



An
Bord
Pleanála

Inspector's Report ABP-300596-18

Development	Solar PV Farm and all Associated Works at Ardrnadoman East, Loughrea, County Galway
Location	Ardnadoman East, Loughrea County Galway.
Planning Authority	Galway County Council
Planning Authority Reg. Ref.	17/791
Applicant(s)	Engie Investments Ireland Ltd.
Type of Application	Permission
Planning Authority Decision	Refuse permission
Type of Appeal	First Party V Refusal
Appellant(s)	Engie Investements Ireland Ltd.
Observer(s)	Thomas & Teresa Costello Mary & Tony Buckley Michael & Antoinette McGauran
Date of Site Inspection	24 th April 2018
Inspector	Ronan O'Connor

Contents

1.0 Site Location and Description	3
2.0 Proposed Development	3
3.0 Planning Authority Decision	3
3.1. Decision	3
3.2. Planning Authority Reports	3
3.3. Prescribed Bodies	4
3.4. Third Party Observations	4
4.0 Planning History.....	5
5.0 Policy Context.....	5
5.1. Project Ireland 2040: National Planning Framework	5
5.2. Development Plan.....	5
5.3. Natural Heritage Designations	6
6.0 The Appeal	6
6.1. Grounds of Appeal	6
6.2. Planning Authority Response	9
6.3. Observations.....	9
6.4. Further Responses.....	11
7.0 Assessment.....	11
8.0 Recommendation.....	27
9.0 Reasons and Considerations.....	27
10.0 Conditions	27

1.0 Site Location and Description

- 1.1. The appeal site is located within the townland of Ardnadonman East, approximately 2.5km north-west of Loughrea. To the north and east the site is bounded by the R349 regional road. To the west and south it is bounded by farmland. It comprises of 9 separate fields in total and has a stated area of 12.6 ha.
- 1.2. The site is gently undulating and the eastern area of the site is lower lying, adjoining the regional road, and generally falls to the south. The site is bounded by drains, stonewalls, hedgerow and treestands. A drainage watercourse runs along a portion of the southern boundary.

2.0 Proposed Development

- 2.1. Solar PV Farm and all Associated Works at Ardnadoman East, Loughrea, County Galway.

3.0 Planning Authority Decision

3.1. Decision

- 3.1.1. Refuse permission for 5 reasons relating to (i) glint and glare, sightline restrictions, location close to road leading to a traffic hazard (ii) flood risk (iii) impact on designated European Sites (iv) impact on residential amenity resulting from visual impact, glint and glare and overlooking (v) landscape impacts.

3.2. Planning Authority Reports

3.2.1. Planning Reports

The report of the planning officer reflects the decision of the planning authority. Points of note are as follows:

- Little detail provided in relation to flood risk.
- AA Screening does not take into account the impacts of the proposed development on all relevant sites.

- Lack of information on the cumulative impact of the grid connection/restoration impact/surface water disposal and protection of surface waters.
- Sightlines depend on boundaries to be set back/are not indicated as being within control of the applicant.
- Concerns regarding the impact on the road network including glint and glare and the overreliance on the existing screening, which may be less in winter months.
- Possible overlooking from CCTV.
- Visual impact of the boundary fencing has not been assessed.
- Refusal is recommended for six reasons relating to i) glint and glare, sightline restrictions, location close to road leading to a traffic hazard (ii) flood risk (iii) impact on designated European Sites (iv) impact on residential amenity resulting from visual impact, glint and glare and overlooking (v) landscape impacts and (vi) water supply.

3.2.2. Other Technical Reports

Roads & Transportation – recommends refusal on traffic safety grounds – due to scale of proposal and distraction of drivers/Impact on the national route not adequately addressed.

3.3. Prescribed Bodies

An Taisce – Council should ensure optimum site suitability taking account of biodiversity, sensitive areas, archaeological heritage, good tillage land and the capacity of the Lough Rea 38kv to accommodate the proposed development and that of planning reference 17/792.

3.4. Third Party Observations

- 3.4.1. A number of third party observations have been received. The issues raised include landscape impacts, road safety issues, flooding, ecology, impacts on amenity, lack of consultation, health and safety issues.

4.0 Planning History

4.1.1. None.

5.0 Policy Context

5.1. Project Ireland 2040: National Planning Framework

5.1.1. From 16th February 2018, the National Planning Framework has replaced the National Spatial Strategy (NSS) and now represents the overarching national planning policy document. The National Planning Framework sets a new course for planning and development in Ireland, to achieve a shared set of goals for every community across the country, focused on ten National Strategic Outcomes. Chapters of particular relevance to this appeal include Chapters 1 (Vision), Chapter 9 (Realising Our Sustainable Future), Chapter 10 (Implementing the National Planning Framework) and Chapter 11 (Assessing Environmental Impact).

5.2. Development Plan

5.2.1. The relevant plan is the Galway County Development Plan 2015-2021.

5.2.2. Relevant policies and objectives include:

Policy ER 1 – Sustainable Energy Policy & Targets/Policy ER 2 – Development of Renewable Energy/Policy ER 3 – Security of Supply/Objective ER1 – Electricity and Renewable Energy Infrastructure/Objective ER 3 – Low Carbon County/Objective ER 40 Renewable Energy.

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

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

Objective WS 2- EU Policies and Directives.

