



An
Bord
Pleanála

Inspector's Report ABP 306065-19

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| Development | Solar farm |
| Location | Ballyclogh, Tullabeg, Medophall and Medophall Demesne, Co. Wexford. |
| Planning Authority | Wexford County Council |
| Planning Authority Reg. Ref. | 20191272 |
| Applicant | Terra Solar II Limited |
| Type of Application | Permission |
| Planning Authority Decision | Refuse |
| Type of Appeal | 1 st Party v. Grant |
| Appellant | Terra Solar II Limited |
| Observers | 1. Barbara Kelly 2. Adrian Curley 3. Daniel Chagas 4. Patricia Kavanagh 5. Iarnrod Eireann |
| Date of Site Inspection | 15/06/20 |
| Inspector | Pauline Fitzpatrick |

1.0 Site Location and Description

The site, which has an approx. area of 99.8 hectares, comprises of two land parcels north and south of local road L-5092 c. 2km to the east of Camolin and c.8km to the south-west of Gorey.

Parcel 1, which is to the north of the local road, is located in the townlands of Tullabeg and Ballyclogh and is irregular in shape. It is served by an existing road entrance with a network of access tracks traversing the lands.

The Dublin-Rosslare train line bounds the site to the north with the M11 to the south-east. The River Bracken which flows from west to east traverses the northern section of the site. The channel was noted to be dry on day of inspection. The lands are undulating, generally falling from north to south, and are in agricultural use with a farmyard and agricultural sheds immediately to the south-west of the red line boundary. There is a 110kV overhead line (Crane to Banoge) traversing the north-western corner of the site with both double utility poles and pylons supporting the line within the site.

Parcel 2 is to the south and setback from the local road in the townlands of Medophall and Medophall Demesne behind a dwelling and farm buildings. A cul-de-sac lane bounds the site to the south-west. Again, the lands are undulating and are in agricultural use with falls generally from west to east. The 110kV overhead line bisects the site with double utility poles. A stream forms the south-eastern most site boundary.

2.0 Proposed Development

The proposal entails a solar farm comprising of:

- 384,000 m² of photovoltaic panels mounted 0.9 metres above ground level with a maximum height of 2.8 metres
- 25 no. single storey inverter/transformer stations
- Battery storage module and associated equipment container
- Security fencing up to 2.8 metres in height.
- Satellite communications pole

- CCTV
- Upgrading of existing tracks and new tracks to 4 metres in width
- Temporary construction compounds
- Landscaping and ancillary works

A permission for 10 years is sought with the operational lifespan of the solar farm being 35 years.

It is proposed to connect parcel 2 in the southwest to parcel 1 via an underground cable along the local road. This connection is considered to be exempted development under the provisions of Class 26 of the Planning and Development Regulations 2000 as amended.

The application is accompanied by:

- Planning and Environmental Statement
- Glint and Glare Assessment
- Ecological Impact Assessment
- Site Access Study
- Archaeological, Architectural and Cultural Heritage Impact Assessment
- Outline Construction and Environmental Plan
- Hydrological Appraisal
- Photomontages
- Letters of consent from landowners.
- Tullabeg 110kV Substation Construction Methodology (for information only)
- Tullabeg 110kV Substation Ground Investigation Report (for information only)
- Tullabeg 110kV Substation Drainage Proposals (for information only)

There is a concurrent application for a 110kV substation and grid connection made directly to the Board under ref. ABP 305803-19. The substation is within parcel 1 and will connect via a loop-in to the 110kV overhead line.

3.0 Planning Authority Decision

3.1. Decision

Refuse permission for the above described development for 2 reasons:

1. The proposal would present an unacceptable traffic hazard by reason of glint and glare to road users particularly on the M11 and to rail drivers.
2. The Glint and Glare Assessment did not provide an assessment at the proposed 30 degree tilt of panels. There is inadequate information to carry out a full assessment.

3.2. Planning Authority Reports

3.2.1. Planning Reports

The *Executive Planner's* Report (countersigned) can be summarised as follows:

- Having regard to the topography of this open, exposed site and to its visible nature, it is considered that the solar farm would form a prominent and obtrusive feature in the landscape, which would be highly visible in views from roads in the vicinity, and which would adversely impact on the rural character of the area.
- There is concern regarding failure of mitigation and that it cannot be relied upon to remove the potential of glare for traffic users of the M11 with a very high risk for causing a traffic hazard and endangering public health. The risk to the railway is also relevant.
- The reliance on mitigation measures provided by intervening hedgerows which are outside of the applicant's control, and the establishment of new planting are considered unreliable. There remains an unacceptable degree of impacts on residential amenity due to glare being experienced for prolonged times at residential properties.
- The Glint and Glare assessment is inadequate with the panels indicated to be set at 15 degrees which is contrary to the 30 degree angle indicated in the supporting documents.

- The Ecological Impact Assessment included sub-optimal surveying of bats with 2 species recorded. Therefore, the baseline gives an inaccurate measure of the extent of how the existing hedgerows and lands are utilised by foraging bats.
- A number of badger setts were recorded in the scrub habitat in the northwest section of the site south of the Bracken River with evidence to suggest they are actively used.
- Applicant has failed to provide the necessary details of the proposed septic tank and associated percolation area and no EPA Site Suitability Test has been included.

A refusal of permission for 5 reasons recommended.

The *Senior Planner* in a handwritten note at the end of the report states that the landscape concerns are not accepted. The issues relating to glare onto the M11 could be a serious issue. The principle of the development is acceptable once the site is screened from the motorway.

3.2.2. Other Technical Reports

Chief Fire Officer advises of the obligation to obtain a fire safety certificate.

