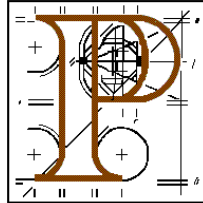


# An Bord Pleanála



## Inspector's Report

An Bord Pleanála Ref. PL07.245518

**DEVELOPMENT:-** Construction of a data centre on lands at Toberroe and Palmerstown, Derrydonnell, Athenry, Co. Galway.

### PLANNING APPLICATION

**Planning Authority:** Galway County Council  
**Planning Authority Reg. No:** 15/488  
**Applicant:** Apple Distribution International  
**Application Type:** Permission  
**Planning Authority Decision:** Grant Permission

### APPEAL

**Appellants:** Noel Kelly and Patricia Heneghan Kelly  
Mary Lindsay  
Pat Larkin  
Concerned Residents of Lisheenkyle (c/o Ms Sinead Fitzpatrick)  
Athenry Golf Club  
Allan Daly  
Julie Bates  
David Hughes

**Types of Appeal:** 3<sup>rd</sup> Party -v- Grant

**Observers:** Edel Grace and Peter Sweetman  
Richard Walsh  
Leonard Fay  
Maeve Kelly  
Eoin Naughton  
Damien Egan  
Eddie Stoker  
Ian Grealley  
Carmel McCormack  
An Taisce  
Laurence F Maher  
Suir Valley Environmental Group  
Brendan McGuane and Mary Lindsay  
Brian Feeney  
Ann Feeney  
Billy Fitzpatrick

**DATE OF SITE INSPECTION:** 27<sup>th</sup> January, 2016 and 6<sup>th</sup> April, 2016.

**INSPECTOR:** **Stephen Kay**

**CONTENTS:**

- 1.0 Site Location and Description
- 2.0 Description of Proposed Development
- 3.0 Planning History
- 4.0 Planning Authority Assessment and Decision
  - 4.1 Internal reports
  - 4.2 Request for Further Information
  - 4.3 Notification of Decision
- 5.0 Third Party Submissions
- 6.0 Observers to Appeals
- 7.0 First Party Response to Third Party Appeals

- 8.0 Other Referrals
- 9.0 An Bord Pleanála Request For Further Information
  - 9.1 response of First Party to Request for Further Information
  - 9.2 Submissions received on Response to Further Information
- 10.0 Planning Policy
  - 10.1 National Spatial Strategy
  - 10.2 Regional Planning Guidelines for the West Region 2010-2022
  - 10.3 Galway County Development Plan, 2015-2022
- 11.0 Overview of Oral Hearing
- 12.0 Assessment
  - 12.1 Principle of Development, Site Location and Consideration of Alternatives
  - 12.2 Impact on Residential and Other Amenity
  - 12.3 Landscape and Visual Impact
  - 12.4 Ecology
  - 12.5 Transport and Access
  - 12.6 Energy Demand, Climate Change and Sustainability
  - 12.7 Other issues
  - 12.8 Environmental Impact Assessment
  - 12.9 Appropriate Assessment

Appendix A - List of Written Submissions Made At Oral Hearing Held on 24-27<sup>th</sup> May, 2016

Appendix B – Copy of order of proceedings for oral hearing as circulated to parties in advance of hearing

## **1.0 Site Location and Description**

- 1.1 The appeal site is located c. 4km to the west of the town of Athenry and c. 12km to the east of Galway City. The site is located adjacent to and to the south of the M6 motorway and the line of the M17 / M18 which is currently under construction runs to the east of the site. A new interchange (Rathmorrissety Interchange) between the M6 and the M17/18 is under construction c.350 metres to the north east of the site at the closest point.
- 1.2 The site comprises a total of 202 ha., the bulk of which is currently in forestry use being owned and managed by Coillte. The forested area comprises a mixture of mature, recently planted and clear felled areas with the majority of the site still covered in mature conifer plantations. The site boundary approximately follows the line of the existing forestry boundary. The site is surrounded by a mixture of agricultural uses with a significant number of dwellings located on the roads which surround the site. In addition, on its western side, the site is bounded by the Athenry Golf Club lands. To the north west, the site adjoins the grounds of Lisheenkyle National School and the national school currently has an 'outdoor classroom' which is located on Coillte lands.
- 1.3 The R348 runs to the south of the site and forms the site boundary for a short section of c. 240 metres at the south east corner of the site. To the north and north west there is a local road which runs within between c.100 and 250 metres of the site boundary. To the west, a further local road runs to the west of the golf club lands.
- 1.4 There is a 220kv power line that runs in a north east – south west direction and which passes close to the north east corner of the site these being the Cashla to Tynagh and the Cashla to Prospect lines. The Cashla substation is located approximately 2.5km to the north west of the appeal site.
- 1.5 The site is in the ownership of Coillte and a letter of consent to the making of the application has been submitted.
- 1.6 There is a concurrent application for the construction of a 220kv substation located to the north west of the proposed data centre building within the existing Coillte forested lands as well as a grid connection, part over ground and part underground, between the current site and the 220kv power line the runs to the north east of the site. The application for this substation and connection was submitted to the Board on 12<sup>th</sup> February, 2016, under the provisions of the Strategic Infrastructure Act, 2006(ABP Ref. 07.VA0020). In subsequent sections of this report this development is referred to as the power supply project.

## **2.0 Description of Proposed Development**

- 2.1 The proposed development is described as comprising a 24,505 sq metre single storey data centre building, a 5232 sq. metre single storey logistics and administration building and a 289 sq. metre maintenance building. The development also proposes a 16 sq. metre security hut and 2 no. 48 s. metre fibre huts having a maximum overall height of 10 metres.
- 2.2 A new access from the public road is proposed to be provided off the R348 with access point located at the south east corner of the development. A looped internal access road is proposed to serve the development. Car parking for the accommodation of 207 no. cars including a total of 7 no. visitor spaces and 50 no internal staff mobility spaces is proposed to be located to the north and north east of the logistics / administration building.
- 2.3 On-site proprietary effluent treatment systems are proposed to be installed and a connection to the mains water supply will be provided. The main treatment system is proposed to serve the administration building and is proposed to have a constructed percolation area that would be located to the north east of the administration building and car park. A second smaller proprietary treatment system is proposed to serve the data hall building and is proposed to be located to the west. Two fire water holding tanks are proposed to be located at the north west corner of the data hall building. Water supply is proposed to be from the existing public water supply which runs along the R348 to the south of the site.
- 2.4 The development proposes the provision of 18 no. standby diesel generators to serve the development and a 20kv electrical substation. The standby generators are indicated as being located immediately to the north of the data hall building and each generator has a rated output of 2MW.
- 2.5 The basic layout of the proposed development is that the data hall is to be located towards the eastern end of the site and orientated in a roughly north south direction. The standby generators to serve the data hall are proposed to be located immediately to the north of the data hall building and the logistics and administration building are indicated as being located to the south. The access and security buildings are located further to the south again from the parking area. Towards the northern end of the overall site is located the area indicated as being the site of the proposed substation. This site measures c. 330 metres east west and 80 metres north south (c. 2.65 ha.) and as part of the proposed development is proposed to be levelled and prepared for the construction of the substation included as part of application Ref. 07.VA0020.

- 2.6 The site is surrounded by a landscaped perimeter buffer area and along the southern and south western part of this buffer zone is located an amenity walk. Access to this walk and a car parking area capable of accommodating 29 no. cars is located at the south east corner of the site outside of the security entrance to the site. It is proposed that as trees are removed from the site to facilitate development that replacement conifer and broad leaved trees would be planted along the site boundary and also between the buildings.
- 2.7 The application is accompanied by a Site Masterplan Drawing (14294.0000) which shows the overall future layout of the site with a total of 8 no. data halls. The additional 7 no. data halls are indicated as being located in a line parallel to and to the west of the first hall. Additional generators are proposed to be located at the northern end of each hall to provide backup power and each hall is indicated as having 18 no. generators. The additional halls are indicated as being connected with a looped internal access road.
- 2.8 The application is accompanied by an Appropriate Assessment Screening Report prepared by the Moore Group Environmental Services and by an Environmental Impact Statement. It should be noted that the EIS submitted with the application has been superseded by a revised EIS which is referred to as the REIS (revised EIS) from here on in this report.
- 2.9 This report should be read in conjunction with that for the substation and grid connection application, Ref. 07.VA0020.

### **3.0 Planning History**

There is no planning history relating to the site.

The site was the subject of a pre application consultation for the proposed construction of a natural gas powered power station (ABP Pre application Ref. 07.PC0010). 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.

There are a number of other applications that are referred to in the appeal submissions and which are of note:

- South Dublin County Council Register Ref. SD14A/0023 – Permission granted to Google for the development of a data centre on a site of 11.25 ha. at Newcastle, Clondalkin, Dublin 22 for the construction of a two storey data storage facility (30,361sq.m.), a double height warehouse building (1,670 sq.m) and a HV Substation area with two buildings; 1 no. 2 storey building (968sq.m.) and 1 no. single storey building (190 sq.m) and associated site development works.
- Meath County Council Register Ref. RA150605; ABP Ref. PL17.245347 – Permission granted by the Planning Authority and granted on appeal for the construction of a data centre campus in 2 phases with a total gross floor area of 76,200 sq. metres together with ancillary administration buildings, new access road and ancillary works including drainage and landscaping on lands at Portan, Gunnocks and Clonee, Co. Meath. The applicant in this case was Runways Information Services Limited – Facebook).
- Wicklow County Council Ref. 10/2123; ABP Ref. PL27.237400 – Permission granted by Wicklow County Council for the development of a data centre on lands at Mountkennedy and Tinnypark Demesnes. This permission was the subject of an appeal to An Bord Pleanála who made a decision to refuse permission. This decision was subsequently quashed by the Supreme Court on the basis that the appeals had been withdrawn prior to the issuing of the decision by the Board.

#### **4.0 Planning Authority Assessment and Decision**

##### **4.1 Internal Reports and Referrals**

Planners Report – The initial report of the planning officer makes reference to the objections received and to the internal reports. The location of the site within the Strategic economic Corridor that runs east from Galway City is noted. The report notes some concerns regarding the choice of location and consideration of alternatives and states that further consideration of alternatives is required. Clarity regarding the statement that the development would be 100% powered by renewable energy is also sought as is clarity regarding the power demand for the development, flood risk and the capacity of the site to cater for effluent disposal. Subsequent to the submission of response to further information a second report of the Planning Officer summarised the response to further information submitted and recommended a grant of permission consistent with the notification of decision which issued.

EIA Statement – there is a report on file regarding the EIS submitted and which summarises the content of the EIS and the further information request issued. This statement concludes that the Planning Officer report dated 8<sup>th</sup> September, 2015 contains a fair and reasonable assessment of the likely significant effects on the environment.

Roads – Initial report recommends further information and highlights issues relating to the level of construction traffic given the raising of ground levels proposed and that construction traffic volumes should be clarified. Construction traffic should not use L3104 or L7108.

Environment – report states that the loadings from the wwtp should be shown and that design and p.e. figures should be indicated. Also stated that compliance with the ground and surface water regulations has not been clearly demonstrated.

Department of Arts Heritage and the Gaeltacht (Development applications Unit) – Stated that the level of information and analysis contained in the screening assessment submitted with the application is limited. Stated that there is no scientific or objective basis presented as to how it has been determined that there would be no hydrological or hydrogeological impacts or contamination of surface or ground waters or that there would not be potential cumulative impacts with the M6 and M17/M18 roads. Stated that there is some information contained in the EIS on these issues / impacts and that this information should be used by the council in the screening assessment. Also noted that the development would result in the loss of some areas of protected species (wood bitter vetch) and that there is further information required regarding the impact on this species. Queries also regarding the impact on Annex IV species and the fact that multi season bat surveys have not been done and no searching for roosts undertaken.

National Roads Authority – states that the authority will rely on the Planning authority to implement national policy. Also notes the potential impact of the grid connection on the national road network and recommends that the planning authority and the applicant liaise with the NRA to address potential issues arising.

An Taisce – submission states that the use of energy by such developments is a key issue and that there is concern that the detail of the commitment to the powering of the development by 100 percent renewable sources is to be determined at a later date. More regard needs to be had to the sourcing of renewable energy. Regarding the location there needs to be consideration of the invoking of the material contravention procedures. A workplace travel plan and a landscape strategy are required.



## 4.2 Request for Further Information

Prior to the issuing of a Notification of Decision the Planning Authority requested further information on a range of issues as follows:

1. That the examination of alternative sites as submitted in the EIS lacks detail and requires further justification for the proposed location to be submitted including zoned land provision in adjoining LAPs.
2. Regarding the reference to 100 % renewable energy sources as set out in the EIS, requires clarification as to how it would be implemented.
3. That the references in Chapter 13 to energy use and energy supply require further clarification.
4. Noted that the hydrology and Hydrogeology sections of the EIS and the submitted Flood Risk Assessment have not taken account of previous known groundwater flooding events in the vicinity. This requires to be assessed in the context of 12.3.7 of the EIS and the issue of climate change also requires clarification.
5. Further details regarding the onsite waste water treatment systems are required including design of the proposed polishing filter and p.e. on which the system is designed. Considered that compliance with the ground and surface water regulations has not been demonstrated.
6. Further details on road and transportation elements including a road safety audit and details of right turning lane and a construction management plan.
7. Justification of the requirement for 18 no. generators on the site and the circumstances where they would be used.
8. Clarification regarding the proposed grid connection in light of the recent legal case regarding grid connections for wind energy developments (O’Grianna v An Bord Pleanála).
9. Provision of a workplace travel plan.

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

1. Regarding alternative locations it is stated that alternative sites in the Galway area were examined. The response details possible sites in Galway City and in other towns / LAPs and concludes that none of the

alternatives set out meet the locational criteria for the development. Exact details of the main alternative sites provided are not given in the response on the basis of commercial sensitivities.

2. Regarding renewable energy the response states that the objective of 100 percent renewable sources will be met by the use of efficient technologies, support for renewable energy generation projects and the purchase of renewable energy from energy providers. Stated that the power demand for the proposed development (Phase 1) is 1.5 percent of current generating capacity and 0.5 percent of projected 2024 generating capacity.
3. Stated that Apple may develop additional data halls on the site (above the initial 1) subject to demand. These additional halls would be the subject of future applications. Connection with the grid network to the subject of a separate application under the strategic Infrastructure act. Confirmation submitted from Eirgrid that the network can accommodate the 30MW demand.
4. That a flood risk assessment was submitted as Appendix 12.1 of the EIS. This assessment includes historical aerial shots of flood events, results from the flood risk modelling undertaken and clarification regarding climate change impacts. The conclusion of the assessment is that there would be no adverse effects on conditions outside the site with respect to flooding.
5. Clarification regarding the waste water treatment system submitted.
6. Regarding roads, a road safety audit was submitted. Regarding construction traffic impacts, reference is made to a number of sections of the EIS. Details of the proposed right turning lane are submitted. A construction traffic management plan has been prepared and submitted.
7. Regarding generators, the predicted noise level has been modelled and presented in tabular and figure formats. Even in the event of a complete power failure the results indicate that the night time boundary noise limit of 45 Laeq 1 hour would not be exceeded at the site boundary.
8. Regarding grid connection and the O’Grianna judgement, the response states that the circumstances of the current case are that the grid connection element of the overall project comes within the SID legislation and that a direct application to An Bord Pleanála is therefore required. Stated that the environmental implications of the grid connection element of the project have been assessed in the submitted EIS.

9. A workforce travel plan has been prepared and is presented in Appendix J.
10. Regarding Nature conservation, it is stated that the AA screening draws on the conclusions of the EIS chapters 4, 10, 11 and 12. The impact on wood bitter vetch is described in 10.5.3 of the EIS and a conservation management plan for the species set out at Appendix 10.4. Stated that this plan drawn up in consultation with the NPWS. Stated that some supplementary survey for bats was undertaken in July, 2015. Stated that as development will only occur on c. 30 percent of the site there will be significant areas remaining for the survival of mammals.

#### **4.3 Notification of Decision of the Planning Authority**

The Planning Authority issued a Notification of decision to Grant Permission subject to 12 conditions. The most significant of these conditions are as follows:

Condition 2 – relates to roads and specifies that no construction traffic shall be permitted on the L3104 or the L7108.

Condition No.4 requires that the applicant shall engage an archaeologist and that the site be the subject of assessment.

Condition 6 – requires the submission of details of all boundary treatments.

Condition No.7 requires the submission of details of all external finishes for agreement.

Condition No.8 specifies that the noise parameters set out in the EIS and the submission of 27<sup>th</sup> July, 2015 shall be met in the development and that monitoring shall be undertaken with results submitted yearly.

#### **5.0 Third Party Appeal Submissions**

A total of 8 no. third party appeals have been received. The following is a summary of the main issues raised in these appeal submissions:

The following is a summary of the main points made in the 8 no. third party appeal submissions received:

### **Allan Daly**

- That the EIS is deficient in terms of consideration of alternatives and in its approach to climate, air, noise and material assets.
- That the description of alternatives and the response of the applicant to the FI request relating to alternatives is inadequate.
- That the case for site selection relies on an exceptionally large site size which cannot be justified. It is based on a potential future development of the site rather than the current application.
- That the impact of the power demand in terms of material assets including electricity generating capacity and grid network impacts has not been adequately assessed. An economic impact assessment of the development on material assets should have been included.
- It is unclear how the existing network / material assets will be able to accommodate the completed development of all 8 data halls.
- The statements regarding renewable energy power do not identify specific power sources, are not enforceable and the renewable power that may be used is not surplus power.
- That the indirect effect of the development in terms of emissions of greenhouse gasses has not been adequately assessed or mitigated.
- That the development should incorporate a cycleway between the site and Athenry.
- That the EIS is deficient in terms of its assessment of the impact on air quality particularly arising from the potential operation of 144 standby generators on the site. An air quality dispersion model should have been prepared. Similarly the impact of the generators in terms of noise has not been adequately assessed.
- That the proposed development is contrary to development management standard 19 which restricts access to this type of road for commercial development.

### **Concerned Residents of Lisheenkyle (c/o HRA Planning)**

- That the choice of location is based on a site to accommodate 8 no. data halls however there is no indication as to when if ever these additional halls would be built.

- That the location of the proposed development outside of any identified settlement is inappropriate and is not supported by land use policy. Other permissions for similar developments (Facebook and Google) show that there is no need for a development to locate in an un serviced rural area. Alternatives at a regional / national scale have not been addressed.
- That while the site is located within what is identified in the Development Plan as a Strategic Economic Corridor (Objective EDT1), this is not a landuse zoning. Rather it is a tool to assist in the identification of suitable sites and is not a site or location specific designation and sites for development should be identified in a LAP.
- With regard to the specific provisions of Objective EDT1, the site is not serviced, proposed development is not necessarily of a national or regional scale or necessarily of high value. Employment is limited and would appear to be overstated by the applicant. The site contains protected species (wood bitter vetch) and the location is not zoned or located within a local area plan.
- The proposal shows disregard for regional and local planning policy and a plan led approach to development. The development is not of strategic importance and is not supported by regional policy.
- Submitted that there are alternative locations available in the general area including a 97 ha, site off the M6 motorway in Athenry where further expansion would be possible. On the western side of the R348 there are 52 ha. of zoned lands (business and technology lands) and a further contiguous 137.5 ha. which are agricultural and which could be rezoned. A permitted alternative location for a data centre in Wicklow also exists.
- That site size has been the main criteria in site selection despite the fact that the development will only occupy c. 30 percent of the total site size.
- That the assessment of alternatives should be on the basis of the development as applied for (1 data hall) rather than the potential future development of a further 7 no. data halls. There is no clarity regarding timescale or phasing of future development. The site choice appears to be influenced by site size.
- That the proposed development only uses 30% of the total site yet the alternatives case made relates to the full 197 ha. site proposed.
- That the Board refused permission for a data centre on un zoned and un serviced lands at Newtownmountkennedy, Co. Wicklow (PL27.237400). Similarly, the current proposal should be refused.

- That the biodiversity of the site will be adversely affected and has not been adequately addressed in the application. The habitat lost is compounded by its isolated location.
- That the application does not adequately address cumulative impacts, including those relating to the grid connection and substation aspects of the development. It is noted that the application EIS states that the EIS for the grid connection is in preparation (4.2.2) indicating that the impacts of that aspect of the overall development had not been assessed.
- That the outcome of the O’Grianna case shows that applications must include details of all aspects of the development including grid connections and this is not achieved in the current application.
- That the proposed development results in project splitting and both applications must be assessed together. To comply with the EIA directive all works that will form part of the overall project must be included in the application.

#### **Pat Larkin**

- The proposal is located on agriculturally zoned lands and disregards planning policy.
- That the site selection process was flawed. Specifically there is an alternative site in Wicklow on which permission was granted in 2014.
- No consideration given to EU habitats and water directives.
- The site is within a state owned bog.
- That the development is premature as the site is not zoned. To permit its development would be an effective subvention for the applicant.

