitats located around the perimeter of the site (inc. riparian & alluvial woodlands, ponds, fens, reed swamps & dry calcareous grasslands) along with some rare plant species (incl. fen bedstraw).

Vegetation clearance should not take place during the bird nesting season. Preconstruction seasonal surveys should be undertaken for bats, and in the event that any roosts are discovered a derogation licence should be obtained from the NPWS for their controlled and humane relocation to a similar suitable habitat. A 30m cordon should be installed around the entrance to the badger setts to ensure protection during the construction phase and this area should be kept free of artificial lighting. Other mammals (incl. birds, foxes & hares) would be disturbed and displaced during the construction works, however it is likely they would return to 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. These concerns could be addressed a planning condition.

It is possible that the site may be hydrologically connected to some nearby designated sites, or that is of value to mobile species at any such sites (incl. otter & birds), and that any diminution in water quality could impact aquatic ecology (incl. fisheries & prey species). These concerns will be addressed in section 8.0 below (AA). And in section 7.6 of the concurrent data centre appeal (ABP-314474-22).

Refer to Section 7.6 of R314474 in respect of the concurrent data centre appeal under ABP-314474-22 for a more detailed assessment of biodiversity impacts. All relevant biodiversity related conditions under ABP-314474-22 should be attached to any grant of planning permission for the substation.

6.7. **Other issues**

Archaeology: The overall lands contain one Ringfort that is a designated Recorded Monument which is located to the W of the substation site, and there is another similar feature located in the field that adjoins the NE site boundary. Section 11 of the EIAR dealt with Archaeological heritage and Technical Appendices 11.1-11.4included an impact assessment and mitigation measures. Having regard to the character of the surrounding area, the site may also contain other archaeological artefacts, as highlighted in the DAU submission in relation to the data centre appeal under ABP-314474-22. Pre-construction archaeological investigation and monitoring should therefore be required by way of a planning condition. The proposed development would not give rise to any significant adverse local or cumulative

impacts on archaeology in-combination with other developments in the surrounding and wider area, subject to compliance with the recommended condition.

Built heritage: There are no protected structures or NIAH features located within or close to the site that have the potential be affect by the proposed development, in terms of their character or setting, and I note that some of the vernacular farm buildings within the site would be retained. The proposed development would not give rise to any significant adverse local or cumulative impacts on built heritage in-combination with other developments in the surrounding and wider area.

Financial contributions: No Section 48 or 49 contributions required for substations.

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 the concurrent report for ABP-314474-22 (R314474).

7.2 Compliance legislative requirements

Directive 2011/92/EU was amended by Directive 2014/52/EU. Art Data Centres 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

The substation project is not listed under Annex 1 of the EIA Directive, and it is below the relevant threshold as set out in the planning and Development Regulations for Annex 11 projects. However, the applicant states that the threshold for "industrial estate development projects, where the area would exceed 15ha" as per Part 2 of Schedule 5 of the Regulation, was considered to be the most relevant threshold in the context of the proposed development, and the EIAR was prepared.

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 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 in 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 Section 3.8 of the EIAR in relation to the proposed substation and associated infrastructure. The following alternatives were considered with respect to the proposed development.

- Do Nothing Alternative
- Alternative locations
- Alternative layouts / designs
- Alternative mitigations
- Alternative processes & technologies

The EIAR concluded that the proposed development represents the optimum solution taking into account access to land, cost and environmental effects. I would concur with this conclusion, having regard to its proximity to and relationship with the proposed data centre campus.

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 report attached to the concurrent appeal before the Board under ABP-314474-22 for a data centre campus which would be served by the proposed substation should also be considered in conjunction with this assessment, and in particular the Section 7.0 (Planning Assessment) and Section 8.0 (Appropriate Assessment).

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, 10 & 12 of the EIAR and associated Technical Appendices and reports dealt with human health & population; air quality; noise & vibration; landscape & visual impacts; 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, changes to air quality, 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 & construction works.	
Submissions	***Concerns raised / Considerations***
	Residential amenity Noise & dust Air quality Traffic generation, hazard & safety Health & safety
Potential impacts	***Assessment***
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 residential amenity during construction & operational phases.	There are several detached houses located to the N & S of the site, and the lands to the W of the M18 are characterised by residential and commercial uses. Refer to section 6.3 of this report for detailed analysis of residential impacts which concluded that there would be no significant adverse effects on amenity by way overshadowing, overlooking, loss of privacy, visual intrusion or general disturbance (incl. noise, dust & emissions).

Visual: potential localised visual impacts on nearby houses, and further afield residential, educational & commercial uses during the operational phase.	Refer to section 6.2 of this report for detailed analysis of visual impacts which concluded that there would be no significant adverse effects. The overall lands slope up from SW to NE and the substation would be in the E section of the proposed data centre campus, which would be bound by existing and augmented landscaping (incl. trees & hedges) and by landscaped berms. The substation would not be visually obtrusive or overbearing having regard to the ENT3 zoning objective for the site, its scale, height & location within the proposed data centre campus, which would in turn be centrally located within the zoned lands, and the proposed landscaped berms.
Noise & vibration**:** potential for localised noise impacts on amenities from construction activities and minor disturbance during the operational phase.	Refer to section 6.3 of this report for detailed analysis of residential impacts. Noise emissions during the construction phase would generally 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. Having regard to the separation distances with the nearest residential properties and the presence of landscaped berms, I am satisfied that the proposed development would not have any significant long-term effects during either phase. This would be subject to implementation of EIAR mitigation measures, compliance with recommended conditions, and adherence to best construction practices.

Air quality: potential for dust & air quality impacts during construction phase.	Refer to section 6.3 of this report for detailed analysis of residential impacts. Dust emissions during the construction phase are not expected to travel more than c.200m from the site and dust and would mainly be deposited within c.50m of the works (depending on prevailing weather conditions). There would be no significant dust emissions during the operational phase. This would be subject to compliance with EIAR / CEMP mitigation measures & recommended conditions, and adherence to best construction practices.
Traffic: Construction & operational traffic volumes have potential for localised air quality impacts, traffic disruption & road safety.	Refer to section 6.4 of this report for a detailed analysis of traffic impacts. The national, regional & local road network has adequate capacity to assimilate the additional traffic volumes associated with the construction & operational phases. The vehicular access arrangements off the R352 are acceptable, and adequate on-site car and bicycle parking would be provided. No adverse traffic impacts anticipated. This would be subject to compliance with EIAR / CEMP mitigation measures & recommended conditions, and adherence to best construction practices.
Health & safety: Potential for adverse impacts on health & safety from on-site accidents.	On-site accident concerns 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 & suggested conditions.
Cumulative Impacts: The project would give rise to some minor cumulative impacts in-combination with the construction of the proposed data centre campus, with no significant cumulative impacts predicted during the operational phase.
Conclusion: I have considered all the potential direct & indirect impacts in relation to population and human health, 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.

Air and Climate	
EIAR sections 8 & 12 of the EIAR and associated Technical Appendices and reports dealt with air quality & climate and traffic & transportation. The EIAR described the receiving environment and identified potential impacts on air quality & climate. The EIAR did not predict any significant adverse impacts on air and climate as a result of dust emissions or traffic movements during either phase, or on air and climate during the operational phase of the substation, subject to mitigation measures.	
Submissions	***Concerns raised / Considerations***
	Dust & Air quality Traffic emissions
Potential impacts	***Assessment***
Air quality: Potential short term localised impacts on air quality resulting from dust and other emissions during the construction phase, including from vehicles.	Dust emissions during the construction phase are not expected to travel more than c.200m from the site and dust and would mainly be deposited within c.50m of the works (depending on prevailing weather conditions). There would be no significant dust emissions during the operational phase. The EIAR air dispersion modelling results indicate that ambient concentrations are within relevant air quality standards (incl. for NO_x & NO_2). No adverse impacts on local or regional air quality predicted or public health anticipated from the emissions. Having regard to the separation distances to the nearest sensitive receptors, I am satisfied that the proposed development would not have any significant long-term effects during the construction or operational phases. This would be subject to implementation of EIAR mitigation measures, compliance with recommended conditions, and adherence to best construction practices.