Electrical installations to be provided in accordance with the National Rules for Electrical Installations ET101.

3.3. Prescribed Bodies

Iarnrod Eireann requires that the exact location and details of boundary treatment to be identified in co-operation with it. The proposal and any mitigation measures should be carefully evaluated to ensure that there is no resulting glint/glare on the railway environment which could impact on the safe operation of railway services or cause any visual distraction to staff. No trees to be planted directly along the railway boundary as they can impair train drivers' vision. In addition, falling leaves/leaf litter can adversely affect the operation of trains. Access for staff to culverts/bridges under the railway should not be hindered and no discharge onto railway property.

Transport Infrastructure Ireland requests the Council to ensure adequate and effective screening and mitigation are identified and provided in any approved

scheme to avoid glint and glare on the M11 and that such mitigation is included in any decision to grant permission. It is unclear that the mitigation proposed is sufficient to address seasonal periods when landscape screening cover is reduced. This should be addressed fully prior to any decision being made. A monitoring programme, to which the applicant will be required to adhere to, should be identified which would allow for additional mitigation, if necessary, and amendment/removal of elements of the solar farm that result in glint/glare and impact on road safety.

3.4. Third Party Observations

Objections to the proposal received by the planning authority are on file for the Board's information. The issues raised relate to:

- Residential amenity
- Public consultation
- Impact on equestrian business
- Adequacy of roads to accommodate movements
- Health implications
- Visual Impact
- Precedent set
- Noise
- Structural damage to property

4.0 Planning History

ABP 305803-19 – current SID application for a 110kV substation and grid connection to serve the proposed solar farm.

5.0 Policy and Context

5.1. National Policy

National Planning Framework

National Policy Objective 55 – promote renewable energy use and generation at appropriate locations within the built and natural environment to meet national objectives towards achieving a low carbon economy by 2050.

National Renewable Energy Plan 2010

The National Renewable Energy Action Plan (NREAP) sets out the Government's strategic approach and measures to deliver on Ireland's 16% target Directive 2009/28/EC. It states that the Government has set a target of 40% electricity consumption from renewable sources by 2020.

Strategy for Renewable Energy 2012-2020

The Strategy states that the Government's overriding energy policy objective is to ensure competitive, secure and sustainable energy for the economy and for society.

Adapting to Climate Change and Low Carbon Act 2015

This Act sets a statutory framework for the adoption of plans to ensure compliance with Ireland's commitments to European and international agreements on climate change. It commits to a carbon neutral situation by 2050 and to also match Ireland's targets with those of the EU. It requires that the Minister for Communications, Climate Action and the Environment make, and submit to Government, a series of successive National Mitigation Plans and National Adaptation Frameworks.

Ireland's Transition to a Low Carbon Energy Future 2015-2030

Accelerate the development and diversification of renewable energy generation to be achieved through a number of means including wind, solar PV and ocean energy.

Draft Renewable Energy Policy and Development Framework 2016

The main principles of the Renewable Electricity Policy and Development Framework include:

- Maximise the sustainable use of renewable electricity resources in order to develop progressively more renewable electricity for the domestic and potential, future export markets.
- Assist in the achievement of targets for renewable energy, enhance security of energy supply and foster economic growth and employment opportunities.

Climate Action Plan, 2019

The plan stresses the importance of decarbonising electricity consumed by harnessing the significant renewable energy resources. Ensuring the building of renewable rather than fossil fuel generation capacity to help meet the projected growth in electricity demand is essential. Ensuring increased levels of renewable generation will require very substantial new infrastructure, including wind and solar farms, grid reinforcement, storage developments, and interconnection.

To meet the required level of emissions reduction, by 2030 it is required to increase electricity generated from renewable sources to 70% comprising of

- Up to 1.5 GW of grid-scale solar energy (indicative figure)

5.2. Regional Policy

Regional Spatial and Economic Strategy for the Southern Region

The Strategy came into effect on 31st January 2020

Objective RPO 87 - Low Carbon Energy Future

The RSES is committed to the implementation of the Government's policy under Ireland's Transition to a Low Carbon Energy Future 2015-30 and Climate Action Plan 2019. It is an objective increase the use of renewable energy sources across the key sectors of electricity supply, heating, transport and agriculture.

Objective RPO 95 - Sustainable Renewable Energy Generation

It is an objective to support implementation of the National Renewable Energy Action Plan (NREAP), and the Offshore Renewable Energy Plan and the implementation of mitigation measures outlined in their respective SEA and AA and leverage the Region as a leader and innovator in sustainable renewable energy generation.

5.3. Local Policy

Wexford County Development Plan 2013

Objective EN07 - To encourage and favourably consider proposals for renewable energy developments and ancillary facilities in order to meet national, regional and county renewable energy targets and to facilitate a reduction in CO₂ emissions and the promotion of a low carbon economy, subject to compliance with development management standards in Chapter 18 and compliance with Article 6 of the Habitats Directive.

Objective EN10 - To prepare a Renewable Energy Strategy for County Wexford during the lifetime of the Plan which will build on and support the Wind Energy Strategy 2013-2019, any Climate Change Strategy prepared for the County and the National Renewable Energy Action Plan (Department of Communications, Energy and Natural Resources, 2010).

Objective EN18 - To promote the use of solar technologies in new and existing dwellings, offices, commercial and industrial buildings, subject to compliance with normal planning and environmental criteria and the development management standards contained in Chapter 18.

Objective L04 – To require all developments to be appropriate in scale and sited, designed and landscaped having regard to their setting in the landscape so as to ensure that any potential adverse visual impacts are minimised.