#### **Athenry Golf Club**

- Concerned regarding the impact of the development on the hydrology of the area and the impact on the frequency of flooding of the golf course lands that already occurs.
- That Apple have agreed that the drainage design of a future application would be the subject of consultations with the golf club representatives. Acknowledged that the current proposal is unlikely to impact the club lands however future phases of development have the potential to adversely impact. The response to the further information request issued by the planning authority is not considered satisfactory.

- That contrary to the statement in the further information response, no works have been undertaken to the golf club lands to address flooding issues on the course.
- In the event that permission is granted it is requested that construction activities on a Saturday are restricted.

### **Julie Bates**

- That despite the submission of further information the issue of alternatives has not been adequately addressed. Not credible that this is the only suitable site.
- That the location of the site within the economic corridor does not exempt it from the requirement to be zoned. A grant of permission would assume that the lands would be zoned for development and would be premature.
- That the development contribution levied by the council is less than that required under the contribution scheme.

### **David Hughes**

- That the description of development is misleading as it does not detail the level of power demand and it is not clear that the development is proposed to be phased or that the application is for one rather than 8 data halls.
- That the further information submitted to the planning authority should have been open to further submissions from the public.
- That the schedule of conditions attached by the Planning Authority levy contributions at a rate based on the entire development and it is therefore apparent that the council granted permission for the entire development.
- That the power demand of the development of 8 data halls is huge – the equivalent of 420,000 homes. Hard to see how the development creating 215 jobs can be justified in this context.
- That the renewable energy stated to be used to power the development has significant additional costs in terms of backup generation, emissions, and costs such as REFIT.
- That the effect of the expansion of wind energy will actually result in increased emissions. Current wind penetration in Ireland is approaching 20 percent. The estimates for the limit for wind penetration vary with some stating 25% but a general absolute maximum of 40 percent.

- As it is, it is likely that Ireland will miss its 2020 emissions targets. Fines for this could be very significant.
- That there is a clear case of project splitting with the overall development.
- That the issue of cumulative impacts is not adequately addressed in the development.
- That there is an alternative to the location of the appeal site which would be closer to centres of population and would facilitate the use of the excess heat generated in a district heating system.
- That the centralised data centre model is liable to terrorist attack.
- That the development is now consistent with Objective EDT1, particularly as it relates to the location relative to population and the potential for heat recovery.
- The response to alternatives issue in the FI is inadequate and citing commercial sensitivities is not acceptable.
- That the response of the Planning Officer / Planners Report to the further information response is not accepted.
- That the statement that the development will enter into a power agreement with renewable suppliers is only a token gesture.
- That the figures cited by the applicants do not take account of capacity factors and the actual level of wind generation required will be c.4 times the nominal level.
- That rather than being a catalyst for achieving increased renewable generation the proposed development will actually act to push the target of 40% renewable energy further away.
- That increased renewable power generation has implications for the scale / capacity of the grid due to accommodating variations in wind generation levels / capacity factor. There are therefore very significant grid reinforcement costs associated with the development that are not quantified. The information from Eirgrid only relates to the initial 30MW demand. There is no reference to the implications of the full build out.
- The cost of the grid works and back up generating capacity would be socialised in the event of permission being granted.



### **Mary Lindsay**

- That the location of the entrance will mean that construction traffic will pass her house at a level of 10 trucks per hour during construction. Requested that the entrance be moved as far to the west as possible or that the existing entrance would be used.
- That the relocation of the entrance would be facilitated by the removal of the dangerous bend in the R348 to the west of the forestry access.
- Concerned regarding the impact of construction on drinking water well serving her house and mothers house.
- Concern regarding impact of blasting on structure of dwellings.
- Needs for control of construction traffic speeds.
- Hours of work proposed not acceptable, particularly the proposed 07.00 to 1600 hrs on Saturdays.
- That contrary to the statement in the EIS there will clearly be a negative impact on bats due to habitat removal and new lighting. There is also a potential impact on badgers and both species are protected.

### **Noel and Patricia Heneghan Kelly**

- That the entrance location will result in traffic passing and noise impacts. The location of the entrance should be revised to be relocated to the west. The dangerous bend in the R348 should also be removed.
- The hours of work proposed are not acceptable, especially the proposed works on Saturdays from 07.00 to 16.00 hrs.
- Rock blasting propose will have an adverse impact on private wells, the structure of houses and on wildlife, particularly bats and badgers.

## **6.0 Observers to Appeal**

Observations on the appeals have been received from a total of 16 no. parties as follows:

- Edel Grace and Peter Sweetman
- Richard Walsh
- Leonard Fay

- Maeve Kelly
- Eoin Naughton
- Damien Egan
- Eddie Stoker
- Ian Greally
- Carmel McCormack
- An Taisce
- Laurence F Maher
- Suir Valley Environmental Group
- Brendan McGuane and Mary Lindsay
- Brian Feeney
- Ann Feeney
- Billy Fitzpatrick

The following is a summary of the main issues raised in these submissions:

- That the nature of the development is very unclear. It is not clear whether the development proposed and permission relates to one data hall or all eight. It is noted that the decision of Galway County Council included a financial contribution for the entire development. Is the permission a grant of permission for one data hall and an outline permission for the other seven ?

***EIA and Cumulative Impacts.***

- That the EIS and EIA undertaken was invalid having regard to the findings in the O’Grianna case. The data centre and the grid connection / substation is one project. The response to further information requested by the Planning Authority states that the SID application will be submitted and that an EIS is being prepared indicating that cumulative impacts cannot be accounted for.

- The findings of O’Grianna indicate that the grid connection details must be included in the application and in the EIA process. This is not the case in this application and therefore a comprehensive EIA cannot be undertaken.
- Submitted that it is not acceptable for the two applications to be submitted concurrently but that the overall development should be included in the one application. The Board must refuse permission on the basis of project splitting and premature development.

### ***Site Location***

- That the site is an isolated one, unserviced and not zoned for development and which is not served by public transport. Development would be contrary to Galway County Council’s development plan. The material contravention procedure needs to be invoked.
- That the proposed location is contrary to the provisions of the national Spatial Strategy and the National Planning Policy Statement as they relate to orderly plan led development, sequential development and ensuring that the right development is in the right location. The development would also be contrary to the principles set out in Smarter Travel and would be contrary to development plan objective DS3 regarding promotion of integrated and sustainable development, DS12 which promotes service led development on serviced lands, Strategic Aim 4 which seeks balanced urban and rural development and Objective SS5 which seeks to support the development of key towns.
- That there is 96 ha. zoned serviced site in Athenry that would be a suitable alternative location.
- That An Bord Pleanála previously refused permission for the development of a data centre on zoned lands at Newtownmountkennedy County Wicklow, (Ref. PL27.237400) on the basis of seriously injuring the amenities and landscape character of the area and that it would be contrary to the principles of Smarter Travel. The Board should be consistent and take the same approach in this case.
- That the nature of data centre development is not understood and that to make provision for this development in the future there is a need for a national policy document that would take account of all potential impacts.

### ***Development Plan Policy***

- The proposal is contrary to Objective EDT 7 of the Plan which seeks to align enterprise with serviced lands and to encourage industrial and enterprise development to operate from lands zoned for such uses in the local area plans.
- The proposal is contrary to the Transportation strategic aims as set out in the development plan (5.1.1) which makes reference to the promotion of development on serviced lands and would be contrary to the overall development strategy of the County Development Plan.
- That the development would be contrary to Objective TI6 of the plan and DM standard 19 as they relate to commercial development accessing onto national and regional routes, including restricted regional routes of which the R348 is one route.
- That there is a planning history of refusal of permission for commercial developments in this location as well as an application for a gas fired electricity generating plant that was withdrawn. The same principles that guided these refusals of permission for commercial development in a rural area should be applied to the subject proposal and this applicant should not be afforded special treatment.
- That parts of the site are prone to serious flooding. The removal of the existing forestry and the proposed development would exacerbate this flooding risk. Galway County Council have recently granted permission for the demolition of a dwelling located at the golf course end of the site that is the subject of flooding, (Ref. 13/522). The decision of the Planning Authority to grant permission has not had regard to the provisions of the Planning System and Flood Risk Management Guidelines.

### ***Pollution Impacts and Flooding***

- That there is a lack of information regarding the cooling water from the proposed development and the processing of the waste streams from the development. The site is located on an important aquifer that is classified as vulnerable. There is a risk of the project impacting on the achievement of good status.
- There is a concentration of waste water treatment systems in this location and that taken in conjunction with these systems the proposed development could have an adverse impact on groundwater and public health.

### ***Archaeology and Ecology***

- That the development would impact negatively on recorded monument GA083-061 (enclosure) which is subject to protection.
- That the loss of species, especially the Vetch is of concern and it is noted that plants have been relocated prior to a decision on the proposal.
- That the development involves the use of chemicals to clean the cooling systems and that this could have an impact on public health.
- That the biodiversity in the woods has not been adequately considered in the decision of Galway County Council. Species include the badger, pine martin, squirrel and bats as well as the wood bitter vetch.
- Negative impact on adjoining farm properties and risk to animals (including pedigree sheep) due to the development of the perimeter walkway proposed and the impact of noise generated by the development.

### ***Energy Demand and Supply Impacts***

- That the statements in the EIS regarding the development being powered by 100 percent renewable power is contradicted by statements that renewable power will be purchased to match that used by the facility.
- That the requirement that the development be served by 100 percent renewables is not feasible. The limit to the amount of renewables that the grid can support is c.42 percent and 960MW of wind energy will need to be installed to support the development (25% capacity factor). Where is the renewable energy project and grid development requirements assessed in the EIS ?
- That the energy demand of 240MW (full build out) is equivalent to 80 DART systems or the electrification of the entire railway network four times over.
- That the proposed development will lead to pressure for further grid development works, pylons, and wind turbines.

- Implications for the grid in terms of loading and necessity for upgrades to accommodate the development. Will the development take up grid capacity that could be used to serve more beneficial employment generating projects. What is the cost of the necessary upgrades in the future. Who will pay for the required deep connection to the grid to facilitate this development.
- That the statement of the development being powered by renewable energy is not realistic. Statements of supporting renewable projects lack detail. When the wind is not blowing then there will not be renewable power available.
- The development is predicated on renewable energy projects however their location is not specified. These projects should also be the subject of EIA. What if the renewable energy demand from this development results in an increase in the level of energy required to be provide from renewable sources to meet targets.
- The EIS and application is inadequate in addressing the energy demand impacts arising from the development and the potential impact on climate change.
- That in the case of the proposed data centre development at Clonee, Co. Meath for Facebook Refs. PL17.245347 and 17.VA0018, the Inspector noted the issue of energy usage, climate change impact and achievement of renewable energy targets but stated that it was considered that requiring the use of sustainable energy sources would be onerous and very unreasonable and that the issues raised regarding climate change and national energy strategy are more appropriately considered at national policy level. The report stated that should the Board not agree with this interpretation then it is open to it to ask further information. The Board granted permission for these developments making no reference to the issue in its reasons and considerations.
- That the outcomes of the Kelly and O’Grianna legal cases requires a review of the long held failure of An Bord Pleanála to address direct and indirect climate, energy, emission, transport and other effects of projects.
- That the Board should request Apple to provide a parallel renewable energy investment strategy for Apple supported renewable energy projects with a net input into the grid that matches that of the proposed development.

- What are the benefits to Ireland of the form of development proposed. The proposed development would make meeting Ireland's renewable energy targets more difficult and potentially liable to emission penalties or fines for not meeting renewable targets.
- That the energy demand for the project would equate to 240MW or 8.4 percent of national demand and equivalent to 420,000 homes.
- That the EPA estimate that Ireland will fail to meet its 2020 renewable energy target and that the potential fine is c. €1.6 billion. The proposed development would increase the energy demand and make meeting the targets more difficult and the fines greater.
- That the impact of the capacity factor for renewables means that the 240MW of wind energy required by the data centre will require 960MW of renewable power development.
- That the centralised data centre model proposed is outdated technology and decentralised servers connected by fibre optics already exist.
- That the potential for a location that would enable district heating to be pursued should be examined. Such infrastructure that would enable decentralised servers and heating have been installed in homes in Germany and Holland.

### ***Residential and General Amenity***

- The noise and pollution from the backup generators would lead to serious pollution and residential amenity issues.
- That the operational noise impacts have not been adequately addressed in the EIS. The use of the 18 back-up generators is not anticipated in the EIS and there is no assessment of the potential impact of a power outage in a situation where the entire 8 no. data halls have been completed.
- The potential impact of the running of the backup generators on air quality is not adequately addressed. These emissions would be in an area with sensitive receptors in the form of houses and school and also the combined effect with the adjacent M17/18 and M6 motorways.
- That there is a case in France where a data centre was directed to cease operations on account of the noise impact of the generators and the cooling system (observations of Sinead Fitzpatrick and Brian Freaney).

- That the substation on the site will result in electromagnetic fields that would have a negative impact on human health.
- That the development will have a negative impact in terms of visual amenity and the impact of lighting. The development has no place in a rural area.
- That the site is within the zone of influence of Carnmore Airport and the lighting impact of the proposal may have an impact on the safety of the airport operations.
- That the loss of 197 ha. of woodland will have a significant loss of amenity and recreational lands currently used by the public. It is one of the few amenities in the area and its loss would be contrary to the core purpose of Coillte as stated on their website. The site should be retained as a publically accessible amenity.
- That Ireland now has the second lowest level of forestry cover in Europe.
- That the full biodiversity impact of the removal of the trees from the site has not been set out in the EIS and these issues were raised by the DAHG in their submission to the Planning Authority. The loss of habitat in this case is compounded by the fact that it is isolated.
- How will Coillte replace the trees lost as a result of this proposal and at what cost.

### ***Other Issues***

- The loss of forestry will result in a loss of carbon storage.
- Negative impact on the bloodstock industry arising from the need for more wind turbines.
- That there are lisins (graves of un christened children from famine times) located in the woods.
- That the level of information presented and resources of the application relative to that available to local residents is unbalanced and fundamentally unfair.
- That the proposed 144 no. diesel generators and associated diesel storage tanks would result in a risk of explosion and fire. Such an incident could impact on the local Lisheenkyle NS and the emissions from the generators could also impact on the school.



- That the unzoned nature of the lands means that they will be available to Apple at very significantly less cost than would be the case were it on zoned serviced lands. This could be seen as effectively an indirect grant to Apple which could be contrary to EU law. This proposal for development on unzoned lands should not be treated any differently to any other prospective developer of the site.
- That there was a previous proposal for a power station in this locality which was withdrawn before a decision was issued, (Observer – Ian Greally).
- That clarity regarding the level of employment likely to be created is required. Facebook development states that 40 jobs so scaling up that would be c.90 for this development and a lot less than the 215 cited by the applicant.
- That the Inspectors Report on the case of the Facebook data centre in Clonee appears to have regard to the National Economic Strategy which supports the development of cloud technologies. Should this however be at any cost ?
- That the proposed substation / grid connection development is not SID. It is not of strategic economic importance to the state or region and would not contribute to the NSS or RPGs.
- That the access to the wood is at a dangerous location on the road.
- That the statement at 13.4.2 of the EIS that the proposed development would not have an impact on property values is not supported by professional or expert opinion.

## **7.0 First Party Response to Third Party Appeals**

The following is a summary of the main issues raised in the response to the grounds of appeal submitted by the first party:

### ***Location and Alternatives***

- That as set out in the EIS the site is suitable for development, being located convenient to power / grid network and the Cashla substation. The site is not particularly environmentally sensitive and is located such that the development can be well screened from surrounding properties and views.

- That a masterplan for the overall development of the site has been submitted and that a minimum site size of 360 acres is required to accommodate the overall development.
- That contrary to the claims of the appellant, the development is consistent with local and national planning policy (see Chapter 5 of EIS). Reference is made in the Regional Planning Guidelines to economic corridors and the development is consistent with Objective EDT1.
- That the site has been the subject of a master planning exercise to indicate that the proposed development will comprise part of a coherent and appropriate build out of the site subject to permission. The site size of 360 acres is required to accommodate the 8 phases proposed over the next 15 years.
- That the development of the site is consistent with the development of the Oranmore to Athenry Strategic economic corridor as provided for in the RPGs.
- The site is consistent with a framework plan prepared for the council in 2005. The strategic economic corridor dates back to 2005 and was incorporated into the development plan in 2006. The proposed use is consistent with the uses envisaged for the corridor. Chapter 5 of the EIS sets out how the proposal is consistent with national and local planning policy.
- That over 20 sites were examined before the appeal site chosen. The EIA directive requires that the applicant / EIS provide an outline of the main alternatives. The reasons for the choice of the site are set out in section 2.3 of the EIS and in the FI response submitted to the planning authority. The site is located relative to power supply and would not have a significant impact in terms of visual amenity or emissions.
- That references to an alternative data centre site in Newtownmountkennedy are noted however this site is 34.7 ha. (86 acres) and is therefore not large enough.
- Similarly the reference in the appeal of Allan Daly to a site of 97 ha (233 acres) off the M6 is noted however it is not large enough to accommodate the full build out of the development.
- That the Directive and Irish regulations specify that applicants should give an outline of the main alternatives considered. This has been undertaken in Chapter 2 of the EIS. Further details regarding

alternative sites was provided in response to the Planning Authority's request for further information.

- Regarding contention in the submission of Mr David Hughes that opportunities for connection to district heating or the use of a distributed / decentralised model to deliver data storage stated that no such opportunities were identified in the site selection process. Stated that the suggestion that the development would be decentralised across several thousand private residences is noted however this is not feasible from perspective of data security as well as the cost of additional infrastructure including server maintenance costs and water and air heating systems in the properties.

### ***Ecology***

- That a conservation management plan for the Wood Bitter Vetch was prepared in conjunction with the NPWS. This plan provides for the protection of the plant on the site, significantly greater than is currently the case. The NPWS has issued a derogation licence for the implementation of the conservation plan. In terms of disturbance to wildlife, the site is currently operated as a commercial forest with resulting noise and disturbance.
- That a detailed assessment of the impact of the proposed development on mammals is given in Chapter 10 of the EIS.
- A detailed assessment of the impact of the development on bats was undertaken and recorded in the EIS. Additional survey work on bats was undertaken in the summer of 2015 and supports the conclusions of the EIS. The proposed planting of the outer areas of the site with broadleaf and conifer species would support bat populations. No evidence of badger activity was recorded on the site.
- The site is currently a commercial forest and that the activity on the site would be comparable in terms of noise and disturbance to the proposed construction activity. It should also be noted that construction of phase one would only involve part of the north east and north of the site.
- That the level of bat activity recorded in surveys for the EIS has been supported by subsequent surveys in the summer of 2015. Bat populations will be supported in the outer perimeters of the site and there will be no loss of roosting potential.

- That the site has low badger activity and the development will not impact on locations where badger activity was noted.
- That the proposed development would be in accordance with the EU Water and Habitats Directives and that the screening for appropriate assessment undertaken concludes that there would be no significant effects on the qualifying interests of any natura 2000 site.

### ***Environmental Impact / EIS***

- That all cumulative impacts have been fully assessed and presented in the EIS. Regarding project splitting, it is submitted that an application can be in the form of more than one application provided that the cumulative impacts of the overall development are considered as part of the EIA process. Contended that cumulative effects have been considered in the EIS under a range of headings.
- That contrary to the statement of the appellants the cumulative effects of the development, including the cumulative effects with the proposed substation and grid connection has been fully addressed in the EIS. Chapter 16 of the EIS sets out the cumulative effects.
- That the proposal does not constitute project splitting and the cumulative impacts of the data centre and grid connection / substation have been assessed in the EIS. A project can be in the form of more than one application provided that the cumulative effects of all elements are considered.
- That the response to FI (Galway County Council) included a letter from Eirgrid dated 1<sup>st</sup> July, 2015 stating that adequate power to serve the development is available. Eirgrid also state that the 30MW load will not impact on local transmission and connection to the 220kv network can be undertaken without impacting on supply.
- That all of Apples data centres have be powered by or offset with 100 percent renewable energy.
- That on opening it is projected that the Apple development will use c. 6MW of power and will not reach 30MW power demand for several years. 6MW represents c. 0.79 % of power generation nationally while 30MW would be 0.78 % of power generation in 2021. 2014 generation is not a good baseline indicator to use as the level of energy requirement is lowered due to the recession.

- That Apple has begun work with renewable energy suppliers to create new generation within the RoI to match the usage of the Athenry facility.
- That Eirgrid's resource adequacy projections show a generation surplus of over 800MW into 2024.
- That the demand created by Apples participation in procuring renewable energy from existing sources will lead to the planning of new projects or the acceleration of already planned projects.
- That Apple are examining a number of options for renewable projects (wind, solar and biomass) and by investing in these projects can minimise the impact on Irish generating capacity.
- That Apple is committed to the principle of additionality in generating capacity and as such will assist in reaching the 40% renewable electricity target by 2020.
- That since 2012 all of Apple's data centres have been powered by or offset with 100 percent renewable power and this development will be the same.

