An Bord Pleanála

Inspector's Report ABP-302034-18

Development	Photovoltaic Farm
Location	Toberoe, Caraunduff, Caherbriskaun & Rathmorrissy, Athenry Co Galway.
Planning Authority	Galway County Council
Planning Authority Reg. Ref.	171538
Applicants	Soleirtricity Ltd
Type of Application	Permission
Planning Authority Decision	Refuse Permission
Type of Appeal	First Party
Appellants	Soleirtricity Ltd
Date of Site Inspection	28 September 2018
Inspector	Dolores McCague

1.0 Site Location and Description

1.1.1. The site is located at the townlands of Toberroe, Caraunduff, Caherbriskaun and Rathmorrissy c 4km west of Athenry, County Galway. The site is west of and adjoining the recently constructed M18 motorway and south of and adjoining the recently constructed M6 motorway. The site is south west of and adjoining the major grade separated interchange between the M17/M18 and M6 motorways at Rathmorrissy. Rathmorrissy junction is a three level motorway to motorway interchange with a 1km circulatory carriageway. The interchange comprises the M6 east-west, at the lowest level, the roundabout at the middle level and the north-south M17/M18 at the highest level. The M17/M18 is at a similar or lower level to the site at the southern end but is higher than the site at the northern end, where it is elevated to join the M6, the roundabout, and to cross above the junction. Along the north of the site the slip road joining the M6 is above the level of the site at the eastern end but the M6 is at a similar level to the site at the western end.

1.1.2. The site is north of the R348 from which access is gained. For construction, access is proposed via the Rathmorrissy access road, an agricultural accommodation road, developed as part of the M17/M18 and M17/M18/M6 interchange development; and for operational use access is proposed via a new entrance, which will access the R348 some distance west of the construction entrance, which replaces an existing field access, with an access roadway to be developed through intervening agricultural lands.

1.1.3. The Dublin Galway rail line runs south of the R348.

1.1.4. The site is made up of several fields and is irregular in shape with a portion running in a north south direction roughly aligned with the M18 and a portion running in an east west direction aligned with the M6. From historic mapping it appears that the fields in the northern section were formerly part of larger fields severed by the M6. The land is in pasture and fields are separated from each other by hedges and stone ditches; in some areas there is evidence of ground disturbance.

1.1.5. To the west is a large area of forestry, where the site of a recently permitted development, the Apple data centre, is located.

1.1.6. There are several high tension lines passing over the subject site with associated lattice framework pylon supports.

1.1.7. The site is given as 43.56 ha.

2.0 **Proposed Development**

2.1.1. The proposed development is a 20 megawatt solar photovoltaic farm comprising: photovoltaic panels on ground mounted frames, 4 single storey inverter/transformer substations, a single storey substation and transformer, 40 single storey 1 megawatt battery storage containers (in a battery storage area), internal tracks, closure of existing and provision of new operational access onto R348, fencing, CCTV / lighting and all associated ancillary development works including landscaping berms, and a temporary construction access.

2.1.2. The details submitted with the application include:

A cover letter from John Spain & Associates,

Letters of consent from the owners of the land,

Drawings,

A book of photographs and photomontages,

Planning report prepared by John Spain & Associates,

EIA Screening Report prepared by Malone O'Regan Consulting Engineers,

Ecological Impact Assessment prepared by Moore Group Environmental Services,

Report for the Purposes of Appropriate Assessment Screening prepared by Moore Group Environmental Services,

Landscape & Visual Impact Assessment prepared by Doyle & O'Troithigh Landscape Architecture,

Traffic & Transport Statement prepared by CS Consulting Group,

Desktop Flood Risk Assessment prepared by CS Consulting Group,

Cultural Heritage Assessment prepared by Moore Group Environmental Services, and

Glint & Glare Assessment prepared by Macroworks.

Drawings

The Drawings submitted include:

Site layout – key map scale 1:2,500 which shows the entire site,

Site layout scale 1:500 in 9 sheets, which in addition to the information in the key map scale 1:2,500, shows spot heights and the location of the CCTV / light posts. Drawing of the transformer station,

Site sections scale 1:1000,

Landscape sections at two locations: near the south eastern end of the site extending through the M18, and at the north western end of the site extending through the M6,

Planting proposals,

Sightline drawing for the proposed new site access,

Drawings of the substation building, CCTV and Light post, a typical access track cross section, typical deer fence details, drawings of a solar panel, a landholding map, and proposed grid connection route scale 1:25,000.

The 40MW battery energy storage area is shown on the site layout – key map scale 1:2,500 and on sheets 3 and 4, but is otherwise undocumented.

The book of photographs and photomontages shows images: as existing, post development and post development with landscaping.

2.2. **Planning Report**

2.3. The planning report includes**:** Reference to planning histories - Board histories – 244351 (including that the solar farm was not a sub threshold development) & 246850 & Galway County Council 16/1500.

2.3.1. Reference to the NSS, RPGs and the White Paper on Energy Policy in Ireland, the National Renewable Energy Plan; the Sustainable Energy Authority of Ireland Strategic Plan 2010-2015, the Strategy for Renewable Energy 2012 – 2020, Ireland's Second National Energy Efficiency Action Plan to 2020, and the county development

plan ER2, ER3, Objectives ER1, ER2, ER4, Landscape Character Sensitivity Area 3 East Galway – flat, avoid long distance visual intrusion, screen by forestry. Athenry LAP to the east. The other supporting reports attached with the application are referred to and salient points are cited.

2.4. **EIA Screening Report**

2.4.1. The EIA Screening Report includes: Schedule 5 of the Planning and Development Regulations, 2001 (as amended 2015), sets out Annex I and Annex II projects which mandatorily require an EIS. Parts 1 & 2 of Schedule 5 outline classes of development that require EIS corresponding to Annex I and Annex II.

2.4.2. Solar PV generation, whether ground mounted or not, regardless of scale, is not a development type listed under Part 1 or 2 of Schedule 5 therefore mandatory EIS is not required. Not being listed, the meaning of sub-threshold development does not arise.

2.4.3. Assessment under Schedule 7 – significance – this schedule sets out the criteria for assessing whether or not a development will have 'likely' and 'significant' effects on the environment.

2.4.4. Table 3-1 assesses under the headings: population and human health; biodiversity, soils and geology, hydrology & hydrogeology, air quality, climate; noise, landscape and visual; cultural heritage, material assets - traffic, material assets – water, material assets – wastewater, material assets - waste, and cumulative impacts; and in each case no likely significant effect is found.

2.4.5. It is concluded that EIA is not required.

2.1. **Ecological Impact Assessment**

2.1.1. The Ecological Impact Assessment states that due cognisance of the presence of the legally protected plant 'Wood-bitter vetch' on the adjacent data centre site was taken during the habitat survey. It was expected that the area of Hazel woodland on the site may have had suitable habitat present but intensive grazing has disturbed the ground flora to an extent that the understory of this woodland is lightly modified. In any case this woodland will be excluded from the development area and management may present an opportunity to allow the ground flora to re-establish.

2.1.2. The habitat types identified are: mesotrophic pond with potential to become an annexed habitat, rich fen, dry calcareous and neutral grassland, hazed woodland and scrub. Hares were seen on the site and a number of passerine birds, which are not of conservation concern.

2.1.3. There are no significant impacts predicted for the proposed development on biodiversity.

2.1. **Report for the Purposes of Appropriate Assessment Screening**

2.1.1. This includes that there is no Natura 2000 site within 5km of the subject site. The project site is located c 6.1 km from the nearest Natura 2000 site: Galway Bay Complex SAC, site code 00268. There is no relevant connectivity with this site and given the low impact nature of the development and no predicted impacts on surface and groundwater, there are no predicted impacts on Natura 2000 sites located outside the 5km buffer.

