Inspector's Report

ABP-310729-21

Development	Two-storey data storage facility containing data halls, electrical and mechanical plant rooms, loading bay maintenance and storage space, office administration areas, internal roads and circulation areas, car parking and cycle parking spaces and associated site works. An Environmental Impact Assessment Report (EIAR) will be submitted with the planning application.
Location	Drogheda IDA Business & Technology Park, Donore Road, Drogheda, Co Meath.
Planning Authority	Meath County Council
Planning Authority Reg. Ref.	21663
Applicant(s)	Tunis Properties LLC.
Type of Application	Permission.
Planning Authority Decision	Grant permission.

Type of Appeal	Third Party
Appellant(s)	An Taisce.
Observer(s)	None.
Date of Site Inspection	2nd December 2021.
Inspector	Barry O'Donnell

Contents

1.0 Site Location and Description

1.1. The subject site is located within the IDA Business and Technology Park on Donore Road, south-west of Drogheda town centre and within the administrative area of County Meath. The IDA Business and Technology Park adjoins Junction 9 of the M1 Motorway and currently contains an existing data centre facility (Reg. Ref. LB191735 refers) which is at an advanced stage of construction, and a commercial building which is set back from Donore Road by c. 350m. Construction has also started on substation development to the north of the site (Ref. ABP-308628-20 refers). Otherwise, the Business Park is served by a spine road that routes in a north direction, terminating at a roundabout, and which has a number of identified access points to individual land plots.

1.2. The site has a stated area of 3.58ha and is within the immediate vicinity of the existing data centre development. It is currently in use as part of the construction site for that permitted development. The site forms part of a larger landholding, which includes the existing data centre site, the substation site and additional lands, which have been indicated as having to potential to accommodate an additional data centre in the future.

1.3. At the time of my site inspection that site was largely laid to hardstanding, with construction materials, site offices and car parking contained thereon. The site is contained on its east and west sides by security fencing. There is a construction access to the immediate south of the existing commercial building, whilst the controlled operational access that serves the landholding is further south and consists of a two-stage access, controlled by security.

1.4. Drogheda Retail Park is on the opposite side of Donore Road and there are a mix of other commercial and retail units in its vicinity.

2.0 Proposed Development

2.1. The proposed development entailed within the public notices comprised: -

- Construction of a 2-storey (with mezzanine levels at both storeys) data storage facility building with a maximum overall height of c.25m, containing data halls, associated electrical and mechanical plant rooms, a loading bay, maintenance and

storage space, office administration areas, screened plant and solar levels at roof level, all within a building with a total gross floor area of c.28,566sqm.

- The proposed data storage facility building will be located to the north of the data storage facility building previously permitted under Reg. Ref. LB191735 and to the south of the gas insulated switchgear substation compound proposed under ABP Ref. ABP-308628-20.
- Emergency generators (26 No.), emission stacks and associated plant are provided in a fenced compound adjacent to the data storage facility, along with a single emergency house supply generator.
- MV building (with a GFA of 249sqm), water storage tanks, diesel tanks and filling area, all located adjacent to the proposed data storage facility building.
- Construction of associated internal access roads and circulation areas, provision of temporary construction access arrangements, footpaths, provision of 50 No. car parking spaces and 26 No. cycle parking spaces within a bicycle shelter.
- Landscaping and planting, bin store and all associated site works including underground foul and storm water drainage and utility cables, on an application site area measuring 3.58ha.
- An Environmental Impact Assessment Report was submitted with the application.

3.0 Planning Authority Decision

3.1. Decision

3.1.1. The Planning Authority granted permission on 4th June 2021, subject to 15 No. conditions.

3.2. Planning Authority Reports

3.2.1. A Planning Report dated 4th June 2021 has been provided, which reflects the Planning Authority's decision to grant permission. The report outlines that the proposed development constitutes a 'high technology' use and is acceptable in principle under the zoning. Reference is also made to the precedent for a data centre on the lands and national and regional policy supports for such infrastructure. The layout and design of the proposed development are stated to be acceptable. The report notes

concerns expressed by the Conservation Officer regarding the height and visual impact of the development but concludes that the development would have an imperceptible visual impact. The report recommends that permission be granted, subject to 15 No. conditions, which are consistent with the Planning Authority's decision to grant permission.

3.2.2. The report includes an Environmental Impact Assessment (EIA), within which it is stated that the Environmental Impact Assessment Report (EIAR) contained the information specified in Schedule 6 of the Regulations. The EIA is conducted under the headings of: -

- Population and Human Health,
- Biodiversity,
- Land, Soil, Water, Air and Climate,
- Material Assets, Cultural Heritage and the Landscape, and
- Interactions

3.2.3. No significant impacts are identified.

3.2.4. Other Technical Reports

A **Conservation Officer** report dated 1st June 2021 has been provided, which expresses the view that the proposed data centre is too tall, as it is equivalent to an 8-storey building. The site is considered to have the potential for 2 and 3-storey building heights. Concerns are also expressed that the development will eventually involve larger substation buildings, which are substantially larger than 25m in height. It recommends that, by way of additional information request, the applicant should be requested to reduce the height of the development to 2-storeys/c.10m.

A **Transportation Department** report dated 1st June 2021 has been provided, which outlines no objection to the development subject to a number of recommended planning conditions.

An **Environment** Report dated 4th June 2021 has been provided, which outlines no objection to the development subject to a number of recommended planning conditions.

A **Heritage Officer** report dated 3rd June 2021 has been provided, which outlines no objection to the development subject to a number of recommended planning conditions. The report expresses the view that the development will have a negative impact on protected view No. 61 of the 2013-2019 development plan. Regarding Appropriate Assessment, the Report expresses satisfaction that based on the information provided, it can be concluded that there will be no significant effects on the qualifying interests of any European sites, alone or in combination.

Emailed comments from the **Public Lighting** officer dated 26th April 2021 have been provided, which outline no objection to the development subject to a recommended planning condition.

A **Water Services** report dated 4th May 2021 has been provided, which outlines no objection to the development subject to a recommended planning condition.

3.3. **Prescribed Bodies**

3.3.1. An Taisce made a submission dated 17th May 2021 which expressed concerns regarding the level of energy usage associated with the development and the contribution to greenhouse gas emissions, both individually and as part of nationwide greenhouse emissions. The submission suggested that the applicant should clarify whether its renewable energy projects will produce an equivalent amount of power to that required by the proposed data centre and that, if they do not, the proposed development should be deemed premature. Consideration of cumulative impacts was also considered inadequate and it was requested that the applicant should give consideration to the cumulative impact of all existing and permitted data centre developments in Ireland, given renewable energy and greenhouse emissions targets are set on a nationwide basis. Consideration of water demands associated with the development were also considered inadequate and it was suggested that assessment should be undertaken against up-to-date climate forecasting, in the context of the likelihood of future water shortages. It was also suggested that cumulative impacts of peak water demand, together with other large-scale water users in the catchment, should be assessed.

3.3.2. The Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media (DAU) made a submission dated 13th May 2021, advising that there is no further requirement for archaeological monitoring, as excavations have already been carried out.

3.3.3. The Environmental Protection Agency made an emailed submission on 7th May 2021, which advised that a licence may be required under Class 2.1 of the EPA Act 1992, in relation to the combustion of fuels, but that confirmation could not be stated based on the application documents.

3.3.4. The Health and Safety Authority made a submission dated 6th May 2021, advising that the proposed development falls outside the scope of the Chemicals Act (Control of Major Accident Hazards Involving Dangerous Substances) Regulations 2015 and that the Authority had no comments on the application.

3.3.5. The Irish Aviation Authority made a submission on 6th May 2021, advising that it had no comments on the application.

3.3.6. Irish Water made a submission dated 6th May 2021, which requested a number of planning conditions as part of a grant of permission.

3.3.7. Louth County Council made a submission dated 7th May 2021, which outlined that the development would not give rise to conflicts with existing land uses or zoning objectives for lands within County Louth. The submission also stated that the Planning Authority would be relied upon to ensure that the development would not exacerbate existing water supply constraints in the area, that wastewater would be adequately treated prior to discharge and that conditions would be attached to secure implementation of mitigation measures contained within the EIAR and measures within the CEMP.

3.3.8. Transport Infrastructure Ireland made a submission dated 6th May 2021, advising that it had no comments on the application.

3.3.9. The Planning Report indicates that the Dublin Airport Authority, the Health Service Executive, the National Transport Authority and The Heritage Council were consulted on the application, but did not make a submission.

3.4. Third Party Observations

3.4.1. A number of third-party observation letters were received, the issues raised within which can be summarised as follows: -

- The height of the development was considered excessive and contrary to Section 11.1.1 of the county development plan.

- Concerns were expressed regarding the visual impact of the development.
- Concerns were expressed regarding the volume of electricity and water required by the development and the impact of the development on supplies to the wider area.
- Discharges from the proposed emergency generators were considered likely to present an air pollution risk for residents in the area, given the prevailing wind is south-westerly and there are residential neighbourhoods downwind of the site.
- The proposed emergency generators were considered likely to create significant noise, particularly if operated at night.
- Concerns were expressed that the development of multiple data centres on the IDA landholding fails to deliver adequate employment for the town.
- Concerns were expressed regarding the adequacy of public consultations.
- Concerns were expressed that the Environmental Impact Assessment Report contained errors and was difficult to navigate.
- The development was considered to be contrary to the Climate Action and Low Carbon Development Act 2015 and the recent 2021 amendment Bill.
- It was stated that the energy statement provided with the application did not identify overall power consumption or the impact of the development on renewable energy targets.
- Concerns were expressed regarding the adequacy of public notices.
- Information provided within the application form was considered inadequate.
- It was suggested that the applicant should give consideration to establishing a community gain fund, as has been done elsewhere with large-scale development, as an acknowledgment that the local community is hosting the development. Particular reference was made to the lack of sporting facilities in the area.

4.0 **Planning History**

LB191735 – Permission granted on 31st March 2020 for alterations to existing road infrastructure within the site and clearance of the site (including removal

of existing internal roadways and removal / diversion of services) to make way for the proposed development; construction of a two storey (with mezzanine levels at both storeys) data storage facility building with a maximum overall height of c. 25 metres, containing data halls, associated electrical and AHU Plant Rooms, a loading bay, maintenance and storage space, office administration areas, screened plant and solar panels at roof level, all within a building with a total gross floor area (GFA) of c. 28,573 sq.m; Emergency generators (26 no.), emission stacks and associated plant are provided in a fenced compound adjacent to the data storage facility, along with a single emergency house supply generator; A 6 MVA substation and associated 6MVA electricity connection; A water sprinkler pump room, MV Building, unit substation, water storage tanks, humidifier tanks and diesel tanks and filling area; Modification of the existing entrance to the subject site (from the estate road to the east), which will function as a secondary entrance providing for emergency and construction access. A new main entrance and access control point to the lands is proposed (also from the estate road to the east) and a single-storey gate house/ security building at this entrance with a GFA of c. 29.5 sq.m.; Construction of internal road network and circulation areas, footpaths, provision of 50 no. car parking spaces and 26 no. cycle parking spaces within a bicycle shelter; and associated site works.

ABP-308628-20 – Permission granted on 28th April 2021 for strategic infrastructure development comprising 110kV gas insulated switchgear substation compound, associated dropdown transmission lines, and associated development at Drogheda IDA Business and Technology Park, Donore Road, Drogheda, Co. Meath.

5.0 **Policy Context**

5.1. **National Planning Framework**

5.1.1. National Strategic Outcome 5 ‘Digital and Data Innovation’ states that ‘*Ireland is very attractive in terms of international digital connectivity, climatic factors and current and*

future renewable energy sources for the development of international digital infrastructures, such as data centres.' A key aim of the NPF is: -

'Promotion of Ireland as a sustainable international destination for ICT infrastructures such as data centres and associated economic activities.'

5.1.2. Relevant National Policy Objective include: -

NPO5: Develop cities and towns of sufficient scale and quality to compete internationally and to be drivers of national and regional growth, investment and prosperity.

NPO10b: Regional and Local Authorities to identify and quantify locations for strategic employment development, where suitable, in urban and rural areas generally.

NPO11: In meeting urban development requirements, there will be a presumption in favour of development that can encourage more people and generate more jobs and activity within existing cities, towns and villages, subject to development meeting appropriate planning standards and achieving targeted growth.

NPO13: In urban areas, planning and related standards, including in particular building height and car parking will be based on performance criteria that seek to achieve well-designed high quality outcomes in order to achieve targeted growth. These standards will be subject to a range of tolerance that enables alternative solutions to be proposed to achieve stated outcomes, provided public safety is not compromised and the environment is suitably protected.

NPO52: The planning system will be responsive to our national environmental challenges and ensure that development occurs within environmental limits, having regard to the requirements of all relevant environmental legislation and the sustainable management of our natural capital.

NPO54: Reduce our carbon footprint by integrating climate action into the planning system in support of national targets for climate policy mitigation and adaptation objectives, as well as targets for greenhouse gas emissions reductions.

NPO64: Improve air quality and help prevent people being exposed to unacceptable levels of pollution in our urban and rural areas through integrated land use and spatial planning that supports public transport, walking and cycling as more favourable modes of transport to the private car, the promotion of energy efficient buildings and homes,

heating systems with zero local emissions, green infrastructure planning and innovative design solutions.

5.2. Government Statement on The Role of Data Centres in Ireland's Enterprise Strategy (2018)

5.2.1. The Statement contributes to the Strategic Policy Framework and outlines the Government's desire for a plan-led approach to data centres. It outlines that Data centres are central to the digital economy and that they contribute to enterprise and regional policy objectives and are strategically important element of Ireland's future economic prospects. The statement acknowledges that data centres pose considerable challenges to the future planning and operation of Ireland's power system, in terms of renewable energy policy/objectives, generation adequacy including maintaining local and regional security of electricity supply, community acceptance and electricity customer costs. Government intends to take steps to mitigate these so that Ireland optimises the benefits that these strategically important investments bring.

5.3. Commission for Regulation of Utilities Direction to System Operators related to Data Centre Grid Connection Processing

5.3.1. On 23rd November 2021 the CRU published a direction to system operators in respect of the processing of data centre grid connection applications. The direction followed earlier public consultation on the issue, in 2021.

5.3.2. The Direction sets out criteria that system operators are now required to consider in assessing data centre connection applications, to determine whether to make a connection offer, and it is stated to have immediate effect.

5.3.3. The identified criteria to be considered is: -

- *The location of the data centre applicant with respect to whether they are within a constrained or unconstrained region of the electricity system.*
- *The ability of the data centre applicant to bring onsite dispatchable generation (and/or storage) equivalent to or greater than their demand, which meets appropriate availability and other technical requirements as may be specified by the relevant SO, in order to support security of supply.*

- *The ability of the data centre applicant to provide flexibility in their demand by reducing consumption when requested to do so by the relevant SO in times of system constraint through the use of dispatchable on-site generation (and/or storage) which meets appropriate availability and other technical requirements as may be specified by the relevant SO, in order to support security of supply.*
- *The ability of the data centre applicant to provide flexibility in their demand by reducing consumption when requested to do so by the relevant SO, in times of system constraint, in order to support security of supply*.

5.3.4. The Direction also states: -

'*Under this decision, where the SO is not satisfied by reference to the assessment criteria that a connection offer can be made to an applicant consistent with the needs of the electricity system, the application will not be processed by the SO, accordingly, the application will terminate.*'

5.4. Climate Action Plan 2021

5.4.1. The Action Plan outlines a roadmap for action to reduce national emissions by 50% by 2030 and to reach net zero no later than 2050, which are legally binding objectives having been set out in the Climate Action and Low Carbon Development (Amendment) Act 2021. The Plan outlines that projections indicate that continued emissions of greenhouse gases (GHGs) will cause further global warming and that as global temperatures increase the extremes of weather and climate we experience will also increase. Ireland is seen to be at risk in a number of areas, including from rising sea levels, extreme weather, pressure on water resources and food production systems and river and coastal flooding.

5.4.2. Section 2.2 discusses EU climate targets and states that in its approach to decarbonising, the EU has split GHG emissions into two categories, namely the Emissions Trading System (ETS) and the non-ETS. Emissions from electricity generation and large industry in the ETS are subject to EU-wide targets which require that emissions from these sectors must be reduced by 43% by 2030, relative to 2005 levels. Within the ETS, participants are required to purchase allowances for every tonne of emissions, with the amount of these allowances declining over time to ensure the required reduction of 43% in GHG emissions is achieved at an EU-level.

5.4.3. Regarding data centres, Section 11.1 outlines that they are a driver of projected energy demand increases, for the period to 2030. In acknowledging the challenges that data centres present to national emissions targets, it states that the government will review its strategy on data centres to ensure that growth of such users can only happen in alignment with our sectoral emissions ceilings and renewable energy targets. The impact of data centre growth on security of electricity supply will also be considered.

5.4.4. Section 11.3 states that the 'Government Statement on the Role of Data Centres in Ireland's Enterprise Strategy 2018' will be reviewed to ensure alignment with: sectoral emissions ceilings and our renewable energy targets; ongoing security of supply concerns; and the demand flexibility measures that are now needed.

5.4.5. Action number 97 states: -

'Review the policy context for Large Energy Users (including Data Centres), ensuring alignment of enterprise policy and wider regulatory environment with electricity emission targets and security of supply'

5.5. Eastern and Midlands Regional Spatial and Economic Strategy 2019-2031

5.5.1. RPO 8.25: Local authorities shall:

- Support and facilitate delivery of the National Broadband Plan.
- Facilitate enhanced international fibre communications links, including full interconnection between the fibre networks in Northern Ireland and the Republic of Ireland.
- Promote and facilitate the sustainable development of a high-quality ICT network throughout the Region in order to achieve balanced social and economic development, whilst protecting the amenities of urban and rural areas.
- Support the national objective to promote Ireland as a sustainable international destination for ICT infrastructures such as data centres and associated economic activities at appropriate locations.
- Promote Dublin as a demonstrator of 5G information and communication technology.

5.6. Meath County Development Plan 2021-2027

5.6.1. The new 2021-2027 development plan has taken effect since the appeal was submitted.

5.6.2. Volume 2 of the new development plan contains written statements and zoning maps for each of the county's settlements, including the Southern Environs of Drogheda. The subject site is zoned '*E1 – Strategic Employment Zones (High Technology Uses)*', with an objective '*To facilitate opportunities for high end technology / manufacturing and major campus style office-based employment within high quality and accessible locations.*'

5.6.3. Accompanying guidance for the zoning objective states that: -

'*E1 zones facilitate opportunities for high end, high value-added businesses and corporate headquarters. This adheres to the concept of 4th Generation Science & Technology Parks. It is envisaged that such locations are suitable for high density employment generating activity with associated commercial development located adjacent to or in close proximity to high frequency public transport corridors*.'

5.6.4. Section 4.8 'Data Centres' states that '*Data centres by nature, are land intensive developments and can have differing locational requirements depending on the type of data accessibility speeds they cater for. All data centres have common infrastructure requirements such as access to high voltage electricity lines, high powered fibre optic cables, good site security and accessibility… The location of these less people intensive uses outside of the M50 ring and separate from but connected to the existing built up area is a key growth enabler for Dublin and the policy position is endorsed within the NPF. Alternative sites deemed suitable for such development include but are not limited to: employment lands at appropriately zoned lands in the Southern Environs of Drogheda, Farganstown and the Trim Road in Navan, employment lands at Enfield and lands adjacent to the Lagan Cement Plant on the outskirts of Kinnegad which have access to the high voltage electricity lines and in the latter two cases, the M4 fibre optic cable.*' (emphasis added)

5.6.5. Policy ED POL 13 states that it is the policy of the Council: -

'*To support and facilitate the development of data centres on suitable sites with supporting infrastructure subject to obtaining the relevant consents.*'

5.6.6. Relevant policies and objectives include: -

ED POL 1: To facilitate and support the continued growth of the economy in the County in a sustainable manner and in accordance with the National Planning Framework (NPF) and the Regional Spatial and Economic Strategy (RSES).

ED POL 2: To support and facilitate the economic development of the County in accordance with the Economic Strategy 2014-2022 or its replacement. There will be a general presumption against development that would prejudice the implementation of the Economic Strategy.

ED POL 4: To identify and promote a range of locations within the County for different types of enterprise activity including international business and technology parks, small and medium enterprises (SME) and micro enterprise centres.

ED OBJ 17: To develop the Drogheda IDA Business Park (Donore Road) and adjoining land as a location for economic investment. There is significant scope in the IDA Business Park for further expansion which will be prioritised by the Council in conjunction with the IDA.

