

# An Bord Pleanála



## Inspector's Report

An Bord Pleanála Ref. 07.VA0020

**DEVELOPMENT:-**

Power supply development comprising of construction of 220kV substation and connections to the existing 220kV Cashla to Prospect and 220kV Cashla to Tynagh electricity circuits and associated works.

**LOCATION:-**

Townlands of Palmerstown, Toberroe, Rathmorrissy and Caraunduff, Derrydonnell, Athenry Co Galway.

**PLANNING APPLICATION**

**Planning Authority:**

Galway County Council.

**Applicant:**

Apple Distribution International.

**Application Type:**

Application under the provisions of 182A of the Planning and Development Act, 2000 (as amended).

**Observers:**

Galway County Council  
Transport Infrastructure Ireland  
IDA Ireland  
Department of Arts Heritage and the Gaeltacht (DAU)  
Irish Water  
Northern and Western Regional Authority  
An Taisce

John Joseph Kelly, c/o Vincent Kelly  
and Associates  
Edel Grace and Peter Sweetman  
Galway Chamber of Commerce  
Julie Bates  
Eoin Naughton and Gary Moscarelli  
Concerned Residents of Lisheenkyle  
(c/o HRA Planning)  
Ian Greally and others  
Brenda McGuane and others

**Date of Site Inspection:** 6<sup>th</sup> April, 2016

**INSPECTOR:** Stephen Kay

## 1.0 INTRODUCTION

An application has been made under the provisions of Section 182A of the Planning and Development Act 2000 (as amended) for the development of a substation and connection to the existing grid network to serve a proposed Data Centre to be located on lands at Palmerstown, Toberroe and Derrydonnell, approximately 4km to the west of the town of Athenry in County Galway. This development is referred to by the applicant and in this report as the power supply project.

Pre-application consultations were initiated on behalf of the applicant to assess whether or not the proposed substation constituted strategic infrastructure under the provisions of the Act. On foot of an assessment and recommendation from the reporting inspector that the proposed development did constitute strategic infrastructure within the meaning of the acts, the Board issued a direction stating that the proposal constituted strategic infrastructure and also that an EIS is required with any application as well as a screening for AA (and NIS if deemed necessary).

On foot of this determination, the applicant submitted an application under the provisions of Section 182A of the Planning and Development Act 2000 (as amended) on 12<sup>th</sup> February, 2016. The application was accompanied by an EIS prepared in respect of the sub station and grid connection development.

A separate planning application (Galway County Council Ref.15/488) for the construction of a data centre was made to Galway County Council under the provisions of Section 34 of the Planning and Development Act 2000. This application is currently the subject of appeal to the Board (Board Ref. PL07.245518). Given the interdependence of the two applications, that for the data centre and the proposed sub station / grid connection application, it is considered appropriate that they would be considered concurrently and it is therefore recommended that this report would be read in conjunction with that relating to Ref. PL07.245518.

The data centre development comprises Phase 1 of what is a potentially larger development and the current proposal (PL07.245518) includes for the first of what is indicated in a masterplan as up to 8 no. data halls. The current proposal is for a c.24,500 sq metre data hall building with a 5,232 sq. metre logistics and administration building together with ancillary uses such as parking and a recreational walk around part of the perimeter of the site. The total area of the data centre site is 202 ha.

## **2.0 SITE LOCATION AND DESCRIPTION.**

The proposed 220kV substation is to be located within a 202 ha. site that is proposed for the development of a data centre and ancillary uses. As set out above, the concurrent application under section 34 of the Act for the development of a data centre comprises the first phase in a potentially larger overall development. The potential future layout of the site is indicated in a masterplan submitted with the datacentre application (Galway Ref. 15/488 and PL07.245518) and this masterplan shows the arrangement of future data halls progressing westwards from the location of the first data hall.

The location of the proposed sub station is at the northern end of the data centre site and to the north of the data halls indicated on the submitted masterplan. It is noted that the size of the substation is larger than that which was initially indicated in the masterplan submitted with the data centre application and the size of the compound measures approximately 8.3 ha. (20.5 acres). The sub station is proposed to be in two parts, one of which comprises 22 bays and would be used by Apple and the remaining two bays would remain with Eirgrid to power any future developments in the area.

The area covered by the proposed sub station is currently in use as a commercial forest and the area where the sub station is proposed to be located comprises a mixture of clear felled area and also existing planting. The lands are relatively level.

The M6 Motorway runs in a roughly east west direction approximately 400 metres to the north of the site of the proposed substation. In addition, construction work is currently ongoing on the construction of the M17 / M18 scheme which will intersect with the M6 a short distance (c.350 metres) to the north east of the appeal site. In addition, the Cashlagh to Tynagh and Cashla to Prospect 220Kv power lines run to the north east and east of the data centre site. These lines run in the north west to south east direction and are supported on metal towers. The Cashla sub station is located to the north west of the data centre site.

### **3.0 PROPOSED DEVELOPMENT**

The application made under the provisions of Section 182A relates to the substation element only of what is a wider development for the construction of a data centre on the site and adjoining lands. The application documentation indicates that the development will incorporate the following elements:

- Outdoor air insulated 220Kv switch gear including circuit breakers, disconnect switches, cable sealing ends, instrument transformers, surge arresters and busbars. The switchgear and other equipment is proposed to be mounted on supports which would be a maximum of 15 metres in height.
- 10 no. 220Kv / 20Kv banded transformers each having a maximum overall height of 10 metres.
- Reactive compensation equipment with a height not exceeding 14 metres.
- Harmonic filtration equipment with a maximum height of 14 metres. Lighting to the compound comprising 48 no. lighting masts each with a maximum overall height of 30 metres.
- 2 no. control buildings having a maximum height of 5 metres each.
- 48 no. pre-fabricated steel cabins each with a maximum overall height of 4 metres.
- Internal access roads having a total length of 1850 metres and a total of 10 no. vehicle parking spaces to be located adjacent to the substation.
- 2 no. diesel generators and associated banded tanks each having a capacity of maximum 7,500 litres.
- Fencing to the substation site comprising a palisade fence of c. 2.6 metres in height and an electrified fence inside the palisade.

A separate surface water network is proposed for the substation site and the on site control buildings are proposed to have toilet facilities which would drain to holding tanks which would be the subject of periodic emptying. Water supply to the compound would be from the public supply and via the supply which would serve the data centre site.

The connections between the sub station and the grid network in the form of the 220Kv Cashla to Tynagh and Cashla to Prospect lines are proposed to consist of a mixture of underground connection within the data centre site and moving to an over ground connection outside of the site boundary. The details of the connection to the grid network are as follows:

- The construction of 7 no. new towers ranging in height from c. 24 metres to 33 metres and erection of associated new cabling,
- The decommissioning and removal of 3 no. existing 220Kv tower structures and the associated cabling.
- The construction of 4 no. new cable sealing end compounds of c. 1500 sq metres each in area and each incorporating new tower structures of maximum 33 metres in height.
- The laying of underground cabling of 4 new circuits having a total length of c. 6,000 metres.
- The construction of access tracks to the new cable connections having a total length of c. 1,500 metres.

#### **4.0 PLANNING HISTORY**

An Bord Pleanála Ref. 07.PC0010 – Part of the site which is now the subject of the proposed data centre development was the subject of a pre application consultation for the proposed construction of a natural gas powered power station. The prospective applicant in this case was the Quinn Group however the pre application request was withdrawn by the prospective applicant prior to a determination being made by the Board and no application for development was made on the site.

#### **5.0 APPLICATION FOR APPROVAL TO AN BORD PLEANALA**

An application to An Bord Pleanála was submitted for planning approval under the provisions of S182A of the Act. The application was accompanied by the following information:

- Completed Planning Application form along with detailed drawings of the substation compound.
- Copies of the site notices erected on site and the published newspaper notice.
- letters of consent to the making of the application from Coillte, private landowners and Galway County Council. There is also a

letter from Eirgrid which states that the design and layout of the substation proposed is appropriate for the loading and also that the connection for the Phase 1 data centre application (as per PL07.245518) can be accommodated without any further requirement to reinforce the transmission system. The letter also states that the proposed connection using 4 no. 220Kv circuits and the looping into the existing Cashla – prospect and Cashla – Tynagh 220Kv lines ‘provides for a very reliable and secure electricity supply’.

- A list of proscribed bodies to which details of the application were sent.
- SID Supporting Planning Statement prepared by McCarthy Keville and O’Sullivan Consultants and copy of the notification as sent to the prescribed bodies.
- A schedule of the pre application consultations undertaken.
- An Environmental Impact Statement including Non-Technical Summary.
- A Screening Statement for Appropriate Assessment.

## **5.1 Observations Submitted to the Board**

### *5.1 Submission from Galway Co Council Members*

Copy of report on the proposed strategic infrastructure application submitted by the Council. Stated that the contents of the report were presented to the members of the county council at their meeting held on 16<sup>th</sup> march, 2016 and that the report was accepted in its entirety. Report states that the development plan and specifically Objective EDT 1 (Strategic Economic Corridor) supports the development in this location.

The report submitted sets out the nature of the proposed development, the content of the submitted EIS and the policy context for the development. It is noted that there are no scenic routes or designations in the vicinity of the site and the report states that it is not considered that the proposed development, either alone or in combination with other plans or projects would have significant adverse effects on the conservation objectives of any European sites. The conclusions of the submitted flood risk assessment that there would be a minimal risk of flooding to the substation site are noted. The report concludes that the proposal is consistent with Objective EDT1 of the county development plan and that the compatibility of the power supply and data centre

projects with the plan policy indicates that the proposal is located in the most suitable location within the County.

No community gain or special contribution conditions are identified and a contribution of €42,560 in accordance with the adopted s.48 contribution scheme is sought.

#### *5.2 Submission from the Department of Arts Heritage and the Gaeltacht*

In its submission dated April 8<sup>th</sup>, the DAHG state that there are no objections to the proposed development on the basis of archaeology. Regarding AA, the submission notes that the development would overlap with the construction of the M17/M18 Gort to Tuam motorway and the existing M6 motorway both of which were the subject of EIA by the Board in the past. Consideration of the in combination effects of these developments with the current proposal, including impacts on mammals and underpasses / routes, are required. Also noted that the data centre site supports an existing population of the wood bitter vetch and that a derogation licence for the translocation of this species has been granted. Considered that an assessment of the likely significant effects of the grid connection and substation development on the wood bitter vetch plant is lacking in the EIS. This is required along with a cumulative assessment of impact on this species and a review of the development in conjunction with the conservation management plan submitted and the relocations undertaken.

#### *5.3 Submission from Irish Water*

Stated that no objection in principle to the proposed development. .

#### *5.4 Submission from An Taisce*

In a submission received on April 7<sup>th</sup> 2016, An Taisce note that the proposal needs to be assessed in conjunction with 07.245518. Note the lack of justification for the site selection and that alternative locations on zoned land should be considered. Issues regarding compliance with climate change and energy targets highlighted. Also contended that up and downstream direct and indirect impacts have to be taken into account and the Edenderry Power station case cited in this regard. The implications of power generation required to serve the development also



needs assessment. Stated that energy demand reductions are required to meet emissions and climate targets in the future.

#### 5.5 *Northern and Western Regional Assembly*

That the development is supported by policies INF23 and ESP9 of the Regional Planning Guidelines. Also note that the development would be well screened and that the development (grid connection) is relatively minor in the context of the existing power lines.

#### 5.6 *Submission from IDA Ireland*

Stated that Apple is an IDA assisted company and that it is requested that An Bord Pleanála would process this application as expediently as possible.

#### 5.7 *Submission from Transport Infrastructure Ireland (TII)*

Submission notes that the proposed development would be undertaken adjacent to the existing M6 motorway and also to the proposed M17 / M18 route which is currently under construction. Noted that the methodology for the crossing of the motorways is set out in the EIS and this generally acceptable. A number of requirements regarding agreement of methods with TII and the council regarding traffic management measures, diversions and that costs of measures would be borne by the developer.

#### 5.8 *Submission from the Peter Sweetman and Edel Grace*

In a submission dated April 7<sup>th</sup>, 2016 stated that the application is for an EIA project and does not include the whole project. Stated that '*An Bord Pleanála have acted ultra vires in accepting this application*'.