### ***Roads and Traffic***

- That Class II regional roads allow for access for industrial uses in the case of essential needs. In the case of the proposed development there is no alternative viable access available.
- That the entrance to the site is c. 135 metres from the appellants dwelling and will not therefore give rise to a nuisance. It is also incorrect that 10 trucks per hour would access the site at construction. This would be a peak construction level and would be infrequent. Traffic accessing the site would be split between east and west access routes reducing the impact on the appellant's property. The bend in the R348 referred to is not on the site and not in a location within the control of the applicant.
- That the entrance junction and R348 would be within capacity for all phases of the proposed development and future phases, including during construction.
- The access arrangements to the site was the subject of a Stage 1 road safety audit.

### ***Impact on Residential Amenity***

- That the hours of operation specified by the Planning Authority are 08.30 to 14.00 on Saturdays and this is not objected to by Apple Distribution International. Noted that the permitted hours on the M17 / M18 are 08.00 to 16.30 on Saturdays.
- That noise is assessed at chapter 8 of the EIS and that the maximum noise level will be below the 50dB(A)<sub>L<sub>aeq</sub></sub> level.
- That the contractor for the development would be required to meet the NRA vibration limits for construction and no significant impacts from vibration is predicted, (see EIS 4.3.1 and 4.8.4).
- That blasting will have to meet NRA vibration limits and Apple is committed to undertaking condition surveys of properties prior to development being undertaken.
- That the peak construction phase traffic will be 10 truck movements per hour. It is submitted that 10 movements per day would be a realistic average.
- That the power source from 220kv is very secure and so the likely instances of a need for the stand by generators is very limited. There will be 4 no. independent 220kv circuits supplying the site which will ensure security of supply.
- That the standby generators will be the latest Tier 4 specification with emission control. The generators for Phase 1 will be 1.8km from the national school, much further away that is the M6.
- That the testing of generators will be monthly and for c. 20-30 minutes.
- That if the 18 generators were operated for 12 hours annually it would generate 108 metric tonnes of CO<sub>2</sub>, miniscule relative to the 57.8 million metric tonnes emitted in Ireland each year. There will be no perceptible effects on air quality at any sensitive receptor outside of the site.
- A noise assessment of the impact of the 18 generators submitted as part of the FI response to galway County Council indicates that the maximum level is predicted to be 44 dB<sub>L</sub>A<sub>eq</sub> and therefore lower than the standard night time limit of 45 dB<sub>L</sub>A<sub>eq</sub>.
- That the need for back-up generators in full build out of the site is likely to be limited by the fact that the 220kv power supply is very reliable.

### ***Other Issues***

- That the disputing of the number of employees ignores the fact that there will be a substantial administration and logistics building on site.
- That the amount levied as a development contribution under s.48 of the Act is set out in the report of the Planning Officer and is a matter for the Planning Authority.
- That Apple will pay the full commercial value of the site when acquiring it from Coillte and there is no basis to the statement that the granting of permission would be an effective subvention of €50 million.
- Regarding hydrology and flooding, it is submitted that the results of the Flood Risk Assessment (Appendix 12.1 of EIS) indicates that the proposed development would not worsen current flood risks in the area.
- That the construction activities will be located in excess of 1km from the golf course and mitigation measures for noise and vibration will ensure that there would not be significant adverse impacts on the course on Saturdays.
- That the nature and extent of the development was adequately described in the public notices and that there is no requirement to specify the power requirement.
- That there is no clear basis as to why the development might be the target of a terrorist attack.

### **8.0 Other Referrals**

The application was referred to the Irish Aviation Authority for comment. No response was received within the time period specified.

The application was also referred to the Development Applications Unit of the DAHG and a response dated 20<sup>th</sup> January received. The following is a summary of the main issues raised in this response:

- That in the event of a grant of permission conditions relating to archaeology should be attached as per submission dated 7/7/2015.

- Notes that the comments of the NPWS were not sought and received in advance of the request for further information issued by the Planning Authority and that this request did not include any further nature conservation issues.
- Notes that the comments made to the Planning Authority still remain valid and that the Board will have to undertake screening for appropriate assessment. The available screening assessment will have to be augmented by further scientific information drawn from the EIS and FI response in order that a screening assessment conclusion can be reached.
- Noted that the site has been the subject of a licence to take protected flora, alter or otherwise interfere with the habitat or environment of a species (wood bitter vetch) and that some aspects of the works sought under this licence have been undertaken. Stated that the Board should ensure that the requirements of this licence and associated 'Conservation Management Plan' are included in the Boards considerations when undertaking EIA.

Subsequent to the request for further information issued by An Bord Pleanála and the response of the applicant, a copy of the further information response was sent to the Development Applications Unit for any further comment with a last date of 29<sup>th</sup> march, 2016. No response to this referral was received from the Development Applications Unit.

## **9.0 An Bord Pleanála – Request for Further Information**

Following an initial review of the application documentation and appeal and observer submissions, the applicant was requested to submit a number of items of further information. The issues raised in this further information request can be summarised as follows:

- Justification for the site selection given its location in an unserviced rural area and details of alternatives considered and justification for the site size required.
- Further details as to how the commitment to 100 percent renewable energy would be achieved.



- The submission of a revised EIS which presents a clear and logical overview of the potential future impacts from the overall development incorporating both the data centre element and the substation / grid connection. A revised EIS shall also address the predicted impact from the proposed development (Phase 1 – one data hall) and the future phases of development. In the event that the statements regarding sustainable energy cannot be sustained, the revised EIS should also address the potential direct and indirect effects arising.
- Comment on the concerns expressed by the NPWS regarding the content and format of the Appropriate Assessment screening and also the extent of survey work undertaken.
- Overview of ground characteristics in the proposed percolation areas.

### **9.1 Response of First Party to Request for Further Information**

A response to the request for further information was received by the Board on 12<sup>th</sup> February, 2016. The applicant was subsequently informed that revised public notices were required and these were published on 4<sup>th</sup> March, 2016. The further information submitted can be summarised as follows:

- A more detailed justification for the proposed location which details a total of 25 sites that were considered throughout the country. Assessed against the criteria set out for the site by Apple, a matrix of the suitability of each site is presented. The response also specifically addresses the alternative locations suggested by the third party appellants.
- A revised EIS (REIS) which presents the impact of the proposed development in a more coherent format. Specifically, the assessment of impacts makes a clear distinction between the impact of the proposed development (single data hall) and the overall development of all eight data halls as well as in combination effects with other relevant plans and projects, including the proposed substation and grid connection (Ref. 07.VA0020). It is considered that the structure of the revised EIS is a significant improvement on that originally submitted and presents the predicted environmental impact of the data centre and substation / grid connection development in a more coherent way than the original document. The revised EIS also makes an assessment of the likely environmental impacts of the proposed development in the event that the power for the development is not from 100 percent renewable sources.

- Regarding renewable energy, the applicant has clarified that it is proposed that energy would be supplied via the national grid but that the applicant would enter into agreements with suppliers of renewable power to purchase the required amount of energy to power the relevant phase of the development. It is also clarified that the proposed grid connection can accommodate the anticipated power demands of the development (Phase 1). Case presented as to how there would be sufficient renewable power available to cater for the development.
- Details of a further bat survey undertaken in July 2015 have been presented. Stated that the results of this survey support the previous results obtained. Additional ecological surveys of Wood bitter vetch also undertaken. Revised appropriate assessment screening report has also been submitted.
- A summary of ground conditions in the area of the proposed percolation area provided.

## **9.2 Submissions Received on Response to Further Information**

The public notices dated 4<sup>th</sup> March, 2016 invited comments on the further information submitted by the first party. The following is a summary of the main issues raised in the submissions received relating to the further information response, focussing on those comments which specifically relate to the further information response:

### ***Site Selection and Alternatives***

- That the gross site area to net development area proposed for the development is not consistent with other data centre proposals.
- That the sites included in the more detailed site assessment matrix submitted comprise 23 out of the 25 which clearly don't meet the criteria. Why was the Newtownmountkennedy site not included in the table.
- That if the 360 acre site area is so important why is the application not for the full development.
- That the Derrydonnell site is actually within 282km of the Wyfla nuclear facility in North Wales and that a new nuclear facility will be located adjacent to Wyfla in the near future. Many other data centre developments in Ireland and also other Apple developments in the US

do not meet the requirement for a 320km separation from a nuclear facility.

- That other rejected sites have adequate levels of screening to meet the criteria.
- That the Wicklow site (Mountkennedy demesne) not included in the assessment meets the requirements regarding proximity to population and educational centres.
- That the proposal for phase 1 of what is now clarified as a larger development comprises project splitting.
- That the proposed use is contrary to the provisions of the development plan.
- The development remains premature pending the submission of details for the grid connection.
- That clarity is required with regard to the number of jobs created.
- That the 'wider' impact of the proposed development in terms of deep grid connection costs, fossil fuel emissions and the need for additional renewable sources with subsidies and potential fines for not meeting renewable targets have to be taken into account.
- The implications of the additional energy generation required to serve the development on the grid has not been covered in the EIS.
- That centralised data centres are old technologies and will be replaced by decentralised storage.
- That if permission is granted for one hall then the Board is effectively vesting the applicants interest to construct the entire masterplan.
- That the scale of development is unprecedented and should have been the subject of phasing. If only phase one of the development was to progress then the locational rationale for the site would not stand and a grant of permission would be a significant underuse of site and poor planning.
- That the site selection criteria are unrealistic. They are based on a full build out of the development / masterplan whereas only one data hall is proposed.
- That at the rate of build out of other Apple centres the development of 8 halls would take over 30 years rather than the 10-15 stated.

- That the use of space in the layout is very inefficient with a site area to floorspace ratio of 9.5: 1.
- Other permitted data centre developments indicate that there is no requirement to locate in an unserved rural area.
- That the site selection criteria have not been sufficiently challenged or justified.

### ***Renewable Energy and Climate Change***

- That the claims of power from 100% renewable energy is clearly not correct. The additional demand will be served by fossil fuel sources. Why is the renewable energy provider not identified. The reliance on statements of 100% renewable energy should be removed from the EIS and in the absence of such revisions permission should be refused.
- That the Climate Section of the revised EIS is fundamentally flawed. Stated that the CO2 emissions from full build out would be c.870 thousand tonnes which is c.1.5% of Irelands CO2 emissions for 2014. Section 9.8.7 of the EIS states that such an impact is not significant.
- That the EIS should be revised to include air dispersion modelling and the results compared to ambient air quality standards.
- That the 'costs' of the proposed development in terms of loss of generation surplus capacity, grid upgrades, greenhouse gas emissions and deforestation need to be taken into account.
- That the applicant has not given any commitment to future phases of development and the application has to be assessed on the basis of Phase 1 as proposed.
- That the only way to achieve the COP 21 targets (Paris Climate Agreement) is to reduce total energy demand. Additional energy demand, even from renewable sources, will not enable the COP21 targets to be met.

### ***EIS / EIA***

- That there are now two EISs for what is essentially the same overall project. This would not be a problem if the two documents were identical but they are not. This is detrimental to the public and the clarity of the process. The applicant should be required to combine the EIS into one document.

- That the revised EIS (REIS) is particularly contradictory where it relates to alternatives. Alternatives are assessed on the basis of the full masterplan whereas in other sections the REIS assesses impacts of Phase one with the full build out considered in terms of cumulative impacts.
- Inadequate consideration given to alternative layouts, formats and processes for the data centre.
- That the REIS submitted is not sufficiently independent and the content relating to renewable energy is particularly biased.
- That the proposal continues to constitute project splitting.
- That the additional bat survey work undertaken is inadequate in scope. Inadequate consideration of the impact of habitat loss and fragmentation. Statement that hen harrier observed likely to be passing through not supported.
- That the location and scale of the proposed substation has changed significantly since the original submission. It is now significantly closer to houses located to the north of the site.
- That should An Bord Pleanála be mindful to grant planning permission that a condition should be inserted requiring that the developer engage with the Athenry Golf Club to ensure that adequate provision is made to protect the golf club lands from flooding.

## **10.0 Planning Policy**

### **10.1 *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.

## **10.2 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.

## **10.3 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 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 – Athenry) 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.

## 11.0 Oral Hearing

A joint oral hearing into the proposed development of the data centre which is the subject of this appeal and the application under the Strategic Infrastructure Act for the construction of a substation and grid connection was held over 4 consecutive days, 24<sup>th</sup> to 27<sup>th</sup> May inclusive in the Connacht Hotel, Galway.

A full list of written submissions made to the hearing is given at Appendix A to this report. The following is a brief summary of the proceedings of the hearing and the parties who presented to the hearing. A copy of the Order of Proceedings circulated to parties in advance of the hearing is attached at Appendix B.

### Day 1

An opening statement was given by *Mr Rory Mulcahy SC* for Apple (item 1 in Appendix A) welcoming the holding of a joint hearing and setting out the merits of the proposal in terms of proper planning, EIA and AA. In his submission Mr Mulcahy made reference to the loss of forestry and the proposed afforestation of other lands to compensate for this loss. Items 3 and 4 of Appendix A comprise Environmental Reports for replacement sites proposed for sites in Counties Wicklow and Roscommon.

This was followed by a statement from *Mr Robert Sharpe* of Apple who is the head of data centre services at Apple setting out the benefits of the proposed location for a data centre and the benefits to the local area that would accrue.

*Mr John Melvin* made a submission on behalf of the Commission for Energy Regulation (CER), (see Item 5 of Appendix A). This submission noted the high degree of security of supply from the proposed location and the lower level of grid reinforcement cost relative to alternative locations in the east. The flat demand profile of data centres was noted as well as the fact that data centres may result in reduced transmission use of system tariffs (TuOS). There was an opportunity for questions to Mr Melvin.

Short submissions on the proposals were then made by the following parties, *Mr Damien Egan*, *Mr Paul Keogh (Athenry for Apple)*, *Ms Mary Lindsay*. In addition to the above, at the invitation of the inspector, the following parties made short submissions to the hearing which covered all aspects of the proposed development and were not restricted to any specific module of the hearing.

- Mr Damien Egan,
- Ms Mary Lindsay



- Ms Sinead Fitzpatrick on behalf of Mr Ian Greally,
- Mr Vincent Kelly
- Mr Eoin Naughton and Mr Gary Moscarelli
- Ms Anne Keary (principal of Lisheenkyle NS).
- Mr Laurence F Maher
- Mr Eddie Stoker
- Mr Noel Grealish TD
- John O'Byrne on behalf of Athenry Golf Club
- Ms Sinead Fitzpatrick on behalf of Mr Ian Greally
- Mr Paul Keane (Athenry for Apple)

*Mr Frederick Freeman*, renewable energy manager Apple noted the ranking of Apple with a perfect score of 100 in the Greenpeace Clean Energy Index. Stated that satisfied that there are sufficient renewable energy resources available and submitted a letter from a renewable energy supplier (Vayu limited) confirming the provision of energy to the development from 100% renewable sources, (see Item 6b).

*Mr Denis McCormack* of Mott McDonald made a submission on the design of the proposed substation and grid connection. Mr McCormack also addressed third party submissions relating to health and public safety.

*Ms Sinead Whyte* of Arup made a submission on Air Quality, Climate, Noise and Vibration Issues (Item No. 8 in Appendix A). This submission addressed issues raised in submissions relating to CO2 emissions, impact of diesel generators and traffic impacts.

Submissions were then taken on **Module 1 – Energy and Climate Change Impacts**. Submissions under this topic were made by *Mr Allan Daly*, (Item 9 Appendix A), which highlighted the content of Eirgrid's most recent (2016) All Ireland Generation Capacity Statement, *Mr David Hughes* highlighting the need to cut overall CO2 emissions and the potential benefits of other formats of data storage (Item 10), Ms Carmel McCormack highlighting the potential wider costs from the development, Mr Hughes on behalf of the Suir Valley Environmental group, and Mr Brian Feeney on behalf of the Lisheenkyle Community Sports and Recreational Development Company Limited.

Questions relating to Module 1 (Energy and Climate Change) centred around the adequacy of the EIS in terms of the impact of the overall development and the validity of the statement that the development would be powered by 100% renewable energy and the fact that there would be no new renewable generation sources. Discussion also regarding the impact of increased CO2 emissions.

Late in day 2 of the hearing **Module 2 (Site Selection and Project Location)** was commenced with a submission by Mr Gus McCarthy on behalf of Apple. This submission (item 11 of Appendix A) outlined how the proposal was consistent with the NSS, regional and local guidance including the strategic economic corridor. This was followed by evidence from Mr Oscar Gonzales (Item 12) the head of site selection for data centres for Apple setting out the benefits of the chosen site in terms of climate, grid and fibre network access and addressing the issues raised in submissions. A submission by *Ms Ria Lyden* (Item 13) relating to EIS, alternatives, material assets and recreational amenity was then made.

*Ms Loughnane Moran* then made a submission on behalf of the Local Authority (Item No.4 of Appendix A) setting out the basis on which the proposal is consistent with national and local planning policy.

*Mr Derek Whyte* on behalf of Ms Julie Bates made a submission on Module 2 (Item 17) outlining how it is considered that the proposed location is not planned and contrary to the Galway County Development Plan and questioning the site selection process.

Submissions relating to Module 2 on behalf of the *Concerned Residents of Lisheenkyle* were made by *Mr Oisín Collins* and *Mr Gary Rowan*, (Items 15A and 15B). These submissions contended that there is an obligation on the Board to assess the entirety of the development (all phases) as that is the basis of site selection, that the development is not such that it justifies location within the strategic economic corridor and that locational choices should be supported by a LAP.

*Mr Allan Daly* made a submission (Item 16) which raised concerns regarding the sustainability of the location, the absence of a planned approach and loose interpretation of the policies related to the Strategic Economic Corridor.

Submission made by 3 members of *Galway Chamber of Commerce* which stressed the positive economic impact that would accrue to the local and regional economy.

Further submissions relating to Module 2 were made by Mr Hughes, Mr Sweetman, Mr Vincent Kelly and Ms McCormack.

Questioning relating to the topics covered by Module 2 were then taken.

Submissions on **Module 3** commenced with submission from the applicant on the topics of Flood Risk (*Mr Alan Leen*, Arup, Item 18), Hydrology (*Ms Catherine Buckley*, Arup, Item 19), Ecology and Biodiversity (*Mr Ger O'Donoghue*, Item No.20), Landscape and Visual Assessment (*Mr David Bosonnet*, Item No. 21), Archaeological, Architectural and Cultural Heritage (*Mr Declan Moore*, Item No. 22) and Roads and Traffic (*Mr Niall Harte*, Item No. 23).

*Ms Valerie Loughnane – Moran* made a submission to the hearing on issues relating to Module 3, (Item No. 24). This included Natura 2000 / AA issues and a suggested condition relating to noise assessment in the event of a grant of permission. This requested condition is in addition to a condition relating to a s.47 agreement requiring agreement for the provision of the walkway as a public right of way.

*Mr Mulcahy* for Apple submitted a written clarification (Item 25) to the hearing responding to queries raised by parties regarding the capacity of the on-site wwtp.

*Mr Daly* made a submission to the hearing regarding the potential impacts of diesel generators on air quality and human health, (Item 26). Using data submitted as part of the Facebook data centre application it was contended that air dispersion modelling for the entire development should have been undertaken and submitted as part of the EIS.

*Ms Fitzpatrick* made a submission on Module 3 issues on behalf of the Concerned Residents of Lisheenkyle followed by submissions from *Mr Vincent Kelly* and *Ms Maura Kelly* setting out concerns regarding impact on agriculture and pedigree sheep. Submissions were also taken from *Mr Brian Feeney* and *Mr Cian Naughton*.

Information regarding detail of the revised infiltration swale embankment and also additional borehole results were presented to the hearing by *Mr Mulcahy*, (Items Nos. 27 and 28).

Questions relating to the topics in Module 3 were then taken followed by closing submissions.

The hearing concluded at approximately 5.20 pm on Friday 27th May.

## 12.0 Assessment

In making an assessment of the proposed development it is restated that the proposed data centre comprises part of what is an overall development that also encompasses the proposed substation and grid connection, together referred to as the power supply project. While the proposed grid connection and substation had to be the subject of a separate application on account of it comprising strategic infrastructure for the purposes of the Acts, the two projects are significantly interconnected and need to be assessed in an integrated manner. The oral hearing held between 24<sup>th</sup> and 27<sup>th</sup> May inclusive followed a topic based format relating to both applications and submissions to the hearing were received relating to both applications. In the course of this assessment I will make reference to both projects at certain points. In view of the above, it is recommended that this assessment would be read in conjunction with that relating to An Bord Pleanála Ref. 07.VA0020.

The following are considered to be the main issues in the assessment of the subject case:

- Principle of development, site location and consideration of alternatives.
- Impact on residential and other amenity
- Visual impact
- Ecology
- Transport and Access
- Energy Demand, Climate Change and Sustainability
- Other Issues
- Environmental Impact Assessment
- Appropriate Assessment

## 12.1 Principle of Development, Site Location and Consideration of Alternatives.

12.1.1 The appropriateness of the location of site chosen for the proposed development has been raised by a number of appellants and observers to the appeal. The fact that the site is not located within an identified settlement is noted as is the fact that there was a limited amount of information provided relating to the alternative locations examined and the criteria under which alternatives sites were assessed. In particular objectors to the proposed developments noted the fact that the choice of site was largely justified on the basis of site size and the need to accommodate the full masterplan comprising 8 data halls while the application itself and the accompanying documentation including the EIS related to an initial phase of development comprising a single data hall.