ED POL 13: To support and facilitate the development of data centres on suitable sites with supporting infrastructure subject to obtaining the relevant consents.

ED OBJ 67: To continue to identify suitable sites for the development of data centres and ICT related development within the County.

5.7. Natural Heritage Designations

5.7.1. The site is not located within or adjacent to any Natura 2000 site. The nearest European site is the River Boyne and River Blackwater SAC (Site Code 002299), which is approx 1.2km north. The section of the Boyne which is designated as an SPA (the River Boyne and River Blackwater SPA Site Code 004232) is further west, approx. 1.5km from the site and on the opposite side of the Boyne M1 Motorway bridge.

6.0 The Appeal

6.1. Grounds of Appeal

The Grounds of Appeal can be summarised as follows: -

- Local Authorities and the Board are granting permission for data centres on a case-by-case basis without adequately addressing cumulative impacts of energy use

and greenhouse gas emissions. This is an infringement of the EIA Directive, which requires that direct, indirect and cumulative impacts be fully assessed and mitigated.

- Energy use and contribution to greenhouse gas emissions
  - Data centres require vast amounts of energy. They are identified as having the fastest growing carbon footprint from across the whole ICT sector.
  - Industry providers have tended to select locations in Northern Europe where the climate is preferred for development. This leads to geographical clusters and subsequent driving up of local and national energy demand.
  - Ireland has been described as the 'data centre capital of Europe' and according to Host in Ireland's Biannual Report (May 2021) there are 70 data centres in operation using 900MW and there are a further 8 under consideration, expected to use an additional 250MW. Growth has been unchecked and data centres now consume 11% of Ireland's grid-generated electricity and it is projected to grow to 31% by 2027.
  - Uninhibited development of data centres is diluting the benefits of renewable energy generation that has taken place in the last 20-30 years.
  - New data centres should only be considered if they provide a directly linked supply of renewable energy to match its energy consumption.
  - Existing and planned data centres likely to be built over the next 7 years are projected to require 12.5 terawatts of additional power beyond current generation amounts. This is enough to power 24 million homes.
  - The projected rate of data centre projects is inconsistent with national climate and environmental policy objectives.
  - Assertions within the EIAR that emissions from the development will have a 'slight' impact on climate are contested.
  - Statements that the development will form part of the EU Emissions Trading Scheme (ETS) and will not impact on obligatory reductions in non-ETS sectors are considered inadequate. Increased demand on the grid, including from data centres, will lower the amount of renewal energy available to the non-ETS

sectors and will potentially lead to Ireland missing its binding targets in respect of renewable energy share and emissions reductions.

- The assessment of direct, indirect and cumulative effects of the development on energy demand and on the climate within the EIAR is insufficient and is not compliant with obligations under the EIA Directive (2014/52/EU).
- Concerns raised in the appellant's submission to the Planning Authority were not addressed in the Planner's Report.
- The existing data centre is considered in conjunction with the proposed data centre but the third data centre planned for the site is not considered. This renders the cumulative assessment incomplete.

- Pressure on National Grid capacity
  - The proliferation of data centres in recent years has placed increasing pressure on the national grid and authorities such as Eirgrid have outlined a need to review such connections and the implications for Ireland's energy security. The Commission for Regulation of Utilities has recently launched a public consultation on the issue, which the Board's attention is drawn to.
  - The Planner's Report did not consider the impact of the proposed development on electricity demands.
  - Reference is made to an article in the Irish Times from July 2021, which highlighted emergency planning by Government for Dublin's electricity supply, following airing of concerns by electricity providers regarding potential outages in the event of a continuation of data centre development patterns. The need for emergency plans could extend outside Dublin as demands grow and the reliance on intermittent wind energy without adequate supplementation by other renewable energy sources means that additional demands are likely to have to be met using fossil fuels.
  - The proposal's potential to exacerbate the current electricity supply crisis should be assessed.
  - There is a need to resolve grid capacity issues and to develop policy prior to granting permission for further data centre developments.

- Further grants of permission for data centres are questioned, as we advance toward meeting Paris Agreement targets.

- The Board is requested to overturn the Planning Authority's decision to grant permission, on the basis that it contravenes Ireland's legal obligations under the EIA Directive.

6.2. Applicant Response

6.2.1. A first party appeal response was submitted on behalf of the applicant, by John Spain Associates Planning Consultants, on 30th July 2021. The contents of the appeal response can be summarised as follows: -

- The contribution of data centre developments and the importance of cloud-based ICT services are highlighted.
  - Organisations of every type, size and industry sector use the cloud and data centres are a key component of a modern economy and society.
  - Amazon Web Services' customers use the services offered from data centres to run their businesses and provides access to sophisticated IT capabilities that were previously only available to large companies.
  - The National Planning Framework acknowledges the importance of data centre infrastructure and commits to Ireland as a sustainable destination for ICT infrastructure such as data centres and associated economic activities.
  - AWS's presence in Ireland has generated business for an estimated over 550 Irish supplier and sub-supplier businesses, including construction, mechanical and electrical suppliers, professional services and a range of services from local businesses.
  - The proposal represents an important part of AWS's investment in Ireland.
- Overconcentration of data centre development in Ireland
  - The appeal fails to acknowledge that Ireland is recognised as a sustainable location for data centre development, in planning policy terms. The proposal accords with national, regional and local policy, which directly supports data centre development.

- It is not a question of there being a disproportionate number of data centres in Ireland, relative to other places. Planning policy supports the delivery of data centres in Ireland and at locations such as the subject site, as demonstrated by the previous grant of permission for a data centre development on the lands. Ireland is considered an optimal location for these developments, which are not considered to be an optional form of development.
- Proposals for data centre developments are assessed at a site level and also in relation to extended regions and environments and under the same broad planning context, allowing for local variations. The supporting policy framework has itself been subject to environmental assessment at a strategic level.
- In assessing a range of similar development proposals, the Board has applied its understanding of the role and operation of data centres in Ireland, based on national, regional and local planning policies. Reference is made to the judgement in *An Taisce v An Bord Pleanala and Ors* (the Kilkenny Cheese case), in the context of an appeal or challenge to a particular proposed development not being an appropriate avenue to challenge overall policy. The issues raised within the refenced case and the proposed development are directly analogous. The approach taken by An Taisce in this appeal is not legally valid and the Board should not have regard to those arguments, as a reason for refusal.

- Alleged requirement for commensurate renewable energy supply
  - There is no basis in planning policy or legislation, to require an equivalent amount of renewable energy or to offset power demand by developing new renewable energy infrastructure directly linked to the development. Without prejudice to this, reference is made the applicant's commitment to achieve net zero Carbon by 2040.
  - Reference is made to a 115MW wind farm in Galway, which is under construction, a 91MW wind farm in Donegal, which is set to come online in December 2021, and a 23MW windfarm in Cork, which is operational since February 2021. These projects are all financed by the applicant via corporate power purchase agreement and the applicant intends to enable further projects in the future.

- Reference is made to the EIAR and Planning Report which accompanied the application, which discuss the above in further detail.

- Assessment of indirect emissions within the EIAR
  - There is no basis for the appellant's argument. The EIAR contains a robust assessment, including in relation to CO_2 emissions arising from the electricity required to operate.
  - The energy generated to serve the development will fall within the scope of the EU Emissions Trading Scheme (ETS), as is the case for all data centres in Ireland. For this reason, any necessary increase in generation due to data centre demand will have no impact on Ireland's obligations to meet the EU Effort Sharing Decision.
  - A detailed discussion of EU controls on greenhouse gas emissions is outlined, including obligations to reduce emissions from ETS and non-ETS sectors.
  - With reference to the appellant's contention regarding the determination of an '*indirect, long-term, negative and slight*' impact on emissions from the development, within the EIAR, the ETS is a 'cap and trade' system, with an EU-wide limit on emissions and, according to Institute of Environmental Management and Assessment guidance '*Assessing Greenhouse Gas Emissions and Evaluating Their Significance*' (2017), whilst in the absence of a defined threshold increased carbon emissions may be considered significant, where they can be compared to a carbon budget, the percentage impact of the project can be determined. In this instance, emissions account for 0.02% of the total EU-wide ETS market and this is considered to be a slight impact.
  - NO_x, SO_2 and NMVOC emissions are also deemed to be *'indirect, long-term, negative and slight*' in terms of regional air quality.
  - Emissions predictions are considered to be worst-case scenarios and will likely decrease as the national fuel mix decreases its carbon intensity as the grid reaches the target 70% renewable mix by 2030.
  - The applicant's concerns that data centre developments are inconsistent with national climate and environmental policy objectives do not acknowledge the potential for greenhouse gas avoidance or displacement associated with the

location of data centres in Ireland and fail to recognise that data centres are a more efficient means of data storage than older enterprise sites.

- Cumulative assessment of climate impact
  - There is no basis to the appellant's argument regarding the adequacy of the cumulative impact assessment.
  - Cumulative impacts of the proposed development, together with the permitted first phase of development (Reg. Ref. RA191735) and the indicative third phase of development on the landholding have been considered in Chapter 16 of the EIAR (Cumulative Impacts). The surrounding area of Drogheda and Rathmullen were also examined but there is limited development which could be taken into account in the cumulative assessment of air quality and climate impacts. The cumulative assessment has taken account of development in the area which could have produced cumulative impacts.
  - There is a typographical error at Section 9.7.2.2 of the EIAR, which should have identified that the proposed, permitted and planned phase 3 data centre developments will consume 144MW per year, rather than 96MW as is stated. 144MW equates to approx. 473,040 tonnes of CO_2 per year. This is a worst case scenario and will likely decrease as the national fuel mix decreases its carbon intensity as the grid reaches the target 70% renewable mix by 2030.
  - Cumulative impacts of the permitted and proposed developments and also the indicative third phase of development on the landholding have been considered for all of the environmental factors contained within the EIAR. A list of the other developments considered in the cumulative assessment is provided in the appendices of the EIAR.
  - Regarding the appellant's concerns over the Planning Authority's consideration of cumulative impacts in its EIA, this is a moot point as the Board will undertake a separate EIA, as the competent authority for the appeal.
  - Regarding the appellant's contention that cumulative impacts of all permitted data centres should be incorporated, there is nothing in the EIA Directive to suggest that assessment of geographically disparate developments should be

undertaken. The type of approach advocated by the appellant for assessment of cumulative effects is the role of SEA.

- Alleged dilution of renewable energy penetration
    - It is not correct to state that the proposed development would result in the dilution of the impact of renewables on non-ETS sectors. The applicant has a strong focus on sustainability and is on path to be powered by 100% renewable energy by 2025.
    - Given the location of data centre developments, it is not possible or appropriate to meet all power needs through on-site renewables and through its commitment to 100% renewable energy goal, the applicant is working to decarbonise the electricity that powers its facilities.
    - Amazon is the largest corporate renewable energy buyer in Ireland, Europe and globally. To date they have announced 2.8GW of projects across Europe. This includes 3 wind farms in Ireland which will provide 229MW of renewable capacity and will help decarbonise Amazon's operations.
- Alleged impact on National Grid
    - In choosing the subject site, the applicant has considered national, regional and local planning policy and has taken cognisance of the 2019 Climate Action Plan, which commits to implement energy actions under the 'Government Statement on the Role of Data Centres in Ireland's Enterprise Strategy' to ensure that large demand connections are regionally balanced to minimise grid reinforcements. The site selection process is outlined in Section 4.3 of the EIAR.
    - The appropriateness of the site is evidenced by the precedent for a data centre at this location. The Board has also granted permission for electricity transmission infrastructure in the area.
    - The applicant acknowledges short-term generation challenges for the grid. There are a number of steps being taken to resolve these.
    - If permission were to be withheld for data centres for the reasons outlined in the appeal, no large industrial energy development would be able to secure development, thereby stalling economic growth. The proposed development must be considered on the existing policy context, which provides ample policy

and which allows planning decisions to be made. Reference is made to the decision on the Apple data centre appeal (ABP Ref. PL07.245518), the decision on which was made prior to publication of the NPF and the RSES. Reference is also made to Element Power Ltd v An Bord Pleanala (2017), where it was held that the Board was obliged to consider an application for permission in the context of existing law, policy and guidelines.

- The Material Assets chapter of the EIAR includes an assessment of impact on electricity supply and concludes that cumulative impacts would be not significant.
- There are two separates consenting processes for the proposed development; the need to secure planning permission for the development and the requirement to secure a connection agreement with Eirgrid for the provision of electricity. Eirgrid requires planning permission to be in place before it considers an application for connection to the grid.

6.3. Planning Authority Response

6.3.1. The Planning Authority made a submission on 29th July 2021, the contents of which can be summarised as follows: -

- The issues raised in the third party appeal were addressed in the Planning Report dated 4th June 2021.
- The EIA carried out was carried out in accordance with the EIA Directive, as transposed into domestic law and has been adopted as the assessment of the Planning Authority.
- The proposed development accords with national, regional and local planning policy and the Planning Authority is satisfied that it would not seriously injure the visual amenities of the area, or residential amenities of property in the vicinity and would not be likely to have significant effects on the environment or ecology of the area.
- The Planning Authority remains of the view that the development is in accordance with the proper planning and sustainable development of the area and permission should be granted, subject to the 15 No. conditions set out in its decision to grant permission.

6.4. Observations

6.4.1. None

6.5. Further Responses

6.5.1. None

7.0 Assessment

7.1. Having inspected the site and considered the contents of the appeal, I consider the main planning issues in the assessment of the proposed development are as follows:-

- Principle of development;
- Energy use and contribution to greenhouse gas emissions;
- Visual impact;
- Drainage;
- Access and parking;
- Residential amenity;
- Other issues;

7.2. Section 8 contains an appropriate assessment screening and Section 9 contains an Environmental Impact Assessment.

7.3. Principle of Development

7.3.1. 'Data centres' are identified as permitted uses on lands subject to the 'E1 Strategic Employment Zones', under the new 2021-2027 county development plan, which was adopted following submission of the appeal.

7.3.2. In addition to the zoning context, the new 2021-2027 development plan contains policy controls for data centres facilities (Section 4.8) and it identifies that employment lands within the Southern Environs or Drogheda, which have access to high voltage electricity lines are suitable for such developments. Policy ED POL 13, which is the supporting policy states thus: -

'*To support and facilitate the development of data centres on suitable sites with supporting infrastructure subject to obtaining the relevant consents.*'

7.3.3. In respect of this policy control, I would note that a masterplan has been developed for the wider landholding, which envisages up to 3 data centre facilities and associated electrical infrastructure development and, to this point, a data centre facility is currently being constructed on adjacent lands to the south (PA Reg Ref. LB191735) and lands to the north are undergoing construction for an approved Strategic Infrastructure Development of a substation and transmission lines (ABP Ref. ABP-308628-20) that would connect to the 110kV overhead transmission lines and which would serve the wider landholding. In view of this, I consider the development is in accordance with both Section 4.8 and Policy ED POL 13 of the development plan.

7.3.4. The development also accords with national and regional policy, as set out in National Planning Framework and the Eastern and Midlands Regional Spatial & Economic Strategy, which support the development of ICT infrastructure, including the provision of data centres at appropriate locations. It would also accord with the Government Statement on the Role of Data Centre in Ireland's Enterprise Strategy, 2018, which outlines that data centres are central to the digital economy and that they contribute to enterprise and regional policy objectives and are strategically important element of Ireland's future economic prospects.

7.3.5. In view of the above considerations, I am satisfied that the proposed development of a data storage facility would comply with the land use zoning objective and would also accord with relevant national, regional and local planning policies. It is therefore acceptable in principle.

7.4. Energy Use and Contribution to Greenhouse Gas Emissions

7.4.1. The appellant raises a number of concerns in respect of the demands for energy and the contribution to greenhouse gas emissions that data centres make. These concerns relate to: -

- Local Authorities and the Board are granting permission for data centres on a case-by-case basis without adequately addressing cumulative impacts of energy use and greenhouse gas emissions.

- The proliferation of data centres in recent years has placed increasing pressure on the national grid and authorities such as Eirgrid have outlined a need to review such connections and the implications for Ireland's energy security. Data centres now consume 11% of Ireland's grid-generated electricity and this is projected to grow to 31% by 2027.
- The proposal's potential to exacerbate the current electricity supply crisis should be assessed. There is a need to resolve grid capacity issues and to develop policy prior to granting permission for further data centre developments.
- The projected rate of data centre projects is inconsistent with national climate and environmental policy objectives.

7.4.2. The applicant's response to the appeal addresses the issues raised by the appellant, in particular stating: -

- The proposed development must be considered on the existing policy context, which provides ample policy and which allows planning decisions to be made.
- There are a number of steps being taken to resolve short-term electricity generation challenges.
- There is no basis in planning policy or legislation, to require an equivalent amount of renewable energy or to offset power demand by developing new renewable energy infrastructure directly linked to the development. Given the location of data centre developments, it is also not possible or appropriate to meet all power needs through on-site renewables.
- The energy generated to serve the development will fall within the scope of the EU Emissions Trading Scheme (ETS), as is the case for all data centres in Ireland.
- With reference to concerns over cumulative impacts from all data centre developments, there is nothing in the EIA Directive to suggest that assessment of geographically disparate developments should be undertaken.

7.4.3. With reference firstly to the appellant's argument that there is a need to resolve grid capacity issues and to develop policy prior to granting permission for further data centre developments, I note that Section 34(2)(a) of the Act states that when making a decision in relation to an application, planning authorities shall be restricted to

considering the proper planning and sustainable development of the area and, in particular, it identifies that regard shall be had to (amongst other things): -

- the provisions of the development plan,
- guidelines issued by the Minister under Section 28, and
- the policy of the Government, the Minister or any other Minister of the Government.

7.4.4. I consider there is an up-to-date policy context in place and there are relevant Government and Departmental policy statements, against which to consider and assess the proposed development. In addition, I note that since the appeal was submitted, the Commission for Regulation of Utilities has published a decision[1] regarding the connection policy for data centres in Ireland that requires Eirgrid to now assess applications against specified criteria before a connection offer is made (this is discussed at Section 7.4.10 of my report). In view of this and in the context of S34(2)(a), I consider it would be unjustifiable to refuse permission on the basis of prematurity, pending the development of further policy on the issue.

7.4.5. Regarding concerns over energy usage and contributions to greenhouse gas emissions, the applicant states that all data centres in Ireland are covered by the EU Emissions Trading Scheme (ETS). Box 2.1 of the Climate Action Plan 2021 outlines that emissions from industry sectors covered by the ETS are subject to EU-wide rather than national targets and that overall emissions allowances will reduce over time, in order to ensure that required emissions reductions are achieved by 2030 (43% compared to 2005 levels). Available records from the Environmental Protection Agency[2] confirm that a number of data centre facilities have been granted GHG Emission Permits in accordance with the ETS, on the basis of the facility including the following specified activity: -

'*Combustion of fuels in installations with a total rated thermal input exceeding 20 MW (except in installations for the incineration of hazardous or municipal waste)*'

7.4.6. The proposed development incorporates 26 No. diesel generators that will power the facility in the event of a power outage and whilst the total MW output of the generators is not stated, it can be assumed that it will be sufficient to accommodate the maximum

[1] CRU21124-CRU-Direction-to-the-System-Operators-related-to-Data-Centre-grid-connection-processing.pdf
[2] https://www.epa.ie/our-services/licensing/climate-change/eu-emissions-trading-system-/emissions-trading-system---stationary-installations/access-to-current-permits-/

48MW electrical demand of the data centre and will therefore give rise to a requirement a GHG Emission Permit. The development will thus be covered by the ETS and will be subject to emissions targets at an EU level, rather than a national level.

7.4.7. There is evidently an EU-wide strategy in place to ensure that GHG emissions targets are met, including from large energy users such as the proposed development and, in this context, I do not consider the proposed development is inconsistent with national climate and environmental policy objectives.

7.4.8. Regarding potential impacts on the National Grid, in the latest All-Island Generation Capacity Statement[3] Eirgrid acknowledges that long term electricity demand is forecast to increase significantly due to the expansion of large energy users, primarily data centres, and that Eirgrid has set out to identify solutions. The applicant states that Eirgrid has confirmed that there is capacity in the grid to accommodate the proposed development, but evidence of such confirmation has not been provided. Eirgrid was not consulted on the application and thus did not provide a submission. The Board may wish to clarify this aspect of the development.

7.4.9. Notwithstanding the absence of confirmation of capacity from Eirgrid, as the applicant states, there are multiple stages to the consent process for data centres, with reference to (a) the requirement to secure planning permission and (b) the requirement to secure an offer of connection to the national grid. Eirgrid's up-to-date *Data Centre Connection Offer Process and Policy* (July, 2020) requires planning permission to be in place before it considers an application for connection to the grid (Section 3.3).