### 5.9 *Submission from Concerned Residents of Lisheenkyle c/o HRA Planning Limited*

In summary, the submission dated April 4<sup>th</sup> states the following:

- All proposed holding of a joint oral hearing is supported.
- The development is to serve a data centre which is in an unserved rural area.
- That location of the data centre within the strategic economic corridor does not permit other plan policies to be overridden. The site of the proposed development is unserved and is not plan led.
- The basis for a number of the site selection criteria used is not clear. Noted that site cost is not included in the criteria presented.
- That the EIS is deficient in terms of the consideration of alternatives including alternative processes, layouts, designs etc. It is not clearly demonstrated that BAT is being used in the development.
- Planning for other similar types of data centre developments have been located in urban areas and on zoned lands.

### 5.10 *Submission from John Joseph Kelly (c/o Vincent Costello and Associates)*

The development raises health and safety concerns due to the impact of electromagnetic fields. Noted that there are 250 houses located within a 2 mile radius of the substation.

### 5.11 *Galway Chamber of Commerce*

- That the proposed development is supported by national, regional and local economic policy.
- That the proposed development of the data centre would have very significant economic benefits for the region and would help in meeting a number of the key economic objectives as set out in the county development plan.
- The direct economic benefit to the area would be significant both during construction and during the operational phase and would lead to significant indirect benefits in terms of employment and economic activity.
- That the development will result in improvements to the woodland and the planting of broadleaved trees and creation of a walking trail.

- The design and power source for the data centre will be environmentally friendly and efficient. Air cooling will be utilised.
- The developer is providing support to both the local primary school and renewable energy projects.

#### 5.12 *Submission from Julie Bates*

States that she is an appellant against the data centre development and that the grounds for appeal are along the same lines as those raised against the data centre development. Submitted that there is little point in the Board considering this proposal under the strategic infrastructure act (the grid connection and substation) until such time as the Board has determined the appeal on the data centre.

#### 5.13 *Eoin Naughton and Gary Moscarelli*

That there is a health risk from living too close to pylons and the national school is in close proximity. The pylons should not be so close to the school.

That the development will not be powered by 100% renewable energy and that the full development of the data centre site (masterplan) would result in a 1.49% increase in national Co2 emissions.

That the proposed controlled pathway around the site will never have the same amenity value as the existing forest.

#### 5.14 *Lisheenkyle Community Sports and Development Company Limited*

That contrary to the statements of the applicant, the LCSDCL have not been included in a consultation process as indicated in the application documentation.

That the application is flawed having been prepared by the applicants and is not independent.

That the overall development should be refused on the basis that the massive development is proposed on woodlands

### 5.15 *Ian Greally and Others*

The following is a summary of the main issues raised in this submission:

- That the site of the substation proposed has increased very significantly from that originally indicated in the masterplan as submitted with the data centre application. This increase in scale has a material effect on the local community in terms of health and safety impacts.
- That the substation development is not strategic infrastructure.
- That the Strategic Economic Corridor (SEC) concept was that the development would occur / be focussed on industrially zoned lands within the towns which overlapped with the SEC designation.
- That the site selection criteria, in particularly site size, does not stand up to scrutiny.
- That the statement in the EIS that the CO2 increase that would result from the full build out of the data centre development (1.49% increase) is not significant is not correct. Such an increase is hugely significant and would impact on Ireland's ability to meet emissions targets.
- That the survey work undertaken and presented in the EIS is inadequate.
- There is a risk of flooding from the overall development.
- The site is not suitable for an onsite waste water treatment system.
- That the need for such a scale of sub station and grid connection is not clear on the basis of the scale of data centre proposed.
- The overall development (including data centre) would have a negative impact on the amenity due to construction noise, diesel generator noise and traffic.

### 5.16 *Submission from Brenda McGuane and Others*

The following is a summary of the main issues raised in this submission:

- That the scale of the sub station has increased enormously since the original masterplan.
- That the need for such a large substation is questionable.
- That the proposed substation development does not conform with strategic infrastructure.

- That the submission of two separate EIS on the same day (the EIS for this application and the REIS for the data centre) cannot meet the Boards requirement set out in the further information request on the data centre to clearly set out the impacts of the overall development. The two EIS documents should have been the same.
- That the increased CO2 emissions from the proposed development (full build out of the data centre) would be hugely significant. 1.49% increase of national CO2 emissions is very significant and will impact Ireland's ability to meet CO2 / greenhouse gas emission targets.
- That the impacts on air and water quality have not been adequately assessed in the EIS.
- That there is inadequate justification for the site and the site selected is contrary to planning policy.
- That the likely demand for additional data centre capacity over the next 10 years does not justify a development of 8 no. data halls. A maximum of 2 no. data halls would likely be required (60MW) and the substation proposed is not required for this scale of development.
- There are additional concerns relating to health benefits of the forest, noise, construction traffic, property values and the impact on the local national school.

## **6.0 APPLICANTS RESPONSE TO THE OBSERVATIONS SUBMITTED**

The observations received from prescribed bodies and from third parties were not forwarded to the applicant for a written response as a decision was made to hold and joint oral hearing to consider the issues raised in this case as well as those arising in Ref. PL07.245518 which is the application for the development of a data centre on the adjoining lands to the south of the substation site.

The oral hearing was held over 4 days, between May 24<sup>th</sup> to 27<sup>th</sup> inclusive, in the Connacht Hotel, Galway.

An overview of the proceedings of the oral hearing is given at section 11.0 of the report prepared in respect of An Bord Pleanála Ref. PL07.245518. It is not proposed to repeat or further summarise the content of the oral hearing at this point, however, during the assessment section reference will be made to relevant submissions and discussion which occurred during the course of the hearing.

A list of all written submissions made at the hearing is given in Appendix A to the report on Ref. PL07.245518.

## **7.0 PLANNING POLICY CONTEXT**

### **7.1 *National Spatial Strategy***

Section 3.7.2 of the Strategy relates to Energy. The strategy notes that reliable and effective energy systems such as gas and electricity to power industry and services are key pre-requisites for effective regional development. The Strategy notes that it is vital that the energy investment programme is integrated with planning policy at regional and local level and there is a need to address electricity infrastructure in county development plans and local area plans to facilitate national, regional and local economic progress.

### **7.2 *Regional Planning Guidelines for the West Region, 2010 – 2022***

Under the heading of economic development, section 1.5.1 states that among the key economic priorities are *'to provide appropriate zoned land with adequate infrastructural services to accommodate enterprise e.g. economic corridor from Oranmore to Athenry'*.

Athenry and the lands to the west of the town including the appeal site are located within a transportation corridor. The area around Galway city including the appeal site is identified as Strategic Rural Assets within a metropolitan hinterland. Athenry is identified among a number of towns which are identified as urban strengthening opportunity.

### **7.3 *Galway County Development Plan, 2015-2021***

The site is located c. 4km to the west of Athenry and outside of the area covered by the Athenry LAP. The provisions of the Galway County Development Plan, 2015-2022 are therefore applicable to the appeal site. The site is not zoned for any specific use and is not the subject of any specific local objective.

The site is located within the Strategic Economic Corridor that runs east from Galway City (Oranmore) and takes in the area of the appeal site and adjacent lands to the east including the town of Athenry. The alignment of the corridor is based around that of the Galway to Dublin railway line and the M6 road corridor. A policy similar to the strategic economic corridor policy in the 2015-2021 Plan has been included in the previous two Galway County Development Plans.

In the current plan, section 2.4.15 states that the spatial and core strategy for the county recognises priority areas for development in the county and that such areas include a strategic economic corridor to the east of the county. The corridor is shown in indicative form on the Core Strategy Map which is on page 36 of the Plan. Section 4.7 of the Plan states that the corridor was identified in consultation with relevant stakeholders and refers a framework plan which was prepared to address the need to accommodate regionally important strategic sites. It is stated that this framework plan *'is indicative only and should not be relied upon as an indicator of land uses within the defined corridor'*.

**Objective EDT 1** of the Plan sets out the objectives of the strategic economic corridor. These include

- *'to seek to reserve lands to support nationally and regionally significant activities and to attract specialist enterprise development that is large scale of high value'*.
- *'to facilitate opportunities for science and technology based employment'*,
- *'to ensure that development is compatible with the enhancement, preservation and protection of the environment and cultural resources recognised within the corridor'*,
- *'to identify sites of adequate size and location to accommodate necessary infrastructure or support activities which would not be appropriate in proximity to centres of population or sensitive environments or environmentally sensitive economic activities.'*
- *'to inform and aid the preparation of local area plans for strategic areas and those surrounding immediate environs within the corridor.'*

The site is located within an area identified as landscape sensitivity 1 in the Plan, where sensitivity 1 is the lowest ranking on 5 tier scale.

**DM Standard 19** relates to access to national and other restricted roads for commercial and other development. The R.348 (Derrydonnell – Atherry) road is included as a restricted regional road under DM standard 19. On such roads commercial, industrial and community facilities development and land uses are to be restricted to essential needs in the particular locality of agriculture, tourism infrastructure, fisheries, forestry, park and ride facilities or existing extractive industries, where these uses cannot reasonably be located so as to be accessed off local or non listed regional roads.

Regarding ground conditions, the site is located within an area that is identified as a locally important aquifer which is moderately productive. The site is located in close proximity to an area that is identified in the plan as an area that is prone to flooding.

#### **7.4 Energy Policy Framework 2007-2020 – Delivering a Sustainable Energy Future for Ireland (Energy White Paper)**

This white paper sets out a strategic energy policy framework to deliver a sustainable energy future for Ireland. One of the key elements of the policy framework is to ensure the delivery of security of supply, which is considered to be essential for all sectors of the economy, for consumers in general and for society as a whole. The key items needed to deliver a secure supply of electricity on a consistent basis are identified as robust networks and electricity generating capacity. To this end, it is an overall objective to strongly support electricity investment programmes in the high voltage transmissions network and the distribution network, in order to facilitate regional development. The White Paper also sets the target of 33% of electricity being produced from renewable generation by 2020.

#### **7.5 Recent White Paper - Ireland's Transition to a Low Carbon Energy Future, 2015-2030**

The Government published the above White Paper in December 2015. This new energy policy covers the time frame up to 2030. Chapter 5 of the document, 'Delivering sustainable energy: Efficiency, renewables, technology', sets out government priorities in the area of renewable energy up to 2030. This includes incorporating higher penetration of renewable energy sources however it is recognised in the document that conventional sources of energy will remain a significant component of supply over the period to 2030. Beyond 2030, the paper sets out a vision



of a radical transformation of Ireland's energy system which is required to meet our climate policy objectives. It is stated that this transformation will result in a low carbon energy system by 2050 with GHG emissions from the energy system reduced by between 80% and 95%, compared to 1990 levels.

## **7.6 Government Policy Statement on the Strategic Importance of Transmission and Other Energy Infrastructure, July 2012**

In this policy statement the Government acknowledges the essential need to meet the demand for energy in a safe, secure and continuous manner as it is the lifeblood of the economy and society. It reaffirms the imperative need for development and renewal of the energy networks, in order to meet both economic and social policy goals. The Government endorses, supports and promotes the strategic programmes of the energy infrastructure providers, particularly EirGrid's Grid 25 investment programme across the regions. The benefits are identified as securing electricity supply to homes, businesses, factories and farms; underpinning sustainable economic growth in the regions and enabling Ireland to meet its renewable energy targets. It is acknowledged, however, that there is a need for social acceptance and endorses the inclusion of community gain considerations into project planning and budgeting.

## **7.7 Grid25**

*'Grid25 – A Strategy for the Development of Ireland's Electricity Grid for a Sustainable and Competitive Future'* (2008) – outlines Eirgrid's strategy for upgrading the national electricity network up to 2025. Grid25 is considered to be essential to supporting growth in the regions and ensuring continued reliability and security of supply and allowing regions to attract new and support existing industry and ensuring continued reliability and security of supply and providing high quality high voltage bulk power supply for Ireland that will enable the different regions to attract in future industry and boost existing industry. The report outlines that without investment in the region's electricity transmission network there will be no capacity by the second half of the next decade in the network to cater for new customers and the reliability of the supply will fall below normal international standards. Furthermore, there will be no capacity in the network to allow further renewable generation to be connected, and given that the north-west is a renewable-rich region, this would have severe consequences for Ireland in terms of meeting its renewable energy targets.