Traffic emissions: Potential short term localised impacts on air quality resulting from increased traffic volumes during construction & operational phases.	Refer to section 6.4 of this report for a detailed analysis of movement & access impacts. The national, regional and 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. No adverse traffic impacts anticipated. This would be subject to implementation of EIAR mitigation measures, compliance with recommended conditions, and adherence to best construction practices, and preparation of a Traffic Management Plan.
Residual Effects: There will be some increase in dust & traffic related emissions during the construction phase, 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: The proposed development would give rise to some minor cumulative impacts in-combination with the construction of the proposed data centre campus, with no significant cumulative impacts predicted during the operational phase.	
Conclusion: I have considered all the potential direct & indirect impacts 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 10 of the EIAR and associated Technical Appendices, Photomontage Views & LVIA 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 around the site (incl. the road network, residential areas & the surrounding rural area). The EIAR did not predict any significant adverse impacts on landscape or visual amenity during the construction and operational phases, subject to the construction of the landscaped berms and replacement tree and hedgerow planting.	
Submissions	***Concerns raised / Considerations***
	Landscape character. Visual amenity. Heritage features
Potential impacts	***Assessment***
There is potential for the following impacts on the landscape and visual amenity during the construction & operational phases. ***Residential & public amenity***: Potential for minor localised visual impacts on houses located to the N, S & SW of the site along the R352	The project would not be located within a sensitive landscape, there are no protected views across the site. The lands slope up from SW to NE and the site is bound to the N, W & E by agricultural lands and to the S by the R352. There is a designated 10ha buffer to the W of the data centre site along the Ballymacahill / Spancelhill Stream, and smaller buffers around Toureen Lough in the SW section & and a Ringfort in the NE section of the overall lands. The substation would be in the E section of the data centre campus, which in turn be centrally located within lands that are zoned ENT3 for enterprise uses. Refer to section 6.2 of this report for a detailed analysis of visual impacts which concluded that there would be no long term significant adverse effects. The site boundaries would be

& local roads, and further afield residential, educational and commercial areas to the SW of the site and M18, on the approach to Ennis, during the operational phase.	defined by landscaped berms & replacement planting would result in a net increase trees and hedgerows. No adverse on impacts on visual amenity are anticipated, subject to the implementation of EIAR mitigation measures (incl. landscaping & planting) & compliance with recommended conditions (incl. early implementation of landscaping).
Road network: Further potential for minor localised visual impacts on views from along the road network during the operational phase (M18, R252 & local roads to N & E).	Although there would be intermittent views of the substation building from the surrounding road network, the impact would diminish over time as the tree & hedgerow planting matures.
Heritage features: Potential for minor localised visual impacts on views towards the Recorded Monuments (Ringforts) located to the NW & NE of the site, and the wooded areas located along the Ballymacahill / Spancelhill Stream & Toureen Lough in the W and SW sections, during operational phase.	There would be no adverse effects on the character or setting of the ringforts, wooded areas or any other cultural or natural heritage features in the surrounding area, having regard to the buffer zones, separation distances, undergrounding of existing & proposed transmission cables, and the erection of landscaped berms around the site perimeter.
Residual Effects: Impacts predicted to be minor subject to implementation of mitigation measures and will diminish over time as the landscaping matures.	
Cumulative Impacts: None predicted.	
Conclusion: I have considered all the potential direct & indirect impacts in relation to landscape, 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.	

Biodiversity	
EIAR sections 5, 6 & 7 and the associated Technical Appendices and reports dealt with: - land, soils, geology & hydrogeology; hydrology & water quality; and biodiversity. Extensive desk top studies & seasonal field surveys were undertaken, and AA Screening & NIS reports were prepared. The EIAR described the overall receiving environment for the proposed data centre and substation as comprising low-intensity agricultural fields defined by trees, hedgerows & stone walls, with a variety of soil types. There is an extensive wooded area parallel to the Ballymacahill /Spancelhill Stream to the W, along with a smaller wooded area around Toureen Lough in the SW section. The lands are underlain by limestone bedrock, which is locally karstified, and there are several small ponds, swallow holes & springs dotted around the site. The overall data centre lands mainly drain W and SW to the Ballymacahill / Spancelhill Stream which forms a confluence with the downstream Garrus River, to ultimately discharge to the Fergus & Shannon Rivers (SAC & SPA). The substation lands partly drain S towards the Tulla Road and beyond via groundwater. The EIAR did not identify any sensitive sites within the project site, although there are several European & national sites in the wider area which have been designated for a variety of habitats & species (incl. waterbodies, wetlands, mammals, birds, bats & fish). It recorded badger & otter activity within the overall site and environs, and the presence of the rare Fen bedstraw in the N section. It noted that the site (incl. lands, hedgerows & farm buildings) may be used by roosting, foraging & commuting birds & bats, and that the on-site ponds and nearby watercourses may provide support habitat for fish & their prey species. 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 ground & surface water quality, habitats & species.	
Submissions	***Concerns raised / Considerations***
	Loss or damage to habitats. Impacts on water quality. Impacts on wildlife (incl. otter, badger, birds, bats & plant species).
Potential impacts	***Assessment***

The overall site comprises low-intensity agricultural grazing land, which is defined by trees, hedgerows & stonewalls, and dotted with ponds, swallow holes & springs. It has an aquatic connection to the Ballymacahill / Spancelhill Stream and downstream Gaurus, Fergus & Shannon rivers. Foraging otter, birds & bats have been recorded within the site & there are badger setts around the perimeter (Incl. the E section). A rare plant species (Fen bedstraw) is present in the N section of the overall site. There is potential for the following impacts on Biodiversity during the construction & operational phases.	The site & environs are not covered by any sensitive natural heritage designations. The overall site contains woodlands, wetlands, grasslands & hedgerows, it has an aquatic connection to a nearby watercourse, and there is evidence that it is used / frequented by several species of animal (incl. otter, badgers, birds & bats) for nesting, roosting, foraging & commuting. The rare Fen bedstraw was recorded in the N fenland section. The substation would be located in the E section, which is mainly characterised by grassland, hedgerows & trees. The EIAR, NIS & CEMP contain mitigation measures to protect water quality & biodiversity.
European sites: Potential aquatic and/or mobile connections to sensitive sites in the wider area***.***	Refer to Section 8.0 of this report (AA) which concluded that there would be no loss, disturbance or damage to any designated sites, habitats or species during the construction or operational phases.
Habitats & species: Potential for loss, damage, or disturbance to habitats & species during the construction & operational phases.	Refer to Sections 6.6 of this report (Biodiversity) which concluded that there would be no significant loss, damage or disturbance to any habitats or species during any of the phases. This would be subject to the implementation of EIAR mitigation

	measures (incl. buffers & landscaping) & compliance with recommended conditions (incl. early implementation of landscaping).
Habitats: Potential for permanent localised loss, damage, or alteration to non-designated habitats (incl. woodlands, waterbodies, wetlands grasslands & hedgerows) during the construction phase.	The woodlands habitat along the Ballymachill / Spancelhill Stream in the W section would be protected by a c.10ha buffer, as would the wooded area around Toureen Lough in the SW section. The central location of the buildings within the overall c.60ha site would contribute to the protection of the myriad of habitats located around the perimeter of the site. Several non-designated habitats within the centre of the site which are of mainly local importance (incl. hedgerows) would be permanently lost or altered. However, the proposal to replant trees & hedgerows within the site and on the landscaped berms would result in a net gain in biodiversity overall, and the long-term impact would not be significant.
Flora: Potential for permanent localised loss of plant species during construction phase (incl. some rare Fen bedstraw & species rich calcareous grasslands) which may be present in parts of the overall data centre site.	Several non-designated plant species of local importance would be permanently lost but given their lack of sensitivity and the proposal to plant native tree and hedgerow species on the landscaped berms around the overall data centre site, the overall long-term impact would not be significant. The central location of the buildings (incl. the substation) within the overall c.60ha site would contribute to the protection of the myriad of habitats located