7.4.10. Also of relevance, in June 2021 the Commission for Regulation of Utilities (CRU) published a consultation paper in respect of the issue of data centre grid connections, within which concerns were expressed regarding the pattern of data centre grid connections. Following submission of the appeal, on 23rd November 2021 the CRU published its decision regarding the connection policy for data centres in Ireland, wherein it directs Eirgrid: -

'*to assess applications for the connection of data centres by reference to the following assessment criteria to determine whether a connection offer can be made within the system stability and reliability needs of the electricity network:*

[3] All-Island Generation Capacity Statement 2021-2030 (Eirgrid and Soni, 2021)

- *The location of the data centre applicant with respect to whether they are within a constrained or unconstrained region of the electricity system.*
- *The ability of the data centre applicant to bring onsite dispatchable generation (and/or storage) equivalent to or greater than their demand, which meets appropriate availability and other technical requirements as may be specified by the relevant SO, in order to support security of supply.*
- *The ability of the data centre applicant to provide flexibility in their demand by reducing consumption when requested to do so by the relevant SO in times of system constraint through the use of dispatchable on-site generation (and/or storage) which meets appropriate availability and other technical requirements as may be specified by the relevant SO, in order to support security of supply.*
- *The ability of the data centre applicant to provide flexibility in their demand by reducing consumption when requested to do so by the relevant SO, in times of system constraint, in order to support security of supply…*

where the SO is not satisfied by reference to the assessment criteria that a connection offer can be made to an applicant consistent with the needs of the electricity system, the application will not be processed by the SO, accordingly, the application will terminate.'

7.4.11. The decision states that this criteria-based assessment of grid connection applications provides for connection offers to be made to data centre applicants in a manner which respects overall system integrity while balancing the need to have a secure and stable supply of electricity. It also provides Eirgrid with a direct instruction to terminate a grid connection, in circumstances where an offer would be inconsistent with the needs of the electricity system.

7.4.12. In view of this very recent connection policy, I consider there are adequate safeguards in place to ensure that the proposed development does not have any undue impact on the security or stability of the National Grid.

7.4.13. In conclusion, I consider there is an up-to-date planning policy context in place, against which to assess the development and I do not consider that the development, which is likely to be subject to EU-wide emissions targets under the ETS, is inconsistent with national climate and environmental policy objectives. Furthermore, the recent CRU

decision in respect of applications for data centre connections to the national grid now requires Eirgrid to undertake a criteria-based assessment of a proposed grid connection application, which is intended to protect the stability and security of the grid, before a connection offer can be made. This provides a necessary safeguard, to ensure that the proposed development does not have any undue impact on the security or stability of the National Grid.

7.5. **Visual Impact**

7.5.1. The proposed development has a stated maximum overall height of c.25m and a stated gross floor area of c.28,566sqm. Its design, scale and proportions are very similar to that of the existing data centre, measuring c.180m long x c.66m wide and with the main part of the building incorporating a uniform height of c.20m. A series of galvanised steel flues project over the roof of the building, up to 25m high and with the tallest section located at the east end of the building, measuring 25.2m high. In terms of appearance, again, similar to the existing data centre, the proposed building is characterised by primarily metal cladding, whilst the east (front) elevation contains glazing which serves first floor level offices, meeting rooms and the canteen, etc.

7.5.2. According to the development plan, the subject site is in a 'coastal landscape' and is part of Area 7 – 'Coastal Plains'. It is identified as being of moderate landscape value. The area west of the M1 motorway is in a 'river corridors and estuaries' landscape and is part of Area 5 – 'Boyne Valley'. It is identified as being of exceptional landscape value. The area to the south is in a 'lowland landscape' and is part of part of Area 6 – 'Central Lowlands'. It is identified as being of high landscape value. The Coastal Plains and Boyne Valley are identified as having high landscape sensitivity, whilst the Central Lowlands have moderate landscape sensitivity.

7.5.3. The Heritage Officer's report, whilst not objecting to the development, expresses the view that the development will have a negative impact on protected view No. 61 of the development plan. View No. 61 (which is carried over to the new development plan) is the 'Hill at Graveyard at Sheephouse' and the development plan states that it provides '*Expansive view of settled lowland with extensive urbanisation and industry visible to the east and north. Views to the north are extensive and encompass*

important cultural landscape of significance. Much woodland to north and west.' Photomontage viewpoint No. 9 represents the view from this graveyard.

7.5.4. The Conservation Officer's report on the application expresses the view that the proposed data centre is too tall and that the development will eventually involve larger substation buildings, which are taller than the proposed building. The Report further outlines that the site is considered to have the potential for 2 and 3-storey building heights and recommends that the applicant should be requested to reduce the height of the development to 2-storeys or c.10m in height. The Report also identifies that the development would negatively affect view No. 61 (previously discussed above) and views north of Drogheda looking southward, as represented by viewpoint No. 11 of the photomontages.

7.5.5. The EIAR contains a landscape and visual assessment at Chapter 11, which includes a series of 15 No. photomontages. I am satisfied that they provide a representative variety of short, medium and long-range views of the proposed development and are representative of the baseline conditions, in particular the appearance and impact of the existing data centre.

7.5.6. I agree with the LVA, that the M1 provides a strong physical and perceptual boundary between Drogheda and the agricultural hinterland to the west. The site is within the built-up area of Drogheda and the proposed development is set against the context of an existing data centre and other built form elements within the town. The development will be a noticeable addition, but I do not consider that it would have any significant or unacceptable impact on the landscape, in view of this setting and context.

7.5.7. Regarding visual impact, the LVA concludes that the development would have an 'imperceptible' or 'no' impact from 6 of the 15 viewpoint locations and a 'slight' or 'moderate' impact from the remaining 9 viewpoint locations.

7.5.8. Regarding viewpoint 9, which is the view from development plan protected view No. 61, the 'Hill at Graveyard at Sheephouse', the development is a noticeable addition to views towards Drogheda, but I do not consider that it is unduly prominent or disruptive of the panoramic view.

7.5.9. Regarding viewpoint 11, which is the view from the flyover at junction 10 of the M1 motorway, the development is a noticeable and prominent addition to views towards Drogheda, extending above the horizon in these views. But the building is seen in the

context of other similarly prominent structures, in particular the Mary McAleese Boyne Valley Bridge, other structures at the Irish Cement plant and the existing data centre facility. The existing data centre is similarly scaled and proportioned to the proposed development and it itself extends above the horizon in the view and the photomontage identifies that the development would have the effect of extending the length of the structure, but that it will not materially increase the height. In this context, I do not consider the development would have a significant or unacceptable impact on the view.

7.5.10. Having visited the site and surrounding area, I consider the development would be most prominent from the adjacent residential properties to the north and north-east, as shown in viewpoints 3 and 4. Viewpoint 3 in particular identifies that the development would be a prominent feature in views from public areas within Tredagh View and it will be visible from private property within both Tredagh View and Cedarfield and from other residential properties to the north. But, in saying this, I consider such close visual connections are likely to arise from the development of high end technology or major campus style office-based employment uses on the lands, as is envisaged under the E1 – Strategic Employment Zones zoning objective. In addition to the zoning context, which identifies data centres as being permissible on the subject lands, I would also note that there are no identified protected views from these residential areas and there are no architectural designations or protected structure buildings in these estates that may be affected by the development. In view of these considerations, I consider the relationship of the development to adjacent residential property would be acceptable.

7.5.11. I note that the Planning Authority's planning report also expresses the view that the development will be absorbed into its urban context.

7.6. **Drainage**

Foul drainage

7.6.1. The Drainage & Water Services report submitted with the application states that a pre-connection enquiry, for the development of the entire 16.4ha landholding on a multi-phase basis, was submitted to Irish Water in 2019. A copy of Irish Water confirmation of feasibility letter, dated 5th November 2019, has been provided.

7.6.2. The Drainage & Water Services report provides estimated calculations in respect of wastewater loading, based on the IW code of practice and also outlines that the foul network routes under the Business Park estate road.

7.6.3. I consider foul drainage proposals are acceptable and I note that Irish Water did not object to this aspect of the development.

Surface water drainage

7.6.4. The Drainage & Water Services report states that run-off from roofs, roads and other hardstanding areas will be collected in a sealed system of pipes and gullies and will be transferred to an attenuation basin that serves the entire landholding. The report states that information provided as part of the first data centre application (Reg. Ref. LB191735) contained calculations for greenfield run-off rates for the landholding. The surface water drainage system and attenuation basin were approved as part of permission Reg. Ref. LB191735.

7.6.5. The Report also states that cooling water, which is required as part of the cooling process when temperatures exceed 28^{o}C, will also be discharged to the surface water network. This has been factored into peak discharge rate calculations for the development.

7.6.6. I consider surface water drainage proposals, which involve connecting to the approved drainage network within the landholding, are acceptable and I note that the Water Services Department of the Planning Authority did not object to this aspect of the development.

7.7. **Access and Parking**

7.7.1. Access to the site is proposed via the existing controlled access to the site, which is located north of the existing data centre. The subject site would be accessed from the internal carriageway, with car parking (50 No. spaces) and a bicycle store provided to the front of the main building and 20 parking spaces are identified as being equipped with an EV charging facility. A circulation route/loop road runs around the development, connecting to the permitted route around the existing data centre. A pedestrian crossing from the footpath on the opposite side of the internal carriageway and walking route through the car parking are also identified on the proposed site layout drawing.

7.7.2. Table 11.2 of the development plan contains parking standards for proposed developments and, for data centres, it identifies that parking should be provided at a rate of 1 space per 300sqm gross floor area. This equates to 95 spaces to serve the proposed development.

7.7.3. Section 13.8.2 of the EIAR, Traffic and Transportation, states that it is estimated that there will be up to 50 staff on the site at any given time and it is estimated that there will be 35 full-time daytime staff, with a further 7 night-time staff and 15 external staff/maintenance contractors/visitors. The section further states that the number of visiting/maintenance staff will typically be of the order of 5 staff per day, with the maximum estimation of 15 being a seldom occurrence.

7.7.4. Whilst parking proposals are below the development plan's allowance, I consider the ratio of parking spaces to employee numbers is very high and is inconsistent with wider planning policies which seek to promote more sustainable forms of travel, as an alternative to the private car. However, where employee numbers have not been confirmed, this is a difficult aspect of the development to control. I consider it would be inappropriate to attach a condition stipulating the number of spaces to be provided based on the information available. Rather I would recommend that should the Board decide to grant permission, a condition be attached requiring the applicant to agree parking levels with the Planning Authority, based on confirmed employee numbers and daily demand levels, and that a mobility management plan should be submitted in tandem (and implemented thereafter) to demonstrate measures taken to promote more sustainable forms of travel for employees.

7.8. Residential Amenity

7.8.1. There are residential properties to the east and north of the site, the closest of which are within c.275m of the site. Residential amenity issues such as overshadowing or overlooking do not arise, in view of the separation distance. I have considered the visual impact of the development from these residential neighbourhoods elsewhere, in the visual impact section of my report. I do not consider the development would have an undue or unacceptable impact on residential property in the area.

7.8.2. Regarding operational impacts for residential properties in respect of air quality, the applicant states that stack height for the back-up generators have been designed to

ensure that an adequate release height is achieved, to aid dispersal and to ensure compliance with ambient air quality limits. The generators will only be operational on the site for testing or in the event of a power outage and worst-case scenario modelling within the EIAR indicates that the generators can operate for up to 157 hours per year, before there is a likelihood of exceedance of the ambient air quality standard. In view of this, I consider it is unlikely that emissions from the development would give rise to any air quality issues for adjacent residential properties.

7.8.3. Regarding operational impacts for residential properties in respect of noise, Chapter 10 of the EIAR outlines that the existing data centre facility is subject to noise limits of 55dB $L_{Aeq, 15min}$ (daytime), 50dB $L_{Aeq, 15min}$ (evening) and 45dB $L_{Aeq, 15min}$ (night-time) and proposes that this limit can be applied across the entire landholding, to limit cumulative emissions from the site. These limits (which were applied by the Planning Authority) are consistent with the Board's standard noise-limiting condition and, in view of this, I consider it is unlikely that noise levels from day-to-day operations would have any undue or unacceptable impact on adjacent residential properties.

7.8.4. Modelled assessment of emergency operations at the site (i.e. operation of the back-up generators) indicates that night-time operation of the generators may lead to significant noise impacts for sensitive residential receptors, in view of the level of exceedance of the existing ambient noise level at this time. The likelihood of this impact arising is low, in view of the fact that the back-up generators are only intended to be operational in times of power outage at the site or for routine testing. As is discussed elsewhere in my report, a key aspect of Eirgrid's assessment of a subsequent grid connection application is that the development shall not jeopardise the stability of the national grid, which I consider provides an adequate safeguard against this situation arising. I also note the applicant's statement that in their experience this situation is a very rare occurrence. I have given consideration as to whether additional mitigation, in the form restriction on the hours on which the generators can be operational, but I consider this would be inappropriate as may undermine operation of the site is emergency.

7.9. **Other Issues**

7.9.1. Regarding the appellant's contention that new data centres should only be considered if they provide a directly linked supply of renewable energy to match energy consumption, there is no legal or policy basis on which to require that such development should be provided. In my view the appellant's contention is a challenge to the overarching policy regime for data centres and it is an issue which cannot be reasonably addressed in my assessment of this appeal. I have thus not pursued the matter any further.

7.9.2. Regarding the appellant's concerns over the categorisation of CO_2 emissions from all permitted, proposed and planned development within the landholding, this issue is addressed in Section 9 of my report, under the heading of 'Environmental Impact Assessment'.

7.9.3. Section 6 of the application form (details of company directors, address, company registration number) is incomplete. This was identified in a third party submission to the Planning Authority. The Planning Authority has responsibility for validation of the application and it did not express any concern regarding this omission. I do not consider the omission of these details has disadvantaged any parties interested in the application and it has not undermined my assessment of the proposed development. The Board may however wish to give further consideration to the matter.

8.0 **Appropriate Assessment**

Appropriate Assessment Screening

Compliance with Article 6(3) of the Habitats Directive

8.1. The requirements of Article 6(3) as related to screening the need for appropriate assessment of a project under part XAB, section 177U of the Planning and Development Act 2000 (as amended) are considered fully in this section.

Background on the Application

8.2. The applicant submitted an *Appropriate Assessment Screening* report as part of the application, prepared by Moore Group. It provides a description of the proposed development, identifies European sites within a 15km search zone and considers potential construction phase, operational phase and in-combination effects.

8.3. Having reviewed the appeal documents and submissions, I am satisfied that there is adequate information to allow for a complete examination and identification of any potential significant effects of the development, alone, or in combination with other plans and projects on European sites.

Screening for Appropriate Assessment- Test of likely significant effects

8.4. The project is not directly connected with or necessary to the management of a European Site and therefore it needs to be determined if the development is likely to have significant effects on a European site(s).

8.5. The proposed development is examined in relation to any possible interaction with European sites designated Special Conservation Areas (SAC) and Special Protection Areas (SPA) to assess whether it may give rise to significant effects on any European Site.

Brief description of the development

8.6. The applicant provides a description of the proposed development at Section 3 of the AA Screening and the development is also described at Section 2 of this Report. In summary, permission is sought for construction of a 2-storey data storage facility building with a maximum overall height of c.25m and containing a range of associated facilities, within a building with a total gross floor area of c.28,566sqm. Also included as part of the development are 26 No. emergency generators, MV building, internal access roads, parking facilities and associated development and site works. The site has a stated area of 3.58ha and is of a previously disturbed nature, having been used as a construction compound as part of the development of a data centre on adjacent lands. The site is served by the public potable and foul water networks. Foul and surface water are proposed to drain to the public network, with surface water being collected initially within an attenuation basin that serves the entire landholding.

<u>Submissions and Observations</u>

8.7. The submissions from the applicant and the Planning Authority are summarised in Section 6 of this Report and internal planning authority reports are summarised in Section 3 of this Report. In particular I note that the Heritage Officer's report on the application expresses satisfaction that based on the information provided, it can be

concluded that there will be no significant effects on the qualifying interests of any European sites, alone or in combination.

European Sites

8.8. The development site is not located in or immediately adjacent to a European site. The AA Screening Report identifies that the nearest European site is the River Boyne and River Blackwater SAC (Site Code 002299), which is approx 1.2km north. The section of the Boyne which is designated as an SPA (the River Boyne and River Blackwater SPA Site Code 004232) is further west, approx. 1.5km from the site and on the opposite side of the Boyne M1 Motorway bridge. The AA Screening Report also identifies the Boyne Estuary SPA, River Nanny Estuary and Shore SPA, Boyne Coast and Estuary SAC and Clogher Head SAC as being located within 15km of the site.

8.9. The AA Screening Report states that the subject site is within the hydrological catchment of the River Boyne but that there are no notable surface water features on the site and therefore no hydrological pathways to off-site surface water bodies.

8.10. A summary of European Sites within 15km of the proposed development is presented in the table below.

European Site (code)	**List of Qualifying interest /Special conservation Interest**	**Distance from proposed development (Km)**	**Connections (source, pathway receptor)**
SPA			
River Boyne and River Blackwater SPA (Site Code 004232)	Kingfisher	1.5km	None
Boyne Estuary SPA (Site Code 004080)	Shelduck, Oystercatcher, Golden Plover, Grey Plover, Lapwing, Knot, Sanderling, Black-tailed Godwit, Redshank, Turnstone, Little Tern, Wetland and Waterbirds.	3.9km	None

River Nanny Estuary and Shore SPA (Site Code 004158)	Oystercatcher, Ringed Plover, Golden Plover, Knot, Sanderling, Herring Gull, Wetland and Waterbirds.	8.3km	None
SAC			
River Boyne and River Blackwater SAC (Site Code 002299)	River Lamprey, Salmon, Otter, Alkaline Fens, Alluvial Forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)	1.2km	None
Boyne Coast and Estuary SAC (Site Code 001957)	Estuaries, Mudflats and sandflats not covered by seawater at low tide, Annual vegetation of drift lines, Salicornia and other annuals colonising mud and sand, Atlantic salt meadows, Embryonic shifting dunes, Shifting dunes along the shoreline with Ammophila arenaria, Fixed coastal dunes with herbaceous vegetation	5.2km	None
Clogher Head SAC (Site Code 001459)	Vegetated sea cliffs of the Atlantic and Baltic coasts, European dry heaths	13.5km	None

8.11. In respect of Screening, the report concludes that: -

'*There is no connectivity to the River Boyne or to any other European sites within or outside the guidelines 15km zone of potential impact.*

There are no predicted effects on any European sites given:

- *The distance between the proposed development and any European sites, approx. 1km.*
- *The lack of connectivity between the proposed development and any hydrological pathways…*
- *The proposed development is to be connected to the existing public sewer network for the treatment of wastewater.*
- *There are no predicted emissions to air, water or the environment during the construction or operational phases that would result in significant effects…*

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

8.11.1. As I have outlined above, none of the sites within the zone of influence has a direct pathway to or from the subject site. In view of this, I concur with the Screening report determination, that they do not require further consideration.

8.11.2. I also note from the Screening Report and from my observations on site, that the subject site has itself been subject to development and has been used as part of the construction site for the existing data centre, where it has been cleared and prepared for development. In view of this, I am satisfied the site does not support any habitat which might be used by any species listed as a special conservation interest. This is supported by the findings in the EIAR in relation to biodiversity, which identifies the site as being of low ecological potential. I also note the statement in the Screening report that the level of development recorded during fieldwork at the site and the distance from the coastal SPAs do not present opportunities to support the bird species (predominantly waders) for which the Boyne Estuary SPA (c. 4km) and River Nanny Estuary and Shore SPA (8.3km) are designated. I consider that this is reasonable.

8.11.3. Section 5.2 of the Screening report contains an assessment of potential in-combination effects. It identifies an extensive list of recent planning applications and grants of planning permission in the surrounding area (Table 4) and it is stated that the potential for significant in-combination effects can be excluded, given the prediction that the proposed development will have no significant effect on any

European site. I concur with the conclusion that significant in-combination effects can be excluded, given that the proposed development itself will not have significant effects.

8.12. On the basis of my assessment, I consider the development would not be likely to have any significant effects on any Natura 2000 site, either directly or indirectly. This conclusion is consistent with the appropriate assessment screening report submitted with the application. Similarly, there are no direct or indirect effects that would be likely to have significant effects on any Natura 2000 site, in combination with any other plan or project.