Policies NHB1/2/4/8 – Seeks to protect natural heritage and water resources/Objective – NHB1 – Protected Habitats and Species /Objective NHB2 – Biodiversity and Ecological Networks/Objective NHB 3 – Water Resources

Policy LCM1 – Preservation of Landscape Character/Objective LCM 1 – Landscape Sensitivity Classification/Objective LCM 2 – Landscape Sensitivity Ratings.

Map LCM 1 sets out Landscape Value Ratings. MAP LCM 2 sets out 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.

DM Standard 20 - Sight Distances Required for Access onto National, Regional and Local Roads/DM Standard 24 - Traffic Impact Assessment, Traffic & Transport Assessment, Road Safety Audit & Noise Assessment/DM Standard 27: Surface Water Drainage & Flooding/ DM Standard 39: Compliance with Landscape Sensitivity Designations/ DM Standard 40: Environmental Assessments.

5.3. Natural Heritage Designations

5.3.1. None.

6.0 The Appeal

6.1. Grounds of Appeal

6.1.1. The Grounds of Appeal, as submitted on behalf of the First Party Appellants, are as follows:

Road Safety

- New access point will provide the required 160m sightlines in both directions.
- The number of vehicles associated with the development, both during construction and operational phases, will be minuscule in the context of the carrying capacity of the R349.

- Reasonable to conclude that the proposed development will have no impact on road safety.
- In relation to glint and glare, it is unclear what policies, objectives or guidelines are contravened.
- In relation to the R&T report, this appears to make reference to site specific guidance provided by TII in relation to another site/also refers to non-existent policy/TII do not have remit over regional roads/findings of the Glint and Glare Assessment were not considered by R&T/Were not re-consulted.
- Glint and Glare Assessment shows the impact on the public road will be negligible.
- Significant number of solar farms built adjacent to or in close proximity to public roads in the UK/demonstrate that solar farms can operate safely at locations adjacent to public roads.

Flood Risk

- A Site Specific Flood Risk Assessment was submitted to Galway County Council as part of the unsolicited further information submission/Included with appeal submission.
- Less vulnerable development, such as PV Panels, are located in Flood Risk Zones A and B.
- Flood Risk Assessment concludes that the overall risk of flooding posed by the development is low.
- Only fleeting reference is made to the FRA within the planner's report/was not given adequate consideration.
- An additional submission has been prepared in relation to flood risk and is included with this appeal.
- Section 6.2 of the FRA deals within surface water drainage/proposed drainage layout has been included for clarity.

Natura 2000 Sites

- Appropriate Assessment Screening Report has been revised to clarify and address the specific issues raised/included with the appeal submission.
- Information on on-site drainage design and an assessment of the impacts of the grid connection has been provided.
- Impacts of decommissioning/flood risk/cleaning of the panels/surface water disposal and cumulative impacts are considered within the AA screening report.

Residential Amenity

- Detailed landscaping plan was submitted to the planning authority/purpose of the plan was to minimise the overall visual impact.
- A photomontage booklet was submitted to the planning authority and is included with this appeal/demonstrates limited visual impact of the proposed development/landscaping measures will, over time, further reduce visual impact.
- Limited height of solar panels (2.5 in height)/relative to other renewable technologies such as wind turbines, the scale is small.
- The proposed security fencing has been removed entirely and replaced with deer fencing and screen planting where appropriate/reduces the visual impact of the proposal.
- Application site has been carefully chosen because of its location and flat topography.
- Solar panels are a regular occurrence in modern Ireland.
- Supported by local, regional and national planning policy.
- Alleged impacts on property values are not a material planning consideration.
- Reason for refusal No. 4 is entirely subjective and is not supported by any specific policies, objectives or guidelines.
- Proposed CCTV will have a view range of 80m and will be angled towards the ground/overall field of vision is limited/no sensitive areas will be visible.

Landscape and Visual Impact

- Proposed screening is not interim as stated in the planner's report.
- While the proposed landscape is bedding in, it is proposed to utilise windbreak netting which is a very effective low impact screening solution.
- Landscaping plan proposes retention and enhancement of existing hedgerow planting/retention of field boundaries/additional native species planting.
- Native hedgerow planting will be allowed to grow to a height of 4 metres.
- Photomontages indicated the existing, proposed view after 1 year and the proposed view after 3-5 years.
- The proposed development will not have any impact on the visual amenity of the rural area or on the character of the landscape.
- Request that ABP grants permission for the proposed development.

6.2. **Planning Authority Response**

6.2.1. None.

6.3. **Observations**

6.3.1. Observations have been received from (i) Thomas & Teresa Costello (ii) Mary & Tony Buckley and (iii) Michael & Antoinette McGauran. The issues raised are summarised below:

Landscape and Visual Impact

- Would spoil natural beauty of the area.
- Proposed panels are on a large scale and are surrounded by a tall metal fence that will draw unwanted attention to the area.
- Potential for vandalism/fencing being used for posters/advertising.
- Views will be diminished.

Road Safety

- Numerous traffic incidents including a fatality along this road.

- Proposed development could cause a distraction to road users and increase the chance of accidents.
- Increased volume of traffic could further increase the risk.

Flooding

- Will lead to additional flooding/will flood surrounding properties.

Ecology

- Currently a haven for wildlife/wide range of animal species in the area.
- Proposed solar farm would impact negatively on these species.
- If development is allowed to proceed allowances must be made for retention of species and habitats.

Residential Amenity

- Development is too close to existing properties.
- Noise issues due to power units and also due to wind noise.
- Proximity of solar panels to potential residential sites.
Loss of privacy.
- Impact of glare.