	around the perimeter of the site that host some rare plant species. However, a pre-construction survey should be undertaken, and buffers provided around any nearby sensitive specimens.
Mammals: Potential for localised habitat loss and general disturbance to several species (incl. badger) during the construction & operational phases.	Several species of ***mammal*** would be disturbed during the construction & operational phases (incl. otter, badger, fox & hare). Most will return and habituate to activity on the site in the long term during the operational phase. The buffers around the W woodland and SW Toureen Lough, along with the central location of the buildings within the overall c.60ha data centre site would contribute to the protection of the myriad of habitats located around the perimeter of the site that are frequented by these species (incl. for nesting, foraging & commuting). The proposed hedgerow replanting & landscaped berms around the perimeter of the data centre campus would help to minimise any long-term adverse impacts, subject to the use of native species. The project footprint would avoid the 3 x badger setts around the perimeter of the site, however, the setts should be further protected by buffer zones, and artificial lighting should be avoided during both phases, to ensure the protection of this species. Fencing panels should be erected in such a manner so as allow wildlife to traverse the site.

Birds: Potential for localised habitat loss and general disturbance to several bird species during the construction & operational phases.	Several species of ***bird*** frequent the overall site and utilise the various habitats (incl. woodlands, wetlands & hedgerows) and farm buildings for nesting & foraging (mainly passerines). Buzzards and some wintering waterbirds were also noted flying overhead although the site does not offer suitable nesting or foraging habitat for these species. Vegetation clearance during the construction phase should take place outside of the bird nesting season. Any loss of supporting habitat (incl. hedgerows) would be compensated in the long-term by the planting of the additional hedgerows & perimeter landscaped berms within and around the overall data centre campus. However, native species should be planted, and landscaping should take place early on in Phase 1. The undergrounding of the existing & proposed transmission lines would reduce the risk of collisions & subsequent fatalities for all species, and in particular for any raptors or wintering waterbirds that are qualifying species for the further afield European sites.
Bats: Potential for localised habitat loss & general disturbance to several bat species during the construction & operational phases (incl. Lesser horseshoe, Brown long-eared, Soprano & Common pipistrelles and Leisler's bats).	Several species of ***bat*** frequent the site & environs and utilise the various habitats (incl. hedgerows) and farm buildings within the overall data centre site for roosting, foraging & commuting (although no roosts were recorded). Bats could be adversely affected by the demolition of farm buildings, vegetation

	clearance and hedgerow removal during the construction phase of the overall project, and by artificial lighting during both phases. EIAR mitigation measures include pre-construction bat surveys, seeking a Derogation Licence if required to enable humane relocation, and the minimal artificial lighting. As for birds above, any loss of supporting habitat (incl. hedgerows) would be compensated in the long-term by additional hedgerow planting which should comprise of native species & take place early on in Phase 1, to avoid a sustained loss of support habitat and any resultant long-term damage to bat populations. The undergrounding of the existing & proposed transmission lines would reduce the risk of collisions & subsequent fatalities for all species, and in particular for Lesser horseshoe bat, which is a qualifying species for several further afield European sites.
Aquatic species: Potential for localised loss of, or disturbance to freshwater species because of a deterioration in water quality due to sedimentation, spillages and surface water runoff during the construction & operational phases (to ground & surface waterbodies).	The site mainly drains W & SW to the Ballymacahill / Spancelhill Stream which forms a confluence with the downstream Garrus River and ultimately discharges to the Fergus & Shannon rivers. The substation would occupy the E section of the site that partly drains Stowards the Tulla Road and beyond. The on-site waterbodies and nearby watercourses may contain suitable habitat for some fish species in their various life cycle stages. However, no sensitive species or support habitat were recorded, although

	several species are present further downstream in the Fergus & Shannon Rivers (incl. Salmon & Lampreys). There are no downstream records of any White-tailed crayfish or Freshwater-pearl mussel, or suitable support habitat for either species. The data centre and substation projects contain several embedded design measures to protect water quality & aquatic ecology (incl. layout & foundation types which take account of karst features). The EIAR also contains a suite of mitigation measures to protect water quality & aquatic ecology (incl. a drainage management plan and ground & surface water protection). The proposed development would not have any significant long-term effects on water quality or aquatic species during the construction & operational phases. This would be subject to the implementation of EIAR mitigation measures & the surface water management arrangements, compliance with recommended conditions, and adherence to best construction practices.
Other species: Potential for damage or disturbance to other species because of habitat loss & general disturbance.	No significant loss, damage or disturbance to other species (incl. invertebrates, amphibians & reptiles) during any of the phases.

Residual Effects: Impacts predicted to be minor subject to implementation of mitigation measures and any recommended planning conditions.
Cumulative Impacts: The proposed development, would give rise to some minor cumulative impacts in-combination with the construction of the proposed data centre campus, with no significant cumulative impacts predicted during the operational phase.
Conclusion: I have considered all the potential direct & indirect impacts 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 5 & 6 and associated Technical Appendices & accompanying reports dealt with: - land, soils, geology & hydrogeology, and hydrology & water quality. The EIAR described the receiving environment, and several desktop studies, field surveys & ground investigation tests were undertaken. The overll data centre site comprises agricultural lands underlain by Limestone bedrock which contains a regionally Important Limestone Aquifer with an Extreme vulnerability rating in the W, and High to Moderate for the rest of the site. The sections of the overall site are karstified, and there several small ponds, swallow holes and springs dotted around the site. The overall lands mainly drain W & SW to the Ballymachill / Spancelhill Stream and hence the Gaurus, Fergus & Shannon rivers, whilst the E section which includes the substation site, partly drains S towards the Tulla Road and beyond. There are no particularly sensitive hydrogeological features in the vicinity. The EIAR described the proposed excavation & construction works for the substation and the installation of the underground cables. It identified potential impacts (incl. accidental sediment & chemical discharges to ground & surface water during the construction phase, and surface water run-off during both phases). The EIAR also contained drainage & water management measures, and the data centre application was accompanied by a Site-Specific Flood Risk Assessment for the overall lands. The EIAR did not predict any significant adverse impacts on land, soil or water during any of the phases, subject to implementation of the surface & ground water and drainage arrangements & mitigation measures (incl. avoidance, drainage systems, & water management measures).	
Submissions	***Concerns raised / Considerations***
	Ground & surface water quality. Water & Wastewater capacity. Flood risk.
Potential impacts	***Assessment***
There is potential for the following impacts on land, soil & water in relation to the works associated with the construction & operation of the overall data centre campus and	The site & environs comprise undulating low-intensity agricultural grazing land that slopes up from SW to NE. The lands are underlain by limestone bedrock which is covered by 4 main soil types. There is localised karstification, and the overall site is dotted with ponds, swallow

proposed substation, and the installation of underground cables.	holes & springs. The overall site mainly drains W & SW to the Ballymacahill / Spancelhill River which forms a downstream confluence with the Gaurus River to ultimately discharge to the Fergus & Shannon Rivers, while the substation site in the E section partly drains S towards the R352 & beyond.
Water quality: Potential pollution of surface and groundwater bodies (with resultant impacts on aquatic ecology) by sediments released during construction works & by accidental fuel spillages or leaks during the construction & operational phases.	The proposed surface water drainage arrangements and mitigation measures contained in the EIAR would protect ground and surface water quality in the underlying aquifer, on-site ponds & nearby watercourses (incl. aquatic species) from contamination by sediments and chemical spills during the construction & operational phases. These measures include sediment traps, spillage kits and appropriate disposal of any identified contaminated soil waste. No diminution in water quality is anticipated in any of the receiving waterbodies and the project would not interfere with the achievement of Good water quality status.
Ground & surface water contamination: Potential impacts resulting from leakage & spillages from vehicles & fuel stores during the construction phase (data centre, substation & underground cables), and potential minor impacts by accidental fuel spillages or leaks	There would be no significant adverse effects ground & surface water quality or groundwater flows during the construction & operational phases. This would be subject to the implementation of EIAR mitigation measures and planning conditions, adherence to best construction practice (Incl. methodologies contained in the EIAR, CEMP and Engineering Report), and compliance with all relevant