Screening Determination

8.13. The proposed development was considered in light of the requirements of Section 177U of the Planning and Development Act 2000 as amended. Having carried out Screening for Appropriate Assessment of the project, it has been concluded that the project individually or in combination with other plans or projects would not be likely to give rise to significant effects on the following European sites: the River Boyne & River Blackwater SAC (Site Code 002299); River Boyne and Blackwater SPA (Site Code 004232), the Boyne Estuary SPA (Site Code 004080), Boyne Coast and Estuary SAC (Site Code 001957), the River Nanny Estuary and Shore SPA (Site Code 004158) and Clogher Head SAC (Site Code 001459) or any other European site in view of the sites' Conservation Objectives, and Appropriate Assessment (and submission of a NIS) is not therefore required.

8.14. This determination is based on the following:

- The absence of any identified hydrological connections between the subject site and the European site,
- The previously disturbed nature of the site, and
- The level of separation between the subject site and the European sites, over 1km.

9.0 Environmental Impact Assessment

9.1. Introduction

9.1.1. The relevant classes of development that require EIA are set out in Schedule 5 of the Planning and Development Regulations 2001-2021. Schedule 5 transposes Annex 1 and Annex II of the EU EIA Directive into Irish Law and Part 1 and 2 of the Schedule set out the categories and scale of development that qualify for mandatory EIA. The most relevant activity class for this proposed development is listed under Part 2, Class 10(a) '*Industrial estate development projects, where the area would exceed 15 hectares.*'

9.1.2. The proposed development falls below the applicable threshold, in view of the stated 3.58ha site area, but it forms part of a larger landholding which exceeds the 15ha threshold, which was granted planning permission for a data centre development under Reg. Ref. LB191735 and as part of which a masterplan drawing was provided, which identified the potential for up to 3 data centre developments and a 110kV substation on the landholding. The proposed development is identified as a second phase of development within the landholding. Permission has also been granted on the landholding for Strategic Infrastructure Development, under Ref. ABP-308628-20, comprising a 110kV gas insulated switchgear substation compound, associated dropdown transmission lines and associated development works. Both Reg. Ref. LB191735 and ABP-308628-20 included the submission of an Environmental Impact Assessment Report (EIAR).

9.1.3. I am of the opinion that the proposed development, taken together with the scale of development previously permitted on the landholding and envisaged by the masterplan which was submitted as part of Reg. Ref. LA191735, constitutes an industrial estate development project, in accordance with Schedule 5, Part 2 Class 10(a) of the Regulations and the stated area of the landholding exceeds the 15ha. The requirements of Part X of the Planning and Development Act, 2000, as amended are therefore triggered and an Environmental Impact Assessment is required to be undertaken.

9.1.4. Notwithstanding the above, an EIAR has been submitted with the application and it therefore falls to be addressed by the Board.

9.2. Compliance with Legislative Requirements

9.2.1. The applicant has submitted an EIAR which comprises the following structure: -

- Non-Technical Summary

- Environmental Impact Assessment Report
- Appendices

9.2.2. Section 1.2.2 of the EIAR states that it has been prepared in accordance with the requirements of the EIA Directives (2011/92/EU and 2014/52/EU) and has been prepared in the grouped format structure, in accordance with advice within '*Guidelines on the Information to be Contained in Environmental Impact Assessment Reports*' (EPA, Draft, 2017). It is stated that '*Guidelines for Planning Authorities and An Bord Pleanala on carrying out Environmental Impact Assessment*' (2018) and European Commission Guidance on the Preparation of the Environmental Impact Assessment Report have also been considered.

9.2.3. The EIAR provides a description of the project comprising information on the site, design, size and other relevant features of the project. It identifies, describes and assesses the direct and indirect significant effects of the project on the following environmental factors: (a) population and human health; (b) biodiversity; (c) land, soils, geology and hydrogeology; (d) hydrology; (e) air quality and climate; (f) noise & vibration; (g) landscape and visual; (h) archaeology; (i) traffic and transportation; (j) material assets; (k) waste management; (l) cumulative impacts; and (m) interactions between factors (a)-(m).

9.2.4. The contributors / competent experts involved in the preparation of the EIAR are set out in Table 1.1 of the EIAR. No specific difficulties are stated to have been encountered in compiling the required information or in carrying out the assessment. Forecasting methods and evidence used to identify and assess significant effects for each environmental factor are set out in each chapter. I am satisfied that the EIAR has been prepared by competent experts to ensure its completeness and quality, and that the information contained in the EIAR and supplementary information provided by the developer, adequately identifies and describes the direct, indirect and cumulative effects of the proposed development on the environment and complies with article 94 of the Planning and Development Regulations 2001-2021.

9.2.5. I have carried out an examination of the information presented by the applicant, including the EIAR, and the written submissions. A summary of the results of the submissions made by the planning authority, appellant and applicant has been set out

at Section 6 of this report. The main issues raised specific to EIA can be summarised as follows:

- Case by case grants of permission by planning authorities and the Board for data centres have not adequately addressed cumulative impacts of energy use and greenhouse gas emissions. This is an infringement of the EIA Directive, which requires that direct, indirect and cumulative impacts be fully assessed and mitigated.
- Growth of data centres has been unchecked and they now consume 11% of Ireland's grid-generated electricity and it is projected to grow to 31% by 2027. Data Centre developments have placed increasing pressure on the national grid and authorities such as Eirgrid have outlined a need to review such connections and the implications for Ireland's energy security.
- The Irish Academy of Engineers predicts that planned data centres will add 1.5m-3m tonnes of CO_2 to Ireland's overall greenhouse emissions by 2028 and this trajectory is not conducive to meeting legally binding renewable energy targets or realisation of national climate policy goals.
- The assessment of direct, indirect and cumulative effects of the development on energy demand and on the climate within the EIAR is insufficient and is not compliant with obligations under the EIA Directive (2014/52/EU).
- Assertions within the EIAR that emissions from the development will have a 'slight' impact on climate are contested.
- The existing data centre is considered in conjunction with the proposed data centre but the third data centre planned for the site is not considered. This renders the cumulative assessment incomplete.

9.2.6. These issues are addressed below under the relevant headings, and as appropriate in the reasoned conclusion and recommendation, including conditions.

9.3. Vulnerability to Risk of Major Accidents and / or Disaster

9.4. The requirements of Article 3(2) of the Directive include the expected effects deriving from the vulnerability of the project to risks of major accidents and/or disaster. Section 2.7 of the EIAR discusses 'major accidents/disasters', outlining as follows: -

- There is a negligible risk of landslides, given the local topography.

- There is no risk of volcanic activity.
- The subject site is not at risk of flooding and the proposed design ensures that neighbouring properties are not affected by flood risk.
- The proposed development will not be a Seveso/COMAH facility.
- The proposed development is not within the consultation distance of a COMAH facility.

9.4.1. I am satisfied that this issue has been addressed satisfactorily in the EIAR and the development is not vulnerable to major accidents or disasters.

9.5. Consideration of Alternatives

9.5.1. The consideration of reasonable alternatives is addressed in Section 4.0 of the EIAR and the following alternatives were considered.

- Do Nothing Alternative
- Alternative project locations
- Alternative designs/layouts
- Alternative processes/technologies
- Alternative mitigation

9.5.2. Regarding alternative locations, Ireland is stated to be a suitable location for data centres, in view of its climate, which allows for cooling by outside air primarily and which benefits sustainability considerations. Within Ireland, the operator has a preference for the east of the country, due to the existence of high-quality industrial parks, availability of infrastructure and proximity to the operator's existing facilities. It is stated that as demand grows, additional secondary data storage buildings are required and there are locational limits (30-40km at most), to ensure optimal performance. Three sites were considered, in accordance with the locational limit, and the subject site was chosen for reasons including the suitability of the site, which is zoned and of appropriate scale, the suitability of neighbouring activities and the availability of water, wastewater and road access.

9.5.3. Consideration of alternative layouts relates to the layout of the wider landholding and the incorporation of three phases of data centre development. Two options (2a and

2b) which allowed for three phases of development were further assessed. There were no discernible differences for the construction phase of both options and further consideration was given to air quality, noise and vibration and landscape and visual impacts for the operational phase of both options. There was no discernible difference between options, with respect to air quality and landscape and visual impacts, whilst in respect to noise and vibration, option 2a was preferred, as the backup generators face north, away from sensitive receptors. Option 2a was the preferred option for reasons relating to optimum use of the site and presentation of a coherent design.

9.5.4. Regarding alternative processes and technologies, alternative cooling processes were considered and it is stated that there are no significant differences between the alternatives considered, that would result in a significant environmental effect. The chosen method (free air cooling with adiabatic cooling when necessary) requires high capital investment but has a lower operating cost and results in lower water and power consumption.

9.5.5. Alternative approaches to mitigation are stated to be considered for each environmental factor, in the relevant chapter, with reference to the overall strategies of avoidance, prevention, reduction and off-setting.

9.5.6. Having examined the alternatives considered and the assessment methodology outlined in the EIAR analysis, I concur that the subject site is an appropriate location for the proposed development, in view of the zoning context, the pattern of development in the area and the availability of services necessary for the development. Regarding the consideration of alternative designs/layouts, I note that the layout of the site is influenced by the existing data centre development to the south and I am satisfied that adequate consideration has been given to design approaches that address potential impacts on sensitive receptors. I am also satisfied that adequate consideration has been given to alternative technologies for the cooling process and note the stated environmental benefits of the preferred free air cooling method.

9.5.7. Overall, I am satisfied that the scope of alternatives considered is appropriate to the proposed development and is consistent with the requirements of the EIA Directive and also with advice provided within *Guidelines for Planning Authorities and An Bord Pleanala on carrying out Environmental Impact Assessment* (DoHPLG, 2018).

9.6. **Assessment of Likely Significant Direct and Indirect Effects on the Environment**

9.6.1. The EIAR contains 17 chapters and a number of chapters contain supporting appendices. Chapters 1-4 provide an introduction to the development, describes the proposal, sets out the planning context and outlines the consideration of alternatives. Chapter 5 addresses human health and population, Chapter 6 addresses land, soils, geology and hydrogeology, Chapter 7 addresses hydrology, Chapter 8 addresses biodiversity, Chapter 9 addresses air quality and climate, Chapter 10 addresses noise and vibration, Chapter 11 addresses landscape and visual, Chapter 12 addresses archaeology, Chapter 13 addresses traffic and transportation, Chapter 14 addresses material assets, Chapter 15 addresses waste management, Chapter 16 addresses cumulative impacts and Chapter 17 addresses interactions between Chapters 4-16. Each of EIAR chapters is considered in detail below, with respect to the relevant headings set out in the Directive.

9.7. **Human Health and Population**

9.7.1. EIAR Chapter 5 addresses human health and population.

9.7.2. This assessment should be read in conjunction with other relevant sections of the EIA, notably Section 9.11 (Air Quality and Climate), 9.12 (Noise and Vibration) and 9.15 (Traffic and Transportation).

9.7.3. In terms of the receiving environment, the site is stated to be at the western fringe of Drogheda, accessed from Donore Road, and with the nearest sensitive residential properties located c.200m to the east, at Cedarfield. There are also other residential areas to the north.

9.7.4. Section 5.5 of the EIAR outlines baseline details in relation to demographics, socioeconomic conditions, education, labour force, health and tourism.

9.7.5. Section 5.7 of the EIAR identifies potential impacts on population and human health arising from the development. For the construction phase, impacts are predicted to be temporary and relate to a general loss of amenity, due to noise and vibration, dust and other air pollutants and traffic. Such impacts are predicted to be slight or imperceptible. The health and safety of site workers is also identified. Predicted impacts for the operational phase relate to noise, material assets (electrical supply) and traffic and such impacts are predicted to be negligible or imperceptible. Mitigation measures are proposed (outlined in EIAR Chapters 9, 10 and 13) to minimise potential impacts on human health. They comprise:-

- Implementation of a dust management plan for the construction phase (Chapter 9).
- Construction management measures, including limited working hours, maintenance of communication between the contractor and stakeholders, appointment of a site representative for matters regarding noise and vibration, monitoring of noise and vibration at critical times and sensitive locations, maintenance of level access roads, use of plant with low potential for noise and vibration, use of barriers around noisy plant, location of plant away from sensitive receptors and use of support structures as necessary. A construction noise and vibration management plan is provided at Appendix 10.5 of the EIAR (Chapter 10).
- For the operational phase use of low noise generating equipment and incorporation of appropriate line attenuators for stacks and exhausts (Chapter 10).
- Implementation of measures contained within an outline construction and environmental management plan (provided as a standalone document as part of the application documents), relating to provision of wheel washing facilities, provision of adequate parking facilities for site workers, control of construction traffic in particular during peak hours and strategic use of routes to the site by construction traffic (Chapter 13).

9.7.6. Regarding construction-phase impacts, I concur with the EIAR that they relate to a loss of amenity arising from construction activity, including noise and vibration, dust and other air pollutants and traffic. These impacts would be temporary, as discussed in detail in Section 9.11 and 9.12 of my report, and I do not consider that they would be significant. Implementation of the proposed mitigation would help to avoid, manage and mitigate these potential impacts.

9.7.7. I also acknowledge positive impacts arising from job creation and the presence of construction workers in the area. The EIA states that up to 400 staff will be employed during construction.

9.7.8. Regarding operational-phase impacts, I consider likely impacts relate to noise and air quality, due to operation of and emissions from the backup generators. As is discussed at Sections 9.11 (Air Quality and Climate) and 9.12 (Noise and Vibration), in regard to air quality, the assessment includes emissions modelling, and for noise, background surveys and noise modelling have been undertaken.

9.7.9. In respect of air quality, I note the assessment states that ambient air quality limits will not be exceeded and that worst-case modelling indicates the generators can operate in emergency circumstances for up to 157 hours per year, before there is a likelihood of exceedance. This issue is discussed in further detail in Section 9.11. In summary, I consider impacts on air quality would not be such as to have significant effects on human health and population.

9.7.10. In respect of noise, a number of scenarios have been modelled, including emergency operations (i.e. during power outage, when the generators would provide power to the development). The modelled assessment shows that day-to-day operations of the proposed development produce low noise levels but that, in emergency operations, the operation of the back-up generators at night-time may lead to significant impacts for sensitive residential receptors, in view of the level of exceedance of the existing ambient noise level at this time. Section 10.2.5 of the EIAR refers to the impact scale adopted by the draft *Guidelines for Noise Impact Assessment* (IoA/IEMA), which identifies that a noise level change of between 5.0-9.9dB(A) is a substantial change in noise level and that this equates to a significant impact.

9.7.11. Whilst a significant impact may arise, I acknowledge that the likelihood of this impact arising is low, in view of the fact that the back-up generators would only be operational in times of power outage at the site and a key aspect of Eirgrid's assessment of a subsequent grid connection application is that the development shall not jeopardise the stability of the grid. I also note the applicant's statement, that in their experience this situation is a very rare occurrence. I have given consideration as to whether additional mitigation should be incorporated, in the form of restriction on the hours on which the generators can be operational, but I consider this would be inappropriate as it may undermine operation of the site in emergency circumstances. This issue is discussed in further detail in Section 9.12 of this Report.

9.7.12. I acknowledge the positive impact from job creation at the operational phase. The EIAR states that up to 50 staff will be employed directly.

Cumulative impacts

9.7.13. Cumulative impacts in relation to population and human health are addressed at 16.2 of the EIAR. The assessment sets out that: (a) the development of the wider landholding will create c.152 full time jobs and will create short-term employment

during construction; (b) cumulative noise emissions during the operational phases of development are compliant with adopted noise limit values; (c) cumulative impacts of emissions to air on human health are assessed in Chapter 9 and dispersion modelling results indicate that emissions will be compliant with National and EU ambient air quality limits and will therefore not result in a significant effect on human health; and (d) other permitted developments in the area are not considered to give rise to significant cumulative impacts, subject to appropriate mitigation measures being put in place for each development. The EIAR concludes that the proposed development, together with other developments considered cumulatively, will have a positive impact on the surrounding area through expansion of employment and associated economic and social benefits.

9.7.14. I have given consideration to cumulative impacts from all phases of development within the landholding. I do not consider significant cumulative impacts arise for the construction phase, in view of the applicant's confirmation that there will be no significant overlap between the construction phases of subsequent phases of development on the landholding.

9.7.15. I consider cumulative impacts for the operational phase relate to air quality and climate and noise. These cumulative impacts are discussed further in sections 9.11 and 9.12 of my report. In summary, with reference to air quality, I note that modelled assessment of emergency operation of the back-up generators during the operational phase, for up to 157 hours per year, indicates that ambient air quality standards would not be exceeded. Generators are only intended to provide power during a power outage, outside of scheduled testing, and I also note the applicant's statement that in their experience this situation is a very rare occurrence.

9.7.16. Regarding climate, I consider the development would not have a significant cumulative impact, in view of its regulation under the ETS, which provides EU-wide emissions controls and reductions targets, in order to ensure that required emissions reductions are achieved by 2030, at an EU level. Such regulation also applies to other phases of data centre development on the landholding. This is discussed in further detail in Section 9.11 of this Report.

9.7.17. Regarding noise, I note that modelled assessment of day-to-day operations, in Chapter 10 of the EIAR, shows that all phases of development produce low noise

levels during day-to-day operations but the assessment of emergency operations across the landholding shows that, similar to night-time operation for the proposed development, night-time operation of the generators will result in increased noise levels at the sensitive residential receptor locations, , in view of the level of exceedance of the existing ambient noise level at this time. A significant impact may therefore arise in this scenario, in accordance with the impact categorisation methodology used by the EIAR, but the situation would only arise if there were a power outage at the site and this unlikely, in view of newly updated process for connection of data centres to the national grid.

Conclusion

9.7.18. On the basis of the information contained within the EIAR and presented as part of the appeal, I am satisfied that impacts that are predicted to arise in respect of population and human health associated with day-to-day operation of the proposed development can be avoided, managed and mitigated by the measures which form part of the proposed development, the proposed mitigation measures and through suitable conditions. Emergency operation of the back-up generators at night-time may give rise to a significant impact in respect to noise levels at adjacent residential property, in view of the level of exceedance of the existing ambient noise level at this time.

9.8. Land, Soils, Geology and Hydrogeology

9.8.1. EIAR Chapter 6 addresses land, soils, geology and hydrogeology.

9.8.2. In terms of receiving environment, Section 6.3 of the EIAR states that the site was previously used for agriculture, with no indication from historical mapping that it had other previous uses. It has more recently formed part of the construction site for the existing data centre to the south. It is stated to be underlain by Limestone and is also underlain by a Regionally important aquifer with a 'low' vulnerability. The underlying groundwater body is stated to be 'not at risk'. Site investigations undertaken in 2020 (borehole logs and a site map are contained at Appendix 6.2) did not encounter bedrock in boreholes drilled to a depth of 15m and the overburden comprises low-permeability sandy gravelly clay.

9.8.3. Section 6.3.5.6 of the EIAR states that there are no sensitive receptors such as groundwater-fed wetlands or geological heritage sites in the immediate vicinity, which could be impacted by the development. From my observations on the site and from a

review of available records, I agree that there are no such sites in the vicinity which are likely to be impacted by the development.

9.8.4. Section 6.5 of the EIAR identifies potential impacts from the proposed development. Identified impacts for the construction phase relate to soil stripping and excavation, storage and removal of soil from the site and discharges containing suspended solids and/or pollutants. Identified impacts for the operational phase relate to leaks or spillages from fuel storage facilities on the site or from vehicles within the site and firewater used in the event of a fire at the facility. The identified impacts are not anticipated to occur, following the implementation of mitigation measures, set out at Section 6.6, which comprise: -

- For the construction phase, implementation of a construction environmental management plan (CEMP), which will (a) control soil excavation, (b) control material removed from the site, (c) control sources of fill and aggregates, (d) outline fuel and chemical handling procedures and (e) control water during construction. The EIAR states that due to the low permeability of the overburden and the shallow nature of foundation excavations, infiltration to the underlying aquifer is not anticipated. A draft CEMP is provided as part of the application documents.
- For the operational phase, (a) development of environmental procedures that include site-specific mitigation and emergency response measures, (b) fuel storage and transfer measures which isolate and contain potential spillages and (c) an increased area of hardstanding on the site (2.4ha) provides protection to the underlying aquifer. This will reduce the level of recharge of the aquifer, but in view of its overall scale, there will be no significant change to the natural hydrogeological regime.