5.4. Environmental Impact Assessment

The construction of a solar farm does not involve a class of development set out in Parts 1 and 2 of Schedule 5 of the Planning and Development Regulations, 2001 (as amended). Accordingly, there is no requirement for the applicant to submit an Environmental Impact Assessment Report in this instance.

5.5. Natural Heritage Designations

The Slaney River Valley SAC (site code 00781) is c.1.2km to the west.

6.0 The Appeal

6.1. Grounds of Appeal

The submission by HW Planning on behalf the applicant against the planning authority's notification of decision to refuse permission, which is accompanied by a Landscape and Visual Statement and Outline Hedgerow Planting, Monitoring and Maintenance Schedule, can be summarised as follows:

6.1.1. *Reason for Refusal No.1 – Impact of Glint and Glare on Road and Rail Users*

- There is no conclusive evidence that the proposed landscape mitigation will fail resulting in adverse glint and glare impacts on rail and road safety.
- Solar panels by their nature are designed to absorb rather than reflect light for the purposes of capturing solar energy and converting it to electricity.
- The modelling conducted for the Glint and Glare report does not account for climate and inherent weather patterns that occur. As such they represent a worst case scenario.
- A precautionary approach was taken in the design with a decision to omit arrays from the highest part of the site.
- From the detailed visibility and glare scenario testing it was confirmed that any potential for impacts could be directly mitigated by design with the following measures taken:
 - Omission of panels on the most elevated part of the site and a focused section north of the River Bracken.
 - Glare scenarios were conducted to establish the height and location of required landscape screening to eliminate small pockets of residual glare on the railway line and M11. It confirmed that any potential for residual glare could be removed in full by means of 4 and 6 metre high screening at targeted locations.
- The screening is an integral component of the design. It is proposed to use advanced nursery stock, planted at commencement of construction. This advanced nursely stock will achieve the required 4-6 metre height before solar

panels are installed at week 58. Thus, the landscape mitigation to eliminate residual glare will be established before the 1st solar panel is installed.

- In the unlikely event that landscaping does not mature at the expected rate the horticultural wind stop netting to be fitted along the perimeter fence at the time of planting during construction phase can be used as a temporary measure at key locations to mitigate any residual glint and glare effects to road and rail until the landscaping is fully established.
- All proposed landscape mitigation is within the red line boundary. There is no reliance on planting outside the site.
- Appropriate monitoring and maintenance contingency safeguards will be put in place. These measures can be secured by way of appropriate planning conditions.
- Precedent has been set where landscaping can provide screening.

6.1.2. Reason for Refusal No.2 – Tilt of Panels

- The modelling for the glint and glare report has been undertaken at a panel tilt angle of 15 degrees. This is an industry benchmark for solar panel design in Ireland and is optimal for the site having regard to latitude, orientation and solar absorption.
- The inclusion of additional options 'up to 30 degrees' was a contingency measure to allow for a small number of possible localised instances where changes in the tilt angle may be required due to topographical or other technical considerations.
- The applicant can confirm that the panel tile will be set at 15 degrees as per drawing no.SD-1016.

6.1.3. Other Issues

In terms of the other matters raised in the Executive Planner's report but not accepted by the Senior Planner:

- The site is within an area designated as lowlands landscape which has capacity to absorb development without causing significant visual intrusion.

The Landscape and Visual Impact Assessment confirms that the proposal will not give rise to significant residual impacts.

- The proposal will not injure the rural amenity of the area.
- There is no effluent treatment proposed as part of the development.

6.2. Planning Authority Response

None received.

6.3. Observations

1. Barbara Kelly
2. Adrian Curley
3. Daniel Chagas
4. Patricia Kavanagh

The submissions can be summarised as follows:

- Negative visual impact
- Negative impact on amenities of residential property including structural damage
- Glint and glare
- Noise
- Deterioration in local road serving the lands
- Impact on health during construction and operational phases
- Adequacy of public notices and public consultation

5. Iarnrod Eireann

The submission can be summarised as follows:

- The Board is advised of its observations made at planning application stage.

- Landscaping adjacent to the railway should be non-deciduous species to ensure no additional risk to the railway. It should be positioned such that the applicant can maintain it from their property whilst providing adequate screening.
- The proposed horticultural wind stop netting proposed as a mitigation measure should the landscaping fail is not acceptable as a short term measure. A temporary fence should be installed to provide screening.

7.0 Section 131 Notice

In view of the proximity of the site to the M11, Transport Infrastructure Ireland was invited to make a submission on the appeal. The submission can be summarised as follows:

- Matters relating to screening and mitigation to avoid glint and glare impacts to the M11 should be addressed fully prior to a determination on the planning application and appeal. Resolution of such matters is requested in the interests of safeguarding the strategic function, safety and operation of the M11 and to safeguard the significant Exchequer investment in the road scheme.
- The observations set out in its submission to Wexford County Council dated 06/11/19 remains the position of the Authority (copy attached).

8.0 Assessment

I consider that the issues arising in the case can be assessed under the following headings:

- Overview
- Policy Considerations
- Glint and Glare – Road and Rail
- Residential Amenity
- Visual Impact

- Access and Traffic
- Other Issues
- Appropriate Assessment

8.1. Overview

- 8.1.1. As discussed previously the proposed solar farm is to be served by a substation and grid connection which is the subject of a concurrent Strategic Infrastructure Development application to the Board under ref. ABP 305803-19.
- 8.1.2. I submit that the development of the solar farm and the substation infrastructure are linked and cannot be determined in isolation. Accordingly, the SID application for the substation is being considered concurrently with this appeal as there is no justification provided to develop the substation other than to connect the solar farm to the electricity transmission network.
- 8.1.3. The potential impacts of the overall development, namely the solar farm and substation were included as part of the Planning & Environmental Report and Appropriate Assessment Screening prepared for this application. I am satisfied that the Board has the necessary information before it to allow for a cumulative assessment of impacts for the overall development.
- 8.1.4. It is noted that some of the issues raised in the observations received focus on the proposed substation and grid connection. While both developments are interlinked and should not be determined in isolation it remains that for the purposes of assessment, each scheme is considered on its own merits and, where appropriate, is considered cumulatively or in combination. Therefore, the commentary pertaining to substation and grid connection are dealt with in the SID application.
- 8.1.5. The northern and southern sections of the arrays are proposed to be linked by means of an underground AC cable trench. The underground cable will run along the local road for a distance of c.400 metres. This connection does not form part of this application.