Other Issues

- Potential for wind damage/panels could be lifted up onto road or adjacent properties.
- Lack of consultation prior to the submission of the application/map and letter was received 1st June 2017 and application was lodged on the 2nd June 2017.
- Health risks/radiation
- Could lead to a contamination of drinking water.
- Proposed site is less than ten yards from an existing well.
- Impact on property values.

6.4. Further Responses

6.4.1. None.

7.0 Assessment

7.1. The following assessment covers the points made in the appeal submissions and also encapsulates my *de novo* consideration of the application. The main issues in the assessment of the proposed development are as follows:

- Principle of Development
- Landscape/Visual Impact
- Impact on Residential Amenity
- Traffic and Access
- Ecology
- Surface Water Drainage
- Other Issues
- EIS Screening
- Appropriate Assessment

7.2. Principle of Development

7.2.1. There is currently no national guidance in relation to solar panel developments in Ireland. I note that since the publication of the 2009 Renewable Energy Directive (2009/28/EC) that Ireland has a target objective requiring that 16% for all energy comes from renewable sources by 2020. In considering the principle of a proposed solar panel development, I have had regard to both national and regional policy provisions and site specific objectives. I have had regard to the Government White Paper entitled 'Ireland's Transition to a Low Carbon Energy Future 2015-2030', published in December 2015. The main objective of this policy document is to reduce carbon emissions and in this regard solar panel developments are considered an integral part of achieving this objective.

- 7.2.2. Project Ireland 2040: National Planning Framework supports the roll out of renewables and National Policy Objective 57 promotes renewable energy generation at appropriate locations.
- 7.2.3. The Galway County Development Plan also includes objectives that support renewable energy projects.
- 7.2.4. As such the proposal is acceptable in principle and the nature of use would not be contrary to the objectives and policies either nationally or under the County Development Plan.
- 7.2.5. However, the overall acceptability of the proposal is contingent on issues such as the visual impact on the landscape taking into account the siting, scale and layout of the proposed solar panel development, impact on local residents and the amenities of the area including noise and glint and glare, impact on ecology, cultural heritage, accessibility/traffic impacts and drainage issues.

7.3. Landscape/Visual Impact

- 7.3.1. Reason for refusal No. 5 of the decision of the planning authority refers to the impact on the visual amenities of the area and the impact on the character of the landscape, resulting from the nature and large scale of the solar farm and the over reliance on existing vegetation, landscaping and interim screening measures.
- 7.3.2. A number of observations on the appeal have also cited the potential adverse impact on visual amenity and consider that the proposal, including the fencing, will spoil the natural beauty of the area.
- 7.3.3. The First Party Appellant has stated that it is proposed to utilise windbreak netting to screen the proposal while the landscaping measures are being established, which is considered an effective solution for minimising visual impact. It is further stated that the landscaping plan proposes retention and enhancement of existing hedgerow planting, retention of field boundaries and additional native species planting, and that native hedgerow planting will be allowed to grow to a height of 4 metres, providing effective screening of the proposals.
- 7.3.4. The appeal site covers a total area of approximately 12.7 Ha, which is divided into 9 separate fields. The site is gently undulating from a high point of approximately 72.5m AOD at the north western corner sloping down to 67m AOD on the southern

boundary. There are some mature trees and hedgerows on the boundaries, mainly closer to residential dwellings. However the field boundaries are defined for the most part by dry stone walls, with the southern boundary defined by a drainage ditch.

- 7.3.5. In terms of Landscape Character, the appeal site lies on the southern fringe the East central Galway (Athenry, Ballinasloe to Portumna) Character area (Area 3) with the Lough Rea Character Area (Area 25) to the south as defined within the CDP. The appeal site lies an area of defined as 'Low Sensitivity' as defined within the CDP.
- 7.3.6. Within the Landscape and Landscape Character Assessment, Area 3 is described as flat and it is noted that height restrictions should apply to avoid long distance visual intrusion.
- 7.3.7. A Landscape and Visual Impact Assessment (LVIA) has been submitted with the application. The extent of the study area was a 4km radius around the site, although the report states that extent of Theoretical Visibility is confined to within 1.5km to 2km with a focus to the east and southwest. It is stated that land cover features reduces the actual visibility to those points immediately adjacent to the site boundary, and up to 0.75km to the south, where there is higher ground with views north toward the site.
- 7.3.8. The LVIA identifies six viewpoints from various locations around the site, with the significance of visual impact ranging from Negligible (VP3), Moderate to Minor- Not Significant (VP1, VP6), Moderate – Not Significant (VP2, VP4) to Major to Moderate - Significant – short term (VP 5).
- 7.3.9. Further appraisal of landscape impacts are provided by way of photomontages, submitted as unsolicited further information. A proposed landscape plan was also provided as unsolicited further information (Drawing No. 170826-b dated 17/11/2017) and a landscape plan was also included with the appeal submission (Drawing No. 170826-b dated 04/01/2018).
- 7.3.10. The appeal site is within a landscape area designated as Low Sensitivity. I consider the viewpoints chosen within the LVIA are fairly representative of the views gained towards the application site. I note the existing screening gained from the boundary trees and from the undulating character of the landscape.
- 7.3.11. However, the proposed development is relatively large in scale, with a site area of 12.6 hectares, and will be visible from a number of viewpoints. Notwithstanding this,

the solar panels themselves are low profile structures and the proposals entail retention of the existing hedgerow within and surrounding the appeal site, as well as proposing additional planting and landscaping to provide screening.