2.1.2. Cumulative effects with other projects are considered, including the proposed Apple data centre. In that case the Board concluded that the proposed development, by itself or in combination with other development in the vicinity, including the adjoining proposal for a 220kV substation to serve the proposed development and the proposed M17/M19 motorway, would not likely to have significant effects on European sites.

2.1.3. The report concludes that the proposed development by itself or in combination with other projects or plans would not be likely to have significant effects on any European sites in view of their conservation objectives.

2.1. **Landscape & Visual Impact Assessment**

2.1.1. The Landscape & Visual Impact Assessment includes:

2.1.2. The topography of the area is generally flat between 40m and 50m OD and sloping from the north east to the south west, but there is high ground to the north west at Knockacreeva which rises to 60mOD. The site is laid out in large fields and small paddocks and used for sheep grazing which is common in the area. There are several high tension lines passing over the site which have lattice framework pylon supports. The M6 Dublin to Galway Motorway forms the northern boundary and the M18 Gort to Tuam motorway is under construction on the eastern boundary. There is

a large interchange under construction and this overpass is a significant visual feature to the north east of the site. There is a large coniferous plantation forming the southern and western boundaries of the site and selected felling is in progress as the forest matures.

2.1.3. Each hedgerow is described. Key receptors are described. Photomontages from 10 locations are provided, pre and post mitigation, together with an assessment of impact post mitigation. The analysis of photomontages, presented in tabular form, predicts no permanent visual impact in all cases.

2.1. **Traffic & Transport Statement**

2.1.1. This includes: the R348 in the vicinity of the site is subject to a speed limit of 80km/h and the design speed it taken as 80km/h. Tables 7/1 and TD41-42/11 of the Design Manual for Roads and Bridges gives sightlines, which interpolated, gives a sightline requirement of 145m either side. This can be achieved by providing an entrance arrangement, through a reduction in height of the existing dry stone walls in the control of the applicant and the implementation of a splayed entrance.

2.1.2. A Construction Management Plan has been prepared and is referred to. Construction traffic will access via the new Rathmorrissy Access Road which is an agricultural accommodation road, developed as part of the supporting infrastructure for the M17/M18/M6 interchange development joining the R348 immediately west of the new motorway overbridge. This accommodation road forms the eastern boundary of the site and will be accessed 600m from the sites south eastern corner. There are several passing bays along the accommodation road. The temporary construction entrance will be 1km from the R348. The volume of construction traffic over a construction period of 7-10 months is detailed, and an environmental management plan for the construction phase is outlined.

2.1. **Desktop Flood Risk Assessment**

2.1.1. The Desktop Flood Risk Assessment, includes: there is no potential for fluvial or tidal flooding.

2.1.2. OPW mapping indicates potential for pluvial flooding, during 100 year storm events in small pockets within the site, the development is not deemed at risk. By retaining flow within the site the likelihood of adversely affecting the public drainage system or contributing to downstream flooding is mitigated. There is no evidence of hydraulic

issues with local drainage infrastructure. Key areas will be super-elevated while still retaining floodwater on site. There are no records of groundwater flooding in the area.

2.1. Cultural Heritage Assessment

2.1.1. The Cultural Heritage Assessment includes: there is one recorded monument within the red line area of the site GA084-129 classified as a Fulacht fiadh. It was tested in 2007 and none of the exposed features were believed to be archaeological in nature and the site was considered fully resolved. To the north of the site, outside the red line boundary, are an additional two monuments GA084-124 and GA084-125; both Fulachtaí fia. GA084-124, 40 m distance away, is described; and GA084-125, 20 m distance away, is described; GA084-129, within the site, is described. A previously undrecorded site is described from field work: a U shaped well.

2.1.2. Surviving townland boundaries are in reasonable condition, typically they are double skinned stone walls tapering to a single coping stone/capstone and average 1.1m in height.

2.1.3. Previous archaeological fieldwork associated with 27.2km of N18 national road scheme, is reviewed; no material of an archaeological nature was revealed during testing. Cartographical and aerial photography was examined.

2.1.4. There is no protected structure or building listed in the NIAH in the immediate vicinity.

2.2. Glint & Glare Assessment

2.2.1. The glint & glare assessment includes:

2.2.2. The photovoltaic panels are oriented in a southwards direction to maximise solar gain and will remain in a fixed position throughout the day and year; they will not rotate to track the movement of the sun. The height of the panels above ground level is 2.12m and centre points 50mm below the top of each of the panels are used to determine the potential for glint and glare generation.

2.2.3. Figures 8, and 9 show mapped locations of houses potentially affected by glint & glare based on a bare ground scenario, fig 8 impact on a ground floor viewer, fig 9 impact on a first floor viewer.

2.2.4. Figures 10, and 11 show roads potentially affected by glint & glare, based on a bare ground scenario, (fig 11 is a zoomed in version of fig 10, focusing on the interchange).

2.2.5. The output graphs set out the days of the year and the times of the day that glint & glare could theoretically be experienced for each receptor pre and post mitigation. Summary data is provided in an appendix. For each of the residential receptors the magnitude of impact is classified as low or very low.

2.2.6. Reflectance is theoretically possible along a number of local and regional roads, along the M6 and M18 and the M6-M18 interchange. As a consequence of the degree of screening that occurs along these roads and in the surrounds of the proposed development, reflectance is only likely to occur at intermittent points along the M6 motorway and M18 motorway and their associated interchange roads. There is emphasis on the importance to note that the maximum minutes per day relate to the time window a section of road can potentially experience reflectance. In the case of road users, these effects will only last the period of time it takes to travel through the effected section of road, and therefore will be significantly less than the maximum periods outlined.

2.2.7. Potential reflectance on the M6 motorway can only geometrically occur along two disconnected sections where off ramps and slip roads converge with the M6, road numbers R53-57, and just east of a series of motorway interchange bridges, road numbers R61-66. Reflectance could potentially occur at both of these road sections for a short period in March and then again in August and September. The former of these road sections could potentially be affected during the evening hours between 6.00pm and 7.30pm for a maximum of 4 minutes per day and an average of 2.4 minutes per day. The latter has potential to be affected during the evening hours between 6.00pm and 8.00pm for a maximum of 14 minutes per day and an average of 7.7 minutes per day. Although only a low-moderate degree of vegetative screening occurs in the direction of the area of reflectance, the newly constructed embankments associated with the M18-M6 interchange is likely to significantly screen any views of the proposed development, prior to mitigation planting. The M6 motorway has been classified as incurring a very low magnitude of effect. As part of the landscape mitigation plan it is proposed to bolster all internal and perimeter hedgerows with supplementary planting of advanced nursery stock holly. It is also

planned to construct a new 1.5m earthen berm along the northernmost boundaries of the proposed development; native whip planting mix and a line of tree planting of mixed species at a height of approximately 3m will be carried out. It is proposed to further plant a dense line of trees along the northwest corner of the proposed development. Once all planting is fully established and hedgerows are maintained at a height of 3-4m, reflectance will be completely eliminated along the main M6 carriageway and the magnitude of effect will reduce to none.

2.2.8. Road numbers R78-88 refers to an off ramp at the north-western corner of the motorway interchange that is currently under construction. While it is not geometrically possible for reflectance to occur along the majority of this section of road, reflectance could occur at R88 for one day in February and again in September. These effects could be experienced during the evening hours between 6.00pm and 7.00pm for a maximum of 2 minutes per day and a maximum of 4 minutes per year. Although it is geometrically possible for reflectance to occur at this point, this road is a one-way road oriented in the opposite direction to the proposed area of reflectance, the magnitude of effect is deemed none.