8.2. Policy Considerations

- 8.2.1. The proposed development is supported by national, regional and local policies in terms of renewable energy. Objective 55 of the National Planning Framework seeks to promote renewable energy and generation at appropriate locations within the built

and natural environment, whilst paragraph 130 of 'Transition to a Low Carbon Energy Future 2015-2030 - White Paper on Energy Policy' recognises that solar energy will become more cost effective as technology matures and that it will be an integral part of the mix of renewables going forward. Consequent to same, the Climate Action Plan 2019 stresses the importance of the decarbonisation of electricity consumed by harnessing the significant renewable energy resources available. To meet the required level of emissions reduction by 2030 it is required to increase electricity generated from renewable sources to 70% with solar energy comprising of up to 1.5 GW (indicative figure).

- 8.2.2. At a regional level it is an objective of the Regional Spatial and Economic Strategy for the Southern Region to increase the use of renewable energy sources across the key sectors of electricity supply, heating, transport and agriculture. At a local level, whilst there is support for solar energy production as a renewable resource, due to the emerging nature of the technology at the time of the plan preparation specific objectives with respect to same or identification of areas considered suitable/unsuitable for solar farms were not included. Therefore, in the absence of a 'plan-led' approach, applications are to be considered on their individual merits and subject to normal planning considerations.

8.3. Glint and Glare – Road and Rail

- 8.3.1. The potential for glint and glare on both the M11 and the Dublin-Rosslare railway line constitutes the substantive issue in terms of the planning authority's notification of decision to refuse permission.
- 8.3.2. The M11 forms the south-eastern boundary of the northern most parcel (parcel 1) for a distance of c.310 metres with fencing, only, delineating the boundary. There is a lay-by immediately to the south of the site boundary which is currently not accessible. The nearest arrays are setback 16.64 metres from the boundary with the road. The rail line forms the northern boundary of the northern most parcel with the nearest arrays being 14.5 metres from the said boundary (north-eastern corner).
- 8.3.3. A Glint and Glare Assessment accompanies the application. In addition to addressing roads (both national and local) and the railway it also assesses the impact on the residential properties and on aviation. I propose to address the issue in terms of residential amenity in section 7.3 below.

- 8.3.4. In response to the planning authority's 2nd reason for refusal the agent for the applicant has confirmed that the modelling for the glint and glare report has been undertaken at a panel tilt angle of 15 degrees. This is an industry benchmark for solar panel design in Ireland and is optimal for the site having regard to latitude, orientation and solar absorption. The inclusion of additional options 'up to 30 degrees' was a contingency measure to allow for a small number of possible localised instances where changes in the tilt angle may be required due to topographical or other technical considerations. However, the agent for the applicant has clarified that the panel tiles will be set at 15 degrees as per drawing no.SD-1016. I also note that the panels are to be oriented in a south facing direction to maximise solar gain and will be in fixed position. They are to have a maximum height of 2.8 metres above the terrain.
- 8.3.5. At the outset it is noted that the solar panels are designed to absorb sunlight and not to reflect it. Whilst it is acknowledged that similar levels of reflectance can be found in rural environments from surfaces such as shed roofs, plastic ground covering and wet roads, the current proposal entails a new development covering an extensive area and is not directly comparable to the examples cited.
- 8.3.6. At the outset I note that there are no specific guidance or standards for the assessment of glint and glare effects on residential or transport routes (road and rail). The approach taken is comparable to that adopted in solar farm developments to date namely:
- 1) the identification of relevant receptors,
 - 2) analysis based on DTM 3-D model to identify the times of the day and months of the year that glint and glare could potentially affect receptors. This provides a 'bare ground' scenario (which does not consider screening from terrain or hedgerows),
 - 3) analysis using DSM (digital surface model) that accounts for the existing screening inherent on and surrounding the site,
 - 4) analysis using DSM that accounts for both existing screening and proposed landscape mitigation planting.
- 8.3.7. It is accepted that there are limitations with the DSM data in that it is a snapshot of the screening situation at the time of the data capture where seasonal variation

through growth and/or cutting may result in minor changes to hedgerow screening. A further limitation is due to the aerial overhead nature of the data capture. If considered to be significantly unreliable then further verification including on site verification is undertaken. The corollary is that the results assume that the sun is always shining and at full intensity with no account taken of climate and inherent weather patterns.