7.3.12. The panels will be most visible, prior to any screening, from Viewpoints 2, 5 and 6 and will form a significant feature on the landscape. However, with the proposed planting and screening the visual impact is reduced by a significant degree.

7.3.13. From viewpoint 6, a point on the R449, there are longer distance views (0.6km) but the views will be more extensive from this point, with the impact of screening being limited. However, given the distance from this point to the appeal site, I do not consider that the visual impact of the proposal would be significant.

7.3.14. In conclusion therefore, given the low sensitivity of the landscape and the proposed screening measures as detailed in the application documents, I consider that the overall visual impact and impact on the character of the landscape is acceptable in this instance, subject to the proposed landscape plan being implemented.

7.4. Impact on Residential Amenity

7.4.1. Reason for refusal No. 4 of the decision of the planning authority refers to impact on residential amenity resulting from visual impact, potential impacts from glint and glare and potential overlooking.

7.4.2. Observations on the appeal have also cited similar concerns in relation to residential amenity and have also raised the issue of noise impacts.

7.4.3. The First Party Appellants, in their appeal submission, state that the proposed landscaping plan is designed to minimise the overall visual impact of the proposal and point to the limited height of the panels compared with other renewable technologies, such as wind turbines.

7.4.4. In my view, the potential impacts on residential amenity relate to visual amenity, impacts from glint and glare, potential overlooking and impacts from noise.

7.4.5. In relation to visual impacts, there are a total of four dwelling houses either adjacent to or in relatively close proximity to the appeal site that have the greatest potential to be impacted upon. These include a property to the north-western boundary, two properties close to the northern boundary and a property to the eastern boundary of the site. In relation to the former three properties, all of these have significant amount

of screening provided by existing vegetation which will reduce the visual impact to a large degree. Three of the fields to the north-western and northern boundaries of the appeal site will not have panels in place, reducing the overall visual impact from adjacent properties.

- 7.4.6. There is a further residential property to the eastern boundary, on the opposite side of the R349. This property also has screening provided by existing vegetation but there will be still some partial views from this property towards the panels, prior to the planting and screening being put in place. However I do not consider that the visual impact of these views would be significant enough to warrant a refusal in this instance.
- 7.4.7. In relation to glint and glare, I note there are no Irish guidelines relating to glint and glare. I do note however that Solar PV arrays are designed to absorb sunlight – the reflectance of glass coating on panels being 9% compared with 19% in normal window glass. Water bodies on a calm day have similar reflective properties to solar PV arrays.
- 7.4.8. The Glint and Glare analysis submitted at application stage considers 28 surrounding dwelling but states that there is only one dwelling (receptor No. 11 to the eastern boundary of the site) where a visible solar reflection is possible, but the resulting impact significance on this dwelling is considered to be low. This is as a result of the possible solar reflections only lasting for 60 minutes per day for a total of 3 months per year, with clear views only gained from the upper floors, and only on days where the weather is clear and sunny.
- 7.4.9. In relation to the impact on receptor No. 11 to the eastern boundary, I note the impact identified above is the worst-case scenario, assuming the weather is clear and sunny for all of the periods where glint and glare are possible. In addition, any glint and glare that does occur would be similar to viewing sunlight reflections from a lake or similar still water body, and would not be considered an intense reflection, such as that from a highly reflective surface. As such I do not consider that there would be any material impact on surrounding residential amenity resulting from glint and glare.
- 7.4.10. In relation to noise, the submitted Noise Assessment notes that without mitigation, that the proposed inverter would exceed recommended night time noise levels.

However it is proposed to contain the invertors in a cabin or similar structure, with a noise reduction of approximately 20dB resulting, taking noise levels below acceptable limits. I concur that impacts in relation to noise are not significant, subject to the mitigation described above.

7.4.11. In relation to overlooking, concern has been raised regarding the proposed CCTV cameras. However, a condition can be imposed ensuring that these face inward towards the site only.

7.5. Traffic and Access

7.5.1. Reason for refusal No. 1 of the decision of the planning authority relates to the creation of a traffic hazard due to inadequate sightlines and possible glint and glare.

7.5.2. In relation to sightlines, it is the concern of the planning authority that the required cutback of vegetation is outside the control of the applicant and therefore the required 160m sightlines cannot in fact be achieved.

7.5.3. Observers on the appeal have also raised concerns in relation to road safety and have cited previous traffic accidents on this road, including one involving a fatality.

7.5.4. The First Party Appellants have stated that the new access point will provide the required 160m sightlines in both directions. It is further stated that the number of vehicles associated with the development, both during construction and operational phases, will be minuscule in the context of the carrying capacity of the R349.

7.5.5. A new access point off the R349 is proposed. Figure 10.1 shows the visibility splay that can be achieved via a new access point. A Traffic and Transport Report is included with Appendix 109 of the Technical Appendices and I have had regard to same.

7.5.6. My observations on site were that the R349 is a relatively heavy trafficked road with a series of bends and turns that limit visibility in either direction at some points along this road. However at the location of the proposed new access point, there is sufficient visibility in both directions and there does not appear to be potential for vegetation growth on sites not within the applicant's control to obscure this visibility. Furthermore, movements during the operational phases will be very limited. The During the construction stage, there will be 3 to 5 vehicles per day accessing the site, with signage in place on the road.