(from vehicles) during the operational phase.	regulations. A final CEMP should be agreed with the planning authority before development commences.
Flood risk: Potential impacts resulting from uncontrolled surface water runoff within and down slope of the site, on nearby infrastructure (incl. R352) & further afield watercourses.	The proposed data centre campus application was accompanied by a Site-Specific Flood Risk Assessment report which include the substation site. No adverse flood risk impacts anticipated during the construction & operational phases. This would be subject to implementation of surface water management arrangements & EIAR mitigation measures, compliance with recommended conditions, and adherence to best construction practices.
Water supply & wastewater capacity: Potential impacts on public water supply and wastewater treatment capacity.	The data centre campus & substation would be connected to existing public services located along the R352, and CC & IW have confirmed available capacity in both networks.
Residual Effects: Residual impacts are not predicted to be significant subject to the implementation of mitigation measures.	
Cumulative Impacts: The proposed development, would give rise to some minor cumulative impacts in-combination with the construction of the proposed data centre campus, with no significant cumulative impacts predicted during the operational phase.	
Conclusion: I have considered all the potential direct and indirect impacts 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 12 & 13, associated Technical Appendices dealt with traffic, transportation & movement, and material assets (incl. access, power supply, telecommunications, water supply & waste 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 lands zoned ENT3 for enterprise & data centre uses. It described the proposed movement, access, service & pedestrian arrangements. It stated that the national, regional & local road network had adequate capacity, and that any short-term minor traffic impacts during the construction phase would be managed by mitigation measures. It did not predict any significant adverse impacts on during the construction & operational phases.	
Submissions	***Concerns raised / Considerations***
	Traffic impacts & safety. Water quality & fisheries. Water use & supply capacity. Energy sources & supplies. Telecommunications connections.
Potential impacts	***Assessment***
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 could have localised impacts on the road network & traffic safety.	The proposed development would be situated within an area that is designated ENT3 for enterprise & data centre uses. The site & environs are connected to the local, regional and national road network, the area (but not the site) is served by an existing water supply & foul sewer, power supply, tele-communications & fibre-optic network. Refer to section 6.4 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 arrangements off the R352 are acceptable. Adequate on-site car parking would be provided.
Water supply & drainage: Potential impacts on environmental services related to the provision of clean water and disposal of unclean water from the site (incl. wastewater & storm water), and resultant impacts on water quality and flood risk related to uncontained and/or unmanaged discharges.	Refer above for a detailed analysis of water supply & drainage impacts. The data centre campus and substation would be connected to the existing public water and wastewater services along the R352, and CCC & IW have indicated that there is adequate spare capacity to service the project. The data centre campus and substation development would drain to nearby watercourses via a customised on-site drainage system which would manage discharge volumes, prevent flooding & protect downstream water quality in ground and surface water bodies, and protect the surround road network from inundation, as per Council requirements. Refer to EIA Land, Soil & Water above which concluded that the proposed development would not have significant impact on surface & ground or ground water and would not give rise to a flood risk. No adverse impacts anticipated, subject to the implementation of EIAR mitigation measures, compliance with planning conditions, & adherence to best construction practices.

Power supply & telecommunications: Potential impacts on existing services.	No adverse impacts anticipated. The proposed data centre development would be powered by the national grid via the existing 110kV substation to the W & the proposed on-site energy centre which would be powered by natural gas from the nearby gas pipeline to the E, which would ensure a continuity of supply. The proposed substation would form a node on the grid. The site is connected to existing telecommunication & fibre-optic services.
Agriculture & fisheries**:** Potential impacts on agricultural land & food production, and fisheries resulting from an unmitigated diminution in water quality.	There will be permanent loss of agricultural land, however the Vertical Farm building which forms part of the data centre application, will provide for an alternative form of food production which will utilise waste heat & water from the data centre halls. No adverse impacts on water quality (refer above) and hence no impacts on fisheries anticipated.
Residual Effects: Residual impacts are not predicted to be significant subject to the implementation of mitigation measures and compliance with any recommended conditions.	
Cumulative Impacts: The proposed development would give rise to some minor cumulative impacts in-combination with the construction of the proposed data centre campus, with no significant cumulative impacts predicted during the operational phase.	
Conclusion: I have considered all the potential direct and indirect impacts 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 10 & 11 and associated Technical Appendices dealt with landscape & visual impact, and archaeological, architectural & cultural heritage. The EIAR described the receiving environment as comprising agricultural fields in a rural area, and it identified several cultural artefacts within the overall data centre site and study area (incl. RM Ringforts). The EIAR described the proposed development and identified potential impacts on cultural heritage around the site. The EIAR 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 / Considerations***
	Impacts on underlying archaeology.
Potential impacts	***Assessment***
Archaeology: Potential impacts on recorded & yet to be discovered artefacts.	The site & environs are not covered by any blanket sensitive designations, although there are 2 x Recorded Monuments (Ringforts) located nearby, and several others in the study area. The Ringfort in the NE corner of the overall data centre site would be protected by a buffer zone which would be kept free of development. However, there may be yet to be discovered archaeological artefacts, and the site should be investigated prior to construction commencing. This is in addition to implementing EIAR mitigation measures (incl. testing, monitoring & recording) & compliance with any recommended planning conditions.
Heritage features: Potential impact on character & setting of heritage features in the wider areas.	Refer to section 6.2 of this report and the EIA Landscape section above which concluded that the proposed development would not have any adverse impacts on heritage features in

	the area, and there are no recorded Protected Structure or NIAH features in the vicinity.
Residual Effects: Residual impacts are not predicted to be significant subject to the implementation of mitigation measures and compliance with any recommended planning conditions.	
Cumulative Impacts: The proposed development, would give rise to some minor cumulative impacts in-combination with the construction of the proposed data centre campus, with no significant cumulative impacts predicted during the operational phase.	
Conclusion: I have considered all the potential direct and indirect impacts 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.	

8.5 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 (inc. renewable energy projects). These are addressed in each of the EIAR chapters. However, the main project relates to the concurrently proposed data centre campus (ABP-314474-22) which would be served by the proposed development. Having regard to the nature and scale of the various projects and the ENT3 zoning objective (incl. enterprise & data centre uses) for the overall lands, I am satisfied that adverse cumulative effects can be avoided, managed, and mitigated by the embedded measures which form part of the proposed development, mitigations measures, and suitable conditions. There is, therefore, nothing to prevent the granting of approval on the grounds of cumulative effects.

8.6 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.

8.7 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.

8.8 Reasoned Conclusion

Having regard to the current Climate Action Act and Climate Action Plan, and 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, and it is considered that the main significant direct and indirect effects of the proposed development on the environment have been identified in section 7.0 and section 8.0 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 and operation phases*** 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 waterbodies. The construction of the proposed development 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 set out in the Environmental Impact Assessment Report (EIAR) related to control and management of sediments, accidental spills and contamination, and drainage management.

- The ***risk of disruption to ground water flow patterns during the construction phase*** through a lack of control over and mismanagement of the excavation and drainage works, or inappropriate siting of foundations. These impacts would be mitigated by the avoidance of karst features, and the agreement of measures within a Construction and Environment Management Plan and the implementation of mitigation measures related to: - avoidance, design and water management.

- The proposed project would give rise ***biodiversity impacts*** arising from the habitat loss and fragmentation, changes to the vegetation on the site, loss of foraging or commuting habitat and disturbance to otters, badgers, birds and bats, connections to foraging, aquatic and water dependent habitats and general disturbance during the construction and operational phases. These impacts would be mitigated by the agreement of measures within a Construction and Environment Management Plan and the implementation of mitigation measures set out in the Environmental Impact Assessment Report (EIAR).