## **8.0 PLANNING ASSESSMENT**

As noted in the introduction, the development the subject of this application under the Strategic Infrastructure provisions of the Planning and Development Acts, is for the purpose of connecting a proposed data centre development to the national grid. The two applications, the subject application for the grid connection and substation under the strategic infrastructure act (the power supply project) and the application for the development of the data centre which is the subject of a concurrent appeal to the Board (ABP Ref. PL07.245518) form part of an overall development and it is therefore recommended that this report and assessment be read in conjunction with that relating to appeal Ref. PL07.245518.

By virtue of the fact that the development the subject of this application comprises essentially facilitating infrastructure for the data centre development, in the event that there is a fundamental issue with the proposed data centre then there is no basis under which the grid connection and substation development are justified.

I consider the main issues relevant to the assessment of this strategic infrastructure development application are as follows:

- Compliance with Strategic and Local Land Use Policy.
- Impact on Surrounding Amenity
- Landscape and Visual Amenity Issues
- Other Issues
- Environmental Impact Assessment
- Appropriate Assessment

### **8.1 Compliance with Strategic and Local Land Use Policy**

#### **8.1.1 National Policy**

8.1.1.1 Section 3.7.2 of the National Spatial Strategy (NSS) acknowledges that reliable and effective energy systems are “key pre-requisites for effective regional development”. The proposed development does not in itself result in a reinforcement of the grid

network in the vicinity of the site however, as was the subject of some discussion at the oral hearing, the location of the proposed development in the west of Ireland is such that there are advantages in terms of the optimal use of existing grid infrastructure with the main source of supply being better matched with the additional demand than would be the case if the development was to be located on the east coast of Ireland. It was also stated during the hearing that the capacity of the grid for accommodating the development of a data centre in Galway is greater than would be the case with an east coast location.

8.1.1.2 The applicant has submitted documentation from Eirgrid stating that the data centre development proposed under Ref. PL07.245518 which is for a 30MW load and which comprises phase one of a potentially larger development, is capable of being accommodated without any upgrades to the grid being required. On the subject of whether subsequent phases of development of the data centre could similarly be accommodated without reinforcement works being required, the applicant, and Eirgrid, are not so definitive. This subject was the subject of discussion at the oral hearing and it is apparent that at this time the ability to accommodate future phases of the development of the data centre depend on overall energy demand at that time as well as developments in generating capacity.

## **8.1.2 Regional Planning Guidelines**

8.1.2.1 The Regional Planning Guidelines for the West Region 2010-2022 identify amongst the key development priorities for the region the provision of ‘...appropriate zoned lands with adequate infrastructural services to accommodate enterprise, e.g. the economic corridor from Oranmore to Athenry’. Under the heading of regional competitiveness and foreign direct investment, the regional guidelines (paragraph 3.5.3) states that ‘economic corridors particularly industrial corridors such as the Oranmore – Athenry strategic corridor must be developed promoted and serviced to high international standards to attract further foreign direct investment .....The corridor should be promoted in a sustainable manner as a centre for major national and international enterprise.’ The importance of Galway as a gateway and promoting balanced regional development is evident from the NSS as is the strategic role of the Oranmore – Athenry SEC in the attraction of large scale foreign direct investment of importance to the western region.

8.1.2.2 Section 5.5 of the Guidelines relates to Energy and Utilities and includes a key recommendation that grid investment for the west must be guided by the need to remedy immediate deficiencies and also by an expected long term growth in population and employment. The proposed development of a substation and grid connection to support a major economic development namely the Apple data centre is in my opinion clearly consistent with the provisions of the regional guidelines to support the development of economic corridors and economic development.

### 8.1.3 Local Planning Policy Context

8.1.3.1 With regard to the local planning context, and the compatibility of the subject proposal this is intrinsically linked to the data centre use and has is the subject of significant discussion in section 12.1 of the assessment under Ref. PL07.245518. To summarise the relevant section of the assessment, the site of both the proposed data centre, sub station and the alignment of the connection to the grid are located on lands that are outside of zoned areas and are not located within the boundary of any local area plan. Similarly there is no specific local objective for the development of a data centre facility or the upgrading of energy infrastructure in this location. As set out in section 12.1 of the report on Ref. PL07.245518 however the site is located within the area identified as a strategic economic corridor (SEC) which stretches over 12 km in an east west direction from Oranmore to Athenry. The detailed objectives for the identified SEC are set out at Objective EDT1 of the *Galway County Development Plan, 2015-2021* and the wording of this objective is as follows:

#### **Objective EDT 1 – Strategic Economic Corridor**

- *‘to upgrade, improve and maximise the infrastructural facilities available within the corridor,*
- *‘to seek to reserve lands to support nationally and regionally significant activities and to attract specialist enterprise development that is large scale of high value’.*
- *‘to facilitate opportunities for science and technology based employment’,*

- *‘to ensure that development is compatible with the enhancement, preservation and protection of the environment and cultural resources recognised within the corridor’,*
- *‘to identify sites of adequate size and location to accommodate necessary infrastructure or support activities which would not be appropriate in proximity to centres of population or sensitive environments or environmentally sensitive economic activities.’*
- *‘to inform and aid the preparation of local area plans for strategic areas and those surrounding immediate environs within the corridor.’*

As discussed in the report relating to Ref. PL07.245518, the wording of Objective EDT1 is in my opinion open to interpretation as to whether it envisaged large scale economic development being effectively open for consideration within the entire area and it is not clear to me that this is what is intended. For this reason, I am not convinced that the construction of a development of the form of the proposed data centre should come within the scope of EDT1 in advance of some form of further detailed plan preparation or site assessment being undertaken. Against this, as also set out in section 12.1 of the report on ref. PL07.245518, the site at Derrydonnell has significant advantages in terms of a potential location for a data centre facility. Principal amongst these advantages are its proximity to power connections to the grid, the availability of the required fibre connections to serve the facility and the availability of a site of sufficient size to cater for the scale of development envisaged by Apple in their masterplan for phased development of the facility to meet anticipated future needs. For these reasons the recommendation of my report relating to Ref. PL07.245518 is that the location of the proposed data centre development is acceptable in principle.

8.1.3.2 Following from the consideration of the merits of the location of the proposed data centre and in the event that the Board consider that the principle of the proposed location is acceptable, it is my opinion that the power supply development is consistent with the provisions of Objective EDT1 of the plan and the provisions of the plan relating to the strategic economic corridor. The proposed power supply development would result in the upgrading and maximisation of the infrastructural facilities available within the corridor and would act *‘to facilitate opportunities for science and technology based employment’*.

8.1.3.3 In conclusion therefore I consider the principle of the development of a substation and grid connection to be acceptable in this instance as this development would be consistent with Objective EDT1 of the *Galway County Development Plan, 2015-2021* and the substation is a vital element to serve the proposed data centre development on adjoining lands. Furthermore I consider that the proposed data centre complies with, and supports the wider strategic aims and objectives relating to the area set out in national and regional plans which seek to attract and develop employment generating activities in designated economic centres specifically within the identified economic corridor. .

## 8.2 Impact on Amenity

8.2.1 As already stated the current SID application before the Board relates to the substation element of the overall proposal only. However it is imperative, particularly as the application before the Board is accompanied by an EIS, and the adjacent data centre is also the subject of an appeal, that cumulative impacts in relation to the overall proposal are assessed in terms of amenity and environmental impact. Cumulative impacts of the impact on amenity of both the data centre and power supply developments were the subject of assessment as part of Ref. PI07.245518 (section 12.2). This assessment was facilitated by the structure of the REIS and EIS documents submitted by the applicant which provides for a cumulative assessment of the impact of both the data centre and power supply developments under a range of headings including noise and air.

8.2.2 In addition to the data centre development which is the subject of a current application, there are other projects in the vicinity which have the potential to have a cumulative impact on amenity. These projects include the potential for future phases of data centre development as envisaged in the Masterplan for the development of the data centre site submitted with the application for both the data centre application and the power supply proposal. This masterplan is indicated in Figure 3.1 of the EIS submitted with the power supply application. In addition, there potential cumulative impacts with the construction of the M17 / M18 motorway schemes which may impact on the proposed development.

8.2.3 With regard to **noise**, potential impacts could arise in relation to noise from both the electricity substation and the proposed Data Centre during both the operational and construction phases. Chapter 8 of the EIS specifically addresses issues in relation to noise and vibration and the

issue has been the subject of detailed discussion in section 12.2 of the assessment for ref. PL07.245518. It is noted that the baseline modelling information presented in the power supply EIS includes two additional data sampling points relative to that contained in the data centre REIS representing two locations on the data centre / substation site boundary in the general area of the sub station and grid connection. Section 8.8 of the EIS sets out the modelling process used for noise and includes inputs for construction activity, including construction traffic. Operational noise sources from the power supply development would comprise a mixture of the sub station, overhead conductors and transmission lines (Corona discharge) as well as potential wind noise from the new lines and towers.

- 8.2.4 **Construction noise** levels at all noise sensitive locations examined as part of the power supply EIS range between 37 and 45 dB Laeq and are well under the maximum construction limit of 70dB as per the TII (formerly NRA) guidelines. It should be noted that this assessment of construction noise relates to the impact of the concurrent construction of the data centre as proposed under Ref. PL07.245518 and the power supply project. It is also notable that the assessment of combined construction noise as cited in the EIS for the power supply project is identical to that presented at Table 8.8 of the REIS for the data centre development.
- 8.2.5 **Operational noise levels** relating to the power supply development in isolation at the 14 noise sensitive receptors examined is indicated in Table 8.9 and all values are very significantly below the 45dBA Laeq threshold for night time noise. Cumulative predicted operational noise levels of the operation of the data centre and power supply development together with the concurrent construction of an additional data hall is presented in Table 8.10 of the EIS and mirrors that presented in the REIS for the data centre. In all cases (noise sensitive receptors) the predicted levels are also below the day time noise limit of 55 dB LAeq.
- 8.2.6 By virtue of its operation and design the proposed power supply development will not lead to any operational **vibration impacts**. Overall therefore it is my opinion that noise and vibration will not have a significant adverse impact on amenity of surrounding properties during either the construction or operational phases.

8.2.7 With regard to **air quality** there will be no significant air emissions during the operational phase of the power supply development during the operational phase. Two back up generators to serve the substation are proposed and would be the subject of periodic testing. No significant air quality impacts are likely from short term testing and very limited necessary operation of these generators. In terms of **construction phase impacts**, the analysis contained in the EIS includes an assessment of the impact of construction activity for the data centre, power supply project and the construction of the M17/M18 motorway. Table 9.5 of the EIS presents the cumulative assessment of the predicted impact of such a scenario and all pollutants (NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub>) are very significantly below the relevant limit value. These construction emissions will be temporary and are unlikely to impact on residential receptors having regard to the separation distances between the substation and residential developments in the area.

8.2.8 **Operational phase** impacts on **air quality** is the subject of assessment at 9.4.4 of the EIS for the power supply project. Such impacts will essentially be limited to additional traffic associated with the ongoing maintenance of the sub station and power lines and would not be significant given the limited additional traffic volumes involved. The two emergency generators on the substation site will be the subject of periodic testing. These generators are of a lower power output than those proposed for the data centre site and the impact of the periodic testing of these units is not likely to be significant in terms of air emissions. As discussed at section 12.2 of the assessment on Ref. PL07.245518 for the data centre, the likelihood of the generators on the substation site being used for any significant period of time is very low given the reliability of the power lines to which the sub station is proposed to be connected, the fact that there are four connections to the lines and the fact that in the event of a power outage, the operation of the data centre facility would switch to the other Apple data centre location in Denmark.