Reflectance has the potential to occur along the on/off ramp at the south-west corner of the motorway interchange, road numbers R89-97. These effects could be experienced from March to April and then again in August and September during the evening hours between 6.30pm and 8.30pm for a maximum of 22 minutes per day and an average of 10.6 minutes per day. As this section of road is relatively elevated, the low degree of screening that occurs in the direction of the site is unlikely to have a large screening effect. Therefore prior to mitigation planting the magnitude of effect on the on/off ramp has been categorised as low. As part of the landscape mitigation plan it is proposed to bolster all internal and perimeter hedgerows with supplementary planting of advanced nursery stock holly. It is also planned to construct a new 1.5m earthen berm along the northernmost boundaries of the proposed development. Native whip planting mix and a line of tree planting of mixed species at a height of approximately 3m will be carried out. Additional landscaping / berm is also proposed along sections of the eastern boundary. This berm is to be planted with a double staggered line of advanced holly planting in addition to a line of mixed tree species. It is also proposed to further plant a dense line of trees along the northwest corner of the proposed development. Once all

planting is fully established and hedgerows are maintained at a height of 3-4m the potential reflectance periods are likely to reduce along this stretch of road, and the magnitude of effect will reduce to very low.

2.2.9. Road numbers R98-116 refer to a slip road that runs at ground level on the south-western side of the motorway on / off ramp mentioned above. Reflectance has the potential to occur for intermittent periods between February and October during the evening hours between 6.00pm and 8.30pm for a maximum of 26 minutes per day.

A low-moderate degree of intervening vegetative screening occurs in the direction of the area of reflectance from this section of road. This road generally occurs at ground level, and therefore the existing screening will have a greater affect than the screening on road numbers R89-97, the neighbouring elevated on/off ramp. Prior to mitigation the magnitude of effect on this section of road has been categorised as low. As part of the landscape mitigation plan it is proposed to bolster all internal and perimeter hedgerows with supplementary planting of advanced nursery stock holly. It is also planned to construct a new 1.5m earthen berm along the northernmost boundaries of the proposed development. Native whip planting mix and a line of tree planting of mixed species at a height of approximately 3m will be carried out. An additional berm is also proposed along sections of the eastern boundary. This berm is to be planted with a double staggered line of advanced holly planting in addition to a line of mixed tree species. It is also proposed to further plant a dense line of trees along the northwest corner of the proposed development. All of this planting is situated adjacent to this stretch of road that generally occurs at ground level. Once all planting is fully established and hedgerows are maintained at a height of 3-4m the potential reflectance is likely to be completely eliminated and the magnitude of effect will reduce to none.

2.2.10. Road numbers R118-131 relate to an off ramp joining the M18 to the M6 motorway. Reflectance has the potential to occur here for intermittent periods between March and October during the evening hours between 6.00pm and 8.30pm for a maximum of 28 minutes per day and an average of 13.8 minutes per day. As this section of road is relatively elevated and only a low-moderate degree of vegetative screening occurs in the direction of the area of reflectance, the magnitude of effect is deemed low prior to mitigation planting.

As part of the landscape mitigation plan it is proposed to bolster all internal and perimeter hedgerows with supplementary planting of advanced nursery stock holly. It is also planned to construct a new 1.5m earthen berm along the northernmost boundaries of the proposed development. Native whip planting mix and a line of tree planting of mixed species at a height of approximately 3m will be carried out. An additional berm is also proposed along sections of the eastern boundary. This berm is to be planted with a double staggered line of advanced holly planting in addition to a line of mixed tree species. It is also proposed to further plant a dense line of trees along the northwest corner of the propose development. Once all planting is fully established and hedgerows are maintained at a height of 3-4m the reflectance periods along this section of road is likely to significantly reduce. However as this section of road is relatively elevated, fleeting views of the proposed development will still be afforded and thus reflectance is still possible. Post mitigation the magnitude of effect is deemed very low.

2.2.11. Reflectance has the potential to occur along the M6-M18 interchange roundabout, road numbers R133-139, for intermittent periods from March to October during the evening hours between 6.00pm and 8.30pm for a maximum of 24 minutes per day and an average of 10.1 minutes per day. Although a low degree of screening occurs in the direction of the area of reflectance, this section of road is relatively elevated and will afford views across a large proportion of the site. However road users on this roundabout will only be ever facing the area of reflectance for a comparatively short stretch of road, c300m, after which the reflectance will be emanating from over their shoulder/behind them. Prior to mitigation the magnitude of effect is deemed low.

Once all planting is fully established along the northern and north western portions of the site and hedgerows are maintained at a height of 3-4m the reflectance periods along this section of road are likely to reduce. However as this section of road is relatively elevated, fleeting views of the proposed development will still be afforded. Post mitigation the magnitude of effect is deemed very low.

2.2.12. The main M18 motorway route is situated adjacent to the eastern periphery of the proposed solar development and is elevated up to 10m above ground level at certain points. Reflectance has the potential to occur along this section of road, road numbers R141-166, for intermittent periods from March to October during the evening hours between 6.00pm and 8.30pm for a maximum of 30 minutes per day

and an average of 15.6 minutes per day. Due to the considerable elevation of this road any existing vegetation that occurs in the direction of the area of reflectance, will only have minor screening effects. However it should be noted that cars travelling along this section of road will be oriented obliquely to the proposed development and reflectance will be relatively fleeting. Only northbound traffic will be affected and users travelling south will have their backs to the panels until they pass them, the reflectance will be emanating from over their shoulder/behind them. Prior to mitigation the magnitude of effect is deemed medium-low.

As part of the landscape mitigation plan it is proposed to bolster all internal and perimeter hedgerows with supplementary planting of advanced nursery stock holly. It is also planned to construct a new 1.5m earthen berm along portions of the eastern boundary to be planted with a double staggered line of advanced nursery stock holly in addition to a line of mixed tree species of approx. 3-4m in height. It is also proposed to plant a dense line of trees along the northwest corner of the proposed development. This is a significant degree of planting, which will screen views of the proposed development where the road is situated at ground level. Although there are sections of the road elevated up to 10m above ground level which will still be afforded views of the proposed development, once all planting is fully established and hedgerows are maintained at a height of 3-4m reflectance is likely to be completely eliminated along sections of the M18 motorway that occurs at ground level, however reflectance could still potentially occur along the elevated sections of this road. Therefore prior to mitigation planting the magnitude of effect on the M18 corridor has been categorised as very low.

A landscape plan has been produced as part of the landscaping proposals for the newly constructed M18 motorway and its associated interchange. It is proposed to plant large sections of the roadside with native whip planting mixes, many of which will be planted at similar elevations to the adjoining sections of road. Even in the early stages of this planting, 2-3 growing seasons, visibility of the proposed scheme is likely to substantially reduce and in some cases no views will be afforded of the proposed development. Once all planting reaches a height of 2-3m a large proportion of the site will be fully screened from view, and reflectance along the motorway and its interchanges will in most cases be entirely eliminated.

2.2.13. It is not considered that here will be any significant nuisance or hazard effects generated from glint and glare along surrounding roads as a result of the proposed solar farm.

2.2.14. Railway receptors are considered – a section of 100m of line 0.8km to the southeast is potentially impacted from May to July between 7.30pm and 8.30pm for a maximum of 8 minutes per day, average of 3.8 minutes per day. For various stated reasons it is unlikely that there will be any reflectance experienced.