- The proposed project could give rise to impacts on ***cultural heritage*** during the construction and operational phases which would be avoided by the implementation of the measures set out in the Environmental Impact Assessment Report (EIAR) (incl. avoidance), and by compliance with the recommended conditions in relation to archaeological assessment of the site.
- 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 and Construction Traffic Management Plan.
- The project could give rise to minor localised impacts on ***residential amenity*** during the construction (noise, dust, air quality, traffic safety & general disturbance) phase. These impacts would be mitigated by the implementation of measures set out in the Environmental Impact Assessment Report (EIAR) related to the protection of air quality, control of noise and dust, traffic management and the erection of screening berms, and by the agreement of measures within a Construction and Environment Management Plan.

8.0 Appropriate Assessment

8.1 The AA Screening Report

The AA Screening Report described the site, environs and the proposed substation development, and it utilised the results of the EIAR desk studies and field surveys. The report confirmed that the proposed development would not be located within a European site. The report stated that there are 23 x European sites within a 15km radius of the proposed works, including 12 x SACs designated for Lesser horseshoe bat and 4 x SPAs designated for wetlands and waterbirds. The report screened out 15 of these sites and concluded that they would not be affected by the proposed development because of the substantial separation distances, upgradient location and/or the absence of any direct connections to the European sites.

8.2 AA Screening Assessment

The proposed development would not be located within an area covered by a European site designation, and it is not relevant to the maintenance of any such European site. There are 23 x European sites located within a c.15km radius / Zone of Influence of the site. The Qualifying Interests and approximate straight line separation distances to these European sites are listed below.

European sites	QIs & SCIs	Distance
SACs	***Qualifying Interests***	
Lower River Shannon	Sandbanks & Estuaries Mudflats & sandflats Coastal lagoons & Reefs Large shallow inlets & bays, Perennial vegetation of stony banks Vegetated sea cliffs Salicornia & other annuals Atlantic & Mediterranean salt meadows Floating river vegetation Molinia meadows & Alluvial forests Freshwater Pearl Mussel Sea, Brook & River Lamprey Salmon & Otter Common Bottlenose Dolphin	1.4km SW
Ballyallia Lake	Natural eutrophic lakes	2.1km W
Old Domestic Building (Keevagh)	Lesser horseshoe bat	4.3km SE
Dromore Woods & Loughs	Lesser horseshoe bat	4.4km N

	Natural eutrophic lakes Tall herb fringe communities Limestone pavements Otter	
Old Domestic Buildings, Rylane	Lesser horseshoe bat	5.9km N
Newgrove House	Lesser horseshoe bat	6.3km E
Newhall & Edenvale Complex	Lesser horseshoe bat Caves	6.5km SW
Toonagh Estate	Lesser horseshoe bat	6.6km NW
Poulnagordon Cave (Quin)	Lesser horseshoe bat	7.0km SE
Poulnadatig Cave	Lesser horseshoe bat Caves	7.2km SW
Old Farm Buildings, Ballmacrogan	Lesser horseshoe bat	8.1km NW
Moyree River System	Lesser horseshoe bat Caves Floating river vegetation Alkaline fens Limestone pavements Otter	8.2km N
Ballycullinan, Old Domestic Building	Lesser horseshoe bat	9.2km NW
East Burren Complex	Hard oligo-mesotrophic waters Turloughs & Floating river vegetation Alpine & Boreal heaths Juniperus communis formations Calaminarian grasslands Semi-natural dry grasslands Lowland hay meadows Calcareous fens Petrifying springs with tufa formation Alkaline fens & Alluvial forests Limestone pavements Lesser Horseshoe Bat & Caves Otter & Marsh Fritillary	9.3km N
Ballycullinan Lake	Calcareous fens	9.4km NW
Ballyogan Lough	Calcareous fens Limestone pavements	9.7km N
Lough Gash Turlough	Turloughs Rivers with muddy banks	11.1km S
Knockanira House	Lesser horseshoe bat	11.8km SW
Kilkishen House	Lesser horseshoe bat	12.7km SE
SPAs	***Special Conservation Interests***	
Balliallia Lough	Teal, Coot & Mallard Wigeon & Shoveller Gadwell & Black-tailed Godwit Wetland & Waterbirds	2.8km NW
Slieve Aughty Mountains	Merlin & Hen Harrier	4.4km NE
River Shannon & River Fergus	Cormorant & Whooper Swan Light-bellied Brent Goose Shelduck & Scaup Wigeon, Teal, Pintail & Shoveler	5.1km SW

	Ringed, Golden & Grey Plovers Lapwing, Knot & Dunlin Black-tailed & Bar-tailed Godwits Curlew, Redshank & Greenshank Black-headed Gull Wetland & Waterbirds	
Corofin Wetlands	Black-tailed Godwit & Teal Whooper swan & Wigeon Little grebe Wetland & Waterbirds	10.7km NW

SAC Conservation Objectives (where listed):

- To maintain and / or restore the favourable conservation condition of the habitats and species for which the SACs have been selected.

SPA Conservation Objectives:

- To maintain and/or restore the favourable conservation condition of bird species listed as SCIs for these sites (Slieve Aughty Mountains, River Shannon & River Fergus Estuaries, and Ballyallia Lough SPAs).
- To maintain the favourable conservation condition of the wetland habitat as a resource for the regularly-occurring migratory waterbirds that utilise it (River Shannon & Fergus Estuaries and Corofin Wetlands SPAs).

The potential effects relate to:

- Release and transport of pollutants in ground and/or surface water flowing into the European sites via underlying ground or surface water bodies.
- Ex-situ impacts on qualifying species outside the European sites but which are an integral and connected part of the population of qualifying interest species, including: -
    - Loss of or damage to habitats used by QI/SCI species.
    - Loss of foraging & commuting areas used by QI/SCI species.
    - General disturbance to QI/SCI species during construction.
- Impacts on water quality and quantity, and/or vegetative composition of support habitats.
- Impacts on vegetative composition of habitats and/or support habitats as a result of colonisation by invasive species.

AA Screening Assessment:

- ***Newgrove House, Newhall & Edenvale Complex, Toonagh Estate, Poulnagordon Cave (Quin), Poulnadatig Cave, Old Farm Buildings (Ballmacrogan), Moyree River System, Ballycullinan (Old Domestic Building), East Burren Complex, Ballycullinan Lake, Ballyogan Lough, Lough Gash Turlough, Knockanira House & Kilkishen House SACs***: Having regard to the nature of the Qualifying Interests for these the sites (incl. Lesser horseshoe bat & Caves), the known foraging range of Lesser horseshoe bat (c.6km), the substantial separation distance between the project and the European sites, and the absence of a downstream aquatic connection with these sites, it is unlikely that the proposed development would have an adverse effect on the QI habitats and species or their Conservation Objectives for these SAC sites.

- ***Dromore Woods & Loughs, Old Domestic Buildings (Keevagh), Old Domestic Buildings (Rylane) and Lower River Shannon SACs***: Having regard to the nature of the QIs for these the sites (incl. Lesser horseshoe bat & it's known foraging range), the proximity of the project to the European site, and the presence of a downstream aquatic connection with a site, it is possible that the proposed development could have an adverse effect on the QI habitats and species or their Conservation Objectives, and further consideration is therefore required.

- ***Ballyallia Lough, River Shannon & Fergus Estuaries, Slieve Aughty Mountains and Corofin Wetlands SPAs***: Having regard to the nature of the SCIs for these sites (incl. waterbirds & raptors) and their known foraging range, the proximity of the project to a European site, and the presence of a downstream aquatic connection with a site, it is possible that the proposed development could have an adverse effect on the SCI species and their Conservation Objectives, and further consideration is therefore required.