9.8.5. Regarding the construction phase, I consider likely impacts relate to site works, in particular soil excavation and groundworks, and subsequent movement and storage of excavated soils. These works give rise to the possibility of run-off from the site containing suspended solids. The fuelling of plant and machinery and construction activity (i.e. use of cement/concrete, etc) may also give rise to spillages on the site. However, I note the presence of low-permeability clay on the site, as outlined in Section 6.3.3 of the EIAR, which has been shown by site investigations to be deep (Appendix 6.2 of the EIAR) and which provides protection to groundwater from such

surface spills. In addition to the mitigation outlined above, I note that it is proposed as part of Hydrology/Material Assets mitigation, to drain and treat construction phase run-off within the site. In view of these considerations, I do not consider significant impacts are likely to arise during construction.

9.8.6. Regarding the operational phase, I consider likely impacts relate to leaks and spillages, in the area of the generators and from fuel storage. However, as is stated in Section 6.6.2 of the EIAR, fuel is to be pumped from the storage tank to belly tanks at each generator and the belly tanks will each be double-skinned. This approach appears to reduce the need for mobile refuelling on the site, reducing the potential for spillages. Furthermore, I note that the development incorporates extensive hard surfacing, including to serve the generator bays and fuel storage, with all ground-level surface water being transferred to an attenuation basin and with appropriate interceptor equipment incorporated. In the event of a leak or spill away from a hard surfaced area, I again note the presence of low-permeability clay on the site, which provides protection to groundwater from surface spills such as this, and the proposed mitigation includes emergency response measures. In view of these considerations, I consider the likelihood of impacts at the operational phase is low and any such impact would not be significant.

Cumulative impacts

9.8.7. Cumulative impacts in relation to land, soils, geology and hydrogeology are addressed at 16.3 of the EIAR. It is stated that potential cumulative impacts during construction relate to the scale of development within the landholding, where soil stripping and excavation increase the vulnerability of the bedrock, and accidental spillages that may lead to contamination. Mitigation, in the form of a thick and low-permeability overburden which provides natural protection and the implementation of project-specific construction environmental management plans (CEMP) for each phase of development, will protect the underlying aquifer. At the operational phase, the extent of hardstanding on the site will reduce the level of recharge to ground and accidental spillages that may lead to contamination. The reduced level of recharge is not considered to be significant, in the context of the overall size of the aquifer and each phase of development incorporates containment measures to ensure there is no impact on the receiving water environment.

9.8.8. I have given consideration to cumulative impacts from all phases of development within the landholding. I consider the potential for cumulative impacts at construction is low, in view the low-permeability soil characteristics of the site and the fact that construction phase run-off is to be drained and treated within the site. The operational phase may contribute to a lower rate of recharge of the underlying aquifer, but I would concur with the EIAR that this is not likely to have a significant impact, in the context of the overall size of the aquifer and in view of the diffuse nature of recharge. I am satisfied that no significant cumulative impacts arise.

Conclusion

9.8.9. On the basis of the information contained within the EIAR and presented as part of the appeal, I am satisfied that impacts that are predicted to arise in respect of lands, soils, geology and hydrogeology can be avoided, managed and mitigated by the measures which form part of the proposed development, the proposed mitigation measures and through suitable conditions. I am satisfied, therefore, that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on lands, soils, geology and hydrogeology.

9.9. **Hydrology**

9.9.1. Chapter 7 of the EIAR addresses hydrology.

9.9.2. In terms of receiving environment, there are no open watercourses within or adjacent to the site and internal surface drainage is stated to comprise a series of remnant drainage ditches. Regional drainage is believed to run south to north, towards the River Boyne (1km to the north) and there is no direct hydrological pathway from the site to the Boyne. EPA surface water quality monitoring stations upstream of the Boyne Estuary and west of the site achieved '*good*' WFD status in 2018, whilst the Boyne Estuary is '*at risk of not achieving good status*'.

9.9.3. A flood risk assessment is contained at Appendix 7.2 of the EIAR and it outlines that the site is in Flood Zone C and is not at risk of flooding. The FRA concludes that the proposed development is commercial in nature and the landholding has no historical flood record and that in accordance with *The Planning System and Flood Risk Management Guidelines for Planning Authorities*, it is a suitable development. Having

reviewed available CFRAM mapping[4], I note that the site is not identified as being at risk of fluvial or coastal flooding. Flood maps related to pluvial flood risk are not available, but I note that there are no records of past floods at the site or in its immediate vicinity and the site or vicinity are not identified by the county development plan SFRA as being at risk of flooding.

9.9.4. Section 7.5 of the EIAR identities potential impacts from the proposed development. For the construction phase, impacts relate to surface water run-off which may contain suspended solids, arising from engineering works and accidental pollution incidents. Section 7.5.1 states that as there is no direct pathway to surface water from the site, there is no likely potential impact on off-site watercourses. Identified impacts for the operational phase relate to (a) surface water run-off from impermeable areas of the site, (b) discharge of cooling water (which is required when temperatures exceed 28^{o}), (c) discharge of rainfall passing through the generator exhaust stacks to the foul sewer, (d) potential leaks and spillages from the on-site fuel tank for the back-up generators. It is again stated that as there is no direct pathway to surface water from the site, there is no likely potential impact on off-site watercourses. Proposed mitigation comprises: -

Construction phase:

- Implementation of a construction environmental management plan, to cover all potentially polluting activities and include emergency response procedures.
- Run-off containing silt will be contained and treated in settlement tanks. Other silt reduction measures are also incorporated.
- Any discharged construction water will be treated using a sediment trap or siltbuster as required.
- Soil temporarily stored on the site will be managed and movement will be minimised. Excavations will remain open for as little time as possible.
- Weather conditions will be monitored when planning construction activities,
- Regarding fuel and chemical handling, a bunded refuelling area will be designated, spill kits will be provided across the site and measures will be incorporated to

[4] https://www.floodinfo.ie/map/floodmaps/

minimise the potential for spillages from mobile bowsers. Drummed fuel or polluting substances will be stored in a bunded area. Ready mix concrete will be brought to site by truck and will be the subject of prior risk assessment. Off-site wash down of trucks will be facilitated.

Operational phase:

- Development of environmental procedures that include site-specific mitigation and emergency response measures,
- A bunded refuelling area will be designated, spill kits will be provided across the site and measures will be incorporated to minimise the potential for spillages from mobile bowsers,
- Surface water from impermeable areas will be diverted to an attenuation basin, which was approved as part of Reg. Ref. LB191735 and which is sized to accommodate the proposed development. Separate piped connections will be provided for roof drainage and road/car park drainage, as this will allow the option of rainwater harvesting in the future. Two hydrocarbon interceptors and a hydrodynamic solid separator are also incorporated, to provide treatment and to remove debris and sediment prior to attenuation. Attenuated stormwater will be discharged to the IDA stormwater system east of the site,
- Mitigation measures are not required in respect of the water supply, but the water system will be metered, to facilitate leakage detection. Water saving measures will also be incorporated.

9.9.5. Regarding the construction phase, I consider likely impacts relate to site works, in particular soil excavation (30,200m^3)and groundworks, which give rise to the possibility of run-off from the site containing suspended solids. Plant and machinery refuelling and construction activity may also give rise to spillages on the site. However, as the EIAR states, there is no direct pathway to surface water from the site so there is no likely potential impact on off-site watercourses. I am unclear from the application documents (including EIAR and Engineering Report) as to whether it is proposed to construct separate settlement tanks to accommodate construction run-off, or whether it is proposed to drain to the existing attenuation basin. I note that the application drawings do not identify new settlement tanks. Notwithstanding, I do not consider construction phase run-off would have a significant environmental impact, in view of

the absence of open watercourses in the vicinity of the site. Regarding the uncertainty over whether new settlement tanks are proposed for the construction phase, I am satisfied that this aspect of the development can be agreed with the planning authority, through planning condition.

9.9.6. Regarding the operational phase, I consider likely impacts relate to surface water discharges that contain suspended solids or pollutants and leaks/spillages. I again note the fact that there is no direct pathway to surface water from the site, so there is no likely potential impact on off-site watercourses. Notwithstanding, I note that the surface water drainage system is stated to be adequately sized to accommodate run-off from the impermeable areas of site, including suspended solids and pollutants.

9.9.7. Spill incidents are likely to be smallscale in nature, in view of the bunded nature of fuel stores, and I do not consider they are likely to give rise to any significant environmental impact. I note that the proposed mitigation includes proposals in relation to spill incidents, as outlined in Section 9.9.4.

9.9.8. Cooling water is to be discharged to the surface water system and rainwater passing through the generator exhaust stacks will drain to the foul water system. I am satisfied that both will adequately treated within the drainage systems.

Cumulative impacts

9.9.9. Cumulative impacts in relation to hydrology are addressed at 16.4 of the EIAR. It states that: (a) cumulative impacts due to contaminated run-off are low, given there are no hydrological pathways to off-site watercourses, (b) there is no potential for increased flooding as individual permitted developments are required to comply with the Greater Dublin Area Drainage Strategy and local authority requirements by providing for attenuation on site, in order to maintain the greenfield run-off rate, (c) the potential for accidental spillages that may lead to contamination is mitigated by incorporation of bunding for oil tanks and interceptors in parking and fuel unloading area. Run-off from all phases of development will be treated through a SuDS system which includes interceptors and (d) increased wastewater loading and potable water demand are an issue for all developments and individual development require a connection agreement with Irish Wate prior to connection. Confirmation of feasibility has been provided by Irish Water in this instance.

9.9.10. I have given consideration to cumulative impacts from all phases of development within the landholding. I consider the potential for cumulative impacts during construction is low, in view of the absence of watercourses from the site and the low-permeability characteristics of the site. For the operational phase, the development provides for effluent to be drained to the public network and surface water to drain to the public network at an attenuated rate and following treatment/settlement to remove suspended solids and pollutants. In the case of effluent, Irish Water has not objected to the development and in the case of surface water drainage, the system was approved as part of previous permission Reg. Ref. LB191735 and is operational on the site and only requires the proposed development to connect to it. In view of these considerations, I am satisfied that no significant cumulative impacts arise.

Conclusion

9.9.11. On the basis of the information contained within the EIAR and presented as part of the appeal, I am satisfied that impacts that are predicted to arise in respect of hydrology can be avoided, managed and mitigated by the measures which form part of the proposed development, the proposed mitigation measures and through suitable conditions. I am satisfied, therefore, that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on hydrology.

9.10. Biodiversity

9.10.1. Chapter 8 of the EIAR addresses biodiversity. The assessment is based on desk-based research and field surveys. Section 8.3.2 states that site surveys were undertaken on 5th February 2019 and 17th April 2019 and consisted of walkover surveys. Follow-up surveys took place on 3rd September 2020 and 3rd March 2021, to confirm any changes to the site since the earlier surveys.

9.10.2. The findings of the surveys are discussed in Section 8.4 of the EIAR, in respect of the receiving environment. The site is stated to fall within the boundary of the permitted data centre development site and has been cleared and prepared for development. It is stated to comprise of spoil and bare ground. The area adjacent to the west site boundary comprises a mixed broadleaf woodland and Section 8.4.2.1 identifies the species encountered. Figure 8.2 and Table 8.2 provide details, including mapping of the habitats recorded on the site.

9.10.3. Section 8.4.3 states that there were no badger setts along field boundaries and there were no signs of badgers within the site during surveys, there were no signs of otter in the study area during surveys and there are no suitable habitats on the site. Regarding birds, Table 8.3 contains a list of birds encountered during surveys. Great Tit, Chaffinch, Blackbird, Wren, Magpie, Goldfinch and Woodpigeon were encountered.

9.10.4. European sites located within a search zone of 15km of the site are identified in Table 8.1 of the EIAR and it identifies that there are 6 European sites within 15km; The River Boyne and River Blackwater SAC (1.2km from the site), the River Boyne and River Blackwater SPA (1.5km from the site), the Boyne Estuary SPA (3.9km from the site), the Boyne Coast and Estuary (5.2km from the site), the River Nanny Estuary and Shore SPA (8.3km from the site) and Clogher Head SAC (13.5km from the site). The site is stated to be within the catchment of the River Boyne but that there are no watercourses on or in the vicinity of the site.

9.10.5. Section 8.4.5 of the EIAR contains a habitat evaluation. It states that there are no rare or protected habitats recorded on the site and it may be considered to be of low ecological value.

9.10.6. Section 7.5 of the EIAR identities potential impacts from the proposed development. In respect of habitat impacts, it states that there will be no degradation of ecosystem services, no loss or degradation of habitats, no loss of species diversity and no loss of genetic diversity. It also states that there will be no direct or indirect impacts on European sites or on the adjacent woodland area (an appropriate assessment screening report is contained at Appendix 8.1).

9.10.7. In respect of impacts on fauna, the low ecological value of the site is reiterated. Indirect impacts on foraging bats are identified as a potential impact, should lighting be pointed towards site boundaries but this risk is considered to be low, in view of the immature nature of the adjacent tree stand, the lack of roost features and the level of existing lighting in the area, along the motorway.

9.10.8. Proposed mitigation relates to the incorporation of bat-sensitive lighting during both the construction and operational phases.

9.10.9. Having visited the site, I concur with the EIAR assessment, that the site is of low ecological potential. At the time of my inspection it was in use as a construction site

and storage compound, as part of the construction of the data centre to the south. It has been cleared and applied with a covering of hardstanding. I note the findings of site surveys and would agree that the development is unlikely to have a significant impact on biodiversity. I note the potential impact on foraging bats along the west site boundary and consider that this potential impact can be mitigated by the incorporation of bat-sensitive lighting, as is proposed.

Cumulative impacts

9.10.10. Cumulative impacts in relation to biodiversity are addressed at 16.5 of the EIAR. It is stated that the cumulative developments listed in Appendices 3.1, 3.2 and 3.3 of the EIAR will have no impact on any European site and the proposed development will have no impact on any European site, so there is no potential cumulative impact on European sites. Regarding impacts on local biodiversity, such impacts would be imperceptible as the development involves the loss of low-value local habitat. With the incorporation of landscaping for all phases of development on the landholding, the development is considered to have an imperceptible impact on biodiversity.

9.10.11. I have given consideration to cumulative impacts from all phases of development within the landholding. I have previously expressed the view that the site is of low ecological potential, given it has been used as part of a construction site and has been cleared and applied with a covering of hardstanding. The wider landholding has also been substantially disturbed and developed, as part of the development of the existing data centre and the ongoing construction of the substation to the north, and I consider it is of low ecological potential. I note the potential impact on foraging bats along the west site boundary, which may be intensified by further development of the landholding, and I consider that this potential impact can be mitigated by the incorporation of bat-sensitive lighting, as is proposed.

Conclusion

9.10.12. On the basis of the information contained within the EIAR and presented as part of the appeal, I am satisfied that no significant adverse impacts are predicted to arise in respect of biodiversity and that they can be avoided, managed and mitigated by the measures which form part of the proposed development, the proposed mitigation measures and through suitable conditions. I am satisfied, therefore, that the

proposed development would not have any unacceptable direct, indirect or cumulative impacts on biodiversity.

9.11. Air Quality and Climate

9.11.1. Chapter 9 of the EIAR addresses air quality and climate. The assessment includes desk-based assessment and modelled assessment. In particular, air dispersion modelling of operational phase emissions was carried out using the US EPA regulated model 'AERMOD' (A description of the AERMOD model is contained at Appendix 9.1) and a UK methodology for modelling back-up generators, published by the UK Environment Agency (consultation document called '*Diesel Generator Short-Term NO2 Impact Assessment*', 2016). Section 9.1 of the EIAR states that this modelling was carried out to assess concentrations of nitrogen dioxide (NO_2) at a number of locations beyond the site boundary, arising from testing and infrequent emergency operation of the backup generators.

9.11.2. Regarding the receiving environment for air quality, Ireland has been split into 4 separate air quality zones and the subject site is within Zone C (23 towns with a population greater than 15,000). Continuous monitoring of NO_2 at Zone C locations of Dundalk, Kilkenny and Portlaoise in 2019 show that levels are below both the annual and 1-hour limit values. Based on an average of the long-term concentrations at these monitored sites, it is estimated that the background NO_2 concentration in the area is 14µg/m^3. Continuous monitoring for PM_{10} at these locations in 2019 suggests an average of no more than 17µg/m^3 and monitoring for $PM_{2.5}$ at Zone C locations on Ennis and Bray was used to generate a background concentration of 13.6µg/m^3 in the area.

9.11.3. Regarding the receiving environment in respect to climate, data published in 2020 states that Ireland will exceed its 2019 annual limit set under the EU Effort Sharing Decision (ESD). GHG emissions for 2019 are estimated to be 4.5% lower than those recorded in 2018 and emissions reductions have been recorded in 6 of the last 10 years. However, compliance with annual EU targets has not been met for 4 years in a row, with agriculture the largest contributor and the transport and energy sectors being the second and third largest contributors. GHG emissions are predicted to decrease in the long-term but Ireland is expected to exceed its compliance obligations under the ESD, for the period 2013-2019.

9.11.4. Section 9.5 of the EIAR identities potential impacts from the proposed development. Identified impacts for the construction phase relate to dust emissions associated with construction activity and GHG emissions from construction vehicles and machinery. Initial commissioning activities for the back-up generators will also take place during the construction phase. These impacts are short-term in nature and none is envisaged to be significant. Proposed mitigation for the construction phase comprises implementation of a dust management plan, which includes site management measures, management of site roads, haul routes and construction vehicles and incorporation of considered construction methods in respect of weather conditions.

9.11.5. Identified impacts for the operational phase in respect of air quality relate to emissions from the back-up generators. Section 9.5.2 of the EIAR states that stack heights have been designed to ensure that an adequate release height is achieved, to aid dispersal and to ensure compliance with ambient air quality limits. No proposed mitigation measures are incorporated in respect of air quality for the operational phase.

9.11.6. Identified impacts for climate during the operational phase relate to operation of the back-up generators, which are anticipated to only be required in the event of a power outage and for testing purposes. Electricity to operate the facility will be sourced from energy suppliers, including power stations and renewable sources such as wind. No proposed mitigation measures are incorporated in respect of climate for the operational phase.

9.11.7. Section 9.7.2.2 of the EIAR discusses indirect impacts for the operational phase and states that CO_2 emissions from electricity to serve the proposed development will not be significant, in relation to Ireland's national annual CO_2 emissions, equating to approx. 157,680 tonnes of CO_2eq per year. Cumulative emissions from the existing data centre, proposed development and future third phase data centre on the landholding are predicted to indirectly result in approx. 473,040 tonnes of CO_2eq per year. The Section goes on to state that the proposed development will require a GHG emission permit, which will be regulated under the EU-wide Emissions Trading Scheme (ETS) and that emissions from the development are thus accounted for under the ETS and do not count towards Ireland's reduced emissions target under the EU Effort Sharing Decision. Emissions from the development will be less than 0.2% of the total ETS market.

9.11.8. Regarding the construction phase, I consider likely impacts relate to dust, arising from construction activity and emissions to air, arising from the commissioning of the back-up generators. Regarding dust, this is a common issue as part of any construction project and I note the applicant's reference to research which indicates that deposition primarily occurs within 50m of a construction site. I also note that mitigation has been incorporated, in the form of a dust management plan, which I consider is adequate to ensure there is no significant impact for sensitive receptors in the locality. Regarding emissions to air, Section 9.5.1 of the EIAR states that the commissioning phase of the backup generators is similar to operational phase testing (Section 9.2.3 confirms the testing regime as follows: Test 1 – testing once per week for all generators at up to 25% load for a maximum of 30 minutes each. Test 2 – each generator periodically tested at up to 90% load for a max of 4 hours per year) and modelled assessment shows that this testing would not have a significant impact on air quality. I do not consider that GHG emissions from construction vehicles and machinery will have a significant impact on climate.

9.11.9. Regarding the operational phase, I consider likely impacts relate to direct emissions to air from the back-up generators during times of operation, and indirect emissions arising from electricity consumption.

9.11.10. For direct emissions, I note that the generators will only be operational in times of power outage and for testing. I have given consideration to the AERMOD model (EPA guidance on air dispersion modelling[5] identifies it as an advanced air dispersion model in the assessment the impact of air emissions from industrial facilities) and the UK EA methodology used in the assessment, which model NO_2 emissions, and I am satisfied that the models are appropriate to the proposed development. I note that the AERMOD model shows that air quality standards are maintained in each of the assessment years in day-to-day operating conditions.