2.2.15. Residential receptors are considered - 18 houses are considered and with mitigation planting they are found likely to experience low to very low magnitude of effect.

2.2.16. The results are provided in tabular form and as graphs with associated mapped points, (northings and eastings). A list of co-ordinates for all receptors is given, Irish grid.

2.3. **Unsolicited Further Information received on the 3rd May 2018, includes:**

Response Statement

Revised drawings showing omission of solar panels

Appropriate Assessment

Glint and Glare Addendum Report by Macroworks

Photomontages, by Studiolab

Archaeology response

Ecological response

Landscape and Visual Assessment Response

Commission on the Regulation of Utilities 'Regulatory Approach to Maintaining Local Security of Supply in Electricity'.

2.3.1. The Response Statement refers to each draft refusal reason in turn.

Re 1 glint and glare – the Macroworks report concludes that it is not considered that there will be any significant nuisance or hazard effects generated from glint and glare along surrounding roads.

Re 2 – the EclA assesses the site as of low ecological value. The woodland, from which solar panels are excluded, is of moderate value. There are no annexed habitats or rare or protected species recorded. The pond and hazel woodland were identified at desktop stage as having potential for higher biodiversity and were excluded at that stage. The report concludes that there will be no impact on a European site.

Re 3 – the solar farm is not intrusive in this robust landscape character area and could be easily assimilated.

Re 4 – the development has been amended to remove panels relating to the Fulacht Fiadh and is happy to include a 25m buffer.

The National Planning Framework acknowledges the role rural areas have played / are to play in meeting the challenge of transitioning to a low carbon economy.

National Policy Objective 55 is cited as is National Strategic Outcome 8. The CRU's 'Regulatory Approach to Maintaining Local Security of Supply in Electricity', is referred to.

Board histories – 248427 is referred to re glint and glare.

Magnitude of effects and other sections of the assessment is set out in the response.

Ireland's first National Mitigation Plan was published in July 2017. The measures implemented through the National Mitigation Plan outline that the sharp decline at global level in the cost of solar photovoltaic technology has resulted in significant interest in this renewable technology across Europe and in Ireland.

The response states:

> 'this submission comprehensively addresses the content and concerns of the letter from Galway County Council in the initial assessment of the proposal and that the proposed development of the solar farm is in accordance with the provisions of the Galway County Plan, will not have adverse impacts on the environs of the subject site and therefore is in accordance with the proper planning and sustainable development of the area.'

2.3.2. Revised drawings

Site Layout Key map scale 1:2,500

Site Layout scale 1:500, for 3 adjoining sections of the site in the north eastern corner showing omission of solar panels within the zone of notification for protected monuments.

2.3.3. Landscape and Visual Assessment Response

Response to issue 1 – refers to very low magnitude of impact from reflectance; that the revisions to the site layout will result in a reduction in theoretical reflectance periods at some receptors but will not alter the magnitude of impact as the reduction in duration would only be relatively small.

Highest residual impacts on the roads within the study area will be very low and this does not equate to hazard effects for road users from the proposed development.

2.3.4. A Glint and Glare Addendum Report is referred to in the Planning Report, as an enclosure. This appears to refer to the report titled ‘Landscape and Visual Statement by Macroworks, April 2018, referred to above and a tabular summary presented as table A-2 which summarises glint and glare analysis along roads.

2.3.5. Memo in response to issue 2 Appropriate Assessment:

Response to issue 2 – the report addresses the project in terms of predicted impacts on surface and groundwater and hydrological connectivity to European sites located within 15km of the project and with potential connectivity on a catchment-based assessment. There are no predicted impacts on surface or groundwater and no predicted impacts on European sites. In -combination effects with regard to adjacent proposed development have been addressed and ruled out.

2.3.6. Report for the purposes of Appropriate Assessment:

Similar to the previous report with a finding of no significant effects.

2.3.7. Photomontages:

Viewpoints are different to those in the earlier submission and are largely from the N18 and M6.

2.3.8. Archaeology response:

Subsequent to redesign there are now no extant recorded archaeological monument within the proposed development area and there will be no direct impacts. It is recommended that a 25m buffer is established and maintained from the outer edge

of archaeological potential for GA084-129. There is potential that groundworks may impact on previously unrecorded deposits or buried remains of archaeological potential. A programme of archaeological monitoring is recommended during construction. Residual impacts are negligible.

2.3.9. Commission on the Regulation of Utilities 'Regulatory Approach to Maintaining Local Security of Supply in Electricity', published 18/12/2017. This publication is attached to the response and referred to in the Response Statement particularly with regard to the reference to data centres contained therein.

3.0 Planning Authority Decision

3.1. Decision

3.1.1. The planning authority decided to refuse permission for 3 reasons:

1 By reason of large scale, orientation glint and glare and proximity to a local road and the N65, it would be at variance with policy in relation to national roads, would adversely affect the operation and safety of national and local roads by reason of traffic hazard.

2 Adverse visual impact by reflection of light may impair driver's vision and cause distraction and have adverse effects on road safety. The development would endanger public safety by reason of traffic hazard.

3 Injury to residential amenities, visual amenities of the rural area and interference with the character of the rural landscape.

3.2. Planning Authority Reports

3.2.1. Planning Reports

There are two planning reports on the file. The first, dated December 2017, recommending refusal of permission for 4 reasons, includes:

The site is landscape sensitivity class 1.

Recorded monument within the site which is subject to statutory protection.

Refers to internal reports and submissions.

CDP

A number of policies and objectives support renewable energy developments.

Objectives ER1, ER3 and ER4.

Roads risk likelihood severity.

Recommending refusal for 6 reasons:

- Glint and glare and proximity to a local road and the M6, M17/M18 and R 348.
- Potential impact on Natura sites.
- Injury to the visual amenities of the rural area and interference with the character of the rural landscape.
- Impact on recorded monument.

3.2.2. Other Technical Reports

3.2.3. Roads & Transportation Unit report dated 1st December 2017, includes:

The Roads & Transportation Unit's advice is that the PA should be guided by TII's observation. They are the authority on design, maintenance and operation of the national network.

If further information is sought to show revised design and further mitigation the Roads & Transportation Unit will not be in a position to recommend approval. With reference to visual distraction, the reporter knows of no guidance on the issue.

Applicant should have sought the advice of TII prior to making the application.

3.3. Prescribed Bodies

3.3.1. **TII 21st November 2017** –

3.3.2. The development is at variance with official policy in relation to control of development on/affecting national roads as outlined in the DoECLG Spatial Planning and National Roads Guidelines as the development and by the precedent which a grant of permission would set, would adversely affect the operation and safety of the national road network for the reasons:

The authority is of the opinion that insufficient data has been submitted with the planning application to demonstrate that the proposed development will not have a detrimental impact on the capacity, safety or operational efficiency of the national road network in the vicinity of the site.

The glint & glare assessment and visual impact assessment submitted with the application do not assess the potential impacts on the national road network to the satisfaction of the authority. The M17/M18 PPP scheme is operational and the reports compiled and submitted with the application appear to pre-date the road opening and have not assessed impacts on M17/M18 mainline traffic. The authority is not convinced that the mitigation identified is sufficient to demonstrate there will be no potential negative impacts to road users from glint and glare and or visual distraction.

3.4. **DCHG 27 November 2017**

3.5. Archaeology –

3.5.1. The proposed development will have a serious and direct impact on the recorded monument GA084-129—Fulacht Fiadh, which is the subject of statutory protection in the Record of Monuments and Places.

3.5.2. The Heritage Impact Assessment report is deemed to be inaccurate and insufficient for the purposes of assessing the direct and indirect impacts on the recorded monument.