AA Screening Conclusion

In conclusion, having regard to the nature and scale of the proposed development, to the separation of the substation site from the European sites, to the nature of the qualifying/conservation interests and conservation objectives of the European sites and to the available information as presented in the EIAR and NIS regarding ground and surface water pathways and mobile connections between the site and the European sites, and other information available, it is my opinion that the proposed development has the potential to affect the following 8 x European sites, having regard to the conservation objectives of this site, and that progression to a Stage 2 Appropriate Assessment is required.

Dromore Woods & Loughs SAC	**Ballyallia Lough SPA**
Old Domestic Buildings (Keevagh) SAC	**River Shannon & Fergus Estuaries SPA**
Old Domestic Buildings (Rylane) SAC	**Slieve Aughty Mountains SPA**
Lower River Shannon SAC	**Corofin Wetlands SPA**

8.3 Appropriate Assessment

The details for the remaining European sites within the Zone of Influence of the proposed development are set out below:

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.

Potential direct effects:

The project would not be located within a European site, and it is not relevant to the maintenance of a European site. No potential for direct effects having regard to the location and scale of the development and to the separation distance between the works and the qualifying interest habitats and species.

Potential indirect effects:

There is potential for indirect effects on the European sites and their qualifying habitats and species during the ***construction phase*** resulting from the loss of foraging, resting and nesting places, loss of or damage to support habitat, and water pollution. The unmitigated release of fine sediments during construction works and hydrocarbons by way of accidental spillages from machinery, could give rise to water pollution in the surrounding waterbodies with resultant impacts on the availability of biomass for the constituent species. Excavations into bedrock could give rise to groundwater contamination and changes in flow patterns with resultant impacts on the surrounding freshwater habitats. The uncontrolled introduction of invasive species from works vehicles could give rise to the colonisation of support habitats by invasive species, with resultant impacts on habitats and species. All in the absence of mitigation. There is also potential for additional significant indirect adverse effects during the ***operational phase*** when the works are complete in relation to the operational substation and associated surface water run-off from hard infrastructure (incl. barrier effects from structures & fencing and water quality).

Mitigation measures:

The EIAR & NIS mitigation measures (incl. embedded design), which would serve to protect the European sites from adverse effects, include:

- Identification and avoidance of karst features.
- Embedded design (incl. foundation types).
- Surface & ground water management
- No on-site maintenance of vehicles or plant.
- Bunded refuelling areas, emergency plan & spill kits.
- Control of cement & concrete.
- Preparation of a CEMP.
- Adherence to best construction practices.
- Timing & seasonality of works.
- Project Ecologist.

Threats to European sites:

Potential threats to the European sites include those posed by agricultural activities, urban and domestic wastewater discharges, quarrying, public water abstraction, and recreational activities (incl. fishing).

Assessment of likely significant effects on the SACs

Dromore Woods & Loughs, Old Domestic Buildings (Keevagh), Old Domestic Buildings (Rylane) & Lower River Shannon SACs: These SACs are located between 1.4km and 6.0km of the substation site and they are designated for a variety of habitats (incl. riparian, lakes, meadows & forests) and several species (incl. Lampreys, Salmon & Otter). Having regard to the nature and scale of the work required to construct the substation and associated infrastructure (incl. site clearance, excavations & foundations), the characteristics of the surrounding lands which are in agricultural use, the separation distance between the proposed development and the European sites, the nature of the Qualifying Interests for each site, and the presence of a mobile or downstream aquatic connection over a short distance, it is possible that the proposed development could have an adverse effect on these SACs and their Conservation Objectives.

I note that the QI Freshwater pearl mussel population of the ***Lower River Shannon SAC*** is located in the Cloon River which in a different river catchment area c. 27km to the S, and that the QI species of Common Bottlenose Dolphin does not frequent the receiving downstream freshwater watercourses, and they will be excluded from further consideration. I also note that in the absence of a downstream aquatic connection over a reasonable distance between the project site and the **Dromore Woods and Loughs SAC** to the W, and three of the QI habitats will be excluded from further consideration (incl. Natural eutrophic lakes, Tall herb fringe communities & Limestone pavements).

SAC Site name	Qualifying Interests	Attributes & targets
Dromore Woods & Loughs	***Lesser horseshoe bat***	Population per roost (261 min); Summer & Auxiliary roosts (no decline); Foraging habitat & Linear features (no significant decline within 2.5km of roost); Light pollution (no significant increase adjacent to roost or commuting routes within 2.5km of roost.
	Otter	Distribution (no decline); Extent of terrestrial & freshwater habitats (no decline); Couching sites & holts (No decline). Fish biomass (no decline); and Barriers to connectivity (no increase).
Old Domestic Buildings (Keevagh)	***Lesser horseshoe bat***	None specified (Refer above).
Old Domestic Buildings (Rylane)	***Lesser horseshoe bat***	None specified (Refer above).
Lower River Shannon	***Sandbanks***	Habitat distribution (stable); Habitat area (stable or increasing); and Community distribution (conserve community types).
	Estuaries, Reefs, Mudflats & sandflats, Large shallow inlets & bays	Habitat area (stable or increasing); and Community distribution (conserve community types).
	Coastal lagoons	Habitat area (stable); Habitat distribution (no decline); Salinity & Hydro regime (natural range); Barrier (hydro connectivity); Water quality (chlorophyll a, MRB & DIN within natural range); Depth of macrophyte colonisation (to depth of lagoon); Typical plant & animal species (maintain); and Negative indicator species (under control).

	Perennial vegetation of stony banks	Habitat distribution (stable); Habitat area (stable or increasing); Physical structure (maintain sediment supply); Vegetation structure (maintain zonation); Vegetation composition (maintain typical species & sub-communities); and Vegetation composition (min negative indicator species);
	Vegetated Sea cliffs	Habitat length (stable or increasing); Habitat distribution (no decline); Physical structure (maintain hydro regime); Vegetation structure (maintain habitat zonation); Vegetation structure (maintain height variation); Vegetation composition (maintain typical species); and Vegetation composition (min negative indicator species); and Vegetation composition (min bracken & woody species
	Salicornia & other annuals; Atlantic & Mediterranean salt meadows	Habitat distribution (stable); Habitat area (stable or increasing); Physical structure (maintain sediment supply); Physical structure (maintain creeks & pans); Physical structure (maintain tidal flooding regime); Vegetation structure (maintain height variation); Vegetation composition (maintain typical species); and Vegetation composition (min negative indicator species - Spartina angelica).
	Floating river vegetation	Habitat area (stable); Habitat distribution (no decline); Hydro regime (maintain appropriate regimes); Substratum composition (particle size ranges, appropriate to the habitat sub-type); Water quality (low nutrients); Vegetation composition (indicator species); Floodplain connectivity (maintain); and Riparian habitat (maintain).
	Molinia meadows	Habitat area (stable); Habitat distribution (no decline); Vegetation structure (herbs: grass ratio & Height); Vegetation composition (min 7 x positive indicator species, notable species, few non-native & negative indicator species); Vegetation structure (few woody species & bracken); and Physical structure (max 10% bare ground). Habitat area (stable); Habitat distribution (no decline); Woodland size (stable); Woodland

	Alluvial forests	structure (maintain diverse cover, height & natural regeneration); Hydro regime (maintain appropriate regimes); Woodland structure (dead wood, veteran trees local distinctiveness – no decline); Vegetation composition (no decline in native tree cover, variety & few non-native species).
	Lampreys	Distribution; Population structure; Juvenile density; Extent & distribution of spawning habitat; Juvenile density; & Availability of juvenile habitat.
	Salmon	Distribution (100% of river channels); Adult spawning fish (Conservation Limit); Salmon fry abundance (Maintain or exceed); Out-migrating smolt abundance No decline); number & distribution of redds (No decline); and water quality (min Q4).
	Otter	Distribution (no decline); Extent of terrestrial, marine & freshwater habitats (no decline); Couching sites & holts (No decline). Fish biomass (no decline); and Barriers to connectivity (no increase).