- 7.5.7. In relation to glint and glare, the glint and glare analysis submitted at application stage states that solar reflections are geometrically possible towards 5 of 38 assessed road locations. Existing screening results in solar reflections expected in 3 of these locations, covering a total of 300m of road. The overall impact is considered moderate. With screening in place the panels will not be visible from the road, reducing the impact almost entirely.
- 7.5.8. Further information in relation to glint and glare was submitted as Appendix 4-1 of the appeal submission and this considers a (i) bare earth scenario (ii) impacts with the 2.4m high wind-stop netting in place and (iii) impacts with the revised mitigation planting in place, as per Ardnandman Landscape Proposal Plan Rev. 1. The wind stop netting results in glint and glare impacts being eliminated from those points along the road closest to the appeal site. Once established, the mitigation planting will almost completely eliminate reflectance occurring along the R349 regional road.
- 7.5.9. In relation to glint and glare, and impacts on road uses, similar considerations apply to that of residential amenity. The reflections that do occur are similar to that from a water body such as a lake. With screening there will be no visibility towards the panels from the road.
- 7.5.10. I note the concerns of the Roads section of the planning authority, including that of the potential impact on the National Road. It is not stated on file what National Road is of concern. I note the closest National Road is the N65 National Road is located 1.9km east of the appeal site, and has very limited visibility towards the appeal site. There will be no impact on this road, as a result of glint and glare.
- 7.5.11. It is further noted that, in the UK context at least, there are numerous examples of large-scale solar developments placed adjacent to motorways without any impact on traffic safety.
- 7.5.12. Overall, subject to conditions, the impact on the surrounding road network will be very limited and as such the proposal is acceptable having regard to traffic and transport issues.

7.6. Flooding/Surface Water Drainage

- 7.6.1. Reason for refusal No. 2 of the decision of the planning authority refers to the absence of comprehensive details to manage surface water run-off on site and to the

location of the site within a flood risk area and the local authority were not satisfied that flood risk issues have been addressed.

- 7.6.2. Observations on the appeal have raised flood risk concerns and have also cited previous flooding occurrences in the area.
- 7.6.3. The First Party Appellant has stated that a Site Specific Flood Risk Assessment was submitted to Galway County Council as unsolicited further information and contends that it was not given adequate consideration at application stage.
- 7.6.4. A site specific flood risk assessment was submitted as part of an unsolicited further information submission. A further submission in relation to flood risk has been provided with the appeal submission, in the form of a letter from Hydro Environmental Services dated 22nd December 2017. This states that sufficient information was submitted at application stage in relation to flood risk and that the mitigation measures outlined in the FRA report ensure compliance with CDP Policies and Objectives.
- 7.6.5. The site specific flood risk assessment notes that an area along the southern boundary of the site is located within the indicative 100-year fluvial flood zone (i.e. Flood Zone A).
- 7.6.6. The less vulnerable infrastructure is located within this areas, such as the PV panels and fencing. High vulnerability infrastructure, such as the electricity substation, is located in areas of the site that are designated Flood Zone C. The panels within Flood Zone A are located above ground level and will not obstruct the flow of flood water.
- 7.6.7. In relation to surface water run-off, water hitting the panels is shed to the ground utilising gaps between the panels and the arrays. A site specific drainage system will be used to ensure that any minor additional runoff is contained and attenuated within the proposed site.
- 7.6.8. The access tracks and hardstanding areas are permeable and so will not increase water run off rates or volumes, and the hardstanding associated with the substation and other cabinets is small in area relative to the appeal site as a whole, and will not have a significant impact on surface water runoff rates or volume.

- 7.6.9. Having regard to the evidence on file, and having regard to flood mapping available from the OPW, the watercourse to the south of the appeal site is the most likely source of fluvial flooding, and as such an area of the southern section of the site is within Flood Zone A. The FRA states that there is no risk of pluvial flooding as the current drains are sufficient to convey waters during heavy rainfall events. The same considerations apply to surface water. There is no evidence of groundwater flooding risk.
- 7.6.10. Given the nature of the solar panels, which have a limited hardstanding area as they are anchored by way of piling, and given that they allow for rainwater to continue to be drained as per the existing situation and given the other best practice measures as set out in Section 6.1 and 6.2 of the site specific flood risk assessment, I concur with the conclusions of the site specific flood risk assessment that the overall risk of flooding posed by the proposed development is considered to be low. While I note the previous flooding instances cited by observers on the appeal, I do not consider that this proposal will see a worsening of the situation, subject to the best practice measures being put in place.

7.7. Ecology

- 7.7.1. An Ecological Report has included as Appendix 5 of the Technical Appendices. This outlines the habitat types which include agricultural grassland, wet grassland, hedgerows, stonewalls and drainage ditches. No plant species of conservation significance were recorded and no evidence of any species of conservation significance were recorded. There is potential for the site to support invertebrates such as newt and common lizard. In relation to birds, the report notes that the site has potential for breeding birds within the trees and hedgerows, and also for ground nesting species within the grassland. It is noted however that the high numbers of cattle observed during the survey may result in reduced densities. The site also has potential to support mammals including bats, hedgehog, otter and Irish hare.
- 7.7.2. The proposal has been designed to facilitate small mammal movement with a minimum 150mm gap between the bottom of the fence and the ground. It is noted that the majority of bird activity is likely to be within the trees and hedgerows to be retained, reducing the impact on bird populations. It is noted that given the site is

subject to heavy grazing, foraging opportunities for birds within the grassland area are low.

- 7.7.3. Overall, subject to the measures outlined in the Ecological Report being implemented, I do not consider that there would be a significant impact on ecology as a result of the proposed development.