8.2.9 Finally, some concerns have been expressed by observers and appellants to the data centre application regarding the potential **health impacts** which would arise from the proposed sub station and extension of the 220Kv electricity network and specifically that the proposed development would bring existing 220Kv infrastructure closer to locations which may be sensitive to electromagnetic fields including residential properties and the Lisheenkyle NS. An assessment of the potential impact of electromagnetic fields arising from the proposed power supply development on human health is presented at Appendix



15.1 of the EIS. This assessment undertaken by Compliance Engineering Ireland concludes that the potential impact within the study area (100 metres) was such that the development would comply with the CNIRP Guidelines of 1998 and EC EMF Recommendation (1999/519/EC) and that there will therefore be no negative impacts arising in terms of electromagnetic fields and resulting impacts on human health. On the basis of the information presented I would accept the findings of the assessment presented and do not consider that there is a clear basis for the case that the proposed development would result in adverse health impacts.

### **8.3 Traffic Impacts**

8.3.1 Traffic survey work for the proposed development covered a total of eight separate locations / junctions and projections for traffic generation arising from the power supply development in isolation are presented in 7.4.2 of the EIS. The main traffic generating works covered in this projection relate to the sub station and then the construction of the new towers, decommissioning of old towers and the erection of the new sections of overhead line. The route for abnormal load deliveries related to the power transformers is set out at 7.4.2.4 of the EIS with a route from Dublin Port specified. Temporary access track routes to the towers will be required and these are set out at 7.4.2.5 of the EIS.

8.3.2 The EIS contains further assessment of the potential traffic impact from the construction of the proposed development in combination with the construction of the data centre and the M17/M18. There is also an assessment made of the potential traffic impacts arising in a post development scenario where the data centre (Phase 1) and the power supply developments were completed and operation and construction was being undertaken on an additional data hall plus construction of the M17/M18 road scheme. This assessment also makes an allowance for users of the proposed car park at the data centre site entrance from the R348 for use by amenity walkers.

8.3.3 The methodology used in the assessments is set out at 7.7 of the EIS and utilises the traffic growth rates set out in the TII Project Appraisal Guidelines. The methodology used is in my opinion robust and appropriate. During the operational phase, traffic generation by the power supply development in isolation would be negligible and limited to maintenance activity, however an assessment of the operational impacts of the wider development (power supply and data centre)

indicate that all junctions examined would continue to operate within capacity during both the construction phase of the data centre and power supply development and also during the operational phase with allowance made for potential ongoing construction of the M17/M18 and concurrent construction of an additional data hall.

8.3.4 Mitigation measures in the form of the construction of a new right turn lane to the site entrance from the R348 are proposed and the information submitted with the data centre application indicates that there is adequate visibility and sight lines at the location of this proposed access. Concerns raised by appellants and objectors regarding the site access arrangements are addressed in more detail in section 12.5 of the assessment of ref. PL07.245518. Other mitigation measures including a construction management plan incorporating a road condition survey are proposed and are considered appropriate.

8.3.5 The substation development proposes a total of 10 no. car parking spaces to serve traffic associated with maintenance. Ten spaces would appear to me to be excessive given the fact that there would be no permanent staff at the substation and that the spaces are for maintenance vehicles only. In the event of a grant of permission it is therefore recommended that the number of car parking spaces on the substation site would be reduced to a maximum of five and that none of these spaces would be used by employees of the data centre commuting to the site for work.

8.3.6 An assessment of the impact of construction and operational traffic in terms of noise, dust and vibration is included as part of Chapters 8 and 9 of the EIS and is addressed in 8.2 of this assessment above. On the basis of the information presented I am satisfied that the additional traffic generated during construction or operational phases of the development will not have a significant adverse impact on residential amenity.

## **8.4 Landscape and Visual Amenity Issues**

8.4.1 An assessment of the impact of the proposed development in terms of landscape and visuals is contained in Chapter 6 of the submitted power supply EIS. The assessment is accompanied by photomontages which relate to viewpoints located to the north and east of the power supply development and which give an indication of the likely impact of the development from two locations on the R348, the M6 to the east of the

proposed Rathmorrissey Interchange and a location to the south east of the Rathmorrissey interchange.

8.4.2 The proposed power supply development has a potentially significant impact in terms of landscape and visuals comprising seven new masts and the removal of three existing structures. The context of the area in the vicinity of the connections to the Cashla to Prospect and Cashla to Tynagh 220Kv lines is also the subject of significant change with the development of the new Rathmorrissey interchange which will mark the connection between the M6 and the M17/M18 motorways. Construction work on the interchange is currently ongoing. In addition to the grid connection, the proposed substation could in my view, have a potentially significant visual impact having regard to its overall scale and the inclusion of a significant number of elements within the substation compound that are of a significant height (lightening masts, switchgear, communications mast etc.). The visual impact of this aspect of the proposal was also addressed in the landscape and visual impact assessment submitted as part of the data centre application and included at chapter 6 of the REIS submitted as part of that application and the accompanying book of photomontages, (Volume 2 of the REIS). In making an assessment of the visual impact of the proposed power supply development it is therefore recommended that regard be had to the content of chapter 6 and Volume 2 of the REIS and the contents of section 12.3 of the assessment of Ref. PL07.245518.

8.4.3 The impact of the sub station is mitigated to a significant extent by the set back of the substation site within the body of the forested data centre site. The sub station is proposed to be separated by a minimum planted buffer zone of 50 metres to the site boundary and the separation between the sub station and the site boundary is c.450 metres at the closest point. During construction of the substation there would be short term slight adverse impacts arising. The existing on site planting and the proposed reinforcement of boundary planting would in my opinion significantly mitigate views of the proposed substation from dwellings located on the local road to the north of the site. Photomontages 7 and 8 contained in the assessment submitted with the data centre application (see Volume 2 of the REIS) indicate that there would be no visual impact arising in this location. There may be a short term adverse impact arising from the construction of a service access to the substation from this local road however any such impact would be short term and long term adverse impacts arising would be slight. View 1 in the visual assessment indicates the impact from the overbridge of the local road over the existing M6 and the sub station is substantially

screened from view by the existing and proposed woodland. Any adverse impact on views due to the substation element of the project would be slight.

- 8.4.4 With regard to the impact of the proposed grid connection, the impact has to be assessed in the context of the existing power lines and towers that are located in the area as well as the existing M6 motorway and the construction of the M17/M18 and Rathmorrissey Interchange. Construction impacts would be short term slightly adverse with the use of cranes and equipment connected with the erection of the new towers and removal of redundant structures. On completion however I would agree with the assessment contained in the EIS that the impact of the new towers and changes to the layout of towers and lines proposed would have a potentially slight to moderate adverse visual impact due to increased concentration of infrastructure in the area. Against this, the area is already heavily modified in visual terms and any impact has to be assessed in this context.
- 8.4.5 Regarding the overall cumulative impact of the proposed data centre plus the power supply project, for the reasons set out in 12.2 of the assessment of Ref. PL07.245518, I do not consider that the proposed development would have more than a slight adverse visual impact or impact on the landscape due to the fact that the data centre and the substation elements would be well screened and separated from sensitive view points and receptors. In terms of the impact of the proposed data centre and power supply in combination with other existing and proposed developments, namely the existing M6 and proposed M17/M18 including new interchange at Rathmorrissey, the impact is moderate adverse with the main impact arising from the significant works related to the development of the M17/M18 and the new interchange.
- 8.4.6 In conclusion, the character of the area of the proposed development has and continues to undergo significant change with the existing 220Kv power lines and M6 and the construction of the M17/M18 and associated Rathmorrissey interchange. The proposed sub station and data centre developments would be well screened within the site by existing and proposed planting and the impact additionally mitigated by the separation from surrounding visually sensitive locations. The proposed changes to the tower layouts and additional power lines in the vicinity of the new interchange are significant structures, however, in the context of the significantly modified landscape I do not consider that the

visual impact or impact on landscape character would be more than moderately adverse.

## 8.5 Ecology

8.5.1 Chapter 10 of the submitted EIS relates to ecology and biodiversity. This section should be read in conjunction with section 8.7 below relating to appropriate assessment and also the assessment of impacts of the proposed data centre project on ecology and biodiversity contained at section 12.4 of the report on Ref. PL07.245518.

8.5.2 In terms of general ecology, the site was the subject of walkover surveys undertaken in July and August 2014. These surveys were augmented by additional survey work undertaken in July, 2015 relating to bats. The main habitat types recorded on the main body of the site where the data centre and the substation are proposed comprise grassland, heath and dense bracken, peatland, woodland and scrub and exposed rock and disturbed ground. The survey work undertaken has also identified an area of rich fen and flush located outside of but close to the boundary of the site to the north east of the data centre / substation site and in the general environs of the proposed grid connection between the site and the 220Kv Cashla to Prospect and Cashla to Tynagh lines.

8.5.3 Also of note on the data centre / substation site is the presence of the rare and protected plant species, the **wood bitter vetch (*V.Orobus*)**. The main locations in which this species was observed was towards the north east of the data centre site and close to the northern boundary though there were additional small areas identified at points along the main east – west orientated track that runs through the forest. The location of the observed plants is indicated in Figure 2 of the Wood Bitter Vetch Conservation Management Plan included at Appendix 10.4 of the submitted EIS. The main areas where the plant has been recorded will not be directly impacted upon by the proposed development of either the data centre or the power supply. In particular the cluster identified as Location 1 on Figure 3 of the Conservation Management Plan are located to the south of the proposed sub surface connection between the substation and the north east corner of the boundary of the data centre / substation site and would not be directly impacted by the proposed development. The substation part of the proposed development required the relocation of the small population identified at Location 3 on Figure 3. The relocation of some of this

species to ensure that it is not impacted by the proposed development was proposed by the applicant and it sought and obtained a derogation licence from the Department for these works. During the course of the oral hearing it was confirmed that the works for the relocation of the plant had been completed such that Phase 1 of the data centre and the power supply project can be undertaken. The location of the wood bitter vetch plants relocated to date is indicated in Figure 10.2 of the EIS. It was also noted that one of the limited number of other examples of such relocation related to the M18 motorway currently under construction to the south east of the application site. As set out at 12.4.7 and 12.4.8 of the report on PL07.245518, on the basis of the information presented I am satisfied that the conservation plan contains adequate measures to protect the original and relocated specimens of the wood bitter vetch on the site and that in the event of a grant of permission that the requirements set out in the submitted Conservation Management Plan would be complied with.

8.5.4 **Bat** detector **surveys** were undertaken on the site between 6<sup>th</sup> and 9<sup>th</sup> August, 2014. In addition, the REIS states that a dusk / dawn mobile bat survey was undertaken on the nights of the 6<sup>th</sup> / 7<sup>th</sup> and the 8<sup>th</sup> / 9<sup>th</sup> August, 2014. The results of these walked transects is discussed in section 10.3 of the EIS and are indicated in Table 10.3 of the REIS submitted with the data centre application. These surveys indicate the presence of four species of bat with common, soprano and unidentified pipistrelles comprising over 90% of the species recorded and an overall recorded activity level on and in the immediate environs of the site of moderate. The initial survey work undertaken in 2014 and included in the initially submitted EIS for the data centre was supplemented by additional survey work undertaken on the 14<sup>th</sup> / 15<sup>th</sup> July, 2015 and these results are presented at Table 10.5 of the REIS. The results of this survey indicate that of the six transects surveyed there were bat passes recorded at three and that overall bat activity was low notwithstanding good conditions for surveying. With regard to the concerns expressed by the Development Applications Unit, survey results for two seasons have been presented which indicate that the overall usage of the site by bats is low. It would have been preferable if additional winter survey information was presented which allowed for an assessment of the potential for hibernation roosts however, on the basis of the activity surveys undertaken over the summer months, the level of winter use is likely to be low. In terms of the potential impact on bat species who may be present and the potential impact on flight paths and corridors, it should be noted that the proposed development and potential future development of additional data halls will not result in the

removal of all existing forestry on site. The majority of the existing forestry will remain and will be augmented at the site boundaries and between the buildings proposed on site. The potential for complete severance of hibernation roosts from summer use areas or from foraging areas is therefore limited and the additional planting will increase the variety of tree type and potential bat habitat available. I would also note that there is no potential for bats to roost in the proposed power structures or cables proposed as part of the power supply project and that the alignment of the sub surface cable within the data centre / substation site crosses areas that are currently clear felled with low bat commuting potential. The area where the substation is proposed is currently planted however the conifer planting in this area would appear to have limited roosting potential and planting will be retained around this site. Overall therefore, on the basis of the information available I do not consider that the proposed development will have a likely significant adverse impact on protected bat species.