Habitats & fisheries: The overall lands drains W and SW to the Ballymachill / Spancelhill Stream which flows into the Lower River Shannon SAC over a short distance via the Gaurus and Fergus rivers. There is potential for adverse impacts on the QI coastal and riparian terrestrial habitats, and QI fish species as result of the unmitigated release of fine sediments during the excavation and construction works, and the release of chemical pollutants during the construction and operational phases as a result of accidental spills and accidents, into the receiving water bodies. Potential adverse impacts would include changes in sediment balance and water quality in the downstream habitats, the introduction of invasive species from works vehicles with resultant changes in vegetation composition and structure, and smothering of fish in their various life stages and support habitat. It is noted that the receiving waterbody, which has a Q3 (Poor) status, does not provide optimum support habitat for QI fish species. Following the implementation of EIAR / NIS mitigation measures (refer above), the measures contained in the Surface Water Management Plan and CEMP, in combination with the use of best construction practices and compliance with relevant requirements, I am satisfied that there would

be no resultant adverse impacts on the QIs and their attributes and targets, or the Conservation Objectives for the Lower River Shannon SAC.

Otter: As for habitats & fisheries above. Any unmitigated resultant loss of fish (prey) species for otter or interference with commuting patterns along watercourses could have potential adverse impacts on this species. However, following the implementation of the EIAR and NIS (and other measures outlined above) I am satisfied that there would be no resultant adverse impacts on the attributes and targets for this species, or the Conservation Objectives for the Lower River Shannon SAC, subject also to compliance with a preconstruction survey condition.

Lesser horseshoe bat: The overall site and environs are characterised by low-intensity agricultural fields that are defined by trees, mature hedgerows and stone walls, which have foraging and commuting potential for this species. There is potential for adverse impacts on the SACs that lie within 6km of the project site by way of loss of linear foraging and commuting habitat, artificial nighttime lighting and general disturbance. However, the attributes and targets for this species state that there should be no significant loss of foraging habitat and linear features within 2.5km of a known roost, and that there should be no significant increase in light pollution adjacent to a known roost or commuting routes within 2.5km of roost. The 3 x SACs (Old Domestic Building (Keevagh), Dromore Woods & Loughs and Old Domestic Buildings (Rylane)) are located between c.4.3km and 5.9km from the site boundary which is well outside the 2.5km limit for breeders cited in the NPWS Conservation Objectives document. The concurrently proposed data centre development would also provide for replacement hedgerow planting which would result in a net biodiversity gain, particularly for foraging bats, and the artificial lighting would be managed in accordance with the submitted Lighting Plan. I am satisfied that there would be no resultant adverse impacts on the attributes and targets for this species, or the Conservation Objectives for the Old Domestic Building (Keevagh), Dromore Woods & Loughs, and Old Domestic Buildings (Rylane) SACs, subject also to compliance with a Phase 1 landscaping condition.

Assessment of likely significant effects on the SPAs

Ballyallia Lough, River Shannon & Fergus Estuaries, Slieve Aughty Mountains & Corofin Wetlands* SPAs*: These SPAs are located between 2km and 11km of the substation and data centre site and they are designated for a variety of bird species (incl. Whooper swan, Light-bellied brent goose, Black-tailed godwit, Black-headed gull & several other species of waterbird) along with 2 x species of raptor (Merlin & Hen harrier). Having regard to the nature and scale of the work required to erect the substation, and the results of the extensive bird survey results that were submitted by the applicant as part of the concurrent data centre and substation applications, it is possible that the proposed development could have an adverse effect on the these SPA sites, their SCI species and/or their Conservation Objectives.

SPA Site name	SCIs	Attributes & targets
Ballyallia Lough	***Teal & Coot*** ***Wigeon & Shoveler*** ***Gadwell & Mallard*** ***Black-tailed Godwit*** ***Wetland & Waterbirds***	None specified.
River Shannon & Fergus Estuaries	***Cormorant***	Breeding population abundance (no decline); Productivity rate (no decline); Distribution - breeding colonies (no decline); Prey biomass available (no decline); Barriers to connectivity (no increase); Disturbance at the breeding site (min human interference); Population trend (stable or increasing); and Distribution (no decrease).
	Whooper Swan ***Light-bellied Brent Goose*** ***Shelduck & Scaup*** ***Wigeon & Teal*** ***Pintail & Shoveler*** ***Ringed, Golden & Grey Plovers*** ***Lapwing & Knot*** ***Dunlin & Curlew*** ***Black-tailed & Bar-tailed Godwits*** ***Redshank & Greenshank*** ***Black-headed Gull***	Population trend (stable or increasing); and Distribution (no decrease) for all these species.

	Wetland & Waterbirds	Wetland habitat area (stable & not significantly less than the area of 32,261ha)
Slieve Aughty Mountains	***Hen Harrier***	Population size (restore c. 14-24 confirmed breeding pairs); Productivity rate (restore); Spatial utilisation by breeding pairs (restore); Extent & condition of heath, bog & associated habitats (restore); Extent & condition of low intensity managed grasslands & associated habitats (restore); Extent and condition of hedgerows (maintain length & quality); Age structure of forest estate (achieve an even and consistent distribution); and Disturbance to breeding sites (avoid impacts on breeding HH).
	Merlin	Population size (stable or increasing); Productivity rate (maintain population); Distribution (available nesting options); Extent & condition of suitable open habitats for foraging (adequate availability); and Disturbance to breeding sites (avoid impacts on breeding M).
Corofin Wetlands	***Black-tailed Godwit*** ***Teal & Wigeon*** ***Whooper swan*** ***Little grebe***	None specified.
	Wetlands & Waterbirds	Refer to Attributes & Targets for the River Shannon & Fergus Estuaries SPA above.

Wetlands & Waterbirds: The development site lies outside the core foraging range for several of the SCI bird species for these SPAs, and it does not contain suitable roosting of grazing habitat (relative to species specific dietary presences) for the more mobile species. Therefore, there would be no direct effects on any of these species, other than some minor disturbance during the construction works. The proposed structures would not give rise to collision risk, displacement, or barrier to movement, and the undergrounding of the existing and proposed transmission cables would further reduce the risk of collision and thus fatalities. However, any diminution in water quality arising from a pollution event, including the unmitigated of release of fine sediments and accidental spills during both phases, could adversely affect downstream support habitats for water birds and the availability of prey species in the River Shannon & Fergus Estuaries SPA. This could give rise to potential impacts on SCI populations for this and the other SPAs, which share some of the more mobile SCI species (incl. Black-tailed godwit & Teal). Potential impacts

on water quality are assessed in more detail above in relation to the SACs. Following the implementation of EIAR / NIS mitigation measures (refer above), the measures contained in the Surface Water Management Plan and CEMP, in combination with the use of best construction practices and compliance with relevant requirements, I am satisfied that there would be no resultant downstream adverse impacts on the SCI bird species or their attributes and targets, or on the Conservation Objectives for the Ballyallia Lough, River Shannon & Fergus Estuaries or Corofin Wetlands SPAs.

Raptors: The substation site either lies outside the core foraging range for Merlin and Hen harrier which are SCI species for the Slieve Aughty Mountains SPA, and/or it does not contain suitable roosting, foraging of grazing habitat. There would be no direct effects on these species, other than minor disturbance during the construction works. The proposed structures would not give rise to collision risk, displacement or barrier to movement, and the undergrounding of the existing and proposed transmission cables would further reduce the risk of collision and thus fatalities.

Suggested conditions:

The EIA assessment contained in Section 7.0 of this report recommended several conditions including additional measures to protect habitats and species (buffers, pre-construction surveys & early replacement planting).

Potential in-combination effects:

Potential indirect in-combination effects relate to damage to qualifying habitats and species, and support habitats because of a similar range of threats as outlined above, having regard to the various plans or projects in wider area (Incl. renewable energy, urban projects, agriculture, domestic discharges & recreation) in the absence of mitigation.