7.8. **Other Issues**

EIS Screening

- 7.8.1. Schedule 5 of the Planning and Development Regulations, 2001 (as amended) sets out projects within Annex I and Annex II which require submission of an EIS (now EIAR). Solar PV farms are not of a class within the annexes. I note that Article 92 of the Regulations, states- '*sub-threshold development*' means development of a type set out in Schedule 5 which does not exceed a quantity, area or other limit specified in that Schedule in respect of the relevant class of development'. As solar PV is not a type/class set out in Schedule 5, it cannot, therefore, be considered for sub-threshold development either. The Board has decided a number of similar-type cases and has concluded that EIA is not required.

Impact on Potable Water Supply

- 7.8.2. An observation on the appeal has raised the issue of the potential impact on potable water supply and notes there are wells within close proximity to the appeal site.
- 7.8.3. The bedrock aquifer beneath the site is classed as Locally Important Aquifer – Bedrock which is moderately productive only in local zones. In terms of groundwater vulnerability the aquifer at the site is classed as having a high vulnerability, with the area along the watercourse classed as having moderate vulnerability.
- 7.8.4. However it is my view that the best practice measures as outlined in Technical Appendix 6 Hydrology, Geology and Hydrogeology, which include pollution control measures, will ensure no adverse impact on groundwater resulting from the proposed development.

Archaeology

- 7.8.5. An Archaeological assessment has been submitted with the application (Technical Appendix 7). The only archaeological feature identified as potentially being impacted is a post-medieval structure, which may be uncovered as a result of the access track

construction. However the impact was considered slight and mitigation is recommended in the form of monitoring of works in the immediate vicinity of this structure. Conditions can be imposed in this regard.

Financial Contribution

- 7.8.6. The Galway County Council Development Contribution Scheme 2016 does not make any reference to Solar Farms or Solar Generating Development, nor does it refer to a wider category of renewable energy development. As such I do not consider that the Galway County Council Development Contribution Scheme 2016 allows for charging contributions for Solar Farm developments and therefore no contribution is applicable in this instance.

Grid Connection

- 7.8.7. Any grid connection would be subject to requirements of ESB Networks. Any grant of permission from the Board could not be construed as consent to any connection to the national grid.

Depreciation of the Value of Property

- 7.8.8. No evidence has been submitted by 3rd Parties to substantiate the claim that a development of this nature would devalue property in the vicinity.

Electromagnetic Fields

- 7.8.9. EMFs are universally present in the environment – both natural and man-made. There is no detail on file in relation to emissions. However, it has previously been accepted by the Board that emissions associated with solar PV farms are low, and would be concentrated around the transformer connecting to the grid (see for example Appeal Reference 300389-17). Strength diminishes with distance. Any emissions would be similar to that associated with household electrical equipment or normal electrical power connections. All equipment must comply with EC standards for EMF. The proposed development will not have any impact on human health.

7.9. Appropriate Assessment

- 7.9.1. Reason for refusal No. 3 of the decision of the planning authority states that the planning authority is not satisfied that the proposal will not have significant effect on nearby European Sites, as the proposal fails to consider the impacts of the restoration stage of the subject site, flood risk, cleaning of the solar panels, surface

water panels and the cumulative impact of the proposal, including that of the grid connection

- 7.9.2. The application was accompanied by an Ecology Report (Appendix 5 of the Technical Appendices) which considers Appropriate Assessment Issues. Further to this, an Appropriate Assessment Screening Report was submitted as part of Unsolicited Further Information (Issue date 08.11.2017). A Revised Appropriate Assessment Screening Report (although it has the same issue date of 08.11.2017) is submitted with this appeal. This provides a description of the project and outlines the standard best practice measures to be implemented. It is stated that water will be used to clean the panels and this will be done up to twice a year. In relation to decommissioning, it is stated that the site of the solar farm will be restored to agricultural grassland at the time of decommission.
- 7.9.3. A description of the habitat types is set out and the potential for the site to support protected habitats and species is considered. A total of 11 Natura 2000 sites were identified with the likely zone of impact, which was a 15km radius around the site.
- 7.9.4. The likely effects of the proposed development on European Sites is considered. It is noted that the closest European Sites are the Lough Rea SAC and SPA which are located 1.9km from the development. There is a hydrological connection with these site, however they are located upstream from the development, rendering impacts unlikely. Standard best practices measures integral to the project will ensure no impact on downstream sites.
- 7.9.5. The screening report concludes that the proposed development, by itself or in combination with other plans and projects, in light of the best scientific knowledge in the field, in view of the sites' conservation objectives, will not have significant effects on any European Site and that there is no requirement for Appropriate Assessment.
- 7.9.6. The Board, as a competent authority, shall only agree to a plan or project only after having ascertained that it will not adversely affect the integrity of a Natura 2000 site. In this regard it is appropriate to carry out a stage 1 screening assessment and then if necessary a stage 2 appropriate assessment.
- 7.9.7. I have considered those sites within 15km of the appeal site and the impacts of the development which is under consideration here.