Under this general heading it is proposed to examine a number of related issues as follows:

- Overall importance of the development in economic and employment terms
- Compliance with development plan and other policy
- Criteria used for site selection
- Requirement for site size
- Scope of alternatives considered.

12.1.2 In terms of ***economic importance***, the proposed development is projected to create a total of 150 no. jobs on site in the operational phase. Chapter 15 of the Revised Environmental Impact Statement (REIS) where the figure of 150 on site operation phase jobs is stated would appear to relate to the development of all phases of the site and all 8 no. data halls although this is not completely clear from the wording used. During the course of the hearing it was clarified by Apple that the number of employees on site for Phase 1 of the application was envisaged as being 150. Regarding potential future employment levels, discussion at the hearing did not provide clarity however it was apparent that future phases of development (the addition of further data halls) would not result in a proportional increase in the level of employment. On the basis of the information gathered at the hearing it is considered likely that some modest overall additional employment would be generated in the event that additional phases of development are permitted on the site in the future.

- 12.1.3 The REIS also makes reference to a multiplier effect of 0.7 for off site employment and attributes this to IDA commissioned research (undertaken by Indecon Consulting) into data centre developments. This would potentially result in the support of another 105 no. jobs off site. Reference has also been made in the REIS to research undertaken by the Washington Research Council which concludes that data centres are estimated to have an employment multiplier effect of between 2.0 and 3.5 depending on operational decisions. During the construction phase, employment is estimated at 200-300 positions over the course of the estimated 28 month building programme for Phase 1 of the overall development as applied for in this application and the associated power supply development would have a requirement for c. 120 construction jobs. The level of employment creation arising from the proposed development is therefore relatively significant.
- 12.1.4 The issue of the location of the proposed development on lands that are outside of any identified settlement and separate from any other similar land uses is raised by third parties to the appeal and was also an issue raised by the Board in the request for further information issued. The appeal site is not located on lands that are zoned for any specific purpose and there is no specific local objective contained in the development plan that supports the proposed form of development in this location. The justification of the applicant and the Planning Authority for the chosen site relates to the provisions of the Galway County Development Plan relating to the Strategic Economic Corridor (SEC).
- 12.1.4 As set out in the evidence presented to the hearing by Ms Loughnane-Moran Senior Planner with Galway County Council, (see Item No.14 attached) the origins of the SEC go back to the National Spatial Strategy (NSS) and the Regional Planning Guidelines for the West Region, 2010-2022. Galway is designated as a gateway in the National Spatial Strategy and is envisaged as the main focus of economic development in the west region. The Regional Planning Guidelines (paragraph 1.5.1) identify amongst the key economic development priorities the provision of *‘..appropriate zoned land with adequate infrastructure services to accommodate enterprise e.g. 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.

12.1.5 At a local level, as set out in the evidence of Ms Loughnane-Moran to the hearing and also in the Planning Report prepared by McCarthy Keville O’Sullivan which accompanied the application, the SEC is a central element of the development strategy for the county and has been so since it was first incorporated into the County Plan in 2006. The SEC extends from Oranmore on the outskirts of Galway City east for a distance of c. 12km. The rationale for the selection of the corridor is set out in section 4.7 of the Plan which makes reference to the fact that the area is endowed with a high concentration of valuable infrastructure as well as its accessibility being located along the alignment of the M6 motorway and the Dublin – Galway railway line. Reference is made to the fact that the designation of the SEC was based on a Framework Plan which was commissioned to address the need to accommodate regionally strategic economic sites. Paragraph 4.7 states that *‘this framework plan is indicative only and should not be relied upon as an indicator of land uses within the defined corridor’*. As will be discussed later in this assessment, this framework plan is not publically available.

12.1.6 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 identity 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.’*

12.1.7 The objectors and appellants to the proposed development raised a number of concerns regarding reliance on the location of the application and appeal sites within the SEC as a justification for the location chosen. Principally, it was noted that Section 4.7 makes reference to the fact the designation derived from a framework plan which it is stated *‘is indicative only and should not be relied upon as an indicator of land uses within the designated corridor’*. It is also contended that the SEC is an indication of locations which may be suitable for certain types of strategic development and that the detail of such locations should be the subject of local area plans or some other form of detailed plan which is the subject of public input. Not to do so it is contended is to promote a developer led rather than a plan led system of planning and to impact negatively on the rights of local residents and other interests to input into the plan process. Finally, it is submitted that the proposed data centre development is not a nationally or regionally significant development as envisaged in Objective EDT1 of the Plan.

12.1.8 To start with the nature of the proposed development and the degree to which it has national or regional significance, as set out at paragraphs 12.1.2 and 12.1.3 above, the level of direct and indirect employment generated by the proposal is likely to be relatively significant and certainly in my opinion of significance at a regional level. In addition, regard has to be had to the impact of a company with the status of Apple locating in Galway would have on the local economy and on the region. It would significantly raise the profile of the area for investment and likely lead to other developments in the technology sector in the future. The comments of the Galway Chamber of Commerce to the oral hearing in this regard, and particularly the potential for the development to reduce the outflow of graduates from the region and to create links with third level research are noted. In view of these facts, I would not agree that the proposed development is not of a type or scale that it is not of national or regional significance. Specifically, I would not agree with the case made by HRA Planning on behalf of the Lisheenkyle Residents that the form of development proposed is not innovative or in some way new technology and that it does not therefore conform with the type envisaged under Objective EDT 1. In my opinion the proposal is clearly of a regional and national economic significance, is a development of very significant economic investment and of a form that while not unique, is clearly specialist in nature.



12.1.9 With regard to the origins of the designation of the SEC and the reference to a framework plan which guided the original designation of the corridor it would appear that a study of the area was undertaken in 2005 and that it was from this study that the SEC designation was developed. The SEC was first introduced into the Galway County Development Plan by way of Variation No.6 of 2006 of the Galway County Development Plan 2003-2009 and the designation has been retained in the two subsequent development plans, namely the 2009-2015 and 2015-2022 Galway County Development Plans. Section 2.5.3.1 of the Response to Further information document prepared by McCarthy Keville O'Sullivan and received by the Board on 12<sup>th</sup> February, 2016 sets out the wording of the SEC policy in these plans. The original framework plan which was the basis for the identification of the corridor and the development of the SEC policy has not been provided during the course of the assessment of the case and I have been unable to source it on the web. Similarly, there is very limited information available regarding the background to the policy by way of documentation supporting the Variation No.6 of 2006. Minutes of a council meeting at which the variation was passed are available, however I have not been able to source background papers or documents on the variation which may give an insight into that rationale for the variation and how it was envisaged that designation would operate in practice.

12.1.10 Reference has been made by the objectors and appellants to the fact that Paragraph 4.7 of the 2015-2022 Plan states that '*this framework plan* (the plan which formed the basis of the 2006 variation) *is indicative only and should not be relied upon as an indicator of land uses within the defined corridor*'. Having not seen this plan I do not know whether it identifies specific areas for development or specific types of development. The objectors have made reference to the fact that paragraph 4.7 states that the framework plan should not be used as an indicator of land uses and that no uses have therefore been identified for the SEC. It is implied that such uses should be set down in a LAP for the corridor or part of the corridor or in some other form of plan such as a masterplan. I note the contents of Paragraph 4.7 however in my opinion the basis of the SEC is set out in Objective EDT1. In any event, as noted above, the framework plan referred to in Paragraph 4.7 is not available and it is not clear what if any uses are specified as acceptable within the corridor.

12.1.11 In terms of **compatibility with Objective EDT1**, there are a number of aspects where in my opinion the proposed development would be clearly consistent. As set out in 12.1.8 above, the proposal is such that it is a nationally and regionally significant development and one which has the potential for the creation of significant direct and indirect employment creation.

The development is also clearly of a large scale and a very significant value of investment is proposed (c.€850 million). Given the nature of the roles envisaged for the administration building I am satisfied that the employment is of a specialist nature and that the activity proposed for the site is consistent with science and technology employment. In view of this, I consider that the proposed development is consistent with the following objectives listed under Objective EDT1:

- *‘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’.*

12.1.12 With regard to the next objective, that the *‘...development is compatible with the enhancement, preservation and protection of the environment and cultural resources..’*, this is addressed in detail in the following sections of this report 12.2 (Residential Amenity), 12.4 (Ecology), 12.7 (Environmental Impact Assessment) and 12.8 (Appropriate Assessment). On the basis of the assessment undertaken under these headings I consider that the proposal would be compatible with the environment and with cultural resources.

12.1.13 The final two requirements of Objective EDT1 relating to the Strategic Economic Corridor are as follows:

- *‘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 issue of site size and the consideration of alternatives is one of the main sources of objection to the proposed development and is considered in more detail in subsequent sections. It has also been contended by objectors and appellants to the proposed development that the wording of the sections of EDT1 above implies that the purpose of the SEC is to guide development and to inform the preparation of local area plans and a more detailed analysis of sites within the identified corridor which may be suitable for development. The case for this interpretation is reinforced by observers and appellants

contending that not to subject the lands identified as comprising the SEC to a further level of plan preparation and associated public consultation is to effectively remove a whole layer of planning and to result in a developer rather than plan led process which effectively excludes the rights of third parties to make submissions on proposed sites. Mr Whyte on behalf of Ms Julie Bates and Mr Rowan on behalf of Lisheenkyle Residents Group both raised objections along these lines during the course of the hearing.

12.1.14 The wording of Objective EDT1 is in my opinion rather loose on this issue as to whether there is an anticipation that sites would be the subject of a more detailed level of assessment or plan preparation. In principle I would accept the points made by objectors such as Mr Rowan and Mr Whyte in that it appears excessively open that the entirety of what has been identified as the SEC would effectively be open for potential development. This is particularly the case when the scale of the SEC is taken into account. It extends for over 12km east to west and incorporates over 48 sq. km (4,800 ha.). The wording of the objective *'to identify sites of adequate size and location to accommodate necessary infrastructure or support activities ...'* could reasonably be interpreted to mean that a further level of site identification would be undertaken before permission would be granted for development although again the wording is not clear. Similarly, the reference to local area plan in *'to inform and aid the preparation of local area plans for strategic areas and those surrounding immediate environs within the corridor'* could be interpreted as meaning that local area plans be prepared for specific parts of the corridor or, as would appear more likely in my opinion, that the SEC be taken into account in the locations where it overlaps with existing towns which have LAPs. In this regard I note that the SEC overlaps with the Local Area Plans for both Oranmore and Athenry and that in both cases the land use zonings in these LAPs reflect the SEC with lands zoned Industrial, Business and Enterprise and Business and Technology located within the LAP area which overlaps with the Strategic Corridor. It is also worth noting that while Galway County Council's interpretation of the SEC and Objective EDT1 is clear from the grant of permission which it issued for the proposed data centre development, the Planners Report in respect of this decision and the evidence presented by the Planning Authority to the oral hearing, it was clarified under questioning that no other similar applications for development within the SEC have been received to date and no permissions granted within the corridor on the basis of Objective EDT1.

12.1.15 In conclusion, it is unclear whether Objective EDT1 is envisaged as being the basis under which permission could be considered within the corridor in advance of any further detailed plan preparation or site assessment being undertaken. While I have significant reservations regarding the interpretation

used by the council and the application of the objective in this case, the proposal has been the subject of submissions to the council as part of the application process as well as appeal to the Board and the subject of the appropriateness of the location has been the subject of considerable discussion at the oral hearing. The wording of the Plan is open to interpretation and it would appear appropriate that an assessment be made of the merits of the form of development proposed in this specific location.

12.1.16 The basis for the locational choice of the applicant revolves around a number of factors, principally a requirement for a site that could accommodate the full development as set out in the submitted masterplan, namely 8 data halls, administration building and substation. It is also a key requirement that the site would be conveniently located relative to the grid network and that it would have ready access to the fibre infrastructure connections. In the case of the site selection criteria as set out at 2.3.3 of the REIS, the relevant separations from these infrastructure is 1.6km for the electricity connection and 8km of significant telecommunications fibre capacity and in my opinion both of these criteria are reasonable.

12.1.17 As noted previously, the **assessment of alternatives** was the subject of significant discussion at the oral hearing and formed part of the request for further information issued by the Board. The REIS and the response to further information received by the Board on 12<sup>th</sup> February, 2016 contain significant information regarding the consideration of alternatives and the justification for the site chosen and this information was further supplemented by discussion during the course of the hearing. Paragraphs 2.3.3 and 2.3.4 of the REIS set out the selection criteria and the sites which were considered as part of the assessment. With regard to the criteria used, a number are obvious requirements for the siting of a data centre including a relatively level site, low natural risk, proximity to centres of population and education and proximity to fibre connections and power sources. Other criteria would however appear to me to be very restrictive and not to have such a clear justification. In particular, the criteria requiring a separation of >320km from nuclear facilities and 80km from any major petro chemical storage sites were questioned during the course of the hearing and in my opinion would appear to be excessively restrictive. I also note that in the case of the separation of >320km to a nuclear facility this would firstly have the effect of potentially excluding all east coast sites and also that as highlighted by a number of parties to the oral hearing that it would appear that a number of Apple data centres in the US are located within 320km of nuclear facilities. Similarly, the permitted data centres in the Ireland such as Google and Facebook are not the subject of such locational restrictions.

12.1.18 Regarding site selection, of particular concern to the appellants and objectors was the fact that the first selection criteria required a site size of 145 ha (360 acres) and secondly that the range of alternatives examined and presented in the REIS for the data centre and the EIS for the power supply project was restricted to those in IDA ownership. Some specific alternatives, notably the IDA owned lands in Athenry and a site in County Wicklow which has been the subject of a grant of permission for data centre use (Ref 10/2123; ABP Ref. PL27.237400) were cited by a number of parties to the appeal.

12.1.19 With regard to the scope of the sites examined as alternatives, in response to a direct question from the inspector at the hearing, representatives of Apple stated that the sites examined as alternatives to the Derrydonnell site comprised sites presented for consideration by the IDA. This approach was justified on the basis that Apple had a close working relationship with the IDA over many years. It was also stated that there was no independent assessment of sites undertaken by any other party or firm acting on behalf of Apple. The restriction of sites for consideration to those under the control of Apple would not appear to be very desirable and it is notable that the bulk of the sites identified are not appropriate on the basis that they do not meet the minimum site size requirement of 145 ha. (360 acres). I note that the Planning report prepared by McCarthy Keville O'Sullivan which accompanied the application makes reference at paragraph 4.3.1 to the fact that an assessment of suitably zoned lands located within 1.6km of 220Kv and 400Kv power lines was undertaken throughout the country to see if a zoned site of 145 ha (360 acres) could be identified. It is stated that this analysis undertaken by way of GIS, did not identify any available sites which met the site size and proximity to power supply requirements. The GIS analysis referenced in 4.3.1 of the Planning Report is not detailed in the REIS, however the requirement to locate in close proximity (1 mile / 1.6km) of a power supply would appear to me to be a reasonable requirement. While I would therefore have a number of issues with regard to the criteria for site selection used in the analysis presented in the REIS and in the presentation of only IDA owned lands, it would appear that there are no or at least very limited alternative zoned sites of the size specified by Apple and conveniently located relative to the 220 and 400Kv power network and fibre networks available nationally, irrespective of the other site selection criteria contained in the REIS. An assessment of the merits of the minimum site size requirement specified by the applicant is therefore appropriate.

12.1.20 The application for permission is accompanied by a masterplan drawing which shows the data hall which is the subject of the current application being phase one of what is envisaged as being a larger scale of

development. In total, eight identically sized data halls are indicated on the masterplan with each being arranged in a north south orientation and parallel and to the west of the currently proposed data hall building. Spacing between the data halls is approximately 75 metres which it is stated is required to ensure that adequate air circulation for successful ambient cooling is achieved. Appellants and objectors to the proposed development contend that the case has not been made as to why additional data halls will be required and that the case has not therefore been made for a site of the scale presented in the application and used in the site selection process. It is also contended that the if the applicant was so certain that the larger scale of development was required then these additional phases of development should have been included in the application with the possibility of a phasing plan being presented.

12.1.21 With regard to ***the need for additional data halls***, I note the information presented by the applicant in the REIS and also the submissions made by representatives of Apple to the oral hearing, notably Mr Sharpe (Item No.2 – submission to oral hearing). In particular, I note the content of section 2.2 of the REIS regarding the need for the project and the conclusions cited from the Cisco Global Cloud Index Forecast report. This report concludes that by 2019 more than 85% of workloads will be processed by data centres that serve the cloud and that global data centre traffic is projected to triple between 2014 and 2019. The report also predicts that the number of devices or connections per user will approximately double over the 2014-2019 period with consequent increase in demand for data storage. The appellants and objectors to the proposal, notably Mr Hughes and Mr Rowan for Lisheenkyle Residents, noted that the nature of the IT sector is such that there are very rapid developments in technology and that it was not certain that there would be a demand for conventional data centres towards the end of the 15 year timeframe given for the development of the Derrydonnell site. This was refuted by Apple who stated that no such step change in technology was envisaged over the likely timeline for the development of the full phases of site development. On the basis of the information presented I consider that the case made by the applicant with regard to need, both in terms of the projected increase in data storage demand and also the likelihood of a significant change in technology is robust. There is of course a chance that a new technology that renders conventional data centres obsolete will be developed or that Apples market share and hence data demand may fall significantly, however both of these scenarios are in my opinion unlikely. In any event, the phased nature of the development of the Derrydonnell site is such that changes in the rate of demand for additional capacity could be accommodated or the development of the site ceased in the event that demand did not increase as projected. I would also note that the scope of the alternative

technologies put forward by the appellants and objectors was limited. Most significantly, Mr Hughes included in his submissions to the hearing how a form of decentralised data storage could be developed with the advantage of such a system being that it could be combined with heat recovery if sited in residential homes and be used to reduce overall energy demand levels and assist in meeting climate change targets and reduction in greenhouse gas emissions. At the level of energy efficiency, the theory behind such an idea is impressive and Mr Hughes set out in considerable detail the implications for Ireland of continuing to increase the demand for energy and how the only way by which climate change targets are going to be reached is by a reduction in the total use of energy. The implications of the proposed development on energy and climate change are discussed in more detail in section 12.6 below and also under the heading of EIA (section 12.8) and are clearly an issue of importance, however the solution presented by Mr Hughes for de centralised data storage would appear to present very significant problems in terms of security of data, maintenance and also in terms of cost and such a solution would also require individual cooling systems in each of the decentralised locations. All of these concerns were raised by representatives of Apple during the hearing and I do not see how these issues could readily be overcome. In conclusion on this issue, it is my opinion that the applicant has put forward a convincing case regarding the likely increase in demand for data storage and the need for the development of additional data storage capacity in the future. The case made regarding the development of two complementary data storage locations in Galway and Viborg in Denmark is strong and, as set out at section 4.2 of the Planning Report, the applicant has also made a convincing case as to why the dispersal of data storage into a number of smaller locations does not make economic or operational sense given the level of investment required in grid connection infrastructure and back up infrastructure. In this regard, the layout of the proposed Apple facility provides for support and research staff to be located onsite in the administration building and I agree with the applicant that it would not be efficient for support staff to be spread across a number of locations. Maintenance of efficient security and the provision of secure fibre connections to the sites are further reasons why the clustering of data halls on one site makes sense. For all of these reasons I consider that the case made by the applicant for the provision of the data centre facility with the capacity to accommodate projected future demand clustered on a single site is convincing. This issue is a fundamental one for the Board to consider and in the event that it does not accept the case made by the applicant regarding likely future data storage demand and consequent requirement for additional phases of development with a consequent site size requirement, then a significant range of alternative options for the location of the Apple facility are opened up. The assessment of alternatives undertaken by Apple has been on

the basis of a minimum site size requirement of 146 ha. (360 acres) and it is evident that there would be alternative sites on zoned lands within existing developed urban areas which would be viable alternatives for a smaller scale of development than that indicated in the submitted masterplan.

12.1.22 Objectors and appellants to the proposed development have raised issues regarding the need for the **site size** to accommodate the floor area of data hall proposed contending that a more **efficient layout** could reduce the site size requirement and potentially mean that alternative site options could be considered. Section 2.3 of the REIS sets out in some detail the basis for the site size proposed. The area of the individual elements of the site, data halls, ancillary / support buildings, substation, parking and circulation are cited and it is indicated how this aggregates to a requirement for a site in excess of 350 acres. The site area calculation also provides for a distance of 75 metres between data hall buildings to allow for the circulation of air and ambient cooling and also the maintenance of a minimum of 50 metre buffer between the substation and site boundary and 75 metres between other buildings / structures and the site boundary to allow for landscaping. In general I consider that the site area calculation presented is acceptable. There may be some case to be made that buffer zones to the site boundaries could be reduced slightly and the allowance of a contingency of 15 percent to account for non optimal site aspect would appear generous given the shape of the site. A comparison of the proposed development with other existing and proposed data centre applications in Ireland was submitted by Mr Allan Daly as part of his submission to the Board in response to the further information response received by the Board from Apple Distribution International. Of particular note is a table (Table 1) contained in that submission which gives a site area to data hall floor area ratio for the current proposal relative to other permitted and proposed data centre developments. Of further note is the fact that some of the developments listed in Table 1 are for 2 storey developments, (Mountkennedy site in Wicklow and the BT Ireland and Eircom developments in Dublin). Of the single storey large scale data centre developments there is a very wide range of site to data hall area ratios with the current proposals 9.5: 1 being lower than the 12.5 : 1 for the Runways Information Services (Facebook) development in Clonee but greater than the 3.7 : 1 for the Google data centre in Dublin 22. Overall, on the basis of the information presented in the REIS I am satisfied that the site size proposed is not excessive to accommodate the full build out of development as envisaged in the masterplan for the Derrydonnell site. There may be some scope for a slight reduction in the site area requirement necessary to accommodate the whole development however I do not consider that it can reasonably be said that such minor reduction would mean that the proposed development could be accommodated on alternative zoned sites. The specific alternative sites cited



by the observers and appellants, namely Mountkennedy in Wicklow and the Athenry site, are discussed in more detail in the following section.