M11 Motorway

- 8.3.8. I note that Transport Infrastructure Ireland in its submission to the Board defers to its submission to the planning authority during the assessment of the application. It requires effective screening and mitigation be identified and provided for in any approved scheme to avoid glint and glare on the M11 and that such mitigation be included in any decision to grant permission. A monitoring programme should be identified which would allow for additional mitigation, if necessary, and amendment/removal of any elements of the solar farm that result in glint/glare and impact on road safety.
- 8.3.9. In terms of the receiving environment of the M11, at the outset I note that no assumptions are made with respect to a driver's field of vision or the duration which a driver may experience reflectance. A total of 52 receptor points (50 metre intervals) were examined. The study identified that glint and glare is theoretically possible at 27 of the receptor points. As extrapolated from Figure 8 and Table 2 of the assessment save for one point (R141) the points of theoretical possibility are from the panels in the northern parcel (parcel 1) only. Consequent to taking into consideration existing intervening screening using the DSM digital surface model 17 receptor points where potential for glint and glare in the absence of mitigation measures remained.
- 8.3.10. The mitigation measures proposed include the omission of panels from the most elevated portions of the site, notably the section in the north-west and north of the River Bracken in parcel 1. Further analysis was carried out which concluded that residual glare could be eliminated with landscaping. It provides for augmentation of 6,697 metres of existing hedgerow and c.1,555 metres of newly planted hedgerow. This will incorporate the utilisation of a combination of whips and advanced nursery stock planted at commencement of construction. The advanced nursery stock in the

form of Alder at 10-12cm girth will be planted during week 1 of construction which will achieve the required 4-6 metre height before the solar panels are due to be installed from week 58. Such stock thereby avails of two full growing seasons to reach the desired heights in the focused areas. The aim is to provide for dense and consistent screening of the site. The depth of planting along the roadside boundary is to be in the region of 5.46 metres. As per the Landscape and Visual Statement that accompanies the appeal 15% of the planting is to consist of evergreen holly which, when coupled with the triple staggered rows of proposed hedgerow planting would address concerns in terms of seasonality of screening.

- 8.3.11. I would accept that this approach aims to eliminate any residual glare before the solar panels are installed. Photomontages 8, 9 and 10 are relevant in this regard. In addition, during the construction period horticultural wind-stop netting is to be used along the perimeter fence at the time of planting. In the event that the planting does not mature at the expected rate the netting is to be retained as a temporary measure at key locations to mitigate any residual effects until the landscape is fully established. I note that the proposed landscaping measures are within the site boundary with no reliance placed on landscaping required outside same. An Outline Hedgerow Planting, Monitoring and Maintenance Schedule accompanies the grounds of appeal with focussed monitoring and maintenance measures proposed.
- 8.3.12. On balance, I consider that sufficient evidence has been provided to substantiate the conclusions that subject to suitable mitigation the proposed development would not give rise to glint and glare on the M11 and, therefore, would not endanger public safety by reason of traffic hazard. A condition requiring appropriate landscape management and maintenance is recommended should permission be granted.

Local Road Network

- 8.3.13. In terms of the local road network 137 receptor points were assessed in a similar manner to the points along the M11. Glint and glare are theoretically possible at 83 points. Further analysis, taking account of existing screening using a digital surface model which was supplemented with on site verification concluded that two points along local road L5092 which passes between the two parcels, only, have glint glare if no mitigation measures were implemented. The measures as proposed are

comparable to those as detailed for the M11 and entail planting of advanced nursery stock at the commencement of construction.

- 8.3.14. On the basis of the detail provided, coupled with the fact that the road is not well trafficked with vehicular speeds relatively low due to its relative narrowness and alignment, it is not considered that the proposal would give rise to concerns in terms of traffic hazard arising from glint and glare.

Railway Line

- 8.3.15. The Dublin-Rosslare railway line is located to the immediate north of Parcel 1. Save for the section in the vicinity of the overhead power line the boundary is delineated by a hedgerow with mature trees. A setback is to be maintained from the overhead line with no panels proposed on the section of the site to the west of same.
- 8.3.16. The proposed panels are to be orientated to the south, away from the rail line. Of the total of 51 receptor points examined glint and glare is theoretically possible at 31. Following the allowance for existing screening and on-site verification 9 points for a maximum of 10 minutes per day over 27 days have the potential for glint and glare without mitigation. When proposed planting is considered the potential for any glare is entirely negated.
- 8.3.17. Iarnrod Eireann in an observation on the appeal requests that landscaping adjacent to the railway should be of non-deciduous species to ensure no additional risk to the railway line and that it should be positioned such that the applicant can maintain it from its property whilst providing adequate screening. I consider that this can be adequately addressed by way of condition. As per the landscaping plan a hedgerow four metres in height is proposed along the northern boundary where none exists with the existing hedgerow along the remainder to be augmented with native whip planting and advanced nursery stock and maintained at a height of 3-4 metres. I also note that the proposed triple staggered hedgerow along the bank of the River Bracken to the south of the rail line would also provide for screening.
- 8.3.18. Iarnrod Eireann considers the use of wind stop netting should the advanced nurseery growth not meet the anticipated growth to be unacceptable, and recommends a temporary fence be installed. I have no objection to the substitution as requested and consider that this can be addressed by way of condition.

8.4. Residential Amenity

- 8.4.1. The site is located within a rural area characterised by sporadic one off housing along the local road network. The nearest properties are those to the north c. 146 metres from parcel 1. The railway line runs in between. A separation distance of approx. 160 metres is to be retained between the dwellings to the south-west of the northern parcel and the nearest arrays. The nearest dwelling to the arrays in the southern parcel is approx. 210 metres to the north-east of same accessed along the local road.

Glint and Glare

- 8.4.2. In terms of residential receptors, a total of 52 properties were examined. Using terrain only data glint and glare is geometrically possible at 40. Taking into account existing screening this is reduced to 1 (H19) located along local road L5092 between the north and south parcels and is c.500 metres to the west of the northern parcel. The DSM based analysis results indicate there is not potential for reflectance to occur at the ground floor of this dwelling and that maximum number of days with the potential for reflectance to occur at the first floor would be 16. Following mitigation this would be reduced to 20 minutes per annum.

Overall, I accept the findings of the report that no significant nuisance is predicted from glint and glare.