Relevant Natura 2000 Sites, Qualifying Interests and Conservation Objectives

7.9.8. The appeal site is not currently designated for any nature conservation purposes under national or international legislation but a number of Natura 2000 sites (SAC/SPA) are within a 15km radius of the subject site. These are set out in the table below:

Site Code, Site Name and Designation	Approximate distance from the appeal site	Qualifying Habitats and Species
004134 Lough Rea SPA	1.9km South-East	Shoveler (<i>Anas clypeata</i>) [A056] Coot (<i>Fulica atra</i>) [A125] Wetland and Waterbirds [A999]
000304 Lough Rea SAC	1.9km South-East	Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp. [3140]
004168 Slieve Aughty Mountains SPA	5.3km South	Hen Harrier (<i>Circus cyaneus</i>) [A082] Merlin (<i>Falco columbarius</i>) [A098]
001913 Sonnagh Bog SAC	8.5km South	Blanket bogs (* if active bog) [7130]
000322 Rahasane Turlough SAC	9.2km West	Turloughs [3180]
004089 Rahasane Turlough SPA	9.4km West	Whooper Swan (<i>Cygnus cygnus</i>) [A038]Wigeon (<i>Anas penelope</i>) [A050] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Black-tailed Godwit (<i>Limosa limosa</i>) [A156]

		Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395] Wetland and Waterbirds [A999]
000318 Peterswell Turlough SAC	11km South-West	Turloughs [3180] Rivers with muddy banks with <i>Chenopodium rubri</i> p.p. and <i>Bidenton</i> p.p. vegetation [3270]
000242 Castletaylor Complex SAC	13.3km West	Turloughs [3180] Alpine and Boreal heaths [4060] Juniperus communis formations on heaths or calcareous grasslands [5130] Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites) [6210] Limestone pavements [8240]
002117 Lough Coy SAC	14.7km South-West	Turloughs [3180]
002244 Ardrahan Grassland SAC	15km South-West	Alpine and Boreal heaths [4060] Juniperus communis formations on heaths or calcareous grasslands [5130]

		Limestone pavements [8240]
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Assessment of likely effects

7.9.10. There is a direct source-pathway linkage (hydrological) between the appeal site and the Lough Rea SAC and SPA, via the watercourse that runs along the southern boundary of the appeal site. These sites are located 1.9km south-east of the appeal site. The Conservation Objectives for these European Sites is to maintain or restore the favourable conservation condition of these habitats and species listed in the relevant section of the table above. Documentation on file states that these two European sites are located upstream of the appeal site, limiting the potential for any significant effects on these sites. Furthermore, best practice measures, including a 10m buffer zone between the panels and the watercourse to the south of the appeal site, will ensure no significant effects on either of these Natura 2000 sites.

7.9.11. In relation to the cleaning of the panels, the documentation on file states that water only will be utilised in this regard, and that cleaning is only necessary once or twice a year.

7.9.12. Flooding and surface water issues are considered elsewhere in this report. In summary however, the proposal will not increase flood risk and the surface water proposals will ensure that no increase in surface water run-off will occur. As such it is considered that no significant effects will arise as a result an increase in the volume or rate of surface water run-off.

7.9.13. The site will revert back to agricultural use once the array is decommissioned.

7.9.14. In relation to potential loss of habitat for the species of conservation interest as relates to Lough Rea SPA, there is no scientific evidence on file that the Shoveler, Coot or Wetland and Waterbirds are currently utilising the appeal site, although an observation on the appeal has stated that a large number of bird species are found in the immediate proximity to the site. While the site has potential to accommodate bird nesting and foraging opportunities, this is more likely to occur with the existing trees and hedgerows to be retained, as the grassland area is currently heavily grazed, reducing foraging opportunities for birds. Notwithstanding this, the immediate surrounding area provides a similar habitat to that currently provided by the appeal

site. As such, I do not consider there will be a significant effect on the species of conservation interest identified above, as relates to the Lough Rea SPA.

- 7.9.15. In relation to the in-combination impacts of the proposed solar farm, and the associated grid connection, the solar farm will connect into the Caheravine substation that is located approximately 500m to the south. This may involve an additional consent procedure. There is no evidence however that any in-combination impact of the solar PV farm and its grid connection could somehow be greater, where it is established that the solar PV farm itself will not have an impact on surrounding European Sites. Whatever the route and the means of construction (underground/over-ground) of the grid connection, the likely impacts will only be established when the route is fully known. The granting of planning permission does not entitle a developer to carry out a development – if there are other codes which must be adhered to, or consents obtained.
- 7.9.16. Also in relation to in-combination impacts, I note there is a current appeal relating to a solar farm at Solar PV Farm at Cahernamona, Loughrea County Galway (Appeal Ref 300603-18). This appeal site is located 1.7km north of the appeal site under consideration here. However given that there are no likely significant direct or indirect effects on European Sites as a result of this proposal, I do not consider there is a likelihood for significant in combination effects on any European Sites when cumulative impacts of these two projects are considered.
- 7.9.17. In relation to the other sites identified above, I consider that the distance to these sites renders it unlikely that there would be any significant direct, indirect or in-combination effects on these European Sites.
- 7.9.18. Having regard to the considerations above, it is reasonable to conclude that on the basis of the information on the 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 site nos. 004134 and 000304, or any other European site, in view of the sites' Conservation Objectives, and a Stage 2 Appropriate Assessment is not, therefore, required.

8.0 Recommendation

- 8.1.1. I recommend that permission be granted for the Reasons and Considerations set out below, and subject to the attached Conditions.

9.0 Reasons and Considerations

Having regard to the provisions of the current development plan for the area and to regional and national policy, it is considered that, subject to compliance with the conditions set out below, the proposed construction of a solar PV farm would not seriously injure the visual or residential amenities of the area, would not impact negatively on road safety, would not lead to increased flood risk nor would it negatively impact on the ecology of the area. The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area.