8.5.5 There is no record from the surveys undertaken of **badger** activity in the areas of the proposed substation, sub surface cable or overhead connection to the 220Kv network. In addition, on the basis of the survey work undertaken, it would appear that badger activity on the overall site is low. There is some evidence of **pine martin, squirrel and fox** recorded on the site and the EIS notes that the area to the north east where the proposed overhead cables and towers are proposed is suitable foraging habitat for foxes and hares. As set out in the assessment of Ref. PL07.245518 for the data centre it is not considered that the construction of the data centre development would be likely to have significant adverse effects on the above species given the low recorded use of the site and the very extensive areas of forest and pathways between the forested areas which are proposed to be retained. In view of this it is my opinion that cumulative impacts on mammals arising from the data centre and the power supply project are likely to be limited. Overall therefore it is my opinion that there may be some short term disturbance to mammals arising from the construction phase of the proposed development. There will however remain very significant areas of the site which will not be disturbed and adequate areas will remain during the operational phase such that species of mammal on site will not be negatively impacted.

8.5.6 To the north east of the data centre / substation site in the vicinity of the existing towers supporting the 220Kv lines there is noted to be an area of **rich fen and flush** and the EIS notes that the area immediately north east of the data centre site contains a mosaic of marsh, swamp and

open water. The EIS (10.4.2) contends that the rich fen and flush habitat recorded does not correspond to any annexed habitat and the design and layout of the power connection outside the boundary of the data centre / substation site has been undertaken to avoid these areas. On the basis of the information presented I am satisfied that these areas will not be impacted directly or indirectly by the over ground power connection proposed in this general location.

8.5.7 Regarding **birds**, while there will be some disturbance potential during the construction phase of the substation the retention of significant areas of habitat and the creation of new habitat will allow for the survival of existing populations.

## 8.6 Other Issues

8.6.1 The EIS for the power supply project includes a **Flood Risk Assessment** at Appendix 12.1. This assessment is the same as that included with the data centre application and contained at Appendix 12.1 of the REIS for that project. It is noted that the scope of the flood risk assessment undertaken incorporates the data centre, sub station and grid connection sites and that while the main focus is on the impact of development on the body of the site proposed to contain the data centre and substation there are also modelling indicated at Figures 16 to 22 inclusive which show the impact of pluvial flooding.

8.6.2 Hydrology and issues of relevance to flood risk are also included in Chapter 12 of the REIS and the EIS for the power supply project relating to Hydrology and Hydrogeology. Specific concern is expressed by the Athenry Golf Club with regard to the potential impact of the development on their site and in particular the potential impact that the later phases of development as per the masterplan might have on their site. It is stated that there have been ongoing discussions between representatives of the golf club and Apple.

8.6.3 On the basis of the CFRAM study maps available, the entirety of the site is located outside of the 1 in 10, 1 in 100 and 1 in 1,000 year predicted flood events. The site is therefore located within Flood Zone C as per the Flood Risk Management Guidelines and the risk of fluvial flooding on the site is therefore very low. The modelling undertaken predicts that the off site flood depths post development would not be any worse than is the case currently and the design of the proposed development includes a number of mitigation measures to minimise the



risk of flooding. These include a surface water drainage system and SuDS system that will ensure that any overland flow will not impact on proposed buildings and that additional water will not be discharged off site post development than is currently the case. The surface water drainage system and SuDS infrastructure have been designed to accommodate a 1 in 100 year rainfall event. The impact of the proposed grid connection element of the proposed development on flood risk is limited and an assessment of the likely influence of the pylon foundations and cable trenching indicates that the hydraulic impact of these works would also be limited being c. 285 metres and c.74 metres respectively, (see Appendix 12.2 of EIS).

8.6.4 On the basis of the information presented I do not consider that the proposed development comprising the proposed data hall and the power supply together with the future development of additional data halls as per the masterplan would have any material impact on flood risk off site or that it would impact negatively on existing drainage features or groundwater in the vicinity of the site.

8.6.5 It is noted that the proposed substation incorporates two support buildings which are proposed to contain **toilet facilities**. It is not proposed that these buildings would be connected to the on site waste water treatment systems proposed under the application for the data centre but rather that they would drain to a holding tank which would be emptied periodically. Given the low volume of discharge from these facilities the proposed approach is considered acceptable and in the event of a grant of permission a condition requiring the developer to enter into an agreement with a registered waste disposal contractor to dispose of the effluent should be attached. The use of on site holding tanks for effluent results in a slight potential risk to groundwater which should be mitigated by the requirement for disposal by a licenced contractor.

8.6.6 With regard to **archaeology**, and cultural heritage there are a number of recorded sites in the general vicinity but no known sites within the application site that would be impacted by the proposed development of the data centre, the power supply project or by the potential future expansion of data hall capacity on the site. The 'zones of notification' of three sites are partially located within the woodland at the south western end of the data centre site but would not be impacted by the proposed works. There are additional recorded sites within the golf club lands located to the west and also on lands to the north. The overall level of recorded sites in the vicinity would suggest the possibility of further sites

being present on the application site. The trenching and pylon foundation works proposed as part of the power supply project as well as the construction of the substation would therefore have a potential negative impact in terms of archaeology. Mitigation measures in the form of monitoring of site works is proposed and it is my opinion that in the event of a grant of permission it is appropriate that a condition requiring archaeological monitoring would be attached.

- 8.6.7 Chapter 14 of the EIS assesses the issue of **cultural heritage**. The site is not located in a designated cultural heritage area. None of the Prescribed Bodies entrusted with the protection of the built, historical or archaeological heritage, notably the DAHG who made a submission to the Board have objected to the proposal on ground of cultural heritage. As part of the EIS study, a field survey of the area was undertaken (see 14.4.12 of the EIS) and no features of significance were noted in the areas of the proposed new towers required as part of the power supply project. The site has been the subject of a geophysical survey which is referenced in chapter 11 of the EIS relating to soils and geology. There is no reference in this chapter to features of note that may be of relevance to cultural heritage or archaeology.
- 8.6.8 With regard to **financial contributions**, the report submitted by the Planning Authority and received by the Board on 8<sup>th</sup> day of April, 2016 notes that on the basis of the s48/s49 development contribution scheme which was adopted by the council in March 2016, the appropriate development contribution to be payable is €42,560 this being the amount relevant to 3040 sq. metres of area for the substation multiplied by €14 per sq metre. There is no reference to any contribution in respect of the proposed additional towers to support the connection to the grid.
- 8.6.9 In terms of **community gain**, the submission received states that the planning authority does not consider that a community gain condition is required. I note the fact that during the course of the oral hearing the Planning Authority raised the issue of a condition requiring the developer to enter into a s.47 agreement regarding the provision of the pedestrian walkway and that such an agreement would clearly set out that the walkway was to be dedicated for use by the public for an indefinite period and that ownership and maintenance of the area would remain with the developer. A condition along these lines is recommended to be attached to any grant of permission which issues in respect of Ref. PL07.245518 for the development of the data centre.

## **8.7 ENVIRONMENTAL IMPACT ASSESSMENT**

### **8.7.1 Structure and Content of REIS**

8.7.1.1 The layout of the submitted EIS follows a grouped format and the impact of the proposed development was addressed under all relevant headings with respect to human beings, flora and fauna, soils, water, air, climate and the landscape, material assets and the interaction of these areas along with the consideration of alternatives and mitigation measures. The content and scope of the EIS is considered to be acceptable and in compliance with the requirement of Articles 94 (content of EIS) and 111 (adequacy of EIS content) of the Planning and Development Regulations, 2001 (as amended).

8.7.1.2 Regarding the comprehensiveness of the submitted EIS and the extent to which it takes into account the impacts on the environment likely to arise on foot of the data centre project and the cumulative effect of the data centre and power supply projects, I note the fact that the REIS was submitted concurrently with the EIS for the power supply development and the significant similarities in structure and content between the two documents. The structure of the EIS document is such that, in my opinion it provides a comprehensive assessment under each of the required environmental factors as specified in the directive. In particular, in my opinion the EIS allows for an integrated assessment of the overall impact of the data centre and power supply developments as well as detailing the cumulative impacts of these projects with other relevant plans and projects, including the potential future expansion of the data centre.

8.7.1.3 One of the objectives of the further information request issued by the Board was to ensure that the EIS submitted for the two projects did not read as two separate documents and that by reading one, there was a clear acknowledgement of the other development and assessment of the overall impacts on the environment likely to arise. I acknowledge that the structure and content of the REIS for the data centre and the EIS for the power supply development are not exactly the same however they are very similar and are, in my opinion such that they present a clear indication of the nature and scope of the overall project (data centre and power supply), the likely significant direct and indirect effects on the environment, measures proposed to mitigate such impacts and an assessment of residual effects.

## 8.7.2 Likely Significant Effects on the Environment

8.7.2.1 Regarding **landscape and visual impacts** the location of the site in a rural area where there are a significant number of residential dwellings on surrounding roads, particularly to the north as well as a national school and adjacent golf course raises issues of potential visual intrusion and change of character. The power supply element of the project would result in the net addition of 4 no. steel towers to the north east of the site and the addition of new lines. The siting of the data centre and substation within an existing woodland area and the relatively low scale of the buildings and other structures proposed on the site are such that the visual impact of the operation of the data centre should be slight and the short term construction impacts would be moderately adverse. Mitigation in the form of reinforcement of boundary planting and new planting within the site would further mitigate the visual impact. The grid connection will result in the addition of new structures into what is however an already significantly modified landscape with the existing 220Kv power lines, the M6 motorway and the construction of a new interchange between the M6 and M17/M18 (Rathmorrissey Interchange). The overall impact of the power supply element would therefore be moderate adverse during construction and slight on completion.

8.7.2.2 Potential impacts on **residential amenity and health** would arise from the noise, dust and vibration impacts during construction and operational phases. As set out at 8.2 above, during construction, the nature of the construction activity, set back to sensitive receptors and mitigation measures proposed in terms of plant, construction management and hours of operation would result in impacts being slight to moderate adverse and predicted noise impacts are within acceptable limits. During the operational phase the main potential impact would be noise and air emissions with particular concern regarding the potential impact of proposed stand by generators on the data centre site and the operation of the on site substation. As set out in detail at 12.2 of the assessment for the data centre (Ref. PL07.245518), the available information indicates that the utilisation of all back up generators would be very infrequent and of short duration and testing would involve the running of one generator at a time, the impact of which in terms of noise and air emissions has been shown in the REIS not to be significant. The impact of the operation and testing of the two generators proposed for the substation site is not considered to be significant in terms of potential impact on residential amenity. In terms of health, as set out at 8.2.9 above, the assessment of potential electromagnetic emissions from the substation and extension and alteration to the grid connection

indicates that there will be no negative impacts arising. Subject to the mitigation measures set out regarding the operation of the stand by generators and the construction of the substation it is not considered that the impact on residential amenity or health impacts arising would be significantly adverse.

8.7.2.3 In terms of **hydrology, hydrogeology and waste water treatment** and disposal, the site is located in a limestone rock area and the site exhibits a low level of coverage above bedrock and exposed rock at certain locations. The data centre development is proposed to be served by two on site waste water treatment systems, one serving the data hall and the other the administration building with additional systems possible in the event of future permission for the expansion of the facility. The substation buildings also have toilet facilities however given the low level of usage and volumes of waste generated it is proposed that these toilets would discharge to holding tanks. The development therefore has potential to impact negatively on groundwater. Analysis presented in the EIS and the REIS for the data centre (Chapters 11 and 12 in both documents) and discussed in more detail in section 8.8 of this report (Appropriate Assessment) indicates that there are no known karst features on the site of the proposed data centre or in the vicinity of the power supply project. A geophysical survey of the site and other analysis points to a low likelihood of significant conduits in the rock and the direction of groundwater flow is approximately north east to south west. Details regarding the type and design of the proposed on site effluent treatment systems incorporating a three stage treatment process and additional raised final percolation area are set out in the REIS and application documentation for the data centre and subject to design, installation and maintenance as proposed the on site waste water treatment plans are not considered likely to have an adverse effect on water quality. Regarding **flood risk**, as set out in section 8.6 of this assessment, subject to the implementation of the proposed drainage design and attenuation systems it is not considered that there would be a significant adverse impact on the environment.