12.1.23 Two particular sites referenced by the appellants and objectors to the proposed development were a 32.8 ha. site at Mountkennedy Demesne, Co. Wicklow which was the subject of a grant of permission for the development of a ten unit data centre with a total data hall floor area of approximately 109,000 sq. metres and a second site and **IDA owned lands** on the western side of **Athenry**, approximately 4km from the site of the proposed Apple development. Of these sites, the appellants and objectors contend that the Athenry IDA lands would be capable of accommodating the development as proposed in the current application, namely the single data hall, administration building and substation infrastructure. This was refuted by Mr Sharpe for Apple who indicated that allowing for a 50 metre buffer zone and the substation that the balance of the Athenry site would be enough for a single data centre building. On the basis that the masterplan for the future development to meet Apples requirements could not be met the Athenry site was discounted. Given that the site is only capable of accommodating a single data hall and would not provide for the option of any expansion above the initial Phase 1 development I would agree that the site is not a viable alternative for Apple's needs. I would also note the fact that the Athenry IDA lands are constrained by the fact that the Dublin – Galway railway line splits the site in a north east – south west orientation. The expansion of the site is also constrained by the fact that the M6 motorway runs immediately to the south west. It is acknowledged that the Athenry IDA lands have a number of potential benefits as set out in the submission of Mr Daly to the hearing (Item No.16, see Figure 2 Athenry 97 ha. IDA site), including proximity to Athenry train station, easy road access to the M6, being within 1.6km of a power connection and the possibility of heat recovery and use in existing and proposed urban development. Mr Daly also highlighted to the hearing how it would be feasible that the extent of the zoned lands in this area could be enlarged through the extension of the zoned area to the north west into contiguous lands. I would note however that such an extension would have to be very significant in order that the full development needs of Apple would be met at this location. I would also note the fact that Mr Sharpe for Apple clarified during the course of the hearing that the alternative sites listed in the REIS (section 2.3.3) had been assessed for the possibility of what he termed 'accretion', or site extension. Detail of the specific reasons why additional zoned lands could not be provided in this location were not presented to the hearing however it was clearly stated by Apple that such options had been examined. Overall therefore on the basis of the information presented, while a location in immediate proximity to the existing developed area of Athenry would have potential benefits over the application site principally with regard

to accessibility, I consider that the limited area of the site, the limitations arising from its proximity to the M6 and the rail line are such that it is not a viable alternative for the proposed development. In particular, the Athenry IDA lands would not provide the option for any future development beyond Phase 1 as provided for in the current application and would not therefore be consistent with anticipated future demand and the future planning for the accommodation of this demand.

12.1.24 Regarding the site at ***Mountkennedy Demesne, County Wicklow***, it should be noted that this site was granted permission by Wicklow County Council in 2010. The decision of the Board to refuse permission (PL27.237400) for reasons relating to the development being contrary to principles of sustainable development being contrary to the principles of Smarter Travel, the availability of other suitable zoned lands in the greater Dublin area and the unsuitability of the site for on site drainage given the proximity of the site to sensitive habitats was subsequently quashed and the decision of the Planning Authority stands. The area of the Mountkennedy Demesne site is 32.8 ha. and it would therefore appear to me that it would not be capable accommodating the scale of development as proposed in the current application and certainly not capable of accommodating additional phases of development as set out in the submitted masterplan and the accommodation of the projected demand for data storage.

12.1.25 Finally, on the issue of alternative sites and the accommodation of a site of 146 ha (360 acres) on lands currently zoned for business and technology use the question has to be asked whether the use of this scale of existing zoned and serviced lands is the optimal use of such lands. As highlighted already, direct employment relative to site area is not very high and this form of development is such that there are specific locational requirements particularly in terms of power supply and fibre connections. These are additional reasons why the site location decision is different to a normal large scale commercial or industrial development.

12.1.26 In conclusion on the issue of site location, alternatives and compatibility with planning policy, I note the location of the site within the area identified as a Strategic Economic Corridor (SEC) in the Galway County Development Plan, 2015-2022 as well as the recognition of the corridor and its importance in the attraction in attracting FDI in the Regional Planning Guidelines for Western Region. As set out above, I do have some concerns with regard to the ambiguity in the wording of Objective EDT1 of the Plan relating to the SEC and particularly the absence of any requirement for a lower level plan (LAP, or Masterplan) which could be the subject of public input and which would guide the detailed development of the SEC. Against this, there is in my opinion a strong basis for the location chosen. The form of development proposed is

consistent with that envisaged for the SEC and the Derrydonnell site has obvious advantages in terms of its proximity to the required power and fibre infrastructure which are required. Of particular issue is the requirement for a site of sufficient size that the future expansion of the facility could be accommodated on the same site and this has been a subject of many of the objections and appeals to the Board. For the reasons set out above, I consider that the applicant has set out a strong case as to the likely increase in demand for data storage as well as the necessity in both economic and operational terms for Apples data centre operations to be located on the one site. I note that concerns with regard to this approach in terms of potential project splitting / slicing and the acceptability of the REIS submitted have been raised by appellants and objectors and these issues will be addressed later in this report. Overall however it is my opinion that the applicant has made a convincing case as to why the site proposed is required to have room to accommodate the future phases of development envisaged in the masterplan and how, when this site size requirement is taken into account, there are very few, if any viable alternative sites available. In stating this, the issue as to whether site location should be influenced by projected future expansion is one on which the Board will have to make a determination. In the event that future expansion requirements are not considered to be a relevant factor in site selection that there are a significant number of other potential locations more conveniently located relative to existing centres of population and employment which could be considered viable alternatives for this development. In such a scenario it would appear to me that the correct course of action would be refusal of permission on the basis of the location of the site on lands that are not the subject of a specific land use zoning objective or specific local objective supporting the form of development proposed and which is separate from established centres of population and employment.

## **12.2 Impact on Amenity**

12.2.1 A number of issues have been raised by appellants and objectors under the general heading of residential and other amenity. These issues include the impact of noise during both construction and operational phases, air emissions from on site power generation (back up generators), general change in the character of the area and the loss of recreational amenity and open space. The relevant sections of the REIS which addresses these issues are chapter 4 (Construction Activities), Chapter 6 (Landscape and Visual), Chapter 8 (Noise and Vibration) and Chapter 9 (Air Quality and Climate).

12.2.2 **Noise** assessment undertaken as part of the REIS was based on a background noise survey undertaken at three locations on the site, approximately at the north west, south west and south east corners of the site. Day, evening and night time measurements were taken over the period 23 / 24<sup>th</sup> September, 2014. It is noted that additional noise survey locations identified to the north east of the current site are identified in the EIS for the power supply development.

12.2.3 In terms of construction noise, the assessment undertaken takes account of the likely concurrent construction of the power supply project with the Phase 1 of the data centre. Noise levels for construction traffic and on site construction activities are estimated. The levels predicted at a total of 14 no. representative noise sensitive receptors vary between 37 and 45 dB Laeq (1 hr) and are demonstrated to be within the limits set out in the NRA / TII *Good Practice Guidelines for the Treatment of Noise During the Planning of National Road Schemes*. The separation of the receptors to the main areas of site development vary with receptor 6 which is a house on the local road to the north of the site c. 375 metres from the revised compound location as identified in the power supply project. To the south of the site, receptor 1 is located approximately 420 metres from the proposed data hall 1 and approximately 390 metres from the logistics and administration building. The modelling process presented in the REIS including the use of the NRA / TII limit values are in my opinion appropriate and on the basis of the analysis presented and the set backs between the main areas of development proposed and the closest receptors it is my opinion that none of the identified receptors would be significantly adversely affected during the construction process. Traffic noise is predicted to increase by a maximum of 4.5 dB(A) at any of the identified receptors. Given the setback between the main areas of construction activity and the sensitive receptors it is not considered that significant vibration impacts due to construction would arise. Regarding the specific concerns of the Athenry Golf Club regarding the impact of noise on the Saturday use of the course, I consider that the noise assessment undertaken indicates that noise will not be a significant issue. Construction works proposed under this application would be located over 1km from the course and I note that Apple have no objection to the cessation of construction activity at 2pm on a Saturday as conditioned by Galway County Council. Overall the construction phase noise and vibration impacts are not considered to be such as to be significantly negative or to result in a significant negative impact on residential amenity.

12.2.4 During the operational phase the main noise related impacts would arise from the running of the back-up generators, the ventilation systems to the data hall(s), the substation (proposed under 07.VA0020) and the impact of

increased traffic generation to the site. A significant number of written submissions and submissions made to the oral hearing make reference to the potential for the on site back up power generation required to ensure continuity of supply to have an adverse impact on residential amenity in terms of noise generation and also emissions. The development as proposed in the application which is currently the subject of appeal proposes a total of 18 no. back up diesel generators and with the full build out of the site there is potential for there to be a total of 144 no. generators on the site to serve the full build out of 8 no. data halls. The role and operation of the back-up generators was the subject of a significant amount of discussion during the course of the oral hearing and the following information was presented by the applicant during the course of discussions at the hearing. Firstly, it was clarified that the generators would require to be the subject of testing for a period of half an hour once a month. This testing would not be concurrent but each generator would be tested in turn for approximately a half hour period. For the currently proposed development this would mean a total of 9 hours each month and with the full build out of 8 data halls there would be a potential test time of 72 hours per month.

- 12.2.5 In terms of the operation of the back-up generators there was discussion at the hearing regarding the likelihood of back-up power being required, in other words the likelihood of the Cashla to Prospect and Cashla to Tynagh 220Kv lines developing a fault. It was outlined to the hearing that the Cashla to Tynagh line has never been the subject of a power outage and that the Cashla to Prospect line has only ever been the subject of outages for a few seconds at a time, usually as a result of lightning strikes. It was also clarified by Mr Lazeroff on behalf of Apple that the connection of the data centre site to the two twin 220Kv lines (Cashla to Prospect and Cashla to Tynagh) was designed with a looped connection and such that power for the centre could be drawn from any of the four connections. It was stated by Mr Sharpe on behalf of Apple that in the unlikely event of a power outage 14 of the 18 no. diesel generators proposed per data hall would be powered up with the other four kept as back up. It was also clarified that in the event of an outage that there would be 5 minutes of back up standby power available on site before the generators would kick in and that if the on site generators were required to kick in for any significant period of time that there would be the capability of the function of the centre being switched to the other Apple European data centre facility in Viborg in Denmark. It was specifically clarified by Mr Sharpe to the hearing that the two data centre facilities (Viborg and Derrydonnell) would be capable of providing back up to one another. The result of the information presented by the applicant is that the likelihood of a power outage to the proposed Derrydonnell facility is very low and that such outages as may occur will generally not require any use of the on site

generators. In the event that the on site generators required, their use would likely be for a matter of minutes pending the resolution of the fault or the transfer of operations to the Viborg facility. In view of this it is considered that the likelihood of the running of all on site generators concurrently is very low.

12.2.6 The impact of the testing of the on site generators is assessed in the REIS (section 8.10.2) and Table 8.10 gives the results of an assessment of a worst case scenario of the concurrent operation of the data hall, the construction of a second data hall, the operation of the substation and the running of an emergency generator as part of the monthly sequential testing of these units. The predicted noise impact meets the day time limit specified in the Galway County Development Plan, 2015-2022, (55 dBA).

12.2.7 Notwithstanding the fact that the likelihood of the use of the back up generators in an emergency mode is very low, the impact of the concurrent running of all 18 no. back up generators proposed as part of the phase of development proposed in the current application is presented in section 8.10.2.1 of the REIS. In making this assessment the operational noise of the power supply project is included and at all 15 noise sensitive receptors the predicted noise level would be consistent with the EPA night time noise limit value of 45 dBLAeq. A further assessment of the potential noise impact of the concurrent running of all 144 no. generators connected with the current proposal plus additional data halls is presented in 8.10.2.2 and Table 8.12 of the REIS and also shows that the EPA night time noise limit would be met at all noise sensitive receptors. As set out in previous sections, the likelihood of concurrent running of the stand by generators is very unlikely and where it may occur the duration of any such impact is likely to be limited.

12.2.8 Some additional operational traffic noise will result from the proposed development however the impact of this is not predicted to be significant. Similarly, operational vibration impacts will not be a significant issue.

12.2.9 **Air quality** is covered in Chapter 9 of the REIS. The running of the stand by generators on the site would lead to potential air emissions as would the potential increase in traffic accessing the site. In terms of the operation of the data hall(s), the on site processes of data storage and cooling of the building would not result in any significant air quality impacts other than a potential raising of temperature. There are also issues arising in terms of the potential for in combination effects with the adjoining M6 and M17/18 which is under construction. Air quality impact of the construction phase of the proposed development is set out in 9.4.3.1 of the REIS and indicates that the impact of additional construction traffic from the combined construction of the data hall and the power supply developments would have a negligible increase on air quality (Table 9.4). In the event of the construction of

additional data halls on the site the impact would similarly be negligible. It is stated in the REIS that an on site dust minimisation plan will be produced which will ensure that the TA Luft guideline limits will be adhered to at sensitive receptors. In the event of a grant of permission it is recommended that the submission of a dust minimisation plan would be required.

12.2.10 The impact on air quality in the operational phase of the development is presented in 9.7 of the REIS and includes a cumulative assessment of the potential impact of the construction of a data centre and administration building, the power supply development (07.VA0020) and the construction and operation of a second data hall. Air quality levels predicted at the 4 identified receptors are all very significantly below the limit values for NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub>.

12.2.11 As noted by some of the appellants, no such assessment was undertaken to model the potential impact on air quality in the event of the operation of all 144 no. stand by generators that would serve the full build out of all 8 data halls. This was justified at the hearing on the basis that the likelihood of a full power outage is very low and also that the run time in the event of such an outage would be limited. It would have been preferable if the calculations had been presented to cover this scenario, however on the basis of the information available it is not considered that there would be a likely significant negative impact arising from such a scenario given the small likelihood of such an occurrence and also the limited time period for which such an occurrence would likely last.

12.2.12 A number of objectors and appellants made reference to the ***change in the character*** of the area which would potentially occur in the event of the proposed data centre and power supply developments being undertaken and particularly in the case that this was supplemented by additional phases of data centre development. A number of submission also made reference to the creation of an industrial zone and implied that the area would no longer have a rural character. The visual impact of the proposal is considered in more detail in section 12.3 below however given the scale of the proposed buildings and those which may be the subject of proposals for future expansion of the site, the extent of buffer landscaping proposed to be retained and the proposals for the augmentation of the existing planted areas around the site perimeter I do not consider that the proposed development would result in a significant change in the visual character of the area. Similarly, I do not consider that the possible future expansion of the facility as envisaged in the masterplan would be likely to have a significant visual impact or impact on existing character. The existing dwellings on surrounding roads are well separated from the main potential noise sources on the site, namely the substation, data hall and associated stand by generators. As noted above,

the impact of the proposed development in terms of noise emissions is likely to be limited and this, taken in conjunction with the significant setback of development from site boundaries and existing and proposed planting to buffer areas would in my opinion ensure that there would not be a significant adverse impact on the rural character of the area.

12.2.13 Of very significant concern to many appellants and objectors is the impact that the development of the Derrydonnell lands would have on **recreational amenity**. The existing situation is that for the majority of the time there is free access to the forest with access being available via the forest gate at the south east corner of the site (onto the R348) and other access points to surrounding lands available at other locations around the site. The existing layout provides for a network of forest tracks of considerable length that traverse the mature conifer and clear felled areas of the site. The site is clearly an important recreational and leisure area for both the local population in the immediate environs of the site and also from further afield. The exact degree of usage of the site is difficult to determine however at the time of my inspectors of the site over the winter and spring of 2015/2016 I observed a significant number of walkers in the area. The applicants note the fact that the area is a commercial forest and that it has a limited visual or other amenity value and contend that what is proposed following completion of the proposed development and the power supply project, namely a c.4.7km long partially looped walking trail along the southern and south western part of the site would result in a significant improvement in amenity. I am not convinced that this would be the case as the proposed layout has significantly less walking trail length available and it would be much more limiting in terms of movement. The trail would, however have a better surface and car parking facilities, which are currently very limited at the access to the R348, would be significantly improved with the provision of a dedicated car parking area accessible from the main access route from the Apple facility onto the R348. The layout of this parking area is indicated in the Landscape Concept Plan included in the Landscape Masterplan report (prepared by Brady Shipman and Martin) submitted with the application. Overall, while I would agree that there would be some loss of recreational amenity particularly for those living closest to the site and who may no longer have direct access to the forest, it would be significantly offset by the provision of the recreational trail and improved parking facilities. I note that the Local Authority in their submission to the oral hearing requested that the proposed public walkway would be dedicated for use of the public and that this arrangement would be made the subject of an agreement under s.47 of the Planning and Development Act, 2000 (as amended). I do not have any objection to the inclusion of a condition to this effect and note that no objections were raised by the applicant at the hearing.



12.2.14 The option of the retention of some of the forest for public access pending the use of the lands for future phases of development would also appear to be available and while this is not something which was discussed in detail at the hearing or volunteered by Apple it would appear that the bulk of the area to the west of the substation lands could remain in public access pending the possible future increase in the number of data halls accommodated. In the event of a grant of permission and pending any future applications for expansion of the facility, it is recommended that a condition be attached requiring the retention of access to the woodlands not required for the proposed development.

### **12.3 Visual impact**

12.3.1 A landscape and visual impact assessment is included at chapter 6 of the REIS. This assessment is supplemented by Volume 2 of the REIS which contains photomontages of the proposal. Of note, the landscape and visual assessment undertaken and the photomontages both indicate and assess the impact arising from the construction of the data centre application and the power supply development in combination.

12.3.2 The proposed development provides for the retention of existing planting on the site and the augmentation of planting with a mix of deciduous and conifer planting between the data hall building(s) and also around the site perimeter. The site and surrounding areas are relatively flat and there are no area of particular scenic value in the vicinity of the site. In the County development Plan, the Landscape Character Assessment identifies the site as having a low sensitivity (Class 1).

12.3.3 The landscape and visual assessment considers that the construction impacts arising from the proposed development would have a moderate local negative impact on landscape character, that such impacts will be temporary and that the main area of impact would be in the vicinity of the site access onto the R348. Views and impacts from surrounding properties and roads during the construction phase are predicted to be limited. I would be in general agreement with this assessment regarding construction phase impacts. The existing planting on site will act to substantially screen construction activities with the main areas of impact being at the entrance to the site from the R348 where there will be significant removal of existing vegetation and construction activity and also to the north east of the data centre site with the concurrent construction of the 7 no. new tower structures connected with the grid connection. Some impact will also arise from construction equipment on the site such as cranes which may be visible from some locations.

12.3.4 During the **operational phase** the REIS (section 6.4.1.2) assesses the overall impact as slight negative. The area of woodland to be removed to facilitate the direct construction of the development (current data centre application for one data hall and the power supply) is stated to be approximately 33 ha. Future phases of data centre development would result in the removal of a further approximately 39ha. of forestry.

12.3.5 The photomontages submitted with the application, in my opinion support the conclusion that the overall landscape and visual impact of the proposed development and the power supply development would be limited. Future phases of data centre development on the site would not, in my opinion alter this assessment. The cumulative impact of the proposed development and the Rathmorrissey interchange on the M6 and M17/18 is also in my opinion limited although the opening of this interchange would facilitate close range views of both the existing and proposed new electricity infrastructure which are not currently available.

## 12.4 Ecology

12.4.1 Ecology is addressed in Chapter 10 of the REIS and an assessment of the impact of the proposed development on ecology should be read in conjunction with Section 12.8 below regarding Appropriate Assessment. In terms of general ecology, the site was the subject of walkover survey and these were primarily undertaken in July and August 2014. The main habitat types recorded on the site comprise grassland, heath and dense bracken, peatland, Woodland and scrub and exposed rock and disturbed ground. The survey work undertaken has also identified two areas of rich fen and flush located outside of but close to the boundary of the site one to the north east and the other located along the southern boundary. The lands in the vicinity of the site to the north has a sinkhole and that to the south of the site adjoins an area of wet willow – alder – ash woodland.

12.4.2 On site, the main feature of note 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 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 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. 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.