3.5.3. Re. the statement that it has been fully excavated, the departments records indicate that it is still extant. The development as designed would therefore have a direct impact.

3.5.4. Excavations referred to (ref E003700) were not undertaken at recorded monument GA084-129, but were a distance away within the N18 CPO.

3.5.5. The Heritage Assessment does not provide full qualification of the ground disturbance on the development site. It fails to assess the cumulative ground disturbance from the 1.5m deep ground fixings and to address the impacts of their removal and is therefore deemed insufficient for the purposes of assessment of impact on archaeological heritage potential.

3.5.6. The EIA screening report is inadequate re archaeology.

3.5.7. Further information required is listed.

3.6. Nature Conservation –

3.6.1. Based on the EclA a sizeable wetland area occurs within the site and comprises open water fringed by marsh, rich fen and large sedge swamp habitats which grade into more extensive areas of fen and wet grassland.

3.6.2. The development represents a sizeable extension to significant recent constructed and permitted developments in this area. The cumulative ecological effects, including habitat loss and fragmentation and the creation of further barriers to species movements will require consideration by the council. Any ecological mitigation measures for adjoining recent developments including permitted developments should be identified and safeguarded where necessary.

3.6.3. The EclA contains baseline information on the habitats present but does not present an assessment of the likely ecological effects of the proposed development taking account of the details of the solar farm, its construction and operation and including the extent and nature of the ground works that will be involved. An assessment of the nature, extent and significance of the likely effects on wetland habitats (open water, marsh, fen and sedge swamp) and more species-rich calcareous grassland habitats is lacking and it is difficult to envisage the extent of temporary disturbance and permanent change at the site, (e.g is infilling of wetland areas required. Ecological mitigation measures are not specified, with the exception of limited avoidance. Whether there will be drainage and loss of wetlands will require consideration by the Council when considering the need for EIA.

3.7. **Unsolicited Further Information:**

3.8. During extended time (referred to on the file as extending to 13th June 2018) unsolicited further information was received.

3.8.1. The unsolicited further information received, 3rd May 2018: including a landscaping plan; flood risk assessment; and an appropriate assessment screening report; is referred to under the heading proposed development (main heading 2) at 2.3 above.

3.9. **Further Reports**

3.10. **Prescribed Bodies**

3.11. **DCHG** 27 November 2017

3.11.1. Archaeology – no objection subject to conditions – 25m buffer, groundwork monitoring etc.

3.12. **TII** 21st November 2017

3.12.1. The Authority will rely on the planning authority to abide by official policy in relation to development on/affecting national roads as outlined in DoECLG Spatial Planning and National Roads Guidelines for Planning Authorities (2012), subject to the following:

3.12.2. The Authority requests that the Council has regard to the provisions of chapter 3 of the DoECLG Spatial Planning and National Roads Guidelines, in the assessment and determination of the subject planning application.

3.13. **Planning Authority Reports**

3.13.1. Roads & Transportation Unit report dated 1st December 2017, includes:

The guidelines referenced by TII, although primarily concerned with traffic capacity, do consider roadside developments that generate light and light reflection, issues that occur at the development in question.

The Spatial Planning and National Roads Guidelines for Planning Authorities at page 29 is quoted:

> With regard to lighting, while such facilities help to promote security and personal safety, advertise commercial enterprises, permit outdoor working and sports activities and highlight features of interest, artificial lighting that is poorly designed, installed or maintained can create adverse safety effects on road users by misleading the driver as to the road alignment, obscuring road signs or markings and/or distracting drivers' attention. This is also a particular concern for developments on roads which run parallel to the national road network.

Inappropriate building design or materials can also reflect light in a manner that may result in adverse effects on safety. The use of highly reflective building surfaces, such as glass, in situations where they are likely to reflect car headlights can impair drivers' vision and cause distraction and thus create confusion and have adverse effects on road safety.

TII guidance on glint and glare is not developed beyond this, and it does not reference guidance available from other sources. The Council must remain within the guidance available from the National Authority.

The applicant states that glint and glare is theoretically possible along the M6 motorway and M18 motorway and reflectance is also theoretically possible along a number of M6-M18 interchange roads, but concludes that the likelihood of occurrence, taken with the mitigation measures proposed, is low.

Risk management evaluates the level of risk as a product of the likelihood and the severity of the injury/incident. On the M6/M18 interchange with high speeds and high volumes, an incident would have a severe outcome, something that in risk terms diminished the significance of the low likelihood factor claimed.

Glint and glare issues would expose the Council to the cost of remedial measures.

Recommending refusal because of adverse visual impact by reflection of light that may impair drivers' vision, cause distraction and adversely affect road safety.

3.13.2. Planning Report - 11/6/2018

Unsolicited further information is considered and the report acknowledges that the concerns regarding the archaeological monuments has been satisfactorily addressed; and the concerns regarding Natura sites has been satisfactorily addressed; recommending refusal for three reasons:

1 By reason of large scale, orientation Glint and glare and proximity to a local road and the N65, would be at variance with policy in relation to national roads, would adversely affect the operation and safety of national and local roads by reason of traffic hazard.

2 Adverse visual impact by reflection of light may impair driver's vision and cause distraction and have adverse effects on road safety. The development would endanger public safety by reason of traffic hazard.

3 Injury to the visual amenities of the rural area and interference with the character of the rural landscape.

These reasons issued as the Planning Authority's decision.

3.14. **Third Party Observations**

3.14.1. Third party observations have been read and noted.

4.0 Planning History

245518. Galway County Council Ref.15/488) for the construction of a data centre. comprising Phase 1 of what is a potentially larger development 245518 includes for the first of what is indicated in a masterplan as up to 8 no. data halls. 245518 is for a c.24,500 sq metre data hall building with a 5,232 sq. metre logistics and administration building together with ancillary uses such as parking and a recreational walk around part of the perimeter of the site. The total area of the data centre site is 202 ha.

07.VA0020 application under Section 182A of the Planning and Development Act 2000 (as amended) for the development of a substation and connection to the existing grid network to serve a proposed Data Centre to be located on lands at Palmerstown, Toberroe and Derrydonnell, approximately 4km to the west of the town of Athenry in County Galway. The 220kV substation is to be located within a 202 ha. site at the northern end of the data centre site. The sub station is proposed to be in two parts, one of which comprises 22 bays and would be used by Apple and the remaining two bays would remain with Eirgrid to power any future developments in the area. The M6 Motorway runs in a roughly east west direction approximately 400 metres to the north of the site of the proposed substation. In addition, construction work is currently ongoing on the construction of the M17 / M18 scheme which will intersect with the M6 a short distance (c.350 metres) to the north east of the appeal

site. In addition, the Cashlagh to Tynagh and Cashla to Prospect 220Kv power lines run to the north east and east of the data centre site. These lines run in the north west to south east direction and are supported on metal towers. The Cashla sub station is located to the north west of the data centre site.

5.0 Policy Context

5.1. Development Plan

5.1.1. Galway County Development Plan 2015-2021 is the operative plan, relevant provisions include:

5.1.2. The site is located within the Strategic Economic Corridor that runs east from Galway City (Oranmore) and takes in the area of the appeal site and adjacent lands to the east including the town of Athenry. The alignment of the corridor is based around that of the Galway to Dublin railway line and the M6 road corridor.

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

5.1.4. Relevant policies and objectives include:

Policies - ER 1 – Sustainable Energy Policy & Targets; ER 2 – Development of Renewable Energy; ER 3 – Security of Supply.

Objectives - ER1 – Electricity and Renewable Energy Infrastructure; ER 3 – Low Carbon County; ER 4 Renewable Energy.