8.7.2.4 Regarding **traffic and access**, as discussed at section 8.3 above there are potential impacts on the local road network during construction and operational phases. During the operational phase the impact of additional traffic in terms of emissions is also a potential issue. Construction traffic would be the subject of agreement on foot of a construction management plan and the access route for construction traffic and hours of traffic movements would be the subject of restriction. During the operational phase, access to the site would be subject to a mobility management plan. Analysis presented in the EIS (Chapter 7)

indicates that the road network in the vicinity of the site would be capable of accommodating the proposed development and that all junctions would operate within capacity during the construction and operational phases of the development, including construction of the data centre project and the construction and operation of possible future phases of data centre development.

8.7.2.5 Regarding **material assets** there are a number of issues that may potentially give rise to significant effects on the environment. The development of the data centre and the substation will result in the loss of an **existing forest** area to which the public currently have relatively unrestricted access and which is a significant local amenity. The proposed development may also have potential impacts on the grid network through the utilisation of existing capacity. The loss of recreational lands is proposed to be mitigated by the construction of a dedicated walking trail and significantly improved parking facilities for those accessing the new facility. Subject to conditions, there is not considered likely to be a significant negative impact arising in terms of impact on recreational amenity. With regard to the utilisation of infrastructure, clarification has been provided by Eirgrid that the development the subject of the current application can be accommodated.

8.7.2.6 **Ecology** as it relates to protected sites and the Natura 2000 network is considered in detail in 8.8 below and it is concluded in this assessment that there would not be any adverse impact on the conservation objectives of any Natura 2000 site arising as a result of the proposed data centre and power supply developments. With regard to **other ecology**, the proposed development has the potential to impact on other species, including a number of protected species, specifically bats, badger and pine martin. The site has been the subject of general walkover ecological survey as well as some specialist survey work for particular species. Available information regarding other species indicates that the presence of animals is limited and having regard to the nature and extent of works proposed including the extent of retained woodland and supplemental planting I do not consider that subject to mitigation measures being implemented there would be an adverse impact on ecology.

8.7.2.7 In terms of **archaeology and cultural heritage**, there are a number of recorded monuments and archaeological features in the general vicinity of the site and these are such that there is potential that there are existing features located on the site and which may be impacted by the proposed data centre or power supply projects. There

are no recorded monuments on the site or located in close proximity such that they would have a likelihood of being impacted by the proposed development and in view of this the proposed mitigation measure that works would be the subject of supervision by a qualified archaeologist are considered appropriate and such as to ensure that any archaeology present on site is noted and that in such cases there would not be a significant adverse impact caused by the development.

8.7.2.8 I consider that the **assessment of interactions** between the environmental factors as set out in the EIS is consistent with the requirements of the directive and the relevant regulations and that the assessment of interactions presented in Chapter 16 is accurate and reasonable.

8.7.2.9 In summary, it is my opinion that the EIS submitted clearly identifies the likely significant effects on the environment arising from the development of the proposed power supply project together with the data centre and sets out appropriate mitigation measures for the potential environmental impacts identified. It is considered that there is adequate information available on file to carry out a comprehensive EIA in respect of the proposed power supply project and the combined data centre and power supply project incorporating substation and grid connection and that subject to the implementation of the proposed mitigation measures set out in the EIS and other conditions attached to the recommendation of this report I would agree with the conclusions that the proposed development would not have significant adverse impacts on the environment.

## **8.8 Appropriate Assessment**

8.8.1 The application is accompanied by an Appropriate Assessment Screening Report which was prepared by Moore Group – Environmental Services and which is contained at Appendix 10.1 of the REIS. The assessment concludes that the only Natura 2000 site which is located within 5km of the application site and which has potential for a hydrological connection is the Galway Bay Complex (Site Code 000268). In making this assessment it is noted that there are no watercourses on the site and that the wetlands located at the boundary of the site are not hydrologically connected to the water based features of the majority of the Natura 2000 sites in the wider area (15km radius). Other sites which are located just outside of the 5km zone comprise the Cregganna Marsh SAC and the Inner Galway Bay SPA. The screening proceeds to undertake an assessment of the potential impacts on the

Galway Bay Complex only and the assessment concludes that if the data hall development were to proceed there would be no direct, indirect or in combination impacts on the Galway Bay SAC and that based on the precautionary principle that it was possible to rule out likely significant effects on the SAC. It is noted that the format of the screening assessment submitted is such that the potential impact of the power supply and grid connection application are considered as part of the assessment of potential in combination impacts.

8.8.2 As noted at the start of this assessment, the proposed power supply project is part of a larger development incorporating a data centre and this assessment including this appropriate assessment screening should be read in conjunction with that for the proposed data centre (ABP Ref. 07.07.245518). In order that an appropriate assessment of the overall development (data centre and power supply / grid connection) is undertaken and that all potential impacts on Natura 2000 sites and conservation objectives are accounted for it is proposed that the structure of this assessment would include a specific section relating to the impact of the proposed power supply / grid connection and a in combination assessment of the impact of these works with those relating to the construction of the data centre.

8.8.3 The nature of the proposed data centre and power supply / grid connection development is such that there would not be significant noise or air emissions arising such as would have the potential to impact negatively on the qualifying interests of any Natura 2000 sites. The main potential impacts on natura 2000 sites are considered to relate to the potential for pollution of ground waters. There are no surface water feature on the site of the proposed data centre and wetland areas located in close proximity to the data centre and grid connection sites are not located such that they are hydrologically connected to the proposed development or to surrounding Natura 2000 sites. In assessing the sites which may be potentially affected by the proposed development regard has also to be had to the fact that the activity on site would not produce any significant level of process emissions with the exception of the on site waste water treatment system and the air emissions resulting from the running of back up power generators. The site is located in a limestone area and the general direction of groundwater flow is from north east to south west across the area. There are no known Karst features located on the site and those that are in close proximity to the site are general located to the east and north (Figure 12.6 EIS). A geophysical survey of the site identified that the depth of rock is relatively shallow, no significant conduits were identified and the rock typology is given as 'dry tightly jointed limestone'.



The site itself is located on what is classified as a locally important aquifer. Information regarding the potential zone of influence on groundwater arising from construction activities is presented in Appendices 12.2 of both the EIS for the power supply project and the REIS for the data centre. These calculations indicate that the radius of influence for each element of construction activity is 74 metres for cable trenches, 285 metres for pylon foundations, 553 metres for substation construction and 330 metres for the data centre buildings.

8.8.4 A number of sites are considered to be potentially impacted by the proposed development of the data centre and power supply and having regard to the source – pathway – receptor model. The information contained in the hydrology and hydrogeology section of the EIS (Chapter 12) indicate that the extent of fractures and connectivity within the bedrock on site and immediate environs is low as indicated by the low level of recharge from pumping tests undertaken and the results of the geophysical survey. The ground levels and analysis of likely direction of groundwater flow indicate that the direction of groundwater flow is to the west and south west. In view of this, and the lack of any hydrological connection between the wetland features adjoining the site and designated Natura 2000 sites the following sites could in my opinion be potentially affected by the proposed development of the data centre and the power supply / grid connection:

- Galway Bay SAC (site code 000268)
- Inner Galway Bay SPA (site code 004031)
- Cregganna Marsh SPA (site code 004142)

#### **8.8.5 Conservation Objectives of Identified Natura 2000 Sites**

The following are the qualifying interests for these sites:

##### Galway Bay Complex SAC (000268)

- Mudflats and sandflats not covered by seawater at low tide.
- Coastal lagoons
- Large shallow inlets and bays
- Reefs
- Perennial vegetation of stoney banks

- Salicornia and other annuals colonising mud and sand
- Atlantic salt meadows
- Otter *lutra lutra*
- Harbour seal *Phoca vitulina*
- Mediterranean salt meadows
- Turloughs
- Juniperous communis formations on heaths or calcareous grasslands.
- Semi natural dry grasslands and scrubland facies on calcareous substrates
- Calcareous fens with cladium mariscus and species of the caricion davallianae
- Alkaline fens

Inner Galway Bay SPA (site code 004031)

- Great Northern Diver (*Gavia immer*)
- Cormorant (*Phalacrocorax carbo*)
- Grey Heron (*Ardea cinerea*)
- Light-bellied Brent Goose (*Branta bernicla hrota*)
- Wigeon (*Anas penelope*)
- Teal (*Anas crecca*)
- Shoveler (*Anas clypeata*)
- Red-breasted Merganser (*Mergus serrator*)
- Ringed Plover (*Charadrius hiaticula*)
- Golden Plover (*Pluvialis apricaria*)
- Lapwing (*Vanellus vanellus*)
- Dunlin (*Calidris alpina*)
- Bar-tailed Godwit (*Limosa lapponica*)

- Curlew (*Numenius arquata*)
- Redshank (*Tringa totanus*)
- Turnstone (*Arenaria interpres*)
- Black-headed Gull (*Chroicocephalus ridibundus*)
- Common Gull (*Larus canus*)
- Sandwich Tern (*Sterna sandvicensis*)
- Common Tern (*Sterna hirundo*)
- Wetland and Waterbirds

Cregganna Marsh SPA (site Code 004142)

- Greenland White Fronted Goose

The stated conservation Objectives for the above sites and species are to maintain their favourable conservation condition.

### **8.8.6 Potential Likely Significant Direct and Indirect Effects on Identified Natura 2000 Sites**

Galway Bay Complex SAC (000268)

The data centre site is located c.4.5km and the substation site c. 5km from the SAC at the closest point with the bulk of the SAC significantly further removed at between 5 and 15km. The potential direct and indirect impacts arising from the proposed development of the power supply project comprise the potential disturbance of groundwater during construction. The provision of back up power would lead to potential emissions to air.

As noted above, there are no surface water features in close proximity to the main part of the site which contains the substation. The area to the north east in the vicinity of the alignment of the grid connection contains a number of areas of wet woodland, fen and flush however these areas are not hydrologically connected to any of the designated natura 2000 sites identified in section 8.8.4 above.

The on site sanitary facilities proposed at the substation site is not served by a treatment system but rather is proposed to be discharged to a holding tank. The implications of this arrangement in terms of groundwater has been discussed at section 8.6.5 above and subject to

satisfactory arrangements for the maintenance, emptying and disposal of effluent by a licenced contractor I do not consider that any adverse impacts are likely to arise.

Fuel storage will be required on site to serve the proposed on site generators and it is proposed that all such storage areas will be located within a bunded area with a capacity of at least 110 percent of the tank capacity.

Given the above ground conditions and the physical separation between the site and the coastal features and species (otter and harbour seal) which form conservation objectives for the Galway Bay complex SAC I do not consider that the proposed development of the power supply project would be likely to have a significant effect on these objectives.

Regarding the other objectives, namely Turloughs, Juniperous communis formations on heaths or calcareous grasslands, semi natural dry grasslands and scrubland facies on calcareous substrates, Calcareous fens with cladium mariscus and species of the caricion davallianae and Alkaline fens the closest locations where these features could be present are that part of the SAC which lies immediately to the east of the N18 national road. Similar to the above, on the basis of the information presented in the EIS regarding the sub surface conditions, rock type, and movement of contaminants I do not consider that it is either likely that the proposed development of the power supply project would have an effect on these conservation objections or that any such effect would be significant either by way of alterations to the water table or groundwater flows during construction or operational phases or due to the release of groundwater contaminants from the site. There is a Turlough located to the south west of the site (Derrydonnell Turlough indicated at Figure Figures 5 and 6 of the Flood Risk Assessment Report contained at Appendix 12.1 of the EIS) and a wet woodland and fen area located to the north east. Both of these areas are located outside of any designated SAC and, on the basis of the information presented are not clearly hydrologically connected to any designated site. For these reasons as set out in 8.5 above, it is not considered that the proposed development would be likely to adversely impact on these habitats.

Details regarding air quality and emissions are given in Chapter 9 of the EIS and have been discussed under 8.2 above relating to residential amenity. As set out at table 9.7.2 of the EIS and discussed at the oral hearing the testing of the two back up generators located on the substation site will be done one at a time and the resulting impact on air quality would not impact on any Natura 2000 site.