9.11.11. The assessment also states that modelled assessment of emergency operation of the generators. Using the AERMOD model, a scenario of operation of the generators for 100 hours per year (additional to scheduled testing) indicates compliance with relevant air quality standards for NO_2, whilst assessment using the

[5] Air Dispersion Modelling from Industrial Installations Guidance Note (AG4) (2020) - https://www.epa.ie/publications/compliance--enforcement/air/air-guidance-notes/EPA-Air-Dispersion-Modelling-Guidance-Note-(AG4)-2020.pdf

UK EA methodology indicates that the generators could operate for up to 157 hours per year, before there is a likelihood of exceedance of the ambient air quality standard. Both assessments are stated to constitute worst case scenarios and I note the applicant states that in their experience operation of the back-up generators other than for testing is a rare occurrence. From the information available to me, I consider the likelihood of operation of the generators for a period which would result in exceedance of the ambient air quality standard is low and I am satisfied that day-to-day operations will not give rise to a significant impact on air quality.

9.11.12. Regarding other emissions to air, Section 9.7.2.3 of the EIAR states that SO_2 emissions will equate to 0.38% of the national emission ceiling limit, NO_X emissions will equate to 0.65% of the national emission ceiling limit and NMVOC will equate to 0.87% of the national emission ceiling limit. I consider these emissions, which relate to the combustion of fossil fuels, are not significant in the context overall national ceiling limits, and would note, as the applicant states, that these emissions levels will in any case reduce as the national fuel mix continues to diversify away from reliance on fossil fuels, towards renewable sources.

9.11.13. Regarding indirect impacts, I note that Section 9.7.2.2 of the EIAR states that the proposed development will require a GHG emission permit, meaning it will be regulated under the EU-wide Emissions Trading Scheme (ETS) and that emissions from the development are thus accounted for under the ETS and do not count towards Ireland's reduced emissions target under the EU Effort Sharing Decision.

9.11.14. The appellant contests the determination of the EIAR in respect of impact on climate, i.e. the determination that the development would have a slight impact on climate. In the first party response to the appeal, the applicant responds directly to this ground of appeal, stating that in accordance with guidance contained within '*Assessing Greenhouse Gas Emissions and Evaluating Their Significance*' (IEMA, 2017), where emissions can be compared to an existing carbon budget (in this case the ETS), the percentage impact the project will contribute to climate change can be determined. The proposed development will be less than 0.2% of the total ETS market and where there is a medium sensitivity environment and the magnitude of impact is small, this equates to a slight impact. It is restated that CO_2 emissions will not affect Ireland's reduced emissions target under the EU Effort Sharing Decision.

9.11.15. I have assessed operational phase emissions at Section 7.3 of this report, outlining that Box 2.1 of the Climate Action Plan 2021 states that emissions from industry sectors covered by the ETS are subject to EU-wide rather than National targets and that overall emissions allowances will reduce over time, in order to ensure that required emissions reductions are achieved by 2030 (43% compared to 2005 levels).

9.11.16. I have considered the submissions by both parties and have also considered advice within the above-referenced IEMA guidance and I am inclined to agree with the applicant, that the development will have a long-term slight impact on climate, given its regulation by the ETS. Emissions from the ETS sector do not count toward or affect Ireland's reduced emissions target under the EU Effort Sharing Decision and the proportion of the overall ETS market which the development would account for is very low. I would also note that the ETS contains emissions reductions targets for the period up to 2030, so mitigation of indirect emissions arising from the development will likely be required as part of the ETS, even if it is not proposed as part of the proposed development.

Cumulative impacts

9.11.17. Cumulative impacts in relation to air quality and climate are addressed at 16.6 of the EIAR. It states that: (a) based on the phased approach to construction of the landholding, there is minimal potential for cumulative impact on air quality and climate from simultaneous construction, (b) Air dispersion modelling detailed in Appendix 9.3 of the EIAR assessed air quality impacts of the build-out of the overall landholding and the results indicate that ambient ground level NO_2 concentrations are within relevant air quality standards, assuming stack heights of 25m for all diesel generators on the site, (c) Cumulative indirect electricity usage for the landholding would be equivalent to 0.87% of Ireland's national annual CO_2 emissions, (d) Indirect air emissions from electricity power generating stations generating the electricity used by the proposed development are regulated by the EPA, which ensures that emissions do not significantly affect ambient air quality, (e) a review of other permitted developments in the wider area found that there were no developments of significance with air emissions that require inclusion in the cumulative assessment.

9.11.18. I have given consideration to cumulative impacts from all phases of development within the landholding.

9.11.19. Regarding air quality, I do not consider significant cumulative impacts arise for the construction phase, in view of the applicant's confirmation that there will be no significant overlap between the construction phases of subsequent phases of development on the landholding. Regarding the operational phase, Chapter 9 of the EIAR presents the results of air dispersion modelling that predicts the impact of the operational phase of development of the wider landholding. I note that this modelled assessment shows that air quality standards are maintained for day-to-day operations across all phases of development and the assessment also states that emergency operation of the generators up to 157 hours per year does not give rise to any exceedance of ambient air quality standards. The generators are for emergency back-up purposes and will only be operated in such circumstances, outside of scheduled testing. I also note that the process for connection to the national grid requires Eirgrid to give importance to maintaining the overall stability of the grid, so the development is not likely to have a destabilising effect or lead to power outages. The likelihood of emergency operation of these generators is therefore likely to be low. From the information available to me, I do not consider the development will give rise to significant cumulative air quality impacts.

9.11.20. Regarding climate, I have previously discussed this issue at Sections 7.3 of my report and have outlined that the proposed development will be regulated by the EU Emissions Trading Scheme, which provides EU-wide emissions controls and reductions targets, in order to ensure that required emissions reductions are achieved by 2030. Emissions from the development (and other data centre developments for that matter) do not count towards or affect Ireland's reduced emissions target under the EU Effort Sharing Decision. The applicant states that emissions from the proposed development will be less than 0.2% of the total ETS market and I consider it is reasonable to assume that other phases of data centre development on the site will have a similar impact on the total ETS market. I do not consider the impact of the development of the wider landholding would have a significant cumulative effect on climate, in the context of the overall market, and I note that under the ETS, the applicant will in any case be subject to reduced emissions targets and is likely to be required to implement mitigation, to ensure that reduced emissions targets under the

ETS are achieved. In view of these considerations, I consider the development would not have a significant cumulative impact on climate.

Conclusion

9.11.21. On the basis of the information contained within the EIAR and presented as part of the appeal, I am satisfied that impacts that are predicted to arise in respect of air quality and climate can be avoided, managed and mitigated by the measures which form part of the proposed development, the proposed mitigation measures and through suitable conditions. I am satisfied, therefore, that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on air quality and climate.

9.12. Noise and Vibration

9.12.1. Chapter 10 of the EIAR addresses noise and vibration. The assessment comprises desk-based assessment, noise surveys and modelled assessment.

9.12.2. Regarding the noise impact assessment, Section 10.2.4 of the EIAR states that there is no statutory guidance in Ireland, in respect of maximum permissible noise levels during construction and that, in the absence of same, consideration is given to guidance within *BS 5228 – 1: 2009+A1:2014 Code of Practice for Noise and Vibration Control on Construction and Open Sites – Noise*. Using this guidance, Table 10.4 of the EIAR sets out noise levels which, if exceeded, signify a significant effect at the facades of a residential receptor. Consideration is also given to guidance within *Guidelines for the Treatment of Noise and Vibration in National Road Schemes* (TII, 2004) and Table 10.6 sets out construction noise levels that should not be exceeded for such projects. For the operational phase, Section 10.2.5 identifies the requirements of condition No. 15 of LB191735 and proposes that the specified noise limits within the condition should be applied to cumulative noise levels, from the permitted and proposed developments.

9.12.3. The noise assessment is supported by a series of noise surveys, which were undertaken over a number of hours on 14th and 15th November 2019, and a Baseline Noise Monitoring Survey report is provided at Appendix 10.2. Road traffic noise, distant and local, was the most significant noise source and typically dictated ambient noise levels at the nearest noise sensitive locations during daytime and night-time

periods. Table 10.10 of the EIAR contains a review of measured noise levels from the surveyed locations, during daytime and night-time conditions.

9.12.4. Regarding the receiving environment, Section 10.3.1 states that road traffic noise, distant and local, was the main significant noise source observed and typically dictated ambient noise levels. Table 10.10 outlines typical ambient noise levels at surveyed locations.

9.12.5. Section 9.5 of the EIAR identities potential impacts from the proposed development. Identified noise impacts for the construction phase relate to typical construction activity on the site, which is stated to have the potential to generate significant levels of noise. Construction hours are envisaged to be 07.00-18.00 hours Monday-Friday and 08.00-14.00 hours on Saturdays and occasional weekday evening work may be required but building activities will be reduced on long days in order to manage any associated noise impacts. Section 10.5.1 states that as the construction programme has only been developed in outline form, it is difficult to calculate the actual magnitude of noise emissions. Noise levels are therefore predicted using guidance set out in BS 5228-1 and Table 10.11 contains typical plant items and associated noise levels that are anticipated for various phases of the construction programme. Figure 10.4 contains 7 identified representative locations, which are utilised for the purposes of the noise impact assessment, and Table 10.12 contains predicted noise levels at separate stages of the construction phase for each of these locations. Of these locations, residential locations (R01, R02, R04, R06 and R07) are predicted to experience maximum noise levels of 60Db $L_{AEQ, 1hr}$). R05, which is a commercial property, is predicted to experience maximum noise levels of 72Db $L_{AEQ, 1hr}$. Identified vibration impacts relate to excavation works and lorry movements on uneven road surfaces but it is stated that, due the distance to sensitive locations, there is little likelihood of structural or even cosmetic damage to existing neighbouring dwellings.

9.12.6. Identified noise impacts for the operational phase relate to building services noise, emergency operations and additional traffic on public roads. Section 10.5.2 of the EIAR states that 5 scenarios were developed for the purposes of noise assessment: (a) normal day-to-day activity for the proposed development, (b) emergency operation for the proposed development, (c) generator testing for the proposed development, (d) normal day-to-day activity for the indicative masterplan development and (e) emergency operation for the indicative masterplan development. Predicted noise

levels are presented in Tables 10.13/10.14 and Tables 10.4.1/10.4.2 of Appendix 10.4. With reference to the EIAR tables, I note that there are slight differences in the predicted noise levels. For completeness, I have assessed on the basis of the higher predicted noise level where there is an inconsistency.

9.12.7. In each of the modelled scenarios location R05 (the commercial property on the IDA lands to the east) is predicted to experience greatest noise, whilst the residential locations surveyed are predicted to experience a maximum noise level of 36dB $L_{Aeq, T}$ for scenario (a), a maximum noise level of 54dB $L_{Aeq, T}$ for scenario (b), a maximum noise level of 38dB $L_{Aeq, T}$ for scenario (c), a maximum noise level of 36dB $L_{Aeq, T}$ for scenario (d) and a maximum noise level of 55dB $L_{Aeq, T}$ for scenario (e). In each scenario instance, noise levels are stated to be below the limits that were adopted for the assessment.

9.12.8. Regarding the noise modelling exercise, details of the model are contained at Appendix 10.3 and it states that DGMR iNoise software was used and that it calculates noise levels in accordance with ISO 9613: *Acoustics – Attenuation of Sound During Propagation Outdoors, Part 2: General Method of Calculation* (1996). The input data used in the model reflects the proposed development.

9.12.9. Section 10.6 of the EIAR contains proposed mitigation measures. For the construction phase they comprise proposals to limit construction hours, proposals for communication channels between stakeholders, appointment of a site representative for matters relating to noise and vibration, monitoring of noise and vibration at sensitive receptor locations and provision of level road surfaces within the site. It is also stated that plant used on the site will have low inherent potential for generation of noise and vibration, barriers will be erected around noisy items such as generators or compressors and such plant will be situated away from sensitive receptors. Vibration is recommended to be limited to that outlined in Table 10.7. An outline construction noise and vibration management plan is provided at Appendix 10.5. For the operational phase, mitigation comprises proposals to use low noise generating equipment and incorporation of appropriately specified line attenuators for stacks and exhausts, as necessary.

9.12.10. Regarding the construction phase, I agree with the EIAR, that likely impacts relate to typical construction activity and I accept that at this point it is difficult to

accurately calculate the magnitude of noise emissions. In this context, I consider it is appropriate to use the typical noise levels identified by BS5228-1, for the purposes of the assessment, and I note the predicted noise levels at each of the representative locations, contained in Table 10.12. The table indicates that for each of the sensitive residential locations surveyed, noise levels are not at a level which would give rise to a potential significant effect, in line with advice provided by BS5228. Given the separation distance to adjacent housing, whilst construction activity will likely have a noticeable noise impact, I do not consider that it would be significant. Location R05 (the commercial property on the IDA lands to the east) is shown to experience greater noise levels, but this is a function of the very close proximity of that site to the subject site. Whilst R05 is a commercial rather a residential property, I note that for the majority of the construction phase it is shown to experience levels below the maximum permissible that is specified by the TII guidance in respect of construction noise. For this property there is likely to be limited scope to reduce noise levels by any significant degree, but I note the commitments within the proposed mitigation to appoint a site representative and to monitor noise at sensitive receptor locations. I would also note that construction noise will be temporary and is likely to be transient, so predicted noise levels are unlikely to be constant over the period.

9.12.11. Regarding the operational phase, I consider likely impacts relate to daily operations at the site, in particular associated plant, and operation of the back-up generators during testing or a power outage situation. I note that Table 10.13 contains predicted noise levels at the 7 representative locations for modelled Scenarios A, B and C, which are related solely to the proposed development and Table 10.4.1 of Appendix 10.4 contains predicted noise levels for Scenarios D and E, related to cumulative noise levels from development within the wider landholding. For scenarios A and C, which I consider to be the most likely scenarios to occur on the site, I note that the model shows day-to-day operations generating low noise levels at the sensitive residential receptor locations. Scenario D, which represents day-to-day operation of development within the wider landholding, also shows day-to-day operations generating low noise levels at the sensitive residential receptor locations. In view of this, I do not consider that noise levels for the modelled day-to-day scenarios would be such as to have a significant noise impact at adjacent residential property.

9.12.12. Scenario B, which represents emergency operations for the proposed development (i.e. operation of the back-up generators) shows increased noise levels at the sensitive residential receptor locations. Section 10.2.5 of the EIAR refers to the impact scale adopted by the draft *Guidelines for Noise Impact Assessment* (IoA/IEMA), which identifies that a noise level change of between 5.0-9.9dB(A) is a substantial change and that this equates to a significant impact. Applying this IEMA guidance, noise levels are shown to be at a level where significant impacts arise at these residential locations in the event of night-time operation. Scenario E, which represents day-to-day operation of development within the wider landholding, similarly shows increased noise levels at the sensitive residential receptor locations, which again are shown to exceed the threshold for likely significant effects in the event of night-time operation. In both Scenarios B and E, it can be seen that operation of the back-up generators generates this additional noise and I note this situation is stated to only arise in an emergency situation, whereby there is a power outage at the site. No mitigation is proposed, which would give rise to any material reduction in noise in this emergency situation.

9.12.13. Whilst I acknowledge that noise levels may have a significant impact at night in the emergency operation scenario, the likelihood of this scenario arising is low (the applicant states that it is an extremely rare occurrence) and in this regard, consideration must be given to the recently published direction by the CRU in respect of data centre applications for connection to the national grid, whereby priority is given to the stability of the grid when processing such applications, and where it is made clear that if the system would be jeopardised by an individual application, a connection offer shall not be made. This provides assurance that the development will only be connected to the grid if it can be accommodated without impact to overall stability.

9.12.14. I have given consideration to whether additional mitigation should be incorporated, i.e. to restrict hours of operation of the back-up generators, but I consider this would be inappropriate as it may undermine the operation of the site in times of emergency.

Cumulative impacts

9.12.15. Cumulative impacts in relation to noise and vibration are addressed at 16.7 of the EIAR. It states that construction work on the subject site is likely to be a dominant

noise source for identified receptors to the east and north-east and construction work on other sites will be effectively masked by this development. Implementation of mitigation measures outlined at Section 10.6 should ensure there will be no cumulative noise impact during construction. Cumulative noise effects for the operational phase are considered in Chapter 10 and Table 10.15 outlines predicted noise level changes, which are deemed to be imperceptible or not significant.

9.12.16. I have given consideration to cumulative impacts from all phases of development within the landholding.

9.12.17. I concur with the EIAR assessment, that construction activity on the site will be a dominant noise source and will to some extent mask other noise sources in the area. I note that the EIAR assessment of the construction phase indicates that noise levels are not at a level which would give rise to a potential significant effect, in line with advice provided by BS5228. Regarding the operational phase, as I have set out previously, Chapter 10 of the EIAR included modelled assessment of a number of scenarios, including the day-to-day operational phase of all phases of development on the landholding and emergency operations for all phases of development on the landholding. Assessment of day-to-day operations indicates that all phases of development produce low noise levels but the assessment of emergency operations across the landholding shows night-time operation of the generators will result in increased noise levels at the sensitive residential receptor locations, which are shown to exceed the threshold for likely significant effects. Whilst a significant impact may arise in this scenario, I note that the situation would only arise if there were a power outage at the site and, as I have stated previously, the process for connection to the national grid requires Eirgrid to give importance to maintaining the overall stability of the grid, so the development is not likely to have a destabilising effect or lead to power outages. The likelihood of this significant effect arising is therefore, in my opinion, low.

9.12.18. I have given consideration to whether additional mitigation should be incorporated, i.e. to restrict hours of operation of the back-up generators, but I consider this would be inappropriate as it may undermine the operation of the site in times of emergency.

Conclusion

9.12.19. On the basis of the information contained within the EIAR and presented as part of the appeal, I am satisfied that impacts that are predicted to arise in respect of noise and vibration associated with day-to-day operation of the proposed development can be avoided, managed and mitigated by the measures which form part of the proposed development, the proposed mitigation measures and through suitable conditions. Emergency operation of the back-up generators at night-time may give rise to significant effects in respect to noise levels at adjacent residential property.

9.13. **Landscape and Visual**

9.13.1. Chapter 11 of the EIAR addresses landscape and visual impacts.

9.13.2. In terms of the receiving environment, the site is located c. 2km south-west of Drogheda town centre, within the IDA Business and Technology Park. The Business Park is developing and currently contains an existing data centre facility, a commercial building and a sub-station development which is undergoing construction. The site is open and is visible in a number of short, medium and long-range views. According to the Meath county development plan, the site is in a 'coastal landscape' and is part of Area 7 – 'Coastal Plains'. It is identified as being of moderate landscape value. The area west of the M1 motorway is in a 'river corridors and estuaries' landscape and is part of Area 5 – 'Boyne Valley'. It is identified as being of exceptional landscape value. The area to the south is in a 'lowland landscape' and is part of part of Area 6 – 'Central Lowlands'. It is identified as being of high landscape value. The Coastal Plains and Boyne Valley are identified as having high landscape sensitivity, whilst the Central Lowlands have moderate landscape sensitivity.

9.13.3. The assessment methodology includes desk-based research and analysis and included site visits which were undertaken Autumn 2019 and February 2021. The assessment is also supported by a series of 15 No. photomontages, which provide a variety of short, medium and long-range views of the proposed development.

9.13.4. Section 11.5 of the EIAR identifies potential impacts associated with the proposed development. Identified impacts for the construction phase relate to construction activity, including site works and excavations, materials stockpiling and the incremental construction of the development. Such impacts are considered to have primarily slight or moderate impacts on both landscape character and views. Identified impacts for the operational phase relate to the bulk and massing of the proposed data

centre. The assessment considers it will be recognisable as a new built form within the landscape and will be noticeable, but not prominent.

9.13.5. The accompanying photomontages provide a variety of short, medium and long-range views of the proposed development. Regarding visual impact, the assessment considers the development would have an 'imperceptible' or 'no' impact from 6 of the 15 viewpoint locations and a 'slight' or 'moderate' impact from the remaining 9 viewpoint locations. The following assessments and conclusions are noteworthy: -

- The overbridge at Junction 10 of the M1 (photomontage viewpoint 9) forms part of a protected view. The landscape character currently includes manmade elements and the data centre will be an additional element. The development is predicted to have a moderate impact on landscape character and a slight/moderate impact on the view.
- Sheephouse Graveyard (photomontage viewpoint 11) also contains a protected view. The development is considered to be a peripheral element in the landscape and will have a slight impact on both landscape character and the available view.
- The development will present a substantial new built element in the locality of the residential neighbourhoods to the east and will have a moderate impact from these areas. The development will also be a substantial addition from other areas in the locality and it is considered to give rise to slight or moderate impacts.
- Designated views and prospects within the Bru na Bóinne and Boyne Valley area (including Knowth, Dowth and Newgrange) are stated to be remote and visually separated from the development, so will not be impacted.