Objectives - FL 1 – Flood Risk Management and Assessment; FL 2- Surface Water Drainage and Sustainable Drainage Infrastructure (SuDs); FL 3 – Protection of Waterbodies and Watercourses; FL 4 Flood Risk Assessment for Planning Applications and CFRAMS.

Objectives - DS 6 – Natura 2000 Network and Habitats Directive Assessment; DS 9 – Projects/Associated Improvement Works/Infrastructure and Appropriate Assessment; DS 10 – Impacts of Developments on Protected Sites.

Objective WS 2 - EU Policies and Directives.

Policy NHB1/2/4/8 – To protect natural heritage and water resources.

Objectives – NHB1 – Protected Habitats and Species; NHB2 – Biodiversity and Ecological Networks; NHB 3 – Water Resources

Policy LCM1 – Preservation of Landscape Character

Objectives LCM 1 – Landscape Sensitivity Classification; LCM 2 – Landscape Sensitivity Ratings.

Map LCM 1 sets out Landscape Value Ratings, and MAP LCM 2 Landscape Sensitivity and Character Areas. The appeal site lies within an area with a Landscape Value rating of 'Low' and lies within the East Central Galway (Athenry, Ballinasloe to Portumna) Character Area.

5.2. **White Paper - Ireland's Transition to a Low Carbon Energy Future, 2015-2030, December 2015.**

5.2.1. New energy policy for the time frame up to 2030. Chapter 5 Delivering sustainable energy: efficiency, renewables, technology. Government priorities in the area of renewable energy up to 2030 are set out; including incorporating higher penetration of renewable energy sources. It is recognised that conventional sources of energy will remain a significant component of supply over the period to 2030. Beyond 2030, a vision for the radical transformation of Ireland's energy system, required to meet our climate policy objectives, is set out. This transformation will result in a low carbon energy system by 2050 with GHG emissions from the energy system, reduced by between 80% and 95%, compared to 1990 levels.

5.3. **National Planning Framework**

5.3.1. National Planning Framework (replacing the National Spatial Strategy (NSS)) is the overarching national planning policy document. Its focus is on ten National Strategic Outcomes:

- Compact Growth
- Enhanced Regional Accessibility
- Strengthened Rural Economies and Communities

- Sustainable Mobility
- A Strong Economy, supported by Enterprise, Innovation and Skills
- High-Quality International Connectivity
- Enhanced Amenities and Heritage
- Sustainable Management of Water, Waste and other Environmental Resources
- Transition to a Low Carbon and Climate Resilient Society
- Access to Quality Childcare, Education and Health Services

5.3.2. Of particular relevance are Chapters 1 Vision, Chapter 9 Realising Our Sustainable Future, Chapter 10 Implementing the National Planning Framework and Chapter 11 Assessing Environmental Impact.

5.3.3. Solar energy as part of a more distributed, more renewables focused energy generation system, is seen as an important part of our transition to a low carbon and climate resilient society, and an important part of our environmental and sustainability goals. It is also supports the rural economy and provides jobs in rural areas.

> Part of the future planning and development of our communities at local level will be refocused to tackle Ireland's higher than average carbon-intensity per capita and enable a national transition to a competitive low carbon, climate resilient and environmentally sustainable economy by 2050, through harnessing our country's prodigious renewable energy potential.

5.3.4. National Strategic Outcome 2 includes maintaining the strategic capacity and safety of the national roads network.

5.4. Spatial Planning and National Roads Guidelines for Planning Authorities (2012)

5.4.1. Considerable investment has been provided by Government to transform the network of national roads to the highest international standards. Having made this investment and with future investment being focused on public transport, it is important that the efficiency, capacity and safety of the national road network is maintained.

5.4.2. Investment in the capacity of national roads must be protected through appropriate policies and local planning and collaboration between planning authorities and the National Roads Authority.

5.4.3. There is no specific reference to solar farms. The reference to the control of roadside and adjoining signage and lighting is somewhat analogous.

> the control of roadside and adjoining signage and lighting is an important contributor towards achieving enhanced road safety and planning authorities should use their regulatory and enforcement powers accordingly.

5.5. Natural Heritage Designations

5.5.1. The nearest natural heritage designations in the vicinity of the site are:

- Galway Bay Complex SAC 000268 located c 6km to the west and southwest.
- Lough Corrib SAC 000297 located just over 8km to the north west.
- Monivea Bog SAC 002352 located almost 11km to the north east
- Rahasane Turlough SAC (site code 000322) and Rahasane Turlough SPA (site code 004089) located less than 7km away to the south.
- Cregganna Marsh SPA 004142 located less than 8km away to the south west.

6.0 The Appeal

6.1. Grounds of Appeal

6.1.1. John Spain Associates Planning & Development Consultants have submitted the appeal on behalf of the first party, he grounds includes:

- Galway County Council did not give appropriate weight and consideration to the comprehensive and detailed information in relation to the potential glint and glare impacts of the proposed development and that the statutory body for the safe operation of the motorway network did not raise any concerns in

their June 2018 submission, following clarification by the applicant on some technical issues.

- The site is in an area of low landscape value.
- The development will support a number of strategic aims of the CDP.
- The development will provide a significant improvement to the resilience of the local energy supply network and is an important infrastructural improvement to the Strategic Economic Corridor. It will benefit a regionally significant operation in the form of the permitted data centre, supporting employment in the Strategic Economic Corridor.
- The low profile panels, which will be constructed within the existing hedgerow and stone walls, confirm the low visual impact.
- The National Planning Framework is cited. National Policy Objective 55 is cited.
- CRU's publication 'Regulatory Approach to Maintaining Local Security of Supply in Electricity' is cited:

  > Data centres tend to have large demand loads, and relatively short construction lead times. This can create challenges for network planning. Such potentially rapid demand growth creates a range of issues. One of these issues is that demand connections may be delayed while new transmission reinforcements are built. Network constraints in certain locations may arise if the current network configuration cannot deliver the required power flows in high demand areas, or additionally voltage based constraints may arise.

  Therefore the CRU requests EirGrid to pro-actively examine areas at risk of local security of supply issues under a set of credible scenarios, including demand growth and generator closure. Such analysis should also include an examination of technical operational constraints and a range of options to relax or resolve them.
- Re. reasons no's 1&2 – the reasons are flawed; the technical information submitted and clarified confirms that 'it is not considered that there will be any

significant nuisance or hazard effects generated from glint and glare along surrounding roads as a result of the proposed solar farm'.

- The TII submission of May 2018 confirms that the previous items noted for clarification were satisfactorily addressed. The PA has not given full regard to the second TII submission.

  The November 2017 submission states that insufficient data has been submitted with the planning application to demonstrate that the proposed development will not have a detrimental impact on the capacity, safety or operational efficiency of the national road network in the vicinity. It refers in particular to the glint & glare assessment and visual impact assessment and states that the reports appear to pre-date the road opening and have not assessed impacts on M17/M18 mainline traffic.

  The glint & glare assessment & LVIA did assess the potential impacts on the M17/M18, although not opened the road was constructed and levels were referenced in the assessment.

  The submission of 3rd May 2018 was commented on by TII who did not object to the proposal. This was not taken into account.

  They refer the Board to the glint & glare report submitted with the application. Contrary to reason 1 the impact is classified by Macroworks as either very low or none.

  Bord Pleanála Board decisions and inspector's reports are cited 248427, 249060, 248400, 249025 and 248821.

  The magnitude of effects used by Macroworks is restated.

  Section drawing no LS-01-PP-17-05-19 is copied.