Conclusion:

I concur with the conclusions reached in the NIS that the proposed substation development (incl. transmission cables) will have no significant adverse effects (direct, indirect or in-combination) on the Conservation Objectives, Qualifying Interests or Special Conservation Interests for the aforementioned European sites (SPAs & SACs) or for any other European Site.

8.4 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 following European sites, any other European site, in view of the site's Conservation Objectives.

- Old Domestic Building (Keevagh) SAC - Site code: 002010
- Dromore Woods & Loughs SAC - Site code: 000032
- Old Domestic Buildings (Rylane) SAC - Site code: 002314
- Lower River Shannon SAC - Site code: 002165

- Ballyallia Lough SPA - Site code: 004041
- River Shannon & Fergus Estuaries SPA - Site Code: 004077
- Slieve Aughty Mountains SPA - Site code: 004168
- Corofin Wetlands SPA - Site code: 004220

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 Climate Action Plan 2023,
c. The Government Statement on the Role of Data Centres in Ireland's Enterprise Strategy, July 2022,
d. The Regional Spatial & Economic Strategy for the Southern Region, 2020,
e. The policies of the planning authority as set out in the Clare County Development Plan, 2023 to 2029,
f. The distance to dwellings or other sensitive receptors,
g. The observations made in connection with the application.
h. The report of the planning authority,
i. 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,
j. 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.

Appropriate Assessment:

The Board agreed with the screening assessment and conclusion carried out in the Inspector's report that the following European sites are the only sites for which there is a possibility of significant effects and must therefore be subject to Appropriate Assessment: -

- Old Domestic Building (Keevagh), SAC - Site code: 002010
- Dromore Woods & Loughs SAC - Site code: 000032
- Old Domestic Buildings (Rylane) SAC - Site code: 002314
- Lower River Shannon SAC - Site code: 002165

- Ballyallia Lough SPA - Site code: 004041
- River Shannon & Fergus Estuaries SPA - Site Code: 004077
- Slieve Aughty Mountains SPA - Site code: 004168
- Corofin Wetlands SPA - Site code: 004220

The Board considered the Natura Impact Statement and all other relevant submissions and carried out an appropriate assessment of the implications of the proposed development for European Sites in view of the site's Conservation Objectives for these SACs and SPAs. The Board considered that the information before it was sufficient to undertake a complete assessment of all aspects of the proposed development in relation to the site's conservation objectives using the best available scientific knowledge in the field.

In completing the assessment, the Board considered, in particular, the following:

(i) Site Specific Conservation Objectives for these European Sites,
(ii) Current conservation status, threats and pressures on the qualifying interest / special conservation interest features,
(iii) likely direct and indirect impacts arising from the proposed development both individually or in combination with other plans or projects,
(iv) mitigation measures which are included as part of the current proposal,

In completing the AA, the Board accepted and adopted the Appropriate Assessment carried out in the Inspector's report in respect of the implications of the proposed development on the integrity of the aforementioned European Sites, having regard to the site's Conservation Objectives.

In overall conclusion, the Board was satisfied that the proposed development would not adversely affect the integrity of European sites in view of the site's Conservation Objectives and there is no reasonable scientific doubt as to the absence of such effects.

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,

(d) the Inspector's report.

The Board considered that the Environmental Impact Assessment Report (EIAR) and EIAR 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 EIAR 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, or changes to ground water flow paths 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. The construction of the proposed project could also potentially impact negatively on ground and surface waters by way of contamination through accidents and spillages, and disrupting flow paths. These impacts would be mitigated by the implementation of the Drainage Management Plan, agreement of measures within a Construction and Environment Management Plan, and the implementation of mitigation measures related to: - design and avoidance; accidental spills and contamination; sediment and erosion control; and drainage management.

- ***Biodiversity impacts*** arising from habitat loss and fragmentation, changes to the vegetation on the site, loss of foraging and / or commuting habitat and disturbance to otters, badgers, birds and bats, connections to foraging, aquatic and water dependent habitats and general disturbance during the construction and operational phases. These impacts would be mitigated by the agreement of measures within a Construction and Environment Management Plan, and the implementation of mitigation measures which include: - Pre-construction Surveys; Water Quality protection measures; an Invasive Species Management Plan; and appointment of a Project Ecologist.

- The proposed project gives rise to an increase in ***vehicle movements and resulting traffic impacts*** during the construction phase and significant impacts on the road network can be avoided by the proposed works along the road network. 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: - staging of deliveries; and implementation of a Construction Traffic Management Plan.
- ***Air pollution and noise during the construction and operational phase*** which would impact negatively on sensitive ecological receptors and human populations in the vicinity of the site. These impacts are substantially avoided by the limited number of sensitive receptors in close proximity to the proposed development. Any remaining impacts would be mitigated by the agreement of measures within a Construction and Environment Management Plan and the implementation of mitigation measures related to: - air quality, dust and noise.
- The impacts on ***residential amenity*** during the construction and operational phases would be avoided by the implementation of the measures set out in the Environmental Impact Assessment Report (EIAR) which include specific provisions relating to the control and management of dust, noise, water quality and traffic movement.
- The impacts on ***cultural heritage*** during the construction and operational phases would be avoided by the implementation of the measures set out in the Environmental Impact Assessment Report (EIAR), and by compliance with the recommended conditions in relation to archaeological site assessment.
- The proposed development would have ***potentially positive environmental impacts*** during the operational phase arising from the undergrounding of the existing overhead transmission cables.

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.

11. 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, 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 additional artificial lighting shall be installed or operated on site unless authorised by a prior grant of planning permission.
   b. Operational noise levels shall not exceed 55dB(A) Leq 1hr at the nearest noise sensitive locations between 0800 and 2000hours (Monday to Friday inclusive) and shall not exceed 45dB(A) Leq 1hr at any other time.
   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.
   e. No additional signage or advertising shall be erected on the lands or buildings without a prior grant of planning permission.

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 bat survey shall be carried out by a suitably qualified ecologist during the active bat season.
    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.
    d. A 30m cordon shall be installed around any badger sett entrances, which shall be screened and remain in place throughout the construction works.
    e. There shall be no artificial lighting of any badger sett entrances during the construction and operational phases.

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 and biodiversity.

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. Drainage on to the R352 Tulla Road and the site access shall be by means of a separate drainage network and attenuation system that discharges directly to the Ballymacahill / Spancelhill Stream. This system shall be independent of the M18 Motorway Drainage network.
   Reason: In the interest of public health and to ensure a proper standard of development.

8. The developer shall comply with the transportation requirements of the planning authority for such works and services as appropriate.
   Reason: In the interest of traffic and pedestrian safety.

9. The developer shall comply with the following transportation requirements:
   a. Provide a final Traffic Management Plan for the construction phase of the development to the planning authority for written agreement prior to the commencement of development.
   b. This Plan shall ensure that there is not a back of construction traffic from the M18 / Junction 13 and shall include for staggered deliveries to the site.
   c. Construction of the proposed right hand turning lane at the main access shall be commenced concurrently with the commencement of the site works and be completed within 6 months of the commencement of development on the site. The site access and right-hand turning lane including the proposed pavement overlay shall be undertaken as indicated in the details submitted with the application and detailed design including drainage arrangements along the R352 Tulla Road. Works shall be carried out by the developer at their own expense.

d. CCTV cameras shall be fixed and angled to face into the site and shall not be directed towards adjoining properties or the road.

Reason: In the interest of traffic safety, infrastructure provision, and the proper planning and sustainable development of the area.

10. The construction of the development shall be managed in accordance with a 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.

11. 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.

12. 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.

13. 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.

14. 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.

12. Professional Declaration

I confirm that this report represents my professional planning assessment, judgement and opinion on the matter assigned to me and that no person has influenced or sought to influence, directly or indirectly, the exercise of my professional judgement in an improper or inappropriate way.

Karla Mc Bride
Senior Planning Inspector

11th December 2023