12.4.3 In terms of other surveys undertaken, a static **bat detector survey** was 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 are indicated in Table 10.3 of the REIS and 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 methodology used in the bat survey work was the subject of some discussion during the hearing with reference made to the fact that the surveys were undertaken on a single night. I also note the fact that the Development Applications Unit in their submission to the Planning Authority dated 15<sup>th</sup> June, 2015 note the fact that multi season bat surveys have not been done and no searching for roosts undertaken. The initial survey work undertaken in 2014 and included in the initially submitted EIS 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. 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.

12.4.4 On the basis of the survey work undertaken it would appear that **badger activity** on the site is low and generally confined to the north eastern part of the site. There is some evidence of pine martin, squirrel and fox recorded on the site. 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.

12.4.5 The **area of wet willow – alder – ash woodland** to the north of the site and noted in the REIS is located outside of the site boundary and will not be impacted directly or indirectly by the proposed development. As set out in the assessment for the power supply project, the grid connection works avoid these areas such that there will be no significant direct or indirect effects arising on this area as a result of the construction of the data centre and power supply project.

12.4.6 Regarding **birds**, while there will be some disturbance potential during the construction phase the retention of significant areas of habitat and the creation of new habitat will allow for the survival of existing populations. It is noted that the survey work undertaken and recorded at Table 10.6 of the REIS makes reference to the overflight of a hen harrier and the conclusion of the REIS that this bird was likely overflying rather than nesting at the site was queried by at least one observer to the case. I note however that no other sightings of this species were recorded during the survey work and that there are no records of hen harrier activity in this part of County Galway.

12.4.7 Regarding the **wood bitter vetch** plant, a **conservation management plan** for the species has been submitted with the REIS (Appendix 10.4) and a status report for 2015 is also included in the REIS (Appendix 10.5). The status report updates the known locations of the plant on the site which are as indicated in 12.4.2 above. It also sets out the programme of seed harvesting undertaken and the translocation process undertaken. In this regard it is noted that that part of the relocation was undertaken using mechanical excavation and that this was consented to by the NPWS (section 4 of Appendix 10.5). The figure at the end of Appendix 10.5 shows the areas relocated as at the end of 2015. As noted in 12.4.2 above, it was clarified during the course of the hearing that relocations of the wood bitter vetch in accordance with the derogation licence is now complete. The Conservation Management Plan sets out the methodology for translocation and also the procedure for monitoring post translocation. It is noted that the submission of the NPWS to the Planning Authority dated 15<sup>th</sup> June, 2015 raised concerns with regard to the impact of the relocation of the wood bitter vetch on site, stated that the preparation of a conservation management plan did not demonstrate a full assessment of the potential impacts on the species which it contends were not fully assessed in the EIS and requests that further information on the potential impacts be requested and that such an assessment be included in the EIA undertaken by the Planning Authority (or

the Board in this instance). This information was not requested by the Planning Authority in its request for Further Information dated 11<sup>th</sup> June and the applicant was requested by the Board (as part of the Board's Request for Further Information dated 4<sup>th</sup> day of February, 2016) to submit any further comments on the issues raised in the submission of the NPWS. No further details regarding the impact of the development on the translocation of the wood bitter vetch species was presented in response. I note the limited predicted dust emissions during the construction phase of the development however the assessment contained in Chapter 9 of the REIS relates to sensitive receptors off site rather than the area where the wood bitter vetch has been relocated to. I am not therefore in a position to make an assessment of the potential impact of construction activities on the plant other than to note that the relocation process has been completed. I do however note the fact that section 4.8.5 of the REIS relating to construction phase mitigation measures states that the areas of wood bitter vetch on the site will be securely fenced off for the duration of the construction activity and that on site construction staff would be given information regarding the importance of the plant.

12.4.8 Regarding the detail of the submitted Conservation Management Plan, given that the translocation is stated to be complete the methodology for translocation is no longer relevant however in the event of a grant of permission it is recommended that the procedures for the maintenance and monitoring of the relocated plants would be required by way of condition to be undertaken. I note that a question was raised by Mr Sweetman and Mr Collins during the course of the hearing regarding whether the activity to relocate the wood bitter vetch had been undertaken in accordance with the licence application made to the NPWS and specifically what was the purpose of the relocation cited in the application made. Details of the application or the derogation licence or the application were not presented with the application or at the hearing and are not available via the NPWS website.

## **12.5 Transport and Access**

12.5.1 Construction access to the site is proposed to be via the national road network and the R348 which runs to the south of the site. Access to the existing M6 is available via the Athenry interchange (junction 17). Construction activities are set out in Chapter 4 of the REIS and roads and traffic in Chapter 7. The development as proposed in the current application is indicated as having a construction period of 28 months (Table 4.1 REIS) and it is envisaged that the construction of the data centre would run concurrently with the construction of the power supply project.

- 12.5.2 In terms of construction traffic impacts, the development of the data centre and the power supply project has potential cumulative effects with the construction of the M17/M18 motorway development. Section 7.3.9.1 of the REIS notes this fact and states that the R348 in the vicinity of the appeal site could be used as an alternative construction route for M17/M18 construction traffic and that this level of traffic could be up to 90 HGV movements per day. This level of traffic is assumed in the analysis of construction traffic for the proposed development. The construction workforce at the site is estimated at between 250 and 300 and the peak of 20 two way HGV movements per hour would be generated on the surrounding road network. For the power supply development that is to be undertaken concurrently it is estimated that there would be a maximum of 14 HGV movements per hour and a maximum of 144 construction workers on this part of the development.
- 12.5.3 During operation, the level of employment is assumed to be a maximum of 150 and it is noted that 7.3.11 and 7.3.12 of the REIS states that the 150 employment level would not be exceeded with the full build out of 8 data halls on the site. This was not clearly stated during the course of the oral hearing with the implication being given that additional employment levels would be low and certainly not a pro rata increase for each additional data hall. Traffic to the site would also be potentially generated by the proposed car parking area to serve the amenity walk. This car park is stated in the REIS to have a capacity of 29 cars.
- 12.5.4 The methodology employed in the analysis of traffic impacts and modelling of the potential impact of the proposed development on junction capacity is set out at 7.4.2 of the REIS. For clarity the assessments take account of the construction of the M17/M18 motorway, the concurrent development of the power supply project and the ongoing phased expansion of the data centre site. The methodology used is in my opinion appropriate.
- 12.5.5 The analysis of the predicted impact of the construction and operational phases indicate that all junctions analysed are predicted to operate within acceptable RFC ratios though RFC levels are close to 80 in the case of the site access junction to the R348 in the PM peak for the construction phase in the years of operation up to the time that the full build out of the site is complete and all construction traffic is removed from the analysis.
- 12.5.6 Regarding car parking, section 7.3.19 of the REIS sets out the proposed number of car parking spaces on site and I note that a total of 150 no. staff parking spaces are proposed to be provided. This is one space per employee and would appear to be excessive having regard to the provisions of Smarter Travel, the proximity of the site to Athenry which is served by train

and would be such as to potentially act as a deterrent to promotion of sustainable transportation modes under a mobility management plan for the site. In the event of a grant of permission I would therefore propose that the number of on site parking spaces accessible to staff would be restricted to 100 maximum with an additional 7 no. visitor parking spaces and 8 no. disabled parking spaces. This figure could be reviewed in the event that there are future applications for further phases of development on the site and in light of the experience of operating the site and implementation of the Mobility Management Plan. I also note the fact that it is proposed that there would be an additional 50 spaces which are identified as 'Internal Staff Mobility Spaces' which are for on site staff to move about the site. I agree that given the size of the site some form of on site transport is required and note the proposal in 7.3.19 of the REIS that the vehicles used for this purpose would be electric vehicles where possible. Notwithstanding this, given the limited numbers proposed to be based in the data hall buildings and other locations on the site this figure of 50 spaces would appear to be very high and requires further justification. In the event of a grant of permission I suggest further justification for the number of internal mobility spaces proposed is submitted and that it is clarified by condition that none of these spaces are to be utilised by staff or other persons commuting to the site.

12.5.7 In conclusion, I consider that the analysis of traffic impacts presented is robust in terms of methodology, provides for a comprehensive assessment of the impact that may arise as a result of all permitted and proposed developments in the vicinity and demonstrates that the existing road network in the vicinity of the site is capable of accommodating the construction and operational phases of the development.

12.5.8 An issue regarding the appropriateness of the use of the R348 to access the proposed development was raised by a number of appellants and observers to the case. In particular it is contended that the wording of **DM Standard 19** of the Galway County Development Plan relating to Access to National and Other restricted Roads for Commercial developments identifies the R348 as a controlled regional route where access would be restricted to certain limited classes or types of development. The wording of DM Standard 19 states that '*Commercial, industrial and community facilities development and land use shall be restricted to essential needs, in the particular locality, of agriculture, tourism infrastructure, fisheries, forestry, park and ride facilities or existing extractive industries, and where these cannot be in the opinion of the Planning Authority, be reasonably located along other non-listed regional or local roads*'. In response, the first party contends that Class II regional roads allow for access for industrial uses in the case of essential needs and that in the case of the proposed development there is no alternative viable access

available. The appeal site is certainly accessed via a Class 2 controlled road (R348 Derrydonnell – Athenry) and I would agree with the first party that the wording makes reference to the provision of access for industrial uses in exceptional circumstances where there is no other access available. I would also agree with the first party that there is no viable alternative access route available to the appeal site. The wording of DM19 would appear however to limit access to '*essential needs.....of agriculture, tourism infrastructure, fisheries, forestry, park and ride facilities and existing extractive industries*' and the proposed development does not in my opinion clearly fit within one of these categories. The proposed development would therefore, in my opinion be contrary to DM Standard 19 and this would have to be set against the overall benefits of the proposed site and the merits of the location as discussed at 12.1 above in the making of an overall assessment of the merits of the proposal.

12.5.9 With regard to the **safety of the proposed access**, the application details the proposed site entrance and how the required sight distance can be achieved at the proposed access point, (see ARUP drg. No. C-100-019). A sight line of 160 metres in each direction can be achieved and a 45 metre long right turn lane is proposed. I also note that the proposed access has been the subject of a Stage 1 road safety audit. In terms of traffic safety therefore it is my opinion that the design and layout of the proposed access is satisfactory.

12.5.10 Concerns have been expressed by the resident of the dwelling to the east of the proposed site access regarding the impact on the amenity of the dwelling from the proximity to the access. The dwelling in question is located c. 160 metres from the proposed site access and do not consider that with such a separation there would be a significant negative impact on residential amenity likely to arise. In any event, as stated by the first party, the relocation of the site access to a location further to the west is not feasible if the required 160 metre sight line is to be met. I also note the fact that the land on which the bend in the road referenced by the appellant is located, is not within the control of the first party.

12.5.11 Access to the site by **public transport** or modes other than car are not used in the assessment of traffic from the development and this is reinforced by the proposed layout of on site car parking spaces. A total of 150 no. staff parking spaces are proposed on site plus 7 no. visitor parking spaces. This is additional to the 29 no. parking spaces to be provided for the amenity walkway. Provision in the layout of the site is made for disabled parking spaces with a total of 8 spaces to be provided and 16 no. cycle parking spaces are also proposed. No mobility management plan is submitted in the submitted REIS however a Workforce Travel Plan was



submitted to Galway County Council as part of the response to further information. In the event of a grant of permission the submission of a mobility management plan should be required and such a plan should include for measures to provide a connection between the site and the train service in Athenry as well as other mobility management measures such as car sharing.

12.5.12 During the course of the hearing Mr Allan Daly noted the fact that access to the site from the town of Athenry could be provided via the Teagasc agricultural lands to the east and that such a connection could result in a cycle or walking connection to the site from the town that would only involve utilisation of a very short section of the R348. The alignment of this route is not shown in any of the written submissions made by Mr Daly to the hearing but was shown as a slide during the course of his presentation. I would agree that such a connection would be desirable and note that representatives of Apple state that there is no objection on their behalf to such a connection. The suggested route however involves the provision of a connection via lands that are in private ownership and not in the direct control of the applicant and for this reason is not something which could be the subject of condition. The submitted mobility management plan should contain targets for modal change and encourage Apple to investigate measures that would increase cycling / walking to the site. It is unclear how many potential employees may come from Athenry and the feasibility of a dedicated cycle / walking route however this is something which could be examined under the mobility management plan.

## **12.6 Energy Demand Climate Change and Sustainability.**

12.6.1 Module 1 of the oral hearing related to energy and climate change impacts arising from the proposed development and a very significant amount of information was presented on this subject during the course of the oral hearing. It is obvious that the proposed development is going to be a significant user of power, notwithstanding the measures set out by Apple to ensure that best technology is used to ensure minimum power demand, including the siting of the development in Ireland to ensure that ambient air cooling of the data halls is feasible. To summarise the proposed development of the data hall included in the subject application would generate a demand for 6MW of power by the end of 2018 with that anticipated to rise to 30MW by 2023 when the development is fully operational. Potentially, in the event that development along the lines of the masterplan for the site was progressed and permission granted for this additional development, the power demand generated by the site could extend to 240MW. With regard to the level this energy demand would represent, a significant number of figures were

presented during the course of the hearing with references made to the energy demand relative to generating capacity, average energy demand and peak energy demand. The calculation is also influenced by whether the energy use of the development is assessed against current or future energy use / demand and whether it is assessed relative to the relevant figure for the Republic of Ireland or all Ireland. In terms of peak power demand, the 30MW demand from one data hall would equate to approximately 0.59 percent increase in all time peak demand and a 0.84 percent increase in annual energy use if measured against the 2015 figure which is the most recent available in the Eirgrid 2016-2025 Generation Capacity Statement. The corresponding figures for a full build out of 8 data halls would be a 4.7 percent increase in peak all time demand (which was in 2010) and an approximately 6.75 percent increase in terms of annual energy use based on 2015 figure. This figure of 6.75 percent takes account of a stated 88 percent capacity factor in the development and without allowance for this figure energy use would be approximately 8 percent of 2015 annual energy use. It should be noted that these figures relate to current energy use and percentage energy use would likely be less by the time 30MW demand (c. 2023) or 240MW demand (2030-2035) scenarios arose if we assume that total energy use will increase over time. Whatever way the figures are calculated and presented it is clear however that the amount of energy consumed by the proposed development, both as proposed in the current application and certainly as would arise with the full build out of the masterplan for the site would be very significant.

12.6.2 In terms of energy demand and the impact that developments such as that proposed which have the impact to significantly increase demand have on renewable energy targets and greenhouse gas emissions, the submissions made to the hearing by Mr Hughes (Item 10 attached) showed how the best long term solution to address climate change is a reduction in overall energy demand. In particular, Mr Hughes demonstrated how the reduction in greenhouse gas emissions that would result from an increase from the current low 20 percent penetration of renewable energy to the 2020 target of 40 percent renewables would be limited (11.5 million tonnes to 10.5 million tonnes of CO<sub>2</sub>) in the absence of a reduction in overall energy demand. Looking further ahead, meeting the 2°C limit on global climate temperature increase would likely require very significant reductions in energy demand in the years ahead. The information presented by Mr Hughes is informative and obviously the Irish government will have to undertake measures to help to meet climate change targets which have been signed up to. As highlighted in a number of written submissions and presentations to the hearing, in the event that agreed targets are not met then there exists the potential for fines for Ireland.

12.6.3 Regarding **climate change**, in planning policy terms there is no policy at a national level regarding very high energy consuming projects such as data centres. In energy policy, I note the fact that the Eirgrid All Ireland Generation Capacity Statement 2016-2025 makes specific reference to the projected increase in demand arising from consented and likely planned data centres. While the points made by Mr Hughes are noted, it is clear to me that the facility proposed by Apple is not an optional form of development in the modern world, at least in an international context. As highlighted in the CISCO report referred to in section 2.2 of the REIS, the demand for data storage is projected to rise significantly for the foreseeable future and data storage facilities are required. Alternative technologies including dispersed storage and the use of facilities to provide some form of district heating are noted, however I would agree with the submissions made by Apple on this subject that such approaches result in significant security, efficiency and reliability issues. In short, it is my opinion that data centres are a form of development has to locate somewhere and, at an international level there is a strong case that locations such as Ireland and Denmark where Apple are proposing to develop their European facilities are the most appropriate given the temperate climate will reduce the overall energy requirement to run them. For Ireland, and An Bord Pleanála in making an assessment of the merits of specific proposals such as that currently under assessment the decision has to be made in the context of the nature of the facility, the clear need for such facilities and the necessity that it would locate somewhere. In the absence of a clear policy on this form of development at a national level it is in my opinion very difficult for a body such as An Bord Pleanála to make a decision that this form of development is not acceptable in principle. In addition, while data centres may have the potential to make the achievement of climate change targets more difficult they have clear potential benefits in terms of employment and spin off economic activity. The location of the proposed facility is also such that it would have a potentially significant role in the rebalancing of economic development at a national level. All of these factors have, in my opinion to be taken into account in making an overall assessment of the merits of this proposal.

12.6.4 In terms of making an assessment of the potential impact of the development on climate change and greenhouse gas emissions, an issue which was questioned by a significant number of parties to the proposed development was the statement made in the application documentation that the proposed development would be powered by 100 percent renewable energy. This statement also informed the EIS submitted as part of the original application documentation and comprised part of the further information request issued by the Board on 4<sup>th</sup> February, 2016 the application was requested to provide further justification and information as to how the 100

percent renewable energy source statement could be justified (Item No.2 of further information request).

12.6.5 In the response to further information and during the course of the hearing, representatives of Apple set out the companies approach to energy. This approach essentially comprises three steps the first being the use of best technology and design to minimise energy usage. The second relates to the use of Apple supported renewable energy generation projects and the third provides for the purchase of renewably sourced energy from energy suppliers via the grid. Arising from this approach, Apple contend that the statement that the development would be powered by 100 percent renewable energy is correct. The promotion of best technology and the minimisation of energy use is an objective that Apple places a significant emphasis on and the choice of location for the European facilities is an indication that energy demand minimisation is an important consideration. I would also note the reference made by Mr Freeman of Apple at the oral hearing to the Greenpeace Clean Energy Index which is contained in the report Clicking Green: A Guide to Building the Green Internet (Greenpeace, May, 2015) and the 100 percent score of Apple in this index as evidence of company commitment to energy efficiency. Regarding direct renewable energy connections and renewable energy projects, as noted by a number of parties at the hearing no such projects are identified by Apple and no specific renewable energy projects are included as part of the current application. In any event, the question has to be asked whether any such new renewable projects be additional to that which would otherwise come on stream. Maybe in the event that there was a direct connection between the project and the data centre development it could be definitively stated that the power generated would be additional to what otherwise would be the case however at present such connections are not permissible in Ireland and any power supply has to be via the normal grid network. For this reason I do not see that direct power supply projects are currently relevant.

12.6.6 The main reason for Apple's contention of 100 percent renewable power supply for the development appears to relate to their commitment that power to the development would be sourced from renewable sources by an energy provider who is in a position to provide certainty regarding the origin of power. In the case of Apple and the current proposal, details were submitted in response to the further information request issued by the Board which committed Apple to the supply of power from a renewable energy provider and also stated that options for potential renewable energy projects would be examined. During the course of the hearing, Apple submitted details in the form of a letter from Vayu a renewable energy provider which states that Apple and Vayu have reached agreement for the supply of energy to the

proposed datacentre and that Vayu gives Apple a binding commitment that all of the electricity supplied to the proposed datacentre will be generated from renewable sources. From the information available regarding Vayu it is evident that they are a licenced energy supplier (as distinct from generator) and information available from the Commission for Energy regulation gives the breakdown of energy sourced by the company. This shows that Vayu's fuel mix is 100 percent from renewable sources, (see Table 2.3 of CER Fuel Mix Disclosure and CO2 emissions 2013). The issue which arises and which has been raised by a number of parties to the hearing relates to the degree to which the power supplied by Vayu as part of a power purchase agreement (PPA) with Apple or any other supplier to power the Apple development can be considered as additional and therefore the degree to which the energy used to power the development can realistically be deemed to be from renewable sources. Apple contend that their development and the commitment that it would be powered by renewable energy would lead to the development of new or additional renewable generation, however there is no clear way to demonstrate that this would be the case. In addition, as set out during the course of the oral hearing, there is a recognised limit to the penetration of renewable energy sources to the grid and there is always a need for base energy supply via conventional sources to provide power when conditions are not suitable for wind energy. The amount of renewable power available is always going to be finite and in the absence of direct connection of renewable generation to the development it is not possible to definitively state that power supplied to the development is from renewable sources. The limitations of the approach proposed by Apple are in my opinion set out in 13.6.2.2 of the REIS where it is stated '*due to the intermittent characteristic of many forms of renewable generation Apple does not claim that in every moment of the day, every day throughout the year, the energy consumed by the data centre will exactly match the quantity of renewable energy supplier or Apple supported projects. Apple's strategy is to ensure that on an annual basis the power consumption of Apple's proposed data centre is matched by renewable energy generation.*' My reading of this statement is that while at an aggregate (yearly) basis power to the development may be traced to renewable sources, it is not possible to state that power supplied at any particular time is not from conventional sources.