10.0 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 17th day of November 2017, and by the further plans and particulars received by An Bord Pleanála on the 8th day of January, 2018, except as may otherwise be required in order to comply with the following conditions. Where such conditions require details to be agreed with the planning authority, the developer shall agree such details in writing with the planning authority prior to commencement of development and the development shall be carried out and completed in accordance with the agreed particulars.

Reason: In the interest of clarity.

2. The period during which the development hereby permitted may be carried out shall be 10 years from the date of this Order.

Reason: Having regard to the nature of the proposed development, the Board considered it reasonable and appropriate to specify a period of the

permission in excess of five years.

3. No works shall commence without the submission for the written approval of the planning authority of final details for the chosen solar panels and inverter cabins.

Reason: In the interest of clarity.

4. (a) All structures including foundations hereby authorised shall be removed not later than 25 years from the date of commencement of the development, and the site shall be reinstated, unless planning permission has been granted for their retention for a further period prior to that date.

(b) Prior to commencement of development, a detailed restoration plan, providing for removal of foundations and access roads to a specific timescale shall be submitted to the planning authority for written agreement. On full or partial decommissioning of the solar farm, or if the solar farm ceases operation for a period of more than one year, the solar arrays, including foundations, shall be dismantled and removed from the site. The site (including all access roads) shall be restored in accordance with the said plan and all decommissioned structures shall be removed within three months of decommissioning.

Reason: To enable the planning authority to consider the impact of the development over the stated time period, and to further enable review of the operation of the solar PV farm, having regard to the circumstances then prevailing, and in the interest of orderly development.

5. No external artificial lighting shall be installed or operated on site, unless otherwise authorised by a prior grant of planning permission.

Reason: In the interest of visual amenity and residential amenity.

6. CCTV cameras shall be fixed and angled to face into the site and shall not be directed towards adjoining property or the public road.

Reason: In the interest of residential amenity and traffic safety.

7. The solar panels shall be fixed in place by way of driven pile or screw pile foundations only, unless otherwise authorised by a prior grant of planning

permission.

Reason: In the interest of the long-term viability of this agricultural land, and in order to minimise impacts on drainage patterns.

8. The construction of the development shall be managed in accordance with a Construction Management Plan, which shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. This plan shall provide details of intended construction practice for the development, including:
- (a) details of site security fencing and hoardings,
 - (b) details of the timing and routing of construction traffic to and from the construction site and associated directional signage, to include proposals to facilitate the delivery of abnormal loads to the site,
 - (c) measures to obviate queuing of construction traffic on the adjoining road network,
 - (d) measures to prevent the spillage or deposit of clay, rubble or other debris on the public road network,
 - (e) details of appropriate mitigation measures for noise, dust and vibration, and monitoring of such levels,
 - (f) containment of all construction-related fuel and oil within specially constructed bunds to ensure that fuel spillages are fully contained; such bunds shall be roofed to exclude rainwater,
 - (g) details of on-site re-fuelling arrangements, including use of drip trays,
 - (h) details of how it is proposed to manage excavated soil, and
 - (i) means to ensure that surface water run-off is controlled such that no deleterious levels of silt or other pollutants enter local surface water drains or watercourses.

A record of daily checks that the works are being undertaken in accordance with the Construction Management Plan shall be kept for inspection by the planning authority.

Reason: In the interest of environmental protection, amenities, public health and safety.

9. Site development and building works shall be carried out only between 0800 to 1900 hours Monday to Friday inclusive, between 0800 to 1400 hours on Saturday, and not at all on Sunday and public holidays. Deviation from these times will only be allowed in exceptional circumstances where prior written approval has been received from the planning authority.

Reason: In order to safeguard the residential amenities of property in the vicinity.

10. Cables from the solar arrays to the compound/equipment areas shall be located underground.

Reason: In the interest of visual amenity.

11. This permission shall not be construed as any form of consent or agreement to a connection to the national grid or to the routing or nature of any such connection.

Reason: In the interest of clarity.

12. The noise level from any plant/machinery shall not exceed 55 dB(A) rated sound level, as measured at the nearest noise sensitive location. Procedures for the purpose of determining compliance with this limit shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development.

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

13. The landscaping plan, as submitted to An Bord Pleanála on 8th Jan 2018 (Drawing No. 170826-b), 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 five years from the completion of the development, 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 interest of visual amenity.

14. No external artificial lighting shall be installed or operated on site, unless otherwise authorised by a prior grant of planning permission.

Reason: In the interest of visual and residential amenity.

15. The developer shall facilitate the preservation, recording and protection of archaeological materials or features that 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 (including hydrological and geotechnical investigations) relating to the proposed development,

(b) employ a suitably-qualified archaeologist who shall monitor all site investigations and other excavation works, and

(c) provide arrangements, acceptable to the planning authority, for the recording and for the removal of any archaeological material which the authority considers appropriate to remove.

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 site and to secure the preservation and protection of any remains that may exist within the site.

16. Prior to commencement of development, the developer shall lodge with the planning authority a cash deposit, a bond of an insurance company, or such other security as may be acceptable to the planning authority, to secure the satisfactory reinstatement of the site upon cessation of the project, coupled with an agreement empowering the planning authority to apply such security or part thereof to such reinstatement. The form and amount of the security shall be as agreed between the planning authority and the developer or, in default of agreement, shall be referred to An Bord Pleanála for determination.

Reason: To ensure satisfactory reinstatement of the site.

Ronan O'Connor
Planning Inspector

17th August 2018