9.13.6. Mitigation measures for the construction phase relate to management of the site, with hoarding and fencing in place and with vehicle management procedures, to avoid congestion and transfer of debris. In addition, trees to be retained are to be protected during construction and soil retained on the site for reuse will be stored appropriately. For the operational phase, reference is made to architectural and landscaping mitigation, which are considered to be effective for the medium and longer term, subject to ongoing maintenance. Protection from light spill is also mentioned as being important. Monitoring is also proposed for the construction phase, where it is proposed that the contractor will be responsible for monitoring the site for cleanliness, with

particular attention to perimeter areas. For the operational phase landscape works will be maintained, in order to ensure failed or defective planting is replaced.

9.13.7. Regarding the construction phase, I agree with the EIAR that impacts relate to construction activity on the site. It was evident on my visit to the site that it is visible from the wider landscape, particularly from the north and west. But whilst the site and construction activity are likely to be visible, I do not consider the impact would be significant. Good site management practices will ensure that the site does not present any nuisance issues for adjacent properties, with reference to site cleanliness and visual clutter. The erection of site hoarding will not screen distant views, but I consider the site will be read as an active construction site and there will be no significant impact. I note that the proposed mitigation includes site management proposals, including the erection of hoarding and monitoring for site cleanliness.

9.13.8. I also agree with the EIAR in respect to operational impacts, that impacts relate to the bulk and massing of the proposed data centre on the site. I have previously assessed the visual impact of the development in Section 7 of my report, which should be read in conjunction with this section. Whilst the development will be a noticeable addition to a variety of short, medium and long-range views, I do not consider the impact on Sheephouse Graveyard or the flyover at junction 10 of the M1 would be significant, in terms of impact on landscape character or visual impact.

9.13.9. I consider the development would be most prominent from the adjacent residential properties to the north and north-east, as shown in viewpoints 3 and 4, but I do not consider the impact would be significant or unacceptable. In reaching this conclusion, I have had regard to the zoning context, the absence of protected views from these residential areas and the absence of architectural designations or protected structure buildings.

Cumulative impacts

9.13.10. Cumulative impacts in relation to landscape and visual are addressed at 16.8 of the EIAR. It states that the landscape and visual assessment included assessment of the proposed development in combination with the proposed substation, the permitted data centre, proposed/permitted/existing development in the area and indicative future development of a further data centre. Cumulative effects during construction will extend the overall duration of construction activity. The indicative

further data centre development will be closer to residential receptors and, in the wider landscape, cumulative construction and development will render the site more prominent. Cumulative effects at the operational phase will intensify the built extent and character of the area, with additional buildings becoming visible from local and wider vantage points. Cumulative developments will not be visible from the area of passage tombs at Bru na Bóinne or from the Battle of the Boyne at Oldbridge.

9.13.11. I have given consideration to cumulative impacts from all phases of development within the landholding.

9.13.12. Cumulative effects for the construction phase relate to extending the incremental effect of construction and the construction of built form on the site and wider landholding. The site is visible in the wider landscape and construction activity is likely to be visible in a range of views, but I do not consider that significant cumulative impacts arise. Good site management practices will ensure that the site does not present any nuisance issues for adjacent properties, with reference to site cleanliness and visual clutter. The erection of site hoarding will not screen the distant views, but I consider the site will be read as ongoing active construction site and there will be no significant impact. Regarding the operational phase, the extent of and bulk and massing of built form on the site increases its prominence in distant views, but I do not consider the impact is significant, in view of other prominent structures which are present in the available views, such as the Mary McAleese Boyne Valley Bridge, the Irish Cement plant and the existing data centre facility. The Boyne Valley Bridge and Cement plant both extend over the horizon and are landmarks in these views. By comparison, the proposed development has the effect of extending the length of the existing data centre building but does not materially affect its height.

Conclusion

9.13.13. On the basis of the information contained within the EIAR and presented as part of the appeal, I am satisfied predicted landscape and visual impacts can be avoided, managed and mitigated by the measures which form part of the proposed development, the proposed mitigation measures and through suitable conditions. I am satisfied, therefore, that the proposed development would not have any unacceptable direct, indirect or cumulative landscape and visual impacts.

9.14. Archaeology

9.14.1. Chapter 12 of the EIAR addresses archaeology.

9.14.2. Regarding the receiving environment, there are 22 recorded archaeological monuments within c. 1km of the proposed development, which are identified in Figure 12.1 of the EIAR. The majority of these sites were identified during construction of the M1 motorway. Previously excavated sites in the area are also identified, in Figure 12.3 of the EIAR. The site is stated to be located in an area of rich historical and architectural heritage.

9.14.3. Section 12.3.3 discusses historic archaeological assessment and investigation of the site. It states that an archaeological assessment comprising archaeo-geophysical survey, pre-development testing and archaeological monitoring was undertaken at the site in 2002 and a further programme of archaeological excavation was completed in November 2020. The 2002 field work included testing of c.25ha of land and to-date 68 possible archaeological features have been identified. The further programme of assessment in 2020 was undertaken in consultation with the National Monuments Service section of the Department of Culture, Heritage and the Gaeltacht and features identified through geophysical survey and testing required topsoil stripping, assessment and excavation. These areas are identified in Figure 12.6 of the EIAR and areas 3 and 5 fall within the application site. The report on findings of this work is ongoing and is due to be completion by the end of 2021. Preliminary interpretations suggest that the site was a multi-period prehistoric site dating from the Neolithic period to the Bronze Age and into the Iron Age.

9.14.4. Section 12.5 of the EIAR identifies potential impacts of the proposed development. It states that as the site has been subject to geophysical survey, archaeological testing and excavation under licence, there will be no further impact on archaeological heritage as a result of the development. No further mitigation measures are proposed

9.14.5. Regarding potential impacts, I am aware that the Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media (DAU) made a submission dated 13th May 2021, advising that there is no further requirement for archaeological monitoring, as excavations have already been carried out. In view of this and the ongoing nature of reporting on the programme of archaeological assessment, I am satisfied that archaeological impacts do not arise as part of the development.

9.14.6. The Chapter does not contain any assessment of architectural heritage. I have given consideration to this environmental factor and note that there are no protected structures in the vicinity of the site. The closest protected structure is the Thatch Public House (RPS Ref. DB-045), which is c.550m from the subject site. This protected structure is separated from the subject site by various built form elements, and I am satisfied that the development would not have a significant impact on its character or setting.

Cumulative impacts

9.14.7. Cumulative impacts in relation to archaeology are addressed at 16.9 of the EIAR. It states that development on the landholding has been subject to archaeological, architectural and cultural heritage impact assessment and previously unrecorded archaeological features have been discovered as part of the assessment process. The recording of these features in full contributes to the cultural and academic understanding of the area.

9.14.8. As I have outlined previously, the landholding has been the subject of extensive archaeological assessment comprising archaeo-geophysical survey, pre-development testing and archaeological monitoring, in 2002 and 2020, including testing of c.25ha of land.

9.14.9. I am aware of the Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media (DAU) submission on the application, which advises that there is no further requirement for archaeological monitoring, as excavations have already been carried out. In view of this and the ongoing nature of reporting on the programme of archaeological assessment, I am satisfied that archaeological potential of the landholding has been adequately investigated and further cumulative impacts do not arise.

Conclusion

9.14.10. On the basis of the information contained within the EIAR and presented as part of the appeal I am satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on archaeology.

9.15. Traffic and Transportation

9.15.1. Chapter 13 of the EIAR addresses traffic and transportation.

9.15.2. Regarding the receiving environment, the site is located within the IDA Business and Technology Park, Donore Road, Drogheda. The site is served by public transport, with a bus stop located 550m from the site access (270m from the Business Park access roundabout) that is served by bus services to and from Dublin (including the Airport) and Dundalk. Other local routes are served on an infrequent basis. Drogheda rail station is located 3km from the site.

9.15.3. Section 13.6.3 of the EIAR states that due to the ongoing Covid 19 pandemic, which has significantly decreased traffic volumes, it has not been possible to undertake traffic surveys as they would not be reflective of true road conditions. The methodological approach taken, therefore, is that baseline conditions were determined using historic data, taken from traffic surveys undertaken as part of the planning application for the permitted data centre in 2019 (Reg. Ref. LA191735 refers). Three junctions were surveyed as follows: -

- J1: 4-arm of Donore Road/off-ramp from/to M1
- J2: 4-arm of Donore Road/Rathmullen Park/off-ramp to M1 southbound roundabout
- J3: 4-arm Donore Road/Drogheda Retail Park access road/IDA Business Park and Technology Park access road roundabout.

The location of each junction is shown in Figure 13.2 of the EIAR.

9.15.4. Section 13.8 of the EIAR analyses traffic generation for the proposed development. It states that the construction phase is predicted to commence during Q2/Q3 2023 and be ongoing for a period of 36-41 months. The initial phase of construction of the proposed development will overlap with the final stage of construction for the existing data centre development, but peak construction for the proposed development will not occur until Q1/Q2 of 2024, by which time the existing data centre and substation developments will be complete. Traffic associated with the construction phase is predicted at Section 13.8.1 and it relates to traffic associated with employees and contractors and vehicles and machinery used in construction. Predicted traffic volumes are stated to be estimated using available data from a similar data centre development and are predicted to be not significant. For the operational phase Section 13.8.2 estimates that there will be up to 50 staff on the site at any given time, with an assumption of up to 50 staff during the day and a reduced presence of 7 staff at night.

It is predicted that the development will give rise to 30 2-way trips in the AM peak and 8 2-way trips in the PM peak.

9.15.5. Section 13.10 of the EIAR predicts trip distribution associated with the proposed development, for both construction and operational phases and this is built upon in Sections 13.11 and 13.12, where trip distribution from other permitted development in the area (including the existing data centre to the south and substation development to the north), planned development of the wider landholding and development of the remaining part of the IDA Business Park are also considered.

9.15.6. The traffic impact analysis is analysed based on base year, opening year, future year and horizon year scenarios, for the AM and PM peaks and includes background traffic growth forecasting. In each of the modelled scenarios, 'do nothing', 'do minimum' and 'do something', it is predicted that each of the assessed junctions will continue to operate within acceptable levels. The cumulative operational phase assessment indicates that modelled junction Nos. 1 and 2 are approaching capacity, due to the high volume of traffic associated with development of the wider IDA landholding, but that the junctions would continue to operate within acceptable limits.

9.15.7. Mitigation is incorporated for the construction phase, in the form of proposals for wheel-washing facilities and cleaning of the access road and proposals for car parking and traffic management. The proposals are set out in the draft Construction Environmental Management Plan submitted with the application.

9.15.8. I consider the traffic impact analysis undertaken is consistent Transport Infrastructure Ireland's *Traffic and Transport Assessment Guidelines* (2014) and the use ARCADY modelling software for the impact assessment is commonplace for traffic assessments. I also consider the use of pre-pandemic survey data is appropriate and is likely to more representative of longer term conditions in the area. Having considered the assessment, I note that the 'do something' scenario, which includes the proposed development and other permitted development in the area, the modelled junctions continue to operate within acceptable levels.

9.15.9. I concur with the EIAR that traffic generation relates to traffic associated with employees and contractors and vehicles and machinery used in construction and I note the low-level of predicted trip generation associated with the operational phase. Trip generation from the site will be greater during the construction phase, but is shown

to have no significant impact on the road network and trip generation for the operational phase is very low and will in all likelihood have an imperceptible impact on the road network.

Cumulative impacts

9.15.10. Cumulative impacts in relation to traffic and transport are addressed at 16.10 of the EIAR. It states that cumulative construction phase impacts are not anticipated, as there is no anticipated significant overlap of separate phases of data centre development on the landholding. The cumulative operational phase assessment indicates that modelled junction Nos. 1 and 2 are approaching capacity in the assessment year of 2041, due to the high volume of traffic associated with development of the wider IDA landholding, but that the junctions would continue to operate within acceptable limits.

9.15.11. I note that Chapter 13 of the EIAR included modelled assessment of the proposed development and other permitted and planned development and, in particular, modelled the impact of development of the three junctions closest to the site (Figure 13.2 identifies the location of these junctions). Modelled assessment of the development, in the 'do something' scenario, shows that each of the junctions continue to operate within acceptable levels. I note that the modelled assessment of future development of the wider IDA Business Park lands indicates a deterioration in the performance of the junctions, but this assessment is stated to be based on assumptions regarding the quantum of development on these lands. In view of the fact that there is no extant planning permission for development, I have thus given it limited consideration. Development of the IDA lads will require planning permission and will itself be subject to assessment and justification, in the context of traffic and transport impacts. In conclusion, I consider the development does not give rise to significant cumulative traffic and transport impacts.

Conclusion

9.15.12. On the basis of the information contained within the EIAR and presented as part of the appeal, I am satisfied that impacts that are predicted to arise in respect of traffic and transport can be avoided, managed and mitigated by the measures which form part of the proposed development, the proposed mitigation measures and through suitable conditions. I am satisfied, therefore, that the proposed development

would not have any unacceptable direct, indirect or cumulative traffic and transport impacts.

9.16. **Material Assets**

9.16.1. Chapter 14 of the EIAR addresses material assets. The chapter assesses ownership and access, built services and infrastructure that have not been discussed elsewhere within the EIAR.

9.16.2. Regarding the receiving environment, Section 14.4 outlines the following: -

- Power and electrical supply: 110kV and 38kV overhead lines traverse the landholding, in the north-west corner, and wayleaves for 38kV and 10kV overhead lines traverse the subject site. Reference is made to the substation development proposed under ABP Ref. ABP-308628-20, which is intended to provide power to the proposed development.
- Telecommunications: There is a fibre optic cable distribution network in place within the Business Park and there is capacity for the proposed development.
- Surface water infrastructure: An existing sewer within the Business Park discharges to the public sewer in the north-east corner of the park. The pipeline has a large diameter, 750mm, which is due to the fact that at the time of permission there was no requirement to provide attenuation.
- Foul drainage infrastructure: An existing connection runs along the Business Park road, to the east of the site.
- Water supply: The site is served by a 300mm watermain located in the Business Park.

9.16.3. Regarding ownership and access, the site is owned by IDA Ireland and a letter of consent to the planning application was provided as part of the application. The site is accessed from the site access provided as part of the existing data centre development, via a t-junction with the business park estate road. The access gates are manned 24/7 and the site is secured by security fencing, CCTV and surveillance.

9.16.4. Section 14.6 of the EIAR identifies potential impacts from the proposed development. Identified potential impacts for the construction phase relate to power consumption, surface water run-off containing suspended solids, foul drainage and potable water

usage. These impacts are identified as being temporary, for the construction phase. In the case of power consumption, the requirement for the construction phase is stated to be relatively minor, whilst for surface water run-off, reference is made to proposals contained in Chapter 7 of the EIAR (Hydrology) which confirm that run-off will be contained and treated within the site. Potable water demands are not expected to be significant and relate to the provision of staff welfare facilities.

9.16.5. For the operational phase, potential impacts relate to power consumption, telecommunications bandwidth demands, surface water discharges containing suspended solids and/or pollutants, discharge of cooling water and potable water demands. Regarding power consumption, it is stated that the development will have a maximum demand of 48MW and that Eirgrid has confirmed there is sufficient power available to serve the development. Regarding telecommunications bandwidth demands, it is stated that there is capacity in the network to accommodate the development. Regarding surface water drainage, it is stated that run-off will drain to the surface water system approved as part of the existing data centre development (Reg. Ref. LB191735), which has capacity to accommodate the development and will be discharged to be public sewer at the greenfield run-off rate. Residential cooling water will also be discharged to the surface water network during periods when the weather exceeds 28^{o}. Regarding potable water demands, it is stated that pressure in the area will not be affected as Irish Water has confirmed feasibility of connection.

9.16.6. Mitigation measures are proposed for both construction and operational and comprise commitments to adherence to best practice and to liaising with service providers. Reference is also made to mitigation which is intrinsic to the proposed design, such as SuDS measures, the incorporation of PV panels and the use of direct drive EC fans.

9.16.7. Regarding the construction phase, I consider likely impacts relate to the potential for surface water run-off containing suspended solids to be discharged to the public network. As I outlined in my assessment of construction impacts on Hydrology, I am unclear as to whether it is proposed to construct separate settlement tanks to accommodate construction run-off, or whether it is proposed to drain to the existing attenuation basin. Notwithstanding, I note the commitment at Section 14.6.1 of the EIAR to on-site containment and treatment of construction run-off, to ensure the removal of suspended solids prior to discharge. In view of this, I am satisfied that a

condition can be attached, requiring the applicant to agree surface drainage proposals for the construction phase, with the Planning Authority.

9.16.8. The development is not stated to require specialist construction methods and water supply is stated to relate to employee welfare facilities, so I do not consider issues relating to power consumption or potable water demands arise. I also do not consider issues relating to foul drainage arise, in view of confirmation by Irish Water that there is capacity to accommodate the development in the public network.

9.16.9. Regarding the operational phase, I agree with the EIAR, that potential impacts relate to power consumption, telecommunications bandwidth demands, surface water discharges containing suspended solids and/or pollutants, discharge of cooling water and potable water demands.

9.16.10. Regarding power consumption, which is an indirect impact, I have previously assessed energy demands and impact on the National Grid, at Section 7 of my report, outlining that the latest All-Island Generation Capacity Statement from Eirgrid acknowledges the long term electricity demand and supply challenges that data centres present for the Grid. I also outlined that the Commission for Regulation of Utilities recently published a decision, which directs Eirgrid to undertake a criteria-based assessment of grid connection applications for data centres, which includes a direct instruction to terminate a grid connection application in circumstances where an offer would be inconsistent with the needs of the electricity system. In view of this, I consider the grid connection application process, which is separate to the planning process, contains safeguards to ensure that the proposed development does not have a significant impact on the National Grid.

9.16.11. Regarding surface water and cooling water discharges, I note that in both instances it is proposed to drain run-off to the surface system approved as part of the existing data centre development (Reg. Ref. LB191735), which has capacity to accommodate the development and will be discharged to be public sewer at the greenfield run-off rate. This system is stated to incorporate appropriate interceptor devices that will intercept suspended solids prior to discharge. Subject to maintenance, I consider the risk of suspended solid or pollutant discharges to the public network is low.

9.16.12. Regarding water demands, Section 14.5.2 of the EIAR states that water will be required for cooling equipment and for general use including cleaning, sanitary services and employee welfare. It is proposed to source the supply from the mains and cold water storage tanks will be provided, which will act as break tanks and a demand buffer on the watermain. I note that Irish Water has not expressed any objection or concerns regarding its ability to service the development and, in view of this, I do not consider the development will have a significant impact on water supply in the area.

Cumulative impacts

9.16.13. Cumulative impacts in relation to material assets are addressed at 16.11 of the EIAR. It states that the proposed development entails minimal use of material assets during construction. At the operational phase, the development will have minimal impact on surface water, foul drainage and water infrastructure. The applicant has engaged with Irish Water to ensure there is foul water and potable water capacity for all phases of development on the landholding and confirmation of feasibility was provided and the surface water drainage system for the landholding was designed and permitted as part of Reg. Ref. LB191735.

9.16.14. The three phases of data centre are stated to generate a demand for 144MW of electricity (48MW per building) and Eirgrid's All-Island Generation Capacity Statement 2020-2029 sets out that Eirgrid has the capacity to provide for such developments.

9.16.15. I have given consideration to cumulative impacts from all phases of development within the landholding.

9.16.16. I concur with the EIA, that the construction stage is unlikely to have any significant cumulative impact on material assets, in view of the fact that the development is identified as not requiring specialist construction methods.

9.16.17. Regarding the operational phase, I consider cumulative impacts arise in respect of energy consumption. This issue has also been raised within the grounds of appeal, where the appellant identifies the cumulative energy demands of data centres and asserts that consideration should be given to the cumulative impact of their energy demands, before further grants of permission are made. I have considered the issue of energy at Section 7.3 of my report and have outlined that there is an up-to-date

policy context in place and there are relevant Government and Departmental policy statements, against which to consider and assess the proposed development. I also outlined that since the appeal was submitted, the Commission for Regulation of Utilities has published a decision regarding the connection policy for data centres in Ireland that requires the system operator Eirgrid to now assess applications against specified criteria before a connection offer is made and that this provides a safeguard to ensure the development (or any other individual data centre development) does not have a significant cumulative impact on energy usage/capacity.