Noise

- 8.4.3. The panels in themselves would not generate noise. The main noise sources would be from the transformer/invertors which will be within containers and are located at a remove from the nearest dwellings. The nearest is c.278 metres from the nearest dwelling to the north of Parcel 1. The transformers are identified as noise generating with typical acoustic volumes of 58dBA whilst inverters typically produce volumes of 33dBA. Taking into consideration the proposed insulated building conditions the actual audible noise levels will be materially below these and will be imperceptible with distance. In addition, I note that noise would only be generated during daylight hours and consequently there will be no noise emissions at night. Having regard to the low level of noise that will be generated, the separation distance to dwellings and the daytime operation of the solar farm when other noise

sources such as traffic and farm machinery will contribute to the noise environment, I consider that impacts would be negligible and insignificant.

8.4.4. A number of observers raise concerns regarding noise arising from the substation. Whilst this does not form part of this application for the interests of completeness I note it is to be located c. 310 metres from the nearest dwelling to the south of Parcel 1 which is significantly above the 5 metre minimum distance recommended by Eirgrid to the land boundary of any noise sensitive receptor. In combination with the noise to be generated by the transformers/invertors, I consider that impacts would be negligible and insignificant.

8.4.5. As the site will be largely unmanned save for occasional inspections/maintenance vehicular movements during the operational phase will be minimal and will have no impact.

Construction

8.4.6. It is estimated that the construction period would be in the region of 75 weeks. Each parcel is to be served by a construction compound. The construction hours are proposed between 0800 and 1800 Monday to Friday and 0800 and 1600 Saturday. It is noted that following public consultation a temporary noise-limiting construction hoarding, in addition to the proposed planting, is to be erected along the south-western boundary of parcel 1.

8.4.7. It is inevitable that potential negative impacts to the local population may occur during the construction period particularly in terms of noise and traffic. However, these impacts will be temporary. A condition requiring the preparation of a construction management plan can be attached should the Board be disposed to a favourable decision.

8.4.8. In terms of structural stability of adjoining properties I note that the ground works for the panels are non-intrusive in nature with the preferred method being screw or rammed piles to a depth of up to 2 metres causing minimal ground disturbance and occupying less than 1% of the land area.

8.4.9. A number of observers have raised the issues that arose during the construction of the M11 in terms of noise and vibration, however this is not a matter for comment by the Board at this juncture.

Privacy

8.4.10. The solar arrays in themselves would not give rise to loss of privacy. On completion of the construction works the site would be intermittently visited for maintenance purposes etc. Such visits would not give rise to concerns in this regard. The site is proposed to be surrounded by security fencing and a number of CCTV cameras are proposed. A condition requiring the cameras to be fixed in place facing into the site should be attached, which will address any concerns in this regard. There are no formal lighting requirements for the development save those required for the substation to meet Eirgrid requirements.

Health and Safety

8.4.11. Issues in terms of health and safety as raised in the observations reference the substation and transmission line which is not the subject of this application. The issues arising from the construction phase have been addressed.

8.5. Visual Impact

8.5.1. The subject site covers an area of just under 100 hectares in two parcels within an undulating landscape, largely in agricultural use, with the highest points being the north/north-western section of parcel 1 and the western section of parcel 2. As per the current County Development the site is within a landscape designated as lowland and not considered to be of particular sensitivity. It is considered to have a higher capacity to absorb development without causing significant visual intrusion. In addition, there are no listed views or prospects in the vicinity.

8.5.2. I would advise the Board that the photomontages that accompany this application omitted the proposed end-mast structures for the grid connection which form part of the concurrent SID application. This has been rectified in the photomontages that accompany the SID application and, therefore, provide a visual representation of the overall development. In addition, whilst reference is made to a prepared Landscape and Visual Impact Assessment (LVIA) in the Planning and Environmental Statement accompanying the application no such document is on file. I would bring to the Board's attention that the LVIA that accompanies the application for the substation provides an assessment of the development as a whole (solar farm and substation). On this basis I do not consider that the absence of the LVIA on this file to be a material defect.

- 8.5.3. I submit that the photomontages are a useful tool to assist in the assessment and, save for the omission end masts referred to above, I consider that that they have been presented in a reasonable and competent manner. Because it is proposed that mitigation screen planting will take place up to two growing seasons ahead of panel placement the visual impact assessment does not include an appraisal of 'pre-mitigation impacts' on the basis that they will not occur as it is intended that the planting will have become established prior to the panel installation. The assessment therefore only relates to post-mitigation 'residual impacts'.
- 8.5.4. Whilst the development will be visible from the immediate surrounds the relatively level nature of the topography and existing field boundaries which are to be augmented provide a level of screening precluding open unrestricted views either in the immediate environs or from further distances. Any views would be intermittent. I submit that the setting, which is a working rural landscape would, following mitigation, have a low visual impact. The Board will note the intention of the applicant to retain, the existing hedgerows within and abounding the site save for 8 metres as well as proposals to reinforce the existing site boundaries with further planting
- 8.5.5. Whilst there is no doubt that the proposed development would change the local landscape from a visual perspective, in my view the established landscape is capable of absorbing change. Having regard to the mitigation measures proposed I am satisfied that the proposed development would not adversely impact on the landscape and visual amenities of the area including those from adjoining properties.

8.6. Access and Traffic

- 8.6.1. The application is accompanied by an Outline Construction and Environmental Management Plan and Site Access Study which includes a Swept Path Analysis.
- 8.6.2. Access to the 2 parcels is proposed via existing agricultural/domestic accesses from local road L5092. The 80kph speed limit applies with vehicular movements noted to be light on day of inspection. The necessary 70 metre sightlines are available at both entrances and improvement works are not considered necessary.
- 8.6.3. The construction period is estimated to be 75 weeks in duration with the volume of vehicular movements varying across the different construction phases with a peak flow of 31 vehicles per day anticipated, largely corresponding with site preparation and enabling works and when the panels are being installed. Standard HGV loads

are expected save for one abnormal delivery load which will be needed to transport the substation transformer to the site.