- 12.6.7 On balance I would agree with the basis of the argument put forward by the appellants and observers regarding the claims of 100 percent renewable power supply. In the short term where renewable electricity generation in Ireland is below the threshold feasible on the network it may be possible to make a case that a large contract for the supply of power such as that signed between Vayu and Apple could lead to additional renewable generation and that a significant percentage of the power supplied can reasonably be stated

to be from renewable sources. Assessing the extent to which such generation would have come on stream in the absence of the development is in my opinion problematic. In future phases of the development, given the limitations in terms of the grid and the amount of power required I do not see how it can clearly be shown that power to the Apple data centre would be from 100 percent renewable sources. In my opinion the best assumption which can be made is that power supply to the development will be from the grid average power generation sources.

12.6.8 Section 9.8.7.1 of the REIS contains an assessment of the potential impacts on climate that would arise in the case of power supply from 100 percent renewable sources not being achievable and instead being provided from the grid average sources. It should be noted that this assessment is undertaken on the basis of the power mix from 2013 which would include a renewable component of approximately 20 percent. On the basis of this assumption, the CO<sub>2</sub> emissions for the additional 30MW that would arise on foot of the current proposal would be approximately 108,698 tonnes rising to 869,958 tonnes with full build out of the eight data halls as per the masterplan. The effect of this increase in CO<sub>2</sub> in terms of percentage increase over 2014 levels would be c. 0.187% for the current proposal and c. 1.49% in the case of the full masterplan. As noted these figures are on the basis of the existing (2013) generation mix and assuming a continued increase in renewable electricity generation towards the 40 percent target the levels of additional CO<sub>2</sub> emissions and percentage increase are likely to be quite significantly less than above.

12.6.9 The 0.187 percentage increase in CO<sub>2</sub> emission (at 2013 generation mix) is stated in 9.8.7.1 of the REIS not to be significant and while this is a significant figure for one development in the context of overall emissions I would be in agreement with this statement and consider that the climate change impacts arising from the current proposal are limited. Regarding the potential for the overall development of the masterplan to increase national CO<sub>2</sub> emissions by approximately 1.5 percent I would question the conclusion of the REIS (9.8.7.1) that such an impact would not be significant. Against this it should be noted that the 1.5% figure is on the basis of a 20 percent penetration of renewables which will increase significantly by the 2030-2035, anticipated full build out of the masterplan development. It should also be noted that overall CO<sub>2</sub> emissions will likely have increased by 2030-2035 such that the percentage used to power this development will reduce that there is the potential for changing circumstances whereby Apple provided renewable generation projects serving the development either directly or via the grid may come on stream and also that there are likely to be continuing slight increases in overall efficiency of conventional power generation. For all

of these reasons, it is not in my opinion possible to state with any certainty what the impact of the full build out of the data centre as per the masterplan would be in terms of CO2 emissions other than to state that the 1.5 percent increase referred to in the REIS is a very much worst case scenario.

12.6.10 As set out earlier in this assessment, a significant part of the location justification for this proposal relates to the size of site which is required to accommodate the development of additional phases as per the submitted masterplan. It is therefore considered that while additional phases will be the subject of future applications for permission there needs to be some regard given at this stage to the potential environmental impact of such additional phases of development. Notwithstanding the factors set out above that may result in a reduction in the 1.5 % increase in CO2 predicted in the REIS it is my opinion that the future full build out of the site as envisaged in the Masterplan would have a potentially material impact in terms of increased overall CO2 emissions and hence implications in terms of climate change and the ability of Ireland to meet its climate change and greenhouse gas emission targets. As set out at 5.6.2 above, there is limited guidance available regarding the principle of accommodating this form of very energy intensive development in Ireland. It is however my opinion that the potential benefits of the proposed development of the facility in terms of direct and indirect employment and the positive impact on regional development are such that they outweigh the potential adverse climate change and increased greenhouse gas emission impacts which may arise. In coming to this conclusion I have regard to the factors set out at 5.6.8 and 5.6.9 above whereby the impact of the future development in terms of increased CO2 emissions will likely not be as significant as that set out in the REIS. I also would have regard in reaching this conclusion to the fact that the nature of the development is one which is required to be provided in some location and the fact that any additional phases of development would require permission at which time changing circumstances in terms of direct energy supply, climate change policy and potentially new policy direction on data centre and other energy intensive forms of development could be taken into account. This approach of having regard to potential future developments in energy generation and demand is however an issue on which the Board will need to take a position, particularly given the importance of the scale of overall development and site size in the choice of location.

12.6.11 The impact of the proposed development on the grid infrastructure was also a subject raised in written submissions and at the oral hearing. Eirgrid have stated that the current application for a single data hall can be accommodated without reinforcement of the grid network being necessary. It is not, however clear that this would be the case with future phases of

development. The benefits of the proposed development in terms of the utilisation of the existing surplus grid capacity available in the west region was set out during the course of discussion at the hearing and it was stated by Mr John Melvin of the CER who gave evidence to the hearing (Item 5 of Appendix A) that the proposed location in the west region close to an existing 220KV line can be expected to require lower levels of grid reinforcement than would be the case if a similar development was to be located in the Dublin Region. The evidence presented by Mr Melvin also supported information presented by the applicants regarding the benefits that arise on foot of the flat demand profile of data centre developments. Essentially, as the data centre is operating at a relatively constant load over a 24 hour period it facilitates greater use of available wind power at night time and reduces curtailment. As well as making use of grid infrastructure during the off peak period In this way developments with a flat demand profile such as data centre developments is more facilitative of wind than developments with daytime only demand. The evidence presented by Mr Melvin also indicated that the flat demand curve and the more efficient utilisation of the network with resulting lower costs per unit for network users and that data centres may assist in lowering Transmission User of System (TUoS) tariffs which are paid by generators and large energy users. The extent of additional development that may be accommodated on the site without grid reinforcement works being required is not clear from the information available and would depend on future developments in electricity demand and supply across the network. Regarding generation capacity, it is noted that there is currently a significant excess of generating capacity available in the short to medium term. By c. 2025 the generating adequacy in Ireland comes close to standard (Eirgrid All Ireland Generation Capacity Statement 2016-2025) and there is an additional period of surplus available at an all Ireland level subject to increased interconnector capacity being available. It should be noted that the 2016-2025 capacity statement which predicts the availability of generating capacity has taken account of projections in the development of data centres over the period.

12.6.12 In conclusion, I do not consider that on the information available there is a clear basis to support the objections made regarding the negative impact of the proposal on grid infrastructure and the assertions that Apple would not make a fair contribution to maintaining grid capacity. There is existing capacity to accommodate Phase 1 of the development comprising the first data centre however Apple will be paying transmission use of system charges (TUOS charges) as well as paying for electricity used and as set out by the CER in the short run at least additional use of the system will likely lead to reduced charges for all users. The situation at the time of any future



application for expansion of the data centre is hard to predict and would have to be assessed at that time.

## 12.7 Other Issues

12.7.1 Regarding **archaeology**, 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 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. 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.

12.7.2 Reference is made in a number of submissions received to the presence of **lisins or burial grounds** for children within the woodlands. I note however that there is no record of such sites within the area proposed for development.

12.7.3 A number of submissions regarding the proposed development make reference to the fact that no **flood risk assessment** was undertaken for the proposed development. This is not the case and a Flood Risk Assessment Report dated February 2016 is included at Appendix 12.1 of the REIS. This flood assessment is also included in the EIS submitted for the power supply project. 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. Reference is also made in a number of submissions to the fact that a dwelling located at the western end of the site in the vicinity of the golf club was abandoned as a result of flood risk.

12.7.4 The flood risk assessment (FRA) undertaken makes an assessment of the potential impact of the proposed development of the applications as currently before the Board, namely the development of a data hall and the power supply project and secondly the potential impact of the full build out of

the site as per the masterplan. There are no recorded event of flooding on the appeal site as per floodmaps.ie. The areas surrounding the site are generally at a lower level and the flood risk assessment notes the fact that there were significant flood events in the vicinity of the site in 2006 and 2009. The assessment contains aerial photographs of these flood events and the impact arising mainly to the west and south west of the site including the area of Athenry Golf Club and the general area of Derrydonnell Turlough to the south west of the site. The report also notes the results of a flood event in December 2015 including the fact that at that time the drainage ditches within the site were full of water and flooding occurred on the golf course.

12.7.5 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. Pluvial flooding was the subject of assessment as part of the FRA and Figures 16 to 22 of the assessment show the potential impact of pluvial flooding. The modelling undertaken predicts that the off site flood depths post development would not be any worse than is the case currently. 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.

12.7.6 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 in the vicinity of the site. The proposed development is consistent with the requirements of the Galway County Development Plan regarding flood risk and also with the provisions of the Flood Risk Management Guidelines for Planning Authorities. I note the fact that the golf club have made submissions with regard to the potential impact of the proposed development on their lands and that there are concerns that additional future phases of development of the data centre may have a potential adverse impact on the golf course in terms of drainage. As set out above the analysis undertaken and submitted as part of the current application indicates that this would not be the case and this analysis includes consideration of potential future phases of development. The Golf Club have sought assurances that prior to any future expansion of the data centre

activities that they would be consulted with regard to flood risk. At the time of any future applications for additional data halls on the site consideration will have to be given to the issue of flooding and further assessments undertaken taking into consideration the impact of any development that may be permitted.

12.7.7 A number of parties have submitted that the **financial contribution** amount included in the Notification of Decision to Grant Permission issued by Galway County Council was not accurate. I do not agree that this is the case and it is apparent to me that the amount specified in the Notification of Decision (€284,804.10) is reflective of the cumulative floor area of the development proposed in the subject application for the administration building and one data hall (30,138 sq. metres) by the appropriate charge for roads and recreational amenity as prescribed in the Galway County Council s.48 development contribution scheme.

12.7.8 I also note that the Notification of Decision to Grant Permission issued by Galway County Council includes a special contribution of €16,500 in respect of anticipated costs of the provision of road markings on the R348 to the junction with the R446 during the construction period and renewal of road markings for the ghost island at the R348 / R446 junction. No detailed breakdown of the basis for this contribution amount has been provided or basis for the apportioning of the cost to the proposed development. Given the extent of road where revised markings are required this level of contribution is considered appropriate.

12.7.9 A submission to the oral hearing was made by Mr and Mrs Vincent Kelly who own property on the northern side of the site on which they breed pedigree sheep. Mr Kelly contends that his concerns as expressed to Apple prior to the development have not been taken seriously and that inadequate consideration of the impact of the development on his livestock has been taken in the REIS (see page 128 where there is brief reference to the breeding of sheep and horses under the heading of construction noise impacts). In response to the concerns of Mr Kelly I would note the outcome of the noise modelling exercise undertaken and the results for noise sensitive receptors along the northern side of the site, (Table 8.8 and Figure 8.3). The results of this analysis of predicted construction noise levels shows levels that range between 39 and 45 dB Laeq. The closest night time noise monitoring location for which information is available in the REIS is location 3 where a night time Laeq of 39dB was recorded (Table 8.5 of REIS). On the basis of these results and given the separation between the construction activity and the lands owned by Mr Kelly I do not consider that the increase in noise during the construction phase would be very significant. As to whether a small increase in noise would be sufficient to impact on the breeding of the sheep I

cannot state definitively however on the basis of the information presented I do not consider that negative impacts on livestock would clearly arise. Mr Kelly outlined to the hearing how his existing farming was an outdoor system and stated that a solution would be the provision of a sheep shed or similar facility that would insulate the sheep from noise and disturbance impacts. At the oral hearing there was no indication from the applicant that they were willing to accede to the request for the provision of a shed on Mr Kelly's lands and the provision of such a structure would require works on lands outside of the control of the applicant such that they could not be required to be undertaken by way of condition.

### ***Legal Issues***

12.7.10 By way of a letter to the Board dated 29<sup>th</sup> February, 2016 the Concerned Residents of Lisheenkyle it is contended that the reissuing of the request for further information to the applicant on 4<sup>th</sup> February, 2016 constituted an extension of the time period available to the applicant. It is contended that there is no provision in the Acts under which the Board can extend the time period in this manner at the request of the applicant and it is submitted that the Board must proceed to determine the application on the basis of the information before it as at the 8<sup>th</sup> of February when the time period in the initial further information request expired. It is stated that in the event that the Board proceeds to make use of information presented after the 8<sup>th</sup> February (i.e. the further information response) that the Concerned Residents would reserve their position regarding taking the matter further post a decision by the Board. The reissuing of notices is a practice which has been undertaken previously by the Board in the processing of cases and I note that there is no provision of the Acts which restricts the time period which the Board can give to reply to a request for further information.

12.7.11 Mr Sweetman highlighted the fact that Galway County Council issued a decision on the data centre application in isolation from any information regarding a grid connection. The outcome of the O'Grianna case was cited and it was contended by Mr Sweetman that the decision of the council was invalid on the basis of the O'Grianna judgement as the impacts of the grid connection were not taken into account and further contended that if there was no valid decision of the council then there could be no valid appeal before the Board. The situation regarding the application to the Planning Authority for the data centre and ancillary development is that this application did not constitute strategic infrastructure for the purposes of the Planning and Development Act 2000 as amended. The grid connection referred to by Mr Sweetman comprised the power supply development which did comprise strategic infrastructure. The Planning Authority were not therefore able to accept an application that incorporated the connection to the grid. I would

however note that at the time the application for the data centre was made to the Planning Authority the applicant knew the nature and alignment for this grid connection route. Information regarding this grid connection was submitted at the time of the application to the planning authority for the data centre and reference made to the grid connection in the EIS submitted to the planning authority. For this reason I do not agree that the decision of the Planning Authority is invalid.

12.7.12 Mr Sweetman during the course of the oral hearing noted that the directive requires that the EIS contains a non-technical summary of the project. It was contended that this was not the case in the proposed development as the project descriptions contained in the non-technical summary in the REIS only relates to the data centre aspect of the development and does not reference the grid connection and substation elements of the overall project. I would not accept that this is the case and note that the description of the proposed development given at pages vi-ix also includes a description of the proposed power supply element. I would also note that the summary of potential impacts contained in the non-technical summary make clear reference to the impact in combination with the power supply development. Examples include Landscape and Visual Impact on page xii and noise and vibration (page xiv).

12.7.13 Mr Collins acting on behalf of the Concerned Residents of Lisheenkyle made reference during the course of the hearing to the ECJ case of Paul Abraham and others v Region Wallone and others (2008), a case about modifications to an airport in Belgium. This case, which related to circumstances where an airport in Belgium was the subject of sub threshold works not including an increase in runway length which facilitated a more intensive use of the airport including 24 hour flights resulted in a decision of the court that referred to the original European law (the Directive) which requires that projects which are likely, by virtue of their nature, size or location, to have significant effects on the environment, are to be subject to an EIA. The decision of the court included a warning that *“a Member State which establishes criteria and/or thresholds taking account only of the size of projects, without also taking their nature and location into consideration, would exceed the limits of its discretion”* under the EIA Directive.

12.7.14 In this case an EIS has been submitted for both the data centre application and the power supply development. These documents have made an assessment of the cumulative impacts likely to arise from the development of these projects in combination and have also made an assessment as appropriate of the potential cumulative impacts of the development which is the subject of the current applications and that which is indicated on the Masterplan for future development of the site and which may be the subject of

future applications. As noted by Mr Mulcahy SC for Apple during the course of the hearing, in addition to the current applications being accompanied by EIS which address the combined effects of the proposed data centre and power supply developments as well as cumulative effects with future plans and projects including the potential future expansion of the data centre as per the masterplan, any future application for expansion of the data centre will have to be accompanied by a further EIS which will assess cumulative effects. Given the content of the submitted EIS (power supply project) and REIS (data centre) and the consideration of cumulative effects including that of the future development of the site in accordance with the submission of the Masterplan I do not see how the decision of the ECJ in the Abraham case is relevant to the cases currently before the Board. Similarly, assertions of project splitting and salami slicing made in written submissions and during the course of the hearing are not in my opinion supportable given the fact that the applications are accompanied by EIS and that the submitted documents take account of the potential environmental impacts arising from the planned future development of the data centre site.

## **12.8 Environmental Impact Assessment**

### **12.8.1 Structure and Content of REIS**

12.8.1.1 The original application submitted to the Planning Authority and received by the Board on 9<sup>th</sup> day of October, 2015 was superseded by the revised EIS (REIS) which was submitted to the Board by the first party in response to the further information request issued by the Board. This REIS was received by the Board on 12<sup>th</sup> day of February, 2016 and the first party state that this REIS replaces that originally submitted. The following sections on EIA relate to the REIS document received by the Board on 12<sup>th</sup> day of February, 2016.

12.8.1.2 The layout of the REIS 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 REIS 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). The REIS clearly sets out a case regarding the need for the project and a significant level of detail with regard to the consideration of alternatives is also presented such that it, in my opinion meets the requirement set out in the directive that an outline of the main alternatives would be presented. The

section regarding alternatives was further elaborated upon during the course of the oral hearing held into this development and the concurrent application under the Strategic Infrastructure Act for the power supply to the data centre (ABP Ref. 07.VA0020).

12.8.1.3 Regarding the comprehensiveness of the submitted REIS and the extent to which it takes into account the impacts on the environment likely to arise on foot of the power supply project and the cumulative effect of the data centre and power supply projects, I note the significant revisions made to the structure of the REIS relative to the EIS as originally submitted with the application. I also 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 REIS 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 REIS 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, .

12.8.1.4 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.

## **12.8.2 Likely Significant Effects on the Environment**

12.8.2.1 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 will 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 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 power supply project 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.

12.8.2.2 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 12.2.3 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 site and the operation of the on site substation. As set out at 12.2 above, 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. 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.

12.8.2.3 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 site 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 development therefore has potential to impact negatively on groundwater. Analysis presented in the REIS and discussed in more detail in section 12.9 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 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**, there are no incidences of recorded flood events on the site however there is clearly evidence of a high water level in the area and susceptibility to pluvial flood risk. Areas off site, particularly to the west and south west of the site are noted as being prone to flooding. Details regarding the design of the surface water drainage and attenuation system are set out in the REIS and 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.

12.8.2.4 Regarding **traffic and access**, 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 REIS 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 power supply project and the construction and operation of possible future phases of data centre development.

12.8.2.5 Regarding **material assets** there are a number of issues that may potentially give rise to significant effects on the environment. The development 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. As set out in the assessment above, 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. The situation with regard to future phases is the subject to future developments in terms of energy demand and generation however I note the fact that the proposed location in the west is such that there is greater existing

capacity for expansion and also that future grid capacity enhancements would be funded by additional demand.

12.8.2.6 **Ecology** as it relates to protected sites and the Natura 2000 network is considered in detail in 12.9 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. Some concern has been expressed with regard to the completeness of bat survey work undertaken on the site however I note that summer survey work over two periods has been undertaken and also that given the coniferous nature of the existing woodland, the extent of forested area that is proposed to be retained on the site and the proposed enhancement of wooded areas including the increase in species diversity proposed that the likely impact on bats in terms of loss of habitat or foraging is likely to be limited. Available information regarding other species indicates that the presence of animals is limited and again 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.

12.8.2.7 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.

12.8.2.8 I consider that the **assessment of interactions** between the environmental factors as set out in the REIS 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.

12.8.2.9 In summary, it is my opinion that the REIS submitted clearly identifies the likely significant effects on the environment arising from the development of the proposed data centre together with the power supply development incorporating the substation and grid connection 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 data centre and the combined data centre and power supply project incorporating substation and grid connection and subject to the implementation of the proposed mitigation measures set out in the REIS 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.

## **12.9 Appropriate Assessment**

12.9.1 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). Other sites which are located just outside of the 5km zone comprise the Cregganna Marsh SAC and the Clare River – Lough Corrib SAC. The screening assessment proceeds to undertake a screening 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 cumulative 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.

12.9.2 The comments of the Development Applications Unit of the DAHG as outlined at section 4.1 of this report above are noted and specifically the comment that the submitted screening assessment does not provide adequate justification for the conclusions reached and that additional reference could be made to information contained in the REIS in support of the conclusions. I also note the comments of the Development Applications Unit with regard to the potential impact of the proposed development on the Wood Bitter Vetch which is protected under the Flora Protection Order. This

species is not one of the conservation objectives of any of the Natura 2000 sites potentially affected by the development and the impact of the proposed development on the wood bitter vetch is addressed in section 12.4 above relating to ecology.

12.9.3 As noted at the start of this assessment, the proposed data centre is part of a larger development incorporating a power supply and grid connection and this assessment including this appropriate assessment screening should be read in conjunction with that for the power supply and grid connection (ABP Ref. 07.PA0020). 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 cumulative assessment of the impact of these works with those relating to the construction of the data centre.

12.9.4 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 wet 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. 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 REIS). 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.

12.9.5 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 REIS (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, 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)

#### **12.9.6 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.

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

#### Galway Bay Complex SAC (000268)

The appeal site is located c.4.5km 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 Data Centre Phase 1 comprise the potential for impacts on groundwater arising from the waste water treatment plant on site as well as 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 site. The application documentation, including the response to further information submitted by the applicant in response to the request issued by the Board details how the treatment system proposed on site is such that it is designed for a p.e. of 55. It was set out to the hearing by Apple (Item 25) how, on the basis of a flow of 60 l/h/d the maximum likely p.e. generated on site would be 41 for the administration building and 1 in the case of the data hall. The capacity of the proposed on site treatment systems are well in excess of these anticipated loadings.