  M6:

  The glint & glare report confirms in relation to the M6 that once planting is fully established and hedgerows are maintained to a height of 3-4m, reflectance will be completely eliminated along the main M6 carriageway and the magnitude of effect will reduce to none.

  Motorway Interchange

Road numbers R78-88 refer to an off ramp at the north western corner of the motorway interchange. Reflectance could potentially occur at R88 for one day in February and again in September for a maximum of 4 minutes per day. This road is one way, oriented in the opposite direction to the area of reflectance, and thus the magnitude of effect is deemed to be none.

Road numbers R89-87 north east of the proposed development. Once all planting is fully established and hedgerows are maintained at height 3-4m the potential reflectance periods are likely to reduce and the magnitude will drop to very low.

Road numbers R98-116 refer to a slip road that runs at ground level on the south western side of the motorway. Once all planting is fully established and hedgerows are maintained at height 3-4m the potential reflectance is likely to be completely eliminated and the magnitude of effect will reduce to none.

Road numbers R118-131 relate to an off ramp joining the M18 to the M6. Post mitigation the magnitude of effect will reduce to very low.

Reflectance has the potential to occur along the M6-M18 interchange roundabout road numbers R133-139. Once all planting is fully established along the northern and north western portion of the site and hedgerows are maintained at height 3-4m the reflectance periods along this section is likely to reduce and the magnitude of effect will reduce to very low.

M18

Cars travelling along this section of road will be oriented oblique to the proposed development and reflectance will be relatively fleeting. Only northbound traffic will be affected. As part of the landscape mitigation plan it is proposed to bolster all internal and perimeter hedgerows with planting of advanced nursery stock holly. It is also proposed to construct a 1.5m berm along sections of the eastern boundary to be planted with a double staggered line of advanced nursery stock holly in addition to a line of mixed tree species of approx. 3-4m in height. It is also proposed to plant a dense line of trees along the northwest corner of the proposed development. This is a significant degree of planting, which will screen views of the proposed development where the road is situated at ground level.

Once all planting is fully established and hedgerows are maintained at a height of 3-4m reflectance is likely to be completely eliminated along sections of the M18 motorway that occurs at ground level, however reflectance could still potentially occur along the elevated sections of this road. Therefore prior to mitigation planting the magnitude of effect on the M18 corridor has been categorised as very low.

A landscape plan has been produced as part of the landscaping proposals for the newly constructed M18 motorway and its associated interchange. It is proposed to plant large sections of the roadside with native whip planting mixes, many of which will be planted at similar elevations to the adjoining sections of road. Even in the early stages of this planting, 2-3 growing seasons, visibility of the proposed scheme is likely to substantially reduce and in some cases no views of the proposed development will be afforded. Once all planting reaches a height of 2-3m a large proportion of the site will be fully screened from view, and thus reflectance along the motorway and its interchanges will in most cases be entirely eliminated.

It is not considered that there will be any significant nuisance or hazard effects generated from glint and glare along surrounding roads.

- Solar farms in UK are referred to.
- The applicant would accept the following condition:

  'In the event that the proposed solar PV panels cause glint/glare on road users during the operational stage of the development, effective measures shall be introduced to minimize the impact of glint and glare on road uses in the area. Details of such measures, including a monitoring programme, at the developer's expense, shall be submitted to and agreed in writing with the Planning Authority.'

- Re. Reason no 3 – Galway Co Co have recognised the capacity of the landscape to absorb development – per landscape classification. The permitted Apple Distribution International data centre is considerably larger; the Board's reasons and Considerations in that case are cited.

- A solar farm south of the R348, granted permission by Galway Co Co (Reg Ref 17/1544), is referred to. There is inconsistency in the treatment of the two similar projects.

- Visual amenities of the rural area – the site is low lying; the development is low profile; the closest residential properties lie to the west, close to the M6 motorway and they are well screened etc. Extracts from the LVIA re southern receptors, eastern receptors, western receptors and northern receptors are cited. Re. impact on M6/M17/M18, a section drawing no LS-01-PP-17-05-19 is copied and reference is made to the earlier copied drawing LS-01-PP-17-05-19.

- Extracts from the CDP are listed

- Traffic Hazard – it is not considered that there will be any significant nuisance or hazard from glint and glare. The traffic & transport report from Cronin & Sutton C Engs is cited.

6.2. **Planning Authority Response**

6.3. The Planning Authority has not responded to the grounds of appeal.

7.0 Assessment

7.1.1. The issues which arise in relation to this appeal are: appropriate assessment, environmental impact assessment, principle of the proposed development, impact of glint and glare on the adjoining motorways and the motorways' junction, impact on residential amenity, landscape impact and other issues, and the following assessment is dealt with under those headings.

7.2. **Appropriate Assessment**

7.2.1. Having regard to the nature and scale of the proposed development and nature of the receiving environment no Appropriate Assessment issues arise and it is not considered that the proposed development would be likely to have a significant effect, individually or in combination with other plans or projects, on a European site.

7.3. **Environmental Impact Assessment**

7.3.1. Schedule 5 of the Planning and Development Regulations, 2001 (as amended), sets out Annex I and Annex II projects which mandatorily require an EIS. Part 1, Schedule 5 outlines classes of development that require EIS and Part 2, Schedule 5 outlines classes of developments that require EIS but are subject to thresholds. I do not consider that a solar farm is included in any of the Part 1, Schedule 5 projects.; re the Part 2, Schedule 5 projects, although there are some projects under paragraph 3 'Energy Projects' which relate to energy production, these projects do not appear to include a solar farm as proposed. I note that the Board reached a similar conclusion in a number of relatively recent appeals (e.g. PL04.244539 and PL26.244351 and PL04.245862). The need for environmental impact assessment can, therefore, be excluded at preliminary examination and a screening determination is not required.

7.4. **Principle of the Development**

7.4.1. The National Framework Plan and the Galway County Development Plan support the development of solar farms on suitable sites, which, per se, are likely to be located in rural areas, on agricultural land. The subject site is located on agricultural land which is not of high quality and therefore there is no objection in principle to the proposed development.

7.5. **Glint & Glare**

7.5.1. Having regard to the proximity of the subject site to the M6 motorway adjoining to the north and the M17/M18 motorway adjoining to the east and the motorway to motorway junction at Rathmorrissy adjoining to the north east, the impact of glint and glare on motorists using these recently constructed national roads is the most important issue arising in this case.

7.5.2. Glint and glare has been subject to examination by the first party who produced a glint & glare assessment which accompanied the application and a short response as unsolicited further information responding to the draft reason for refusal, in relation to this issue. The glint and glare assessment refers to roads which are sections of the M6, M17/M19 and the motorway roundabout junction. The

assessment includes reference to the impact of mitigation which will, given time, eliminate the impact along sections of road. The report acknowledges that there are sections of road where the impact cannot be reduced or eliminated.

7.5.3. The report refers to the significance of impact, in many cases defining the impact as ‘low’ or ‘very low’.

7.5.4. The grounds of appeal refers the Board to the glint & glare report submitted with the application; and they state, contrary to reason 1, the impact is classified by Macroworks as either very low or none.

7.5.5. The relationship of the subject site with the adjoining motorways is not well documented on the file. Although sections through the site and motorways are shown at two locations: near the southern end of the site extending through the M18, and at the western end of the site extending through the M6, there are no similar sections at the north eastern end, extending through the M6, or extending through the M18, or extending through the Rathmorrissy Interchange, where the differences in level, which render attempts to provide mitigation of glint and glare impact difficult or unworkable, would be apparent.