- 8.6.4. The said Construction and Management Plan sets out details in terms of delivery routes and management measures in terms of vehicular movements. The said delivery route is illustrated in Figure 6.
- 8.6.5. Whilst the additional traffic and management measures will inconvenience local road users and residents of dwellings in the vicinity the impacts are considered acceptable having regard to the limited duration of the works.
- 8.6.6. The operational phase of the solar farm would generate limited vehicular movements by maintenance staff on an ad-hoc basis. I do not consider that the additional movements would give rise to a material concern.
- 8.6.7. The Observers in their submissions refer to issues in terms of the level of vehicular movements along the local roads during the M11 construction. However, this is not before the Board for comment.
- 8.6.8. As per the site access study report it is recommended that the pavement condition along the portion of the L5092 on the proposed access route for the site be surveyed pre and post works, thereby allowing for appropriate restoration works to be identified and implemented at the conclusion of the project. I consider this to be a reasonable approach and recommend a condition to this effect in the interests of clarity.

8.7. **Other Issues**

Ecology

- 8.7.1. The site is characterised by habitat and species normally associated with managed agricultural land.
- 8.7.2. A 10 metre buffer to the Bracken River and 5 metre buffer to all open drains within the site are proposed.
- 8.7.3. A number of active badger setts were recorded in the scrub habitat in the north west of the northern most site parcel (parcel 1) just south of the Bracken River. As a consequence, the layout has been designed so as to incorporate a buffer of 50 metres from the outlier sett entrance in accordance with established guidelines.

Access will be maintained through a 200mm high void at the base of the perimeter fence.

- 8.7.4. There are no suitable bat roosting structures on the site. While there are several mature trees that have the potential to provide occasional roosting opportunities for bats no potential bat roost features were recorded on any trees within the site boundary. The hedgerows and treelines offer suitable foraging and commuting habitat for bats however agricultural fields are considered to be of low suitability. Bat activity was confirmed to occur on the site during the passive bat detector survey which is acknowledged was undertaken at a suboptimal time for surveying bats (February, 2019). Notwithstanding, in view of the nocturnal nature of the species and the fact that save for a very short stretch of hedgerow (8 metres) and two trees to be removed to facilitate the development, the existing hedgerow and treelines will remain and thus the foraging and commuting habitat will remain in situ and will be augmented by further planting.

Cultural Heritage

- 8.7.5. An Architectural and Cultural Heritage Impact Assessment has been prepared. 2 recorded monuments are located within the site. CH011 and CH017 are located in Parcel 1 and encompass a ring ditch and enclosure respectively. Whilst it is stated that buffers of 20 metres have been provided around these sites, I note that the field in which the monuments are located is omitted in terms of installation of arrays. The nearest development will be the steel lattice masts proposed as part of the grid connection which is subject of the concurrent SID application.
- 8.7.6. Archaeological monitoring during the construction phase of the overall development is proposed.

Site Drainage

- 8.7.7. A Flood Risk Assessment is included in the Hydrological Appraisal report which accompanies the application. The potential flood risks associated with both land parcels are (a) fluvial flooding along the banks of the River Bracken and (b) pluvial flooding due to temporary ponding of surface water. The lands in the immediate vicinity of the river in the northern land parcel formed part of the Owenavorrhagh Arterial Drainage Scheme. The OPW is responsible for carrying out maintenance on this river stretch to reduce or eliminate flood risk and improve channel conveyance.

Channel deepening in the southern parcel was undertaken by the landowner. The potential for flood risk from fluvial and pluvial sources has been alleviated by this and field drainage. There is, therefore, no issue with respect to flood risk on this site.

8.7.8. The new access tracks proposed within the site will cross watercourses at two locations (one in each of the land parcels) via dry construction agricultural bridges which do not require any works in the stream channel itself.

8.7.9. There will be no stockpiling of soil within 50 metres of the watercourse.

Public Participation

8.7.10. Whilst a number of residents express concern as to the level of public consultation in relation to the project I note that there is no legal imperative for the applicant to engage in discussions prior to lodgement of an application.

8.8. Appropriate Assessment

8.8.1. The application is accompanied by an Ecological Impact Assessment which contains an Appropriate Assessment Screening Report in Appendix A

Project Description and Site Characteristics

8.8.2. The site is as described in section 1 above with the project description summarised in section 2.

Natura 2000 Sites, Qualifying Interests and Conservation Objectives

1. Slaney River Valley SAC (site code 00781) is c.1.2km to the west. The qualifying interests comprise a mix of fresh and salt water habitats and species
2. Cahore Marshes SPA (site code 004143) is c. 12.6km to the south-east. The qualifying interests comprise a mix of wintering birds
3. Cahore Polders and Dunes SAC (site code 00700) is 12.6km to the south-east. The qualifying interests comprise dune habitats.

8.8.3. Detailed conservation objectives have been drawn up for the SACs with generic objectives pertaining to the SPA. The overall aim is to maintain or restore the favourable conservation status of the qualifying interests.