With regard to the design of the on site treatment system and the potential impact on groundwaters, Appendix 14.2 of the REIS gives details of the hydraulic calculations and an assessment of risk associated with the waste water treatment plants proposed. This details how the depth to bedrock is c. 1 metre at the closest borehole on the site and that the depth to the water table is 1.4 to 1.6 metres. Calculations regarding the likely worst case concentrations of contaminants at the site boundary are presented and are within the thresholds set in the groundwater regulations. The REIS also contains the information presented in chapters 11 (Soils and Geology) and 12 (Hydrology and Hydrogeology) regarding the results of the pump tests and the geophysical analysis (see Appendix 11.3b) which identifies the primary rock type as jointed tight limestone with an area of mainly saturated fissured limestone.

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 data centre 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 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 data centre 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 groundwater contaminants from the site. There is a Turlough located to the south west of the site and a wet woodland area located to the north east both of which are located outside of the SAC. As set out in 12.4 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 REIS and have been discussed under 12.2 above relating to residential amenity. As set out at table 9.7.2 of the REIS and discussed at the oral hearing the testing of back up generators 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 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 an adverse 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 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 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 REIS Figure 12.4).

In terms of contaminants, the main potential source would be the proposed on site waste water treatment plants however 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 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 radius of influence predicted to arise from construction activity on the site is 330 metres and so the proposed development Cregganna Marsh 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.

### **12.9.8 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 Future Phases of Data Centre Development, the Power Supply and Grid Connection development proposal (ABP Ref. 07.VA0020) 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 and the power supply and grid connection 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.

### **12.9.8.1 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 EIS submitted in respect of the power supply application (07.VA0020), see Appendix 10.1. The power supply development proposal consists of the construction of a new substation to be located on the site which is proposed to be cleared as part of the data centre application (Ref. 07.245518). The proposal also involves the construction of seven new tower structures and the removal of three existing towers as well as the provision of underground cabling between the substation site and the north east corner of the data centre application site.

The screening assessment submitted and contained at Appendix 10.1 of the EIS for the power supply application (07.VA0020) assesses the impact of the power supply proposal on the Galway Bay Complex SAC (site code 000268).

Chapter 11 of the EIS for the power supply development relates to soils and geology and Chapter 12 to Hydrology and hydrogeology. The appendices to the EIS 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 power supply works is such that there would be no process emissions to groundwater or to air which would potentially impact on any natura 2000 site. 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 74 metres for the cable trenching, 285 metres for the pylon bases and 553 metres in the case of the construction of the substation itself.

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

The Galway Bay Complex SAC is located slightly more than 5km from the site of the proposed substation 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 cumulative effects, it is noted that the power supply project would not lead to any direct 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 power supply 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 cumulative 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 power supply development and the likelihood of any indirect effects arising from the construction of the power supply 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 cumulative 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.

### **12.9.8.2 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 12.9.6 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). 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 development 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 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 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 an adverse 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 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 Appendix 12.2 of the REIS. 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, it is not considered that the future development of additional data halls would have an adverse effect on of the Cregganna Marsh SAC site.

### **12.9.8.3 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 (Rathmorrissety 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 that a detailed assessment 'Hydrological Assessment for the Rathmorrissety 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 in combination effects, the M18 is located within c.5km of the Galway bay site at the closest point and the site of the Rathmorrissety 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.

### **12.9.9 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 a Stage 2 Appropriate Assessment is not therefore required.

### **13.0 Conclusion and Recommendation**

Having regard to the above it is recommended that permission be granted based on the following reasons and considerations and subject to the attached conditions.

#### **Reasons and Considerations**

Having regard to the following:

- The design, scale and layout of the proposed development including the indicative Masterplan for the possible future development of the site.
- The projected demand for data storage in the future, the economic and operational rationale for the clustering of data storage capacity on the one site and the consequent potential site size requirements,
- To the limited alternative sites identified which are capable of meeting the locational requirements of the development.
- The location of the site within the area identified as a Strategic Economic Corridor in the Galway County Development plan, 2015-2022,
- To the proximity of the site to power connections and to the required fibre network,
- To the pattern of development in the area including the separation between the application site and surrounding residential and other land uses,

## Environmental Impact Assessment

The Board considered the Revised 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 appellants and observers. 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 acceded 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 have a significant adverse impact on the ecology of the area or on any European site,



- would not be prejudicial to public health,
- would be acceptable in terms of traffic safety and convenience.

The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area.

### **Conditions**

1. The development shall be carried out and completed in accordance with the plans and particulars lodged with the application as amended by the further plans and particulars submitted on the 27th day of July, 2015 and by the further plans and particulars received by An Bord Pleanála on the 12th 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 developer shall agree such details in writing with the planning authority prior to commencement of development and the development shall be carried out and completed in accordance with the agreed particulars.

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

2. All mitigation measures identified in the submitted REIS 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. The following roads and transportation requirements shall be complied with in the development:
  - (a) The number of car parking spaces to be provided in the development shall be reduced such that the maximum number of parking spaces available to staff accessing the site shall be 100 with an additional 7 no. visitor spaces and 8 no. disabled parking spaces. Prior to the commencement of operations justification for the proposed 50 no. Internal Staff Mobility Spaces shall be provided to the Planning Authority and this number

reduced as considered appropriate. None of these Internal Mobility Spaces shall be utilised by staff or other persons commuting or otherwise accessing the site.

- (b) 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.
- (c) 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.
- (d) Construction of the proposed right hand turning lane shall be commenced concurrently with the commencement of site works and shall be completed within 6 months of the commencement of development on the site. The site access and right hand turning lane including proposed pavement overlay shall be undertaken as indicated in the details submitted with the application and detailed design including drainage shall in accordance with the requirements of the Planning Authority.
- (e) Details of the material to all parking areas shall be submitted for the written agreement of the Planning Authority prior to the commencement of development.
- (f) 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.

**Reason:** In the interests of traffic and pedestrian safety, promotion of sustainable transportation modes and protection of residential amenity.

4. Prior to the opening of the development, a Mobility Management Strategy shall be submitted to and agreed in writing with the planning authority. This shall provide for incentives to encourage the use of public transport, cycling, walking and car pooling by staff employed in the development and to reduce and regulate the extent of staff parking. The mobility strategy shall be prepared and implemented by the management company for all units within the development]. Details to be agreed with the planning authority shall include the provision of centralised facilities within the development for bicycle parking, shower and changing facilities associated with the policies set out in the strategy.

**Reason:** In the interest of encouraging the use of sustainable modes of transport.

5. Water supply and surface water drainage arrangements including all on site attenuation proposals shall be agreed in writing with the Planning Authority prior to the commencement of development.

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

6. The following requirements relating to on site drainage and effluent treatment shall be complied with in the development:

- (a) Proprietary effluent treatment and disposal systems shall be provided in accordance with the details submitted with the application and received by the Planning Authority on 24<sup>th</sup> April, 2015 and 27<sup>th</sup> April, 2015 and further information received on 4<sup>th</sup> September, 2015.
- (b) The treatment systems shall be designed, installed and operated in accordance with the EPA publication 'EPA Wastewater Treatment Manuals – Treatment Systems for Small Communities, Business, Leisure centres and Hotels',
- (c) Within three months of the first commissioning of the facility, the developer shall submit a report from a suitably qualified person with professional indemnity insurance certifying that the proprietary effluent treatment system has been installed and commissioned in accordance with the approved details and is working in a satisfactory manner.
- (d) The holding tanks proposed as part of the construction phase 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 public health.

7. Construction and demolition waste shall be managed in accordance with a construction waste and demolition management plan, which shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. This plan shall be prepared in accordance with the “Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects”, published by the Department of the Environment, Heritage and Local Government in July 2006. The plan shall include details of waste to be generated during site clearance and construction phases, and details of the methods and locations to be employed for the prevention, minimisation, recovery and disposal of this material in accordance with the provision of the Waste Management Plan for the Region in which the site is situated.

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

8. Prior to the commencement of development the developer shall submit details, including samples, of the external finishes of the data centre and administration buildings for the prior written agreement of the Planning Authority.

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

9. 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.

10. 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.

11. No additional development shall take place above roof parapet level including lift motor enclosures, air handling equipment, storage tanks, ducts or other external plant, telecommunication aerials, antennae or equipment, unless authorised by a further grant of permission.

**Reason:** To protect the residential amenities of property in the vicinity and the visual amenities of the area.

12. All service cables associated with the proposed development (such as electrical and communication cables) shall be located underground.

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

13. The following requirements relating to noise arising as a result of the permitted data centre development and the power supply project (Ref 07.VA0020) 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.

14. A dust management plan to cover the construction phase of the development as committed in 9.5.1 of the REIS 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.

15. 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

16. 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.

17. The developer 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.

18. The landscaping scheme shown on Figure 6.14 of the REIS, as submitted to the An Bord Pleanála on the 12<sup>th</sup> day of February, 2016 and the provisions of the Landscape Masterplan Report received by the Planning Authority on 24<sup>th</sup> day of April, 2015 shall be carried out within the first planting season following substantial completion of external construction works.

All planting shall be adequately protected from damage until established. Any plants which die, are removed or become seriously damaged or diseased, within a period of 5 years from the completion of the development [or until the development is taken in charge by the local authority, whichever is the sooner], shall be replaced within the next planting season with others of similar size and species, unless otherwise agreed in writing with the planning authority.

**Reason:** In the interests of residential and visual amenity.

19. 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 Revised EIS received by the Board on 12<sup>th</sup> 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.

20. Prior to the commencement of development the developer shall comply with the following regarding the proposed amenity walkway and access for the public to the site:

(a) The proposed amenity walkway, when completed, shall be dedicated for use of the public as a public pathway, and shall remain so accessible in perpetuity thereafter unless consent is granted by the planning authority for a change to these arrangements. The applicant shall enter into a written agreement with the planning authority under section 47 of the Planning and Development Act, 2000 to this effect.

(b) Submit proposals for the written agreement of the Planning Authority for the provision of public access to the western end of the existing forested area outside of the lands immediately required for the development authorised by this grant of permission. Details to be submitted for agreement shall include the form and alignment of the boundary between the data centre site and forest to which public access is to be retained and measures for the maintenance of the area to which access is to be retained.

**Reason:** In the interests of amenity and to ensure the continued utilisation of existing woodland for amenity use pending possible future development of the lands.

21. A suitably qualified ecologist shall be appointed by the developer to monitor and ensure that all avoidance / mitigation measures relating to the protection of flora and fauna are carried out in accordance with best practice and this ecologist shall liaise with relevant bodies including the NPWS and Inland Fisheries Ireland as necessary. A report on the implementation of these measures shall be submitted to the Planning Authority post construction.

**Reason:** To protect the natural heritage of the area.

22. All flooding mitigation measure set out in the flood risk assessment contained in Appendix C4 of the Environmental Impact Statement shall be implemented in full to the satisfaction of the planning authority.

**Reason:** To prevent flooding.



23. 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.

24. The developer shall pay to the planning authority a financial contribution of €284,804.10 (two hundred and eighty four thousand eight hundred and four euro and ten cent) 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.

25. The developer shall pay the sum of € 16,000 (sixteen thousand euro) (updated at the time of payment in accordance with changes in the Wholesale Price Index – Building and Construction (Capital Goods), published by the Central Statistics Office), to the planning authority as a special contribution under section 48 (2)(c) of the Planning and Development Act 2000 in respect of the provision of road markings on the R348 from its junction with the R446 and to renew ghost island markings at the R348 Derrydonnell junction with the R446 during the construction phase.

This contribution shall be paid prior to the commencement of the development or in such phased payments as the planning authority may facilitate. The application of 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 considered reasonable that the developer should contribute towards the specific exceptional costs which are incurred by the planning authority which are not covered in the Development Contribution Scheme and which will benefit the proposed development.

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**Stephen Kay**

Inspectorate,

July, 2016

## Appendix A

### List of Written Submissions Made At Oral Hearing Held on 24-27<sup>th</sup> May, 2016

#### Submissions Made to Oral Hearing

| Document No.                      | Submitted by | Presenter         | Topic   |
|-----------------------------------|--------------|-------------------|---|
| <b>Day 1</b><br><b>24/05/2016</b> |              |                   |   |
| <b>1</b>                          | Apple        | Rory Mulcahy      | Opening Statement   |
| <b>Module 1</b>                   |              |                   |   |
| <b>2</b>                          | Apple        | Robert Sharpe     | Opening Statement   |
| <b>3</b>                          | Apple        | ARUP              | Afforestation of Land in Ballard, County Wicklow            |
| <b>4</b>                          | Apple        | ARUP              | Afforestation of Land in Cloonarragh & Kilgarve             |
| <b>5</b>                          | CER          | John Melvin       | CER's view on proposed Power Supply Development             |
| <b>6a.</b>                        | Apple        | Frederick Freeman | Witness Statement – Renewable Energy                        |
| <b>6b.</b>                        | Apple        |                   | Copy of letter from Vayu Energy to Mr Frederick Freeman     |
| <b>7</b>                          | Apple        | Denis McCormack   | Witness Statement – Power Supply                            |
| <b>8</b>                          | Apple        | Sinead Whyte      | Witness Statement – Air Quality, Climate, Noise, Vibration) |
| <b>9</b>                          | Allan Daly   | Allan Daly        | Summary of Oral Testimony                                   |
|                                   |              |                   |   |

|                                   |                                      |                           |   |
|-----------------------------------|--------------------------------------|---------------------------|---|
| <b>Day 2</b><br><b>25/05/2016</b> |                                      |                           |   |
| <b>10</b>                         | David Hughes                         | David Hughes              | Module 1 Presentation                                       |
| <b>Module 2</b>                   |                                      |                           |   |
| <b>11</b>                         | Apple                                | Gus McCarthy              | Witness Statement – Planning Policy                         |
| <b>Day 3</b><br><b>26/05/2016</b> |                                      |                           |   |
| <b>12</b>                         | Apple                                | Oscar Gonzalez            | Witness Statement – Site Selection                          |
| <b>13</b>                         | Apple                                | Ria Lyden                 | Witness Statement – EIS, Consideration of Alternatives etc. |
| <b>14</b>                         | Galway County Council                | Valerie Loughnane – Moran | Brief of Evidence – Module 2                                |
| <b>15a.</b>                       | Concerned Residents of Lisheenkyle   | Gary Rowan – HRA Planning | Statement of Evidence                                       |
| <b>15b.</b>                       | Concerned Residents of Lisheenkyle   | Gary Rowan – HRA Planning | Book of Maps  |
| <b>16</b>                         | Allan Daly                           | Allan Daly                | Module 2 Submission   |
| <b>17</b>                         | Derek Whyte on behalf of Julie Bates | Derek Whyte               | Copy of statement   |
| <b>Module 3</b>                   |                                      |                           |   |
| <b>Day 4</b><br><b>27/05/2016</b> |                                      |                           |   |
| <b>18</b>                         | Apple                                | Alan Leen                 | Witness Statement – Flood Risk                              |
| <b>19</b>                         | Apple                                | Catherine Buckley         | Witness Statement – Hydrology                               |

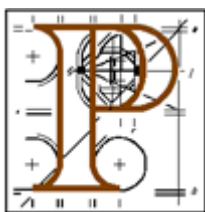
|           |                       |                           |   |
|-----------|-----------------------|---------------------------|---|
| <b>20</b> | Apple                 | Ger O'Donohoe             | Witness Statement – Ecology & Biodiversity                            |
| <b>21</b> | Apple                 | David Bosonnet            | Witness Statement – Landscape & Visual Assessment                     |
| <b>22</b> | Apple                 | Declan Moore              | Witness Statement – Archaeological, Architectural & Cultural Heritage |
| <b>23</b> | Apple                 | Niall Harte               | Witness Statement – Roads & Traffic                                   |
| <b>24</b> | Galway County Council | Valerie Loughnane – Moran | Brief of Evidence - Module 3  |
| <b>25</b> | Apple                 | General Submission        | Revised water flow figures  |
| <b>26</b> | Allan Daly            | Allan Daly                | Module 3 Submission   |
| <b>27</b> | Apple                 | Catherine Buckley         | Bore hole results and map   |
| <b>28</b> | Apple                 | General Submission        | Enlargement of drawings from earlier submission                       |
| <b>29</b> | Noel Grealish TD      | Noel Grealish TD          | General Submission  |
| <b>30</b> | Carmel McCormack      | Carmel McCormack          | Closing submission to OH  |

## Appendix B

### Order of Proceedings for Oral Hearing as Circulated to Parties in Advance of Hearing

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#### An Bord Pleanála



#### ORAL HEARING ORDER OF PROCEEDINGS

|                    |  |
|--------------------|--|
| <b>REFERENCES:</b> | <b>PL07.245518</b> – Construction of a data centre.<br><b>07.VA0020</b> – Power supply development incorporating 220kV sub station |
| <b>DATE:</b>       | Tuesday 24 <sup>th</sup> May, 2016.  |
| <b>LOCATION:</b>   | The Connaught Hotel, Galway.   |

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Having regard to the common issues involved in the two applications, and the requirement to consider potential cumulative and in-combination impacts, a joint oral hearing will be held in relation to appeal Ref. PL07.245518 and application Ref. 07.VA0020. The hearing will commence at 10.00 am on Tuesday, 24<sup>th</sup> April, 2016 at The Connaught Hotel, Galway.

The purpose of the hearing is to allow all parties, who which to do so, to make further submissions on both cases and to allow the Inspector to seek clarification on any relevant issues arising and submissions made. Parties will also have an opportunity to ask questions on submissions made at the hearing.

There is no obligation on any party to make a submission to the hearing or to ask questions. All written submissions already received in relation to both cases will be considered by the inspector and by the Board. For this reason it is also requested that submissions previously made should not be repeated at the oral hearing. Parties should also note that all submissions and information presented to the oral hearing will be considered to be submitted in respect of both cases. On completion of the oral hearing the Inspector will prepare a separate report and recommendation to the Board on each cases.

The oral hearing will comprise an introductory session, 3 main modules to deal with specific topics and closing submissions. Each of the 3 modules will be conducted as follows:

1. Submissions will initially be heard from the applicant, planning authority, prescribed bodies and appellants / observers in relation to the particular issue(s). Each statement should not exceed 30 minutes in total (for both cases) and previous written submissions made to the Board may be referenced but should not be repeated or resubmitted in detail. The applicant will also be afforded an opportunity to respond to the issues raised in the written submissions of the appellants / observers during their submission as part of each module. In making its submission to the hearing, the applicant should present information under each subject area as it relates to 1. data centre, 2. substation / grid connection and 3. cumulative impact.
2. Parties will then be given the opportunity to respond / seek clarifications from those who have presented submissions on the topic. The Inspector will also pose questions / seek clarifications.

An Order of Proceedings is set out below. Parties should be aware that this timetable is indicative only and may be subject to change.

## **DAY 1 – 24<sup>th</sup> MAY      INTRODUCTION AND OPENING OF THE HEARING**

To set the context, the applicant shall present a very brief description of the nature and extent of the proposed developments comprising both the data centre and the proposed grid connection / substation. Application documentation as already submitted, including the EIS should be taken as read. This part of the presentation shall not exceed 15 minutes.

The inspector will then invite parties present who do not wish to cross question and / or who cannot be present later in the hearing proceedings but who wish to make brief oral submissions to the hearing to do so. A maximum of 10 minutes per person will be allocated for any such submissions.

### **MODULE 1: ENERGY AND CLIMATE CHANGE IMPACTS**

Issues arising from the written submissions to be discussed include:

- Energy usage from the proposed development,
- Energy source and proposed use of sustainable energy,
- Impacts of proposed developments on the grid network,
- Impacts of the developments on Ireland's renewable energy targets and commitments including climate change impacts.
- Consideration of the above potential impacts in the submitted EIS.

## **DAY 2 – 25<sup>th</sup> MAY**

### **CONTINUATION OF MODULE 1.**

### **MODULE 2: SITE SELECTION AND PROJECT LOCATION**

Issues arising from the written submissions to be discussed include:

- Site Selection / site selection criteria;
- Alternative sites,
- Planning policy including Development Plan.

**DAY 3 – 26<sup>th</sup> MAY**

**CONTINUATION OF MODULE 2.**

**MODULE 3: OTHER ISSUES**

Issues arising from the written submissions to be discussed include:

- Appropriate Assessment,
- General ecological impacts.
- Landscape and visual impact.
- Flooding, site drainage and groundwater impacts
- Impacts on residential amenity.
- Loss of recreational amenity.
- Traffic and accessibility.
- Other issues arising.

**DAY 4 – 27<sup>th</sup> MAY**

**CONTINUATION OF MODULE 3**

In the event that Modules 1 – 3 are not completed, additional days will be added to the schedule as necessary.

**CLOSING SESSION**

Brief closing statements will be taken in the following order:

- Appellants / Observers,
- Prescribed Bodies,
- Planning Authority,
- Applicant.