7.5.6. The fact that the period during which reflectance is theoretically possible does not represent the period during which a motorist will be affected, because individual motorists will drive through the affected road section in a shorter time period, is referred to as an ameliorating factor. In my view the contrary is the case. That individual motorists pass through the affected area in a short period also means that numerous motorists during the affective period and numerous motorists are likely to be impacted. It also indicates that affected parties will not have time to respond to the impact.

7.5.7. In my opinion the impact of glint and glare on the motorway ramps and the motorway roundabout, where hazardous manoeuvring takes place, requiring particular vigilance, is of very serious concern due to the increased potential for traffic hazard at such locations. In this regard I concur with the Roads and Transportation Unit assessment in their report of 1st December 2017, where it is stated that:

> risk management evaluates the level of risk as a product of the likelihood and the severity of the injury/incident. On the M6/M18 interchange with high speeds

and high volumes, an incident would have a severe outcome, something that in risk terms diminished the significance of the low likelihood factor claimed.

7.5.8. The grounds of appeal refer's to the second TII submission, which they consider constitutes an acceptance of the proposal:

> The TII submission of May 2018 confirms that the previous items noted for clarification were satisfactorily addressed. The PA has not given full regard to the second TII submission.

7.5.9. I do not accept this assessment. The submission from TII, which is a their second submission, supplementary to their earlier submission, states that they:

> rely on the planning authority to abide by official policy in relation to development on/affecting national roads as outlined in DoECLG Spatial Planning and National Roads Guidelines for Planning Authorities (2012), subject to the following:
>
> The Authority requests that the Council has regard to the provisions of chapter 3 of the DoECLG Spatial Planning and National Roads Guidelines, in the assessment and determination of the subject planning application.

Chapter 3 refers to 'development management and roads' which includes expressing concern regarding highly reflective building surfaces which can impair driver's vision, cause distraction and confusion and have adverse effects on road safety.

7.5.10. The Board should also note TII's earlier submission which states that the development is at variance with official policy in relation to control of development on/affecting national roads as outlined in the DoECLG Spatial Planning and National Roads Guidelines, as the development and by the precedent which a grant of permission would set, would adversely affect the operation and safety of the national road network, and that the authority is of the opinion that insufficient data has been submitted with the planning application to demonstrate that the proposed development will not have a detrimental impact on the capacity, safety or operational efficiency of the national road network in the vicinity of the site.

7.5.11. In my opinion, notwithstanding the unsolicited information submitted, it remains the case that the planning application has not demonstrated that the proposed development will not have a detrimental impact on the capacity, safety or operational efficiency of the national road network in the vicinity of the site.

7.5.12. The proposed development has the potential to impact on the motorways M6 and M17/M18 and the three level motorway to motorway interchange, through glint and glare and driver distraction. Although some of the impacted areas will experience temporary impact, with mitigation being successfully achieved over time, and some of the impacted areas will experience continuing impact which is not amenable to mitigation, the traffic hazard which would be caused is a reasons to refuse permission

7.5.13. In relation to the suggestion that the applicant would accept the following condition:

> ‘In the event that the proposed solar PV panels cause glint/glare on road users during the operational stage of the development, effective measures shall be introduced to minimize the impact of glint and glare on road uses in the area. Details of such measures, including a monitoring programme, at the developer’s expense, shall be submitted to and agreed in writing with the Planning Authority.’

7.5.14. In the particular circumstances of this case I consider that the Board should not countenance the creation of a traffic hazard with ‘effective measures’ to follow when risk has been proven.

7.5.15. In addition to traffic hazard posed by glint and glare the proposed development would lead to a loss of capacity and reduction in the value of the investment in this important asset contrary to the policies set out in the Spatial Planning and National Roads Guidelines and the National Planning Framework and these are reasons to refuse permission.

7.5.16. The glint and glare assessment submitted with the application considers the impact on ‘railway receptors’ – a section of 100m of line 0.8km to the southeast is potentially impacted from May to July between 7.30pm and 8.30pm for a maximum of 8 minutes per day, average of 3.8 minutes per day. The assessment notes that for various reasons it is unlikely that there will be any reflectance experienced. In addition, unlike motorists using the adjoining motorway and junction, train drivers become familiar with the landscape they drive through and would be able to accommodate minor impact were it to occur.

7.6. Impact on Residential Amenity

7.6.1. Impact on residential amenity is included in the third reason for refusal in the planning authority's decision. The closest residential properties lie to the west located close to the M6 motorway and are well screened from the proposed development. Residential properties to the north and east are separated from the site by the motorways. Properties to the south are separated by distance from the subject site and by intervening vegetation and field boundaries.

7.6.2. The glint and glare assessment submitted with the application considers the impact on 'residential receptors'; 18 houses are considered and with mitigation planting they are found likely to experience low to very low magnitude of effect.

7.6.3. In my opinion impact on residential amenity should not be a reason to refuse permission.

7.7. Landscape Impact

7.7.1. Impact on landscape is included in the third reason for refusal in the planning authority's decision.

7.7.2. Landscape & visual impact assessment is included in the application documents, and is part of the response submitted as unsolicited further information responding to the draft reasons for refusal. As pointed out by the first party the site is laid out in large fields and small paddocks, there are several high tension lines passing over the site with lattice framework pylon supports, and these together the motorways and the large interchange are significant visual features. A large coniferous plantation forms the southern and western boundaries of the site.

7.7.3. Screen planting is proposed to mitigate the impact of glint and glare on the adjoining motorways and interchange, and it is also proposed to plant a dense line of trees along the northwest corner of the proposed development.

7.7.4. This is not a sensitive landscape. The proposed development would not constitute an objectionable or outstanding landscape feature within the landscape, and landscape impact should not be a reason to refuse permission.

7.8. **Other Issues**

7.8.1. Flood Risk – A flood risk assessment was submitted as part of unsolicited further information which states that OPW mapping indicates potential for pluvial flooding, during 100 year storm events, in small pockets within the site. Key areas will be super-elevated while still retaining floodwater on site. The development is not deemed at risk from flooding. The likelihood of contributing to downstream flooding is mitigated by retaining flow within the site. There is no evidence of hydraulic issues with local drainage infrastructure. There are no records of groundwater flooding in the area.

7.8.2. In my opinion flood risk should not be a reason to refuse permission.

7.8.3. Battery Storage - The application includes a proposal to provide 40 single storey 1 megawatt battery storage containers in a battery storage area. The proposed location is noted on key map scale 1:2,500 and on sheets 3 and 4 at scale 1:500. Apart from location, this aspect of the proposed development is otherwise undocumented.

7.8.4. Should the Board be minded to grant permission they may consider that the information provided in this regard is insufficient.

8.0 Recommendation

8.1.1. In the light of the above assessment I recommend that planning permission be refused for the following reasons and considerations.

9.0 Reasons and Considerations

1 The proposed development is located in proximity to the M6 motorway, the M17/18 motorway and the Rathmorrissy three level motorway to motorway interchange, where particular driver vigilance is required, and the proposed development including through glint and glare impact would endanger public safety by reason of traffic hazard and distraction of drivers and would interfere with the

safety and free flow of traffic on the road. Furthermore, the proposed development would adversely affect the capacity, safety and operational efficiency of the national road network in the vicinity of the site, which would be contrary to national policy to protect the capacity of national routes. The proposed development would, therefore, be contrary to the proper planning and sustainable development of the area.

Planning Inspector

21 December 2018

1 Photographs

2 Extracts from the Galway County Development Plan 2015-2021

3 Extracts from Spatial Planning and National Roads Guidelines for Planning Authorities (2012)

4 Extracts from Project Ireland 2040: Building Ireland's Future, National Planning Framework.