### Inner Galway Bay SPA (site code 004031)

The closest part of this site is located c. 6km from the boundary of the data centre and substation site. Given the nature of the proposed development and the likely potential emissions to groundwater, and air, together with the separation of the application site from the SPA it is not considered feasible that the proposed development would have an adverse effect on habitat within the SPA or used by birds which are species for which the site has been identified and would not therefore be likely to have a significant effect on the Inner Galway Bay SPA site (site code 004031) having regard to its conservation objectives.

### Cregganna Marsh SPA (site Code 004142)

Cregganna Marsh is located to the south west of the site c. 5km from the boundary of the data centre and substation site at the closest point. The site is designated due to its importance as a feeding area for a nationally important flock of Greenland White Fronted Geese and the stated conservation objective for the site is for the maintenance or restoration to favourable status of this species. The Cregganna Marsh SPA is located in the direction of predicted groundwater movement from the application site and the application site and the SPA are both located within the one groundwater body (Clarinbridge Groundwater Body – see EIS Figure 12.4, pg. 255).

In terms of contaminants, the main potential source would be the discharge during construction and potential discharges from the waste water holding tank or generator fuel storage area on the substation site. The level of groundwater discharge, ground conditions as recorded by the on site investigations and the sensitivity of the species which is the conservation objective for the site (Greenland White Fronted Goose) is however such that it is not considered that the proposed development would be likely to have a significant effect on habitat within the site such as would impact on the conservation objectives for the Greenland White Fronted Goose.

The potential impact of the proposed development on the hydrology of the area is set out at Chapter 12 of the REIS and Appendix 12.2 which shows the calculation of the anticipated radius of influence. The conservative calculation of the maximum radius of influence predicted to arise from construction activity on the substation and grid connection sites is 553 metres and so the proposed development would not be likely to have any effect on the hydrology of the marsh site or resultant impact on the conservation objectives of the site.

### **8.8.7 Potential Likely Effects of the Project in Combination with Other Plans or Projects**

In making an assessment of the in combination effects the plans and projects which are considered relevant to such an assessment comprise the Power Supply development, the development of the data centre as proposed under An Bord Pleanála Ref. PL07.245518, Future Phases of Data Centre Development and the permitted N17 / M18 motorway development which is currently under construction to the north east of the data centre site. Given the interconnections between the data centre development (ABP Ref. PL07.245518) and the power supply development, (ABP Ref. 07.VA0020), the impact of these two projects on Natura 2000 sites is considered under a separate heading in the sections below.

#### **8.8.7.1 Phase 1 of Data Centre and Power Supply / Grid Connection**

A screening for Appropriate Assessment was submitted by the applicants (Apple Distribution International) as part of the REIS submitted in respect of the data centre application (ABP Ref. PL07.245518), see Appendix 10.1. The data centre development proposal consists of the construction of single data hall of approximately 25,000 sq. metres, ancillary administration building and other associated works including on site back up power generators, amenity walkway and car parking area, site access and site clearance works for the construction of a substation.

The screening assessment submitted and contained at Appendix 10.1 of the REIS for the data centre application (PL07.245518) assesses the impact of the data centre proposal on the Galway Bay Complex SAC (site code 000268).

Chapter 11 of the REIS for the data centre development relates to soils and geology and Chapter 12 to Hydrology and hydrogeology. The appendices to the REIS contain information on Karst features (Appendix 11.2), ground investigations and geophysical analysis (Appendix 11.3) and hydrological calculations (Appendix 12.2). The results of these assessments indicate that there is no evidence of Karst features on or in close proximity to the sites of the power supply or the data centre. Evidence indicates tightly jointed limestone bedrock and there is no indication from the investigations undertaken of major rock fractures being present. The general direction of groundwater movement is from

north east to south west and pumping and borehole test results indicate a relatively quick rate of recharge.

The nature of the proposed data centre is such that there would be limited process emissions to groundwater or to air which would potentially impact on any Natura 2000 site. Such impacts are limited to emissions from the proposed on site waste water treatment plants and air emissions from back up power generators. Construction or potential de watering impacts would be limited and the results of the analysis presented in Appendix 12.2 indicates that the maximum potential radius of influence from the point of dewatering would be 330 metres for the construction of the data centre building.

#### Galway Bay Complex (site code 000268)

The Galway Bay Complex SAC is located slightly more than 5km from the site of the proposed data centre at the closest point with the bulk of the SAC being significantly further removed from the site. No direct impacts on the SAC would therefore arise. In terms of indirect effects and potential in combination effects, it is noted that with the proposed installation of the treatment system and likely operation of the on site back up generators the data centre project would not lead to any significant emissions to water or air such as would have a potential impact on any Natura 2000 site and that the zone of impact of construction on groundwater as predicted by the analysis contained in the EIS for the power supply and the REIS for the data centre indicate that there would not be any likely impact.

#### Inner Galway Bay SPA (site code 004031)

Similarly in the case of the Inner Galway Bay SPA, the location of the site is very significantly outside of the predicted zone of influence for any hydrological impact arising from the power supply development and the likelihood of any indirect effects arising from the construction of the data centre development is therefore not considered to be significant. In view of this and the conclusion regarding the potential impact of the power supply development on the Inner Galway Bay SPA, it is not considered likely that the in combination impact of the data centre and power supply developments would have any significant adverse effect on the Inner Galway Bay SPA having regard to the conservation objectives for the site.

#### Cregganna Marsh SPA (site Code 004142)

Likewise, in the case of the Cregganna Marsh SPA, the location of the site is very significantly outside of the predicted zone of influence for any hydrological impact arising from the data centre development and the likelihood of any indirect effects arising from the construction of the data centre development is therefore not considered to be significant. In view of this and the conclusion regarding the potential impact of the data centre on the Inner Galway Bay SPA, it is not considered likely that the in combination impact of the data centre and power supply developments would have any significant adverse effect on the Inner Galway Bay SPA having regard to the conservation objectives for the site.

#### **8.8.7.2 Phase 1 of Data Centre and Power Supply / Grid Connection and Future Phases of Data Hall Development as per Masterplan**

##### Galway Bay Complex SAC (000268)

The conservation objectives of the Galway Bay Complex SAC are set out at 8.8.5 above. The predicted impact of any dewatering impact arising during construction or operation phase of the data centre development is indicated as having a maximum zone of influence (using conservative assumptions) of c.330 metres, (see Appendix 12.2 of REIS submitted with the data centre application). The construction of additional data halls as part of any future phase of development would utilise the same construction technology and methods as the currently proposed Phase one data centre and would not therefore have any significant additional impacts in terms of the likely zone of influence on groundwater. On this basis I do not consider it likely that there would be any impacts on the conservation objectives of the Galway Bay Complex SAC arising from changes to the water table or groundwater flows due to future phases of the data centre development on the Derrydonnell site.

With regard to potential impacts arising from operational contamination of groundwaters or surface waters, the construction and operation of additional data halls would be essentially the same as that for Phase 1. An additional small scale wwtp for additional halls is to be anticipated with the p.e. of 1 for the existing data hall wwtp likely to be the scale required. In terms of additional staff who may be accommodated on site with future phases of development, this was the subject of some discussion at the oral hearing. No definitive figure was cited for the



anticipated employment level with a full build out of all data halls, however it would not be a pro rata increase relative to the 150 staff envisaged on completion of phase 1 and additional staff numbers above 150 are likely to be modest. On this basis and having regard to the available information regarding ground conditions as summarised in the sections above, the separation of the data centre and power supply developments from the closest part of the Galway Bay Complex and to the nature of the conservation objectives for the site I do not consider that it is likely that any additional data halls on the site would have any likely significant effect on the Galway Bay Complex SAC having regard to the sites conservation objectives.

#### Inner Galway Bay SPA (site code 004031)

The closest part of this site is located c. 6km from the boundary of the data centre and substation site. Given the nature of the development of additional data halls and the likely potential emissions to groundwater, and air, together with the separation of the application site from the SPA it is not considered feasible that the proposed development would have an adverse effect on habitat within the SPA or used by birds which are species for which the site has been identified and would not therefore be likely to have a significant effect on the Inner Galway Bay SPA site (site code 004031) having regard to its conservation objectives.

#### Cregganna Marsh SPA (site Code 004142)

Cregganna Marsh is located to the south west of the site c. 5km from the boundary of the data centre and substation site at the closest point. The site is designated due to its importance as a feeding area for a nationally important flock of Greenland White Fronted Geese. The Conservation objective is for the maintenance or restoration to favourable status of this species.

The marsh site is located a significant distance outside of the predicted zone of influence on groundwater as set out in Appendices 12.2 of the EIS for the power supply project and REIS for the data centre development. In addition, the level of additional discharge to groundwater arising from the development of additional data halls would be limited on account of the limited anticipated additional personnel on site. Subject to compliance with normal standards for the design, construction and operation of additional on site waste water treatment facilities which I consider to constitute an intrinsic part of the project, it is not considered that the future development of additional data halls would have a significant effect on the Cregganna Marsh SAC site.

### **8.8.7.3 Phase 1 of Data Centre and Power Supply / Grid Connection and Future Phases of Data Hall Development as per Masterplan and Development of the M17/M18 Motorway and existing M6**

The site of the proposed data centre and grid connection developments lies in close proximity to the alignment of the M17 and M18 motorway developments which are currently under construction to the east of the data centre site. The M17/M18 runs north south and connects with the M6 at an interchange (Rathmorrissey Interchange) to the north east of the data centre site. The intersection between the M6 and M17/M18 is currently under construction and the permission for the M17 (An Bord Pleanála Ref. 07.MA0001 and 07.HA0005) also provides for the construction of a motorway service area on the south east side of the M6 / M18 junction. This motorway service area permitted is to be served by an on-site waste water treatment plant which, based on the documentation relating to 07.HA0005) would have an initial p.e. of 400 increasing to c.850 by the design year of 2032. The report of the inspector in the case of 07.HA0005 notes that the level of information submitted in the EIS is considered inadequate however a detailed assessment 'Hydrological Assessment for the Rathmorrissey Interchange' was submitted during the oral hearing which provided an assessment of the impact of discharge of treated effluent to groundwater.

I would also note the fact that from the REIS submitted and the EIS for the power supply development, the lands in the area of the proposed service station and the bulk of the M17 / M18 alignment have a different bedrock type with undifferentiated limestone in the area of the service station and the Lucan formation type in the area of the bulk of the power supply site and all of the data centre site.

#### Galway Bay Complex (site code 000268)

No part of the M6 or M17/M18 development is located within the Galway Bay complex site and therefore no direct impacts arise. In terms of combination effects, the M18 is located within c.5km of the Galway Bay site at the closest point and the site of the Rathmorrissey service area is located c.8km from the natura site at the closest point. The changes to groundwater potentially arising as a result of the M17/M18 was the subject of assessment at the time of the consent for the development. The EIS submitted with the road scheme included details of the road drainage and the foul drainage to the proposed service area was the subject of discussion and clarification at the oral hearing for the M18

scheme. On the basis of the information presented including that there was a depth of 1.5 metres of unsaturated soil at the polishing filter site and that an additional constructed area of 1.2 metres was to be provided, the separation between the roads and the Galway Bay Complex SAC site and the nature of the bedrock on the application sites which are located in the direction of groundwater flow from the M17/M18 and associated service area I do not consider that the drainage of the road or the service area would when taken in conjunction with the proposed data centre and power supply developments be likely to be such as to have a significant effect on the site in light of its conservation objectives.

#### Inner Galway Bay SPA (site code 004031)

Given the separation of the M17/M18 and the Apple development sites from the Inner Galway Bay site (c. 6km to the Apple site and c. 7.5 km to the Rathmorrissey Interchange), the design of the proposed developments and the permitted road schemes including provisions for drainage and the drainage of the service area as well as available information regarding the ground conditions in the direction of predicted groundwater flow away from the Apple site, it is considered that the proposed and permitted developments in combination would not be likely to have significant effects on the Inner Galway Bay SPA site having regard to the conservation objectives for that site.

#### Cregganna Marsh SPA (site Code 004142)

Given the separation of the M17/M18 and the Apple development sites from the Cregganna Marsh site (c.5.5km to the Apple site and 7km to the Rathmorrissey Interchange), the design of the proposed developments and the permitted road schemes including provisions for drainage and the drainage of the service area as well as available information regarding the ground conditions in the direction of predicted groundwater flow away from the Apple site, it is considered that the proposed and permitted developments in combination would not be likely to have significant effects on the Cregganna Marsh SPA site having regard to the conservation objectives for that site.