9.16.18. Each phase of development on the landholding is stated to require 48MW of power for the operational phase and in this respect, I note that the substation development granted permission by the Board under Ref. ABP-308628-20 is intended to provide power to serve the landholding. This development is currently under construction and will be completed before the construction of the proposed development is complete. As I have stated, the applicant will be required to apply to Eirgrid for a grid connection, should permission be granted, and this application will be assessed using criteria which are intended to ensure the overall stability of the national grid. In view of this, I do not consider the development would give rise to a significant impact on the stability or overall capacity of the national grid.

Conclusion

9.16.19. On the basis of the information contained within the EIAR and presented as part of the appeal, I am satisfied that impacts that are predicted to arise in respect of traffic and transport can be avoided, managed and mitigated by the measures which form part of the proposed development, the proposed mitigation measures and through suitable conditions. I am satisfied, therefore, that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on material assets.

9.17. Waste Management

9.17.1. Chapter 15 of the EIAR addresses waste management.

9.17.2. In terms of the receiving environment, Meath Co Co. is stated to be the authority with responsibility for administering waste management activities in the area. Waste management is also governed by the requirements of the Eastern-Midlands Region Waste Management Plan which sets targets for waste management in the region.

9.17.3. Section 15.5 of the EIAR identifies potential impacts of the proposed development. The construction phase is stated to give rise to a range of hazardous and non-hazardous wastes and that incorrect storage can lead to litter and/or pollution incidents and can lead to knock-on issues such as vermin. It is stated that dedicated areas will be provided on the site, whilst this material is temporarily stored pending removal from the site, and that waste contractors will hold collection permits and waste materials will be dealt with in accordance with legislative requirements. Section 15.5.1 of the EIAR states that there is capacity at facilities in the region to accept waste arising from the development. Proposed site works will generate 30,200m^3 of excavated material and it is proposed that all the excavated material will be exported from the site, for reuse, recovery and/or disposal. For the operational phase, wastes likely to arise relate to packaging and office waste, non-hazardous waste from equipment, sludge and wet and dry batteries.

9.17.4. Proposed mitigation measures for the construction phase relate to implementation of a project-specific construction and demolition waste management plan, to ensure effective waste management procedures are in place. It is also proposed that waste materials will be segregated where possible, to enhance opportunities for reuse off-site and wastes will be appropriately stored while on the site. The contractor will appoint a person responsible for waste management and all construction staff will be trained regarding management procedures. Off-site facilities requiring clean fill material will also be contacted, before materials are removed from the site. For the operational phase, waste management procedures will be put in place, including segregation of waste by category.

9.17.5. I consider waste issues for the development primarily arise during the construction phase, particularly in view of the extent of material to be excavated. Like all construction sites, wastes will arise during construction and I note, in this respect, that the applicant states that waste storage areas will be identified and provided on the site and proposes to implement a construction and demolition waste management plan (CDWMP) to control the construction phase, a draft of which is provided at Appendix 15.1. I consider the CDWMP, which will be implemented and updated by the site contractor, contains adequate proposals to control wastes during the construction phase. Disposal of excavated material will be largest issue in respect of construction-

phase waste. The applicant anticipates all material will be removed from the site and it is expected that the material will be disposed of at an authorised facility.

9.17.6. Regarding the operational phase, I consider waste issues arise in respect of the daily operation of the facility. The assessment at Section 15.5.2 of the EIAR does not identify any predicted large scale waste arisings and I note that mitigation for this phase comprises a general commitment to segregate and store wastes to promote reuse and recycling where possible.

9.17.7. I am satisfied that adequate proposals are in place to manage waste for both the construction and operational phases.

Cumulative impacts

9.17.8. Cumulative impacts in relation to waste management are addressed at 16.12 of the EIAR. It is stated that subject to implementation of recommended mitigation measures, all phases of data centre development and the substation development will have an imperceptible cumulative impact.

9.17.9. Other developments in the locality are themselves required to manage waste in compliance with national and local legislation, policies and plans, which will minimise/mitigate potential cumulative impacts.

9.17.10. Waste arises primarily at the construction phase, in view of the extent of site excavation. Whilst the quantum of excavated material for future development on the landholding is unclear, it is reasonable to assume that it will be of similar scale to the proposed development since the remaining plot has also been identified to accommodate a data centre.

9.17.11. The applicant identifies that mitigation has been incorporated, in the form of a construction and demolition waste management plan, which will control waste on the site, and that similar management plans have been incorporated for the other developments on the landholding. These are stated to ensure that waste is dealt with in accordance with statutory requirements. I am satisfied that, subject to incorporation of appropriate site management procedures and compliance with legislation, significant cumulative waste management issues are unlikely to arise.

Conclusion

9.17.12. On the basis of the information contained within the EIAR and presented as part of the appeal, I am satisfied that impacts that waste management impacts can be avoided, managed and mitigated by the measures which form part of the proposed development, the proposed mitigation measures and through suitable conditions. I am satisfied, therefore, that the proposed development would not have any unacceptable direct, indirect or cumulative waste management impacts.

9.18. Interactions

9.18.1. Chapter 17 of the EIAR addresses interactions between the various impacts identified under the environmental factors described in each of the previous chapters of the EIAR and are presented in terms of positive, neutral and negative impacts.

9.18.2. No significant impacts are predicted to arise from the interactions, in view of proposed mitigation measures.

Identified interaction of environmental factors	**Description**
Alternatives with Population and Human Health	The development will create up to 50 full-time jobs and up to 400 temporary jobs during construction.
Land, Soils, Geology and Hydrogeology with Population with Human Health	The development will take place on previously developed land, which is within a business park and which is zoned for strategic employment development. There will be no loss of agricultural land.
Land, Soils, Geology and Hydrogeology with Population with Hydrology	Construction works have the potential to impact on surface water quality, due to discharge of suspended solids or pollutants, etc. A CEMP will be implemented to mitigate the potential for such impacts. Accidental fuel or chemical spills have the potential to affect surface water quality at the operational phase but will be mitigated by procedures to respond to such spillages.

Land, Soils, Geology and Hydrogeology with Population with Biodiversity	Construction activity may have a short-term impact on flora and fauna. Mitigation has been incorporated to reduce such impacts.
Land, Soils, Geology and Hydrogeology with Air Quality and Climate	Construction activity may impact on air quality, in terms of dust generation. Implementation of mitigation measures outlined in Chapters 6 and 9 will address these impacts.
Land, Soils, Geology and Hydrogeology with Archaeology, Architectural and Cultural Heritage	The construction phase has the potential to impact on unidentified archaeological features and that mitigation, in the form of a programme of excavation, has been incorporated to address this potential impact.
Land, Soils, Geology and Hydrogeology with Waste Management	c.30,200m^3 of soil will be excavated during construction and it is proposed that this material will be exported from the site, for reuse, recovery and/or disposal.
Hydrology with Human Health and Population	Increased impermeable surfaces on the site have the potential to impact on surface water flows in the area. The incorporation of SuDS and the site specific flood risk assessment demonstrate there is no increased risk of off-site flooding. Wastewater will drain to the Drogheda WWTP.
Hydrology with Land, Soils, Geology with Hydrogeology	Surface water will be treated prior to discharge to the public network and will be attenuated to the greenfield run-off rate. There are no surface watercourses on the site.
Hydrology with Biodiversity	The development will result in increased surface water run-off. The surface water drainage system incorporates SuDS and interceptors/separators to treat surface water prior to discharge. There is no direct connectivity to any national or internationally designated sites.

Hydrology with Waste Management	Interceptors and separators in the surface water system will generate sludge and debris, which will be managed in accordance with relevant legislation, as set out in the Waste Management chapter.
Air Quality and Climate with Hydrology	Mitigation measures proposed to manage dust on the site are adequate to protect the water environment.
Air Quality and Climate with Biodiversity	Mitigation measures to control dust during construction will ensure there is no impact on biodiversity. Air emissions for the operational phase have been modelled and the results show that emissions will comply relevant limits, so there will be an imperceptible impact on biodiversity.
Noise and Vibration with Population and Human Health	Vibration impacts during construction are expected to be negligible, given the distance of the site from sensitive receptors. Noise levels for construction and operational phases are predicted to be within identified limits, which have been selected with consideration for human health.
Landscape and Visual with Population and Human Health.	The proposal includes architectural details and landscaping proposals that ensure the development will integrate into its setting.
Material Assets with Population and Human Health	Interactions arise for aspects of material assets such as surface water and foul drainage, water supply, power supply and road infrastructure. The capacity of this infrastructure to accommodate the development has been assessed and implementation of mitigation measures outlined in chapters 13 and 14 address potential impacts on human health.
Material Assets with Hydrology	The development will result in changes to surface water drainage, water supply and wastewater networks.

	There is capacity in each of these networks to accommodate the development and mitigation outlined in Chapter 7 addresses potential impacts.
Noise with Biodiversity	Construction phase noise will temporarily displace fauna. Operational noise levels in the area will not change significantly, in view of its commercial/industrial nature.
Air Quality and Climate with Landscape and Visual	The emergency generators require emissions to be dispersed via stacks, which are an integral part of the proposed design. The landscape and visual impact of the stacks is consistent with the emerging landscape character of the area.
Air Quality and Climate with Population and Human Health	Proposed mitigation measures outlined in Chapter 9 ensure that the development complies with ambient air quality limits.
Land, Soils, Geology and Hydrogeology with Noise	Implementation of a construction noise and vibration management plan will mitigate noise impacts associated with excavation works during construction.

9.18.3. I have given consideration to the interactions identified in Chapter 17 of the EIAR. In the main, interactions are considered and assessed in the individual EIAR chapters and I consider significant impacts, other than those previously discussed, are unlikely to arise.

9.18.4. I note that the section identifies a potential interaction between Land, Soils, Geology and Hydrogeology and Archaeology, Architectural and Cultural Heritage. It outlines that the construction phase has the potential to impact on unidentified archaeological features and that mitigation, in the form of a programme of excavation, has been incorporated to address this potential impact. As I stated elsewhere in my Report, a programme of excavation took place as part of the construction of the existing data centre development and the Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media (DAU) made a submission on the subject application advising that there is

no further requirement for archaeological monitoring, in view of this. I am satisfied that the archaeological potential of the site has been assessed and the potential interaction does not arise.

9.19. Reasoned Conclusion

9.19.1. Having regard to the examination of environmental information contained above, and in particular to the EIAR, and the submissions from the planning authority, prescribed bodies, appellant and applicant, in the course of the application and appeal, it is considered that the primary direct and indirect effects of the proposed development on the environment are and will be mitigated as follows:

- Population and Human Health: There are positive impacts arising from the development, through job creation and indirect benefits to local businesses. Impacts arising from noise, dust, traffic, and construction will be mitigated by a Construction Management Plan including traffic management measures. There will be no significant negative impacts subject to mitigation measures proposed or otherwise addressed by condition.
- Air Quality and Climate: Direct emissions from the development relate to dust at the construction phase and emissions from the back-up generators at the operational phase. A dust management plan will be implemented to ensure dust does not become an issue for adjacent property. Proposed stack heights have been designed to ensure that an adequate release height is achieved, to aid dispersal and to ensure compliance with ambient air quality limits. The development will require a GHG emission permit, which will be regulated under the EU-wide Emissions Trading Scheme and CO_2 emissions do not count towards Ireland's reduced emissions target under the EU Effort Sharing Decision.
- Material Assets: The development will have a maximum demand of 48MW. Cumulative demands for 3 phases of data centre development will have a maximum demand of 144MW. The Commission for Regulation of Utilities has published a recent decision regarding the connection policy for data centres in Ireland that requires Eirgrid to now assess applications against specified criteria before a connection offer is made and the express intent of this decision is to ensure overall integrity and stability of the Grid. In view of this, it is considered there

are adequate safeguards in place to ensure the development will not have a significant on the stability of the National Grid.

- Noise and vibration: Modelled assessment of the development shows that the construction phase and day-to-day operations of both the proposed development and all phases of development on the landholding produce low levels of noise. Modelled assessment of emergency operations (i.e. operation of the back-up generators) indicates that noise levels during night-time operation may exceed the threshold for significant effects for adjacent residential property. The scenario is unlikely to arise, in view of the emergency back-up nature of the generators and in view of the new obligations placed on Eirgrid in respect of grid connections applications, which have the express intent of this decision is to ensure overall integrity and stability of the Grid. Consideration has been given to additional mitigation, which would restrict the hours of operation of the generators, but this is considered inappropriate as it would undermine emergency operations.
- The assessment of cumulative impacts has addressed impacts arising from 3 phases of data centre development within the landholding, together with the substation currently under construction and other identified permitted development in the surrounding area, where relevant.
- The development will present a noticeable addition to the landscape and will be visible from a number of short, medium and long-range views. This impact is considered acceptable, given the locational context. Views from the Bru na Bóinne and Boyne Valley area are visually separated from the development, so will not be impacted.
- Traffic and Transport: Modelling of traffic arising from the proposed development, both individually and in a cumulative context, predicts that modelled junctions within the immediate area of the proposed development will continue to operate within acceptable levels.
- Potential construction phase impacts including noise and vibration, site works, traffic, air quality, waste and surface water discharges are recognised and addressed in the EIAR. Proposed mitigation measures are reasonable and practicable and are intended to avoid or minimise the predicted impacts.
- Soils, Geology and Hydrogeology: Subject to implementation of mitigation measures no significant residual impacts expected during construction phase. Any

impacts will be short term and imperceptible. Operational phase impacts will not be significant.

- Hydrology: Subject to implementation of mitigation measures, no significant impacts are predicted to arise.
- Biodiversity: The site is deemed to be of low ecological value, given its previously disturbed and developed nature, and there are no direct pathway connections to European sites. No significant impacts are predicted arise.

9.19.2. Having regard to the above, it is my view that the likely significant environmental effects arising as a consequence of the proposed development have been satisfactorily identified, described and assessed. I consider that the EIAR is compliant with Article 94 of the Planning and Development Regulations, 2001-2021.

10.0 **Conclusion**

10.1.1. The proposed development accords with the 'E1 Strategic Employment Zones' zoning objective which applies under the new Meath County Development Plan 2021-2027. The development also accords with national and regional policies within the National Planning Framework and the Eastern and Midlands Regional Spatial & Economic Strategy. It would also accord with the Government Statement on the Role of Data Centre in Ireland's Enterprise Strategy, 2018.

10.1.2. The development will present a noticeable addition to the landscape and will be visible from a number of short, medium and long-range views, in particular from residential property to the north and east. This impact is considered acceptable, given the locational context.

10.1.3. Eirgrid's latest All Island Generation Capacity Statement 2021-2030 acknowledges the long term electricity demand and supply challenges that data centres present for the Grid but, in the time since the appeal was submitted, the Commission for Regulation of Utilities published its decision regarding the connection policy for data centres in Ireland, which now requires a criteria based assessment of grid connections, is to ensure that overall system integrity is maintained and Eirgrid is also provided with a direct instruction to terminate a grid connection, in circumstances where an offer would be inconsistent with the needs of the electricity system. This is considered to provide

adequate safeguards, to ensure that the proposed development (or any other data centre development) does not have any destabilising effect on the National Grid.

10.1.4. Indirect CO_2 emissions from electricity to serve the facility do not count towards or affect Ireland's reduced emissions target under the EU Effort Sharing Decision and will instead be regulated under the EU Emissions Trading Scheme, which sets EU-wide targets for sectors within the scheme. Mitigation in respect of indirect CO_2 emissions is likely to be required as part of the ETS, in order to ensure EU-wide reduced emissions targets are achieved.

10.1.5. In view of the foregoing considerations, I am satisfied that the proposed development would be in accordance with the proper planning and sustainable development of the area.

11.0 **Recommendation**

11.1. I recommend that permission be granted for the proposed development, for the reasons and considerations set down below and subject to the attached conditions.

12.0 **Reasons and Considerations**

Having regard to:

a) The National Planning Framework - Ireland 2040,

b) The Climate Action Plan 2021,

c) The Government Statement on the Role of Data Centres in Ireland's Enterprise Strategy, June 2018,

d) The Regional Spatial & Economic Strategy for the Eastern & Midlands Region, 2019-2031,

e) The policies of the planning authority as set out in the Meath County Development Plan 2021-2027,

f) The submissions made in connection with the application,

g) 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,

It is considered that, subject to compliance with the conditions set out below, the proposed development would accord with national, regional and local planning, it would not have a significant impact on climate or legally binding national emissions targets in relation to GHG, it would not have an unacceptable impact on the landscape or biodiversity, 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 road and traffic safety. The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area.

13.0 **Conditions**

1.	The development shall be carried out and completed in accordance with the plans and particulars lodged with the application except as may otherwise be required in order to comply with the following conditions. Where such conditions require details to be agreed with the planning authority, the developer shall agree such details in writing with the planning authority prior to commencement of development and the development shall be carried out and completed in accordance with the agreed particulars. **Reason:** In the interest of clarity.
2.	The mitigation measures identified in the EIAR 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.	Details of the proposed public lighting system to serve the development shall be submitted to and agreed in writing with the planning authority, prior to commencement of development and shall incorporate bat-sensitive lighting. The agreed lighting system shall be fully implemented and operational before the proposed development is occupied. **Reason:** In the interest of public safety and visual amenity.

4.	Parking proposals shall be agreed with the Planning Authority prior to the commencement of development and shall based on confirmed employee numbers and daily demand levels. **Reason:** In order to control the level of parking on the site, in the interest of sustainable development.
5.	Prior to the opening of the development, a Mobility Management Strategy shall be submitted to and agreed in writing with the planning authority. This shall provide for incentives to encourage the use of public transport, cycling, walking and car pooling by staff employed in the development and to reduce and regulate the extent of staff parking. Details to be agreed with the planning authority shall include the provision of centralised facilities within the development for bicycle parking, shower and changing facilities associated with the policies set out in the strategy. **Reason:** In the interest of encouraging the use of sustainable modes of transport.
6.	During the operational phase of the proposed development, the noise level from within the boundaries of the site measured at noise sensitive locations in the vicinity, shall not exceed (a) an Leq,1h value of 55 dB(A) (daytime) (b) an Leq,1h value of 50 dB(A) (evening) (c) an Leq, 15 min value of 45 dB(A) at any other time. Night-time emissions shall have no tonal component. **Reason:** In order to protect the amenities of property in the vicinity.
7.	Landscaping proposals shall accord with the Planning Authority's requirements. Agreed measures shall be carried out within the first planting season following commencement of construction of the proposed development. Any trees or shrubs planted in accordance with this condition which are removed, die, become seriously damaged or diseased within two years of planting shall be replaced by trees or shrubs of similar size and species to those original required to be planted.

	. **Reason:** To assist in screening the proposed development from view and to blend it into its surroundings in the interest of visual amenity.
8.	Water supply and drainage arrangements, including the attenuation and disposal of surface water, and flood risk management 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
9.	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, vibration and dust management measures, protection of groundwaters, emergency planning, traffic management, protection of wayleaves, an invasive species management plan and off-site disposal of construction / demolition waste. **Reason:** In the interests of public safety and residential amenity.
10.	Construction and demolition waste shall be managed in accordance with a construction waste and demolition management plan, which shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. This plan shall be prepared in accordance with the "Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects", published by the Department of the Environment, Heritage and Local Government in July 2006. The plan shall include details of waste to be generated during site clearance and construction phases, and details of the methods and locations to be employed for the prevention, minimisation, recovery and disposal of this material in accordance with the provision of the Waste Management Plan for the Region in which the site is situated. **Reason:** In the interest of sustainable waste management

11.	Construction works shall be carried out such a manner as to ensure that the adjoining roads are kept clear of debris, soil and other material and cleaning works shall be carried on the adjoining public roads by the developer and at the developer's expense on a daily basis. **Reason:** To protect the residential amenities of property in the vicinity.
12.	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
13.	Prior to commencement of development, the developer shall lodge with the planning authority a bond of an insurance company, a cash deposit, or other security to secure the provision and satisfactory completion of the development, coupled with an agreement empowering the planning authority to apply such security or part thereof to the satisfactory completion of any part of the development. **Reason:** To ensure the satisfactory completion of the development.
14.	The developer shall pay to the planning authority a financial contribution in respect of public infrastructure and facilities benefiting development in the area of the planning authority that is provided or intended to be provided by or on behalf of the authority in accordance with the terms of the Development Contribution Scheme made under section 48 of the Planning and Development Act 2000. The contribution shall be paid prior to the commencement of development or in such phased payments as the planning authorities may facilitate and shall be subject to any applicable indexation provisions of the Scheme at the time of payment. Details of the application of the terms of the Scheme shall be agreed between the planning authority and the developer or, in default of such agreement, the matter shall be

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

Barry O'Donnell
Planning Inspector

1st February 2021.