### **8.8.8 Conclusion - AA Screening**

It is reasonable to conclude that on the basis of the information on file, which I consider adequate in order to issue a screening determination, that the proposed development, individually or in combination with other plans or projects would not be likely to have a significant effect on European sites 000268 (Galway Bay SAC), 004031 (Inner Galway Bay SPA) and 004142 (Cregganna Marsh SPA), or any other European site in light of site's conservation objectives and that a Stage 2 Appropriate Assessment is not therefore required.

## **9.0 RECOMMENDATION**

Approve the proposed development under Section 182B of the Planning and Development Act 2000 as amended in accordance with the said plans and particulars lodged based on the reasons and considerations set out below.

### **REASONS AND CONSIDERATIONS**

Having regard to:

- (a) the provisions of the Government White Paper "Ireland's Transition to a Low Carbon Energy Future, 2015-2030";
- (b) the provisions of the National Spatial Strategy for Ireland 2002 – 2020 which seeks to strengthen electricity networks in the west region;
- (c) the provisions of the Regional Planning Guidelines for the West Region 2010 – 2022;
- (d) the provisions of the Galway County Development Plan 2015 - 2021;
- (e) the appropriate assessment screening report submitted with the application;
- (f) the nature of the landscape and the absence of any specific conservation or amenity designation for the site;

- (g) the pattern of development in the area and the separation distance of the site from existing residential and other development in the area;
- (h) the submissions on file including those prescribed bodies;
- (i) the documentation submitted with the planning application including mitigation measures set out in the EIS;

#### Environmental Impact Assessment

The Board considered the Environmental Impact Statement submitted by way of further information to An Bord Pleanála and the report, assessment and conclusions of the Inspector with regard to this file and other submissions on file, including the observers and prescribed bodies. The Board considered that this information was adequate in identifying and describing the direct and indirect impacts of the proposed development. The Board completed an Environmental Impact Assessment, and agreed with the Inspector in his assessment of the likely significant impacts of the proposed development, and generally agreed with her conclusions on the acceptability of the mitigation measures proposed and residual impacts. The Board adopted the report of the Inspector. The Board concluded that, subject to the implementation of the mitigation measures proposed, the proposed development would be in accordance with the proper planning and sustainable development of the area.

#### Appropriate Assessment

The Board noted that the proposed development is not directly connected with or necessary for the management of a European site. In completing the screening for appropriate assessment, the Board accepted and adopted the screening assessment and conclusion carried out in the inspectors report in respect of the identification of European sites which could potentially be affected and the identification and assessment of the potential likely significant effects of the proposed development, either individually or in combination with other plans or projects, on these European sites in view of the site's conservation objectives. The Board was satisfied that the proposed development, either individually or in combination with other plans or projects, would not be likely to have a significant effect on European sites Nos. 000268, 004031 and 004142, or any other European site in view of the sites Conservation Objectives.

It is considered that, subject to compliance with conditions below, the proposed development would not seriously injure the amenities of the area or of property in the vicinity, would not be prejudicial to public health or safety, would be acceptable in terms of traffic safety and convenience, would be acceptable in terms of visual amenity and would not be detrimental to other aspects of the environment. The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area.

### **CONDITIONS**

1. The proposed development shall be carried out and completed in accordance with the plans and particulars, including the mitigation measures specified in the EIS, lodged with the application in An Bord Pleanála on 12<sup>th</sup> day of February 2016, 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 undertaker shall agree such details in writing with the planning authority prior to the commencement of development and the proposed development shall be carried out in accordance with the agreed particulars.

**Reason:** In the interest of clarity.

2. All mitigation measures identified in the EIS and other particulars submitted with the application shall be implemented in full by the developer except as may otherwise be required in order to comply with the following conditions. The developer shall appoint a person with appropriate ecological and construction expertise as an environmental manager to ensure that the mitigation measures identified in the EIS are implemented in full.

**Reason:** In the interest of clarity and to protect the environment during the construction and operational phases of the development.

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

**Reason:** To ensure adequate servicing of the proposed development and prevent pollution.

4. The site shall be landscaped generally in accordance with the landscaping proposals set out in the EIS. Planting shall take place within the first planting season following the commencement of construction.

**Reason:** In the interest of visual amenity.

5. The following roads and transportation requirements shall be complied with in the development:

- (a) All construction traffic shall utilise the national and regional road network to access the development and construction related traffic shall not use the L3104 or L7108 unless otherwise the subject of prior agreement in writing with the Planning Authority.

- (b) A Traffic Management Plan for the construction phase of the development shall be submitted for the written agreement of the Planning Authority prior to the commencement of development on site.

- (c) The internal road network serving the development including turning bays, junctions, parking areas, footpaths and kerbs shall comply with the detailed standards set down by the local authority for such road works.

- (d) Car parking associated with the permitted substation shall be restricted to a maximum of 5 no. spaces. These spaces shall be used solely in connection with the servicing of the substation site and shall not be used by employees of the proposed data centre on adjoining lands.

**Reason:** In the interests of traffic and pedestrian safety and protection of residential amenity.

6. The following requirements relating to noise arising as a result of the permitted the power supply project and data centre project (Ref. PL07.245518) shall be complied with in the development:

- (a) Noise monitoring locations and a schedule for the submission of noise monitoring results for the purposes of the construction phase

of the proposed development shall be agreed in writing with the planning authority prior to the commencement of any development on site. Construction noise levels shall be in accordance with the limits set out in the TII document, '*Good Practice Guidelines for the Treatment of Noise during the Planning of National Road Schemes*' (2014) and in the event of significant deviation from the construction noise levels predicted in Table 8.8 of the REIS additional mitigation measures shall be agreed and implemented.

- (b) During the operational phase of the proposed development, the noise level arising from the development, as measured at the nearest noise sensitive location shall not exceed:-
- (i) An  $L_{AeqT}$  value of 55 dB(A) during the period 0800 to 2200 hours from Monday to Saturday inclusive. [The T value shall be one hour.]
  - (ii) An  $L_{AeqT}$  value of 45 dB(A) at any other time. [The T value shall be 15 minutes]. The noise at such time shall not contain a tonal component

All sound measurement shall be carried out in accordance with ISO Recommendation R 1996 "Assessment of Noise with respect of Community Response" as amended by ISO Recommendations R 1996 1, 2 or 3 "Description and Measurement of Environmental Noise" as applicable.

**Reason:** To protect the amenities of property in the vicinity of the site.

7. A dust management plan to cover the construction phase of the development as committed in 9.5.1 of the EIS shall be submitted and agreed in writing with the Planning Authority prior to the commencement of development. .

**Reason:** To protect the amenities of property in the vicinity of the site.

8. Site development and building works shall be carried out only between the hours of 08.00 to 19.00 Mondays to Fridays inclusive, between 08.00 to 14.00 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 amenities of property in the vicinity.



9. Prior to the commencement of work the developer shall submit for the written agreement of the planning authority a detailed Construction and Environment Management Plan and an Environmental Emergency Response Plan for the construction and commissioning stage of the proposed project.

**Reason:** In the interests of public health

10. The construction of the development shall be managed in accordance with the Construction Management Plan which shall be submitted to, and agreed in writing with, the planning authority prior to the commencement of development. This Plan shall provide details of intended construction practice for the development including hours of working, noise management measures and off-site disposal of construction/demolition waste. Surplus excavation material to be taken off site shall only be recovered or disposed of at an authorised site in accordance with the Waste Management Acts. This shall not apply to any excavated material used within the site boundary.

**Reason:** In the interest of public safety and residential amenity.

11. The undertaker shall facilitate the archaeological appraisal of the site and shall provide for the preservation, recording and protection of archaeological materials or features which may exist within the site. In this regard, the developer shall:

- (a) notify the planning authority in writing at least four weeks prior to the commencement of any site operation relating to the proposed development, and
- (b) employ a suitably-qualified archaeologist prior to the commencement of development. The archaeologist shall assess the site and monitor all site development works.

The assessment shall address the following issues:

- (i) the nature and location of archaeological material on the site, and
- (ii) the impact of the proposed development on such archaeological material.

A report, containing the results of the assessment, shall be submitted to the planning authority and, arising from this assessment, the developer shall agree in writing with the planning authority details regarding any further archaeological requirements including, if necessary, archaeological excavation prior to commencement of construction works. In default of agreement on any of these requirements, the matter shall be referred to An Bord Pleanála for determination.

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

12. All waste generated during construction including any surplus excavation material shall be taken off site and shall only be recovered or disposed of at an authorised site which has a current waste licence or waste permit in accordance with the Waste Management Acts 1996 – 2008. This shall not apply to the reuse of excavated material within the applicant’s site boundary. The developer shall ensure that all waste removed from site is collected and transported by an authorised collector. The applicant shall ensure that all activities pertaining to collection and transportation are as detailed in any waste collection permit.

**Reason:** In the interest of sustainable waste management.

13. (a) The applicant shall appoint a suitably qualified ecologist to monitor and ensure that all avoidance/mitigation measures relating to the protection of flora and fauna are carried out in accordance with best ecological practice and to liaise with consultants, the site contractor, the NPWS and Inland Fisheries Ireland. A report on the implementation of these measures shall be submitted to the planning authority and retained on file as a matter of public record.
- (b) The monitoring programme and reporting arrangements for the Wood Bitter vetch (*Vicia Orobus*) set out at section 5.4 of the Conservation Management Plan for the species and contained at Appendix 10.4 of the EIS received by the Board on 12th day of February, 2016 shall be complied with. Annual survey and monitoring and the preparation of reports in accordance with the requirement of the Management Plan shall be prepared for a

minimum of five years from the date of the grant of permission and shall be submitted to the NPWS.

**Reason:** In order to assist and record the success of the translocation of the protected species *Vicia Orobus* present on the site and to protect the environmental and natural heritage of the area.

14. Comprehensive details of the proposed lighting system to serve the development shall be submitted to and agreed in writing with the planning authority, prior to the commencement of development. The agreed lighting system shall ensure that there is no light spill into adjoining properties or the public road.

**Reason:** In the interest of visual amenity and the amenity of surrounding properties.

15. All of the flood mitigation measures set out in the flood risk assessment contained at Appendix 12.1 of the EIS submitted with the application shall be implemented in full in accordance with the requirements of the planning authority.

**Reason:** To prevent flooding on site and surrounding lands.

16. All soiled waters generated on the substation site shall be directed to an underground holding tanks proposed. These tanks shall be maintained and emptied on a regular basis and the contents shall be disposed of off site to a licenced facility. Details of the procedure for emptying of the tanks including details of the contractor for the emptying of the tanks and the licenced facility for the disposal of the material shall be submitted for the written agreement of the Planning Authority prior to the commencement of development.

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

17. Prior to the commencement of development the undertaker shall submit proposals for the written agreement of TII regarding the methodology and scheduling of the works required for the crossing of the M6 and the M17/M18 motorways. Details to be submitted shall include proposals to

minimise the impact on the national road network, proposals for traffic management, and methodology for undertaking the works. Approval under s.53 of the Roads Act, 1993 shall be obtained prior to any works in the vicinity of the motorways being undertaken and any costs arising to TII or the PPP operators of the motorways shall be borne by the developer.

**Reason:** In the interests of vehicular safety and to ensure that disruption of the national road network arising from the development is minimised.

18. All fuel storage areas shall be located within bunded areas that have adequate capacity to cater for any fuel spillage and which ensure protection of the fuel from potential flood risk. Details of all such areas shall be submitted for the written agreement of the Planning Authority prior to the commencement of development.

**Reason:** To protect against the risk of pollution of ground and surface waters.

19. The developer shall pay to the planning authority a financial contribution of €42,560 (forty two thousand five hundred and sixty euro) 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 authority may facilitate and shall be subject to any applicable indexation provisions of the Scheme at the time of payment. The application of any indexation required by this condition 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.

**Reason:** It is a requirement of the Planning and Development Act 2000 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.

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**Stephen Kay**  
Inspectorate.

July, 2016.