Assessment of Likely Effects

- 8.8.4. The site is not within or adjacent to any designated site. Therefore, no direct impacts would arise.
- 8.8.5. Slaney River Valley SAC is located in a separate river catchment to the River Bracken which flows through the site. The Bracken River is a tributary of the Owenovarragh River which discharges to the sea north of Courtown c. 12km downstream of the proposed development (when measured along the watercourses). Otter is a qualifying interest and there is the potential for it to travel between the two watercourses. No signs of Otter were recorded, and the River Bracken is not considered suitable for breeding Otter. In view of the absence of any hydrologic connection between the sites there is no potential for the designated site to be indirectly affected by the proposed development
- 8.8.6. In view of the intervening distance between the site and Cahore Marshes SPA and Cahore Polders and Dunes SAC, the absence of hydrologic connection and the qualifying interests of both sites, there is no potential for the designated sites to be indirectly affected by the proposed development.
- 8.8.7. In terms of cumulative effects, I have regard to the concurrent application under ref. ABP 305803-19 for a substation and grid connection which are located within parcel 1 and which will service the overall development.

Screening Statement and Conclusions

- 8.8.8. It is reasonable to conclude that on the basis of the information on file, which I consider adequate in order to issue a screening determination, that the proposed development, individually or in combination with other plans or projects, would not be likely to have a significant effect European sites nos.00781, 004143 and 00700 in view of the sites' conservation objectives and a Stage 2 Appropriate Assessment (and submission of a NIS) is not therefore required.
- 8.8.9. In reaching this conclusion, I took no account of mitigation measures intended to avoid or reduce the potentially harmful effects of the project on any European Sites.

9.0 Recommendation

In view of the foregoing I recommend that permission for the above described development be granted for the following reasons and considerations subject to conditions.

10.0 Reasons and Considerations

Having regard to

- the provisions of national and regional policy objectives in relation to renewable energy,
- the provisions of the Wexford County Development Plan 2013,
- the nature and scale of the proposed development,

it is considered that, subject to compliance with the conditions set out below, the proposal would support national and regional renewable energy policy objectives, would not conflict with the provisions of the Development Plan, would not seriously injure the residential amenities of property in the vicinity, would not have unacceptable impacts on the visual amenities of the area, would not result in a serious risk of pollution, would be acceptable in terms of traffic and rail safety and convenience, and would, therefore, be in accordance with the proper planning and sustainable development of the area.

11.0 Conditions

1. The development shall be carried out and completed in accordance with the plans and particulars lodged with the application, and by the further particulars received by the Board on the 3rd day of December, 2019 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 the 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. All of the environmental, construction and ecological mitigation measures, as set out in the Planning and Environmental Report and other particulars submitted with the application, shall be implemented by the developer in conjunction with the timelines set out therein, except as may otherwise be required in order to comply with the conditions of this Order.

Reason: In the interests of clarity and of the protection of the environment during the construction and operational phases of the development.

4.
 - (a) This permission shall be for a period of 25 years from the date of the commissioning of the solar array. The solar array and related ancillary structures shall then be removed unless, prior to the end of the period, planning permission shall have been granted for their retention for a further period.
 - (b) Prior to commencement of development, a detailed restoration plan, including a timescale for its implementation, providing for the removal of the solar arrays, including all foundations, anchors, inverter/transformer stations, substation, CCTV cameras, fencing and site access to a specific timescale, shall be submitted to, and agreed in writing with, the planning authority.
 - (c) 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/anchors, and all associated equipment,

shall be dismantled and removed permanently from the site. The site shall be restored in accordance with this plan and all decommissioned structures shall be removed within three months of decommissioning.

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

5. The developer shall facilitate the archaeological monitoring of the site and shall provide for the preservation, recording and protection of archaeological materials or features which may exist within the site. In this regard, the developer shall:
 - (a) notify the planning authority in writing at least four weeks prior to the commencement of any site operation (including hydrological and geotechnical investigations) relating to the proposed development, and
 - (b) employ a suitably-qualified archaeologist prior to the commencement of development. The archaeologist shall assess the site and monitor all site development works.

The assessment shall address the following issues:

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

A report, containing the results of the assessment, shall be submitted to the planning authority and, arising from this assessment, the developer shall agree in writing with the planning authority details regarding any further archaeological requirements (including, if necessary, archaeological excavation) prior to commencement of construction works. In default of

agreement on any of these requirements, the matter shall be referred to An Bord Pleanála for determination.

Reason: In order to conserve the archaeological heritage of the area and to secure the preservation (in-situ or by record) and protection of any archaeological remains that may exist within the site.

6. Buffer zones shall be established around –

(a) Recorded Monument I.D. WX0110040002 – Ring Ditch, and

(b) Recorded Monument I.D. WX011-040001 - Enclosure

as set out in the Archaeological, Architectural and Cultural Heritage Impact Assessment report received by the planning authority on the 13th day of September, 2019.

The buffer zones shall be delimited using appropriate temporary boundary fencing and signage until the solar panels are installed. No construction works, stockpiling of topsoil, or any development, landscaping and/or planting shall take place within the designated buffer zones.

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

7. (a) All existing hedgerows (except at access track openings) shall be retained notwithstanding any exemptions available and new planting undertaken in accordance with the plans submitted to the planning authority with the application on the 13th day of September 2019 and the details and particulars submitted to An Bord Pleanála on the 3rd day of December, 2019.

(b) A revised landscaping plan with amended planting proposals alongside the railway line that bounds parcel no.1 to the north shall be submitted to the planning authority for written agreement prior to commencement of development. The planting shall comprise of native evergreen plant and tree species.

(c) Wind stop netting shall not be used along the northern boundary with the railway line. Details of temporary fencing to be erected along the boundary during the construction phase and which shall be retained in situ until the landscaping is fully established shall be submitted to the planning authority for written agreement prior to commencement of development.

(d) All landscaping shall be planted to the written satisfaction of the planning authority prior to commencement of development. Any trees or hedgerow that are removed, die or become seriously damaged or diseased during the operative period of the solar farm as set out by this permission, shall be replaced within the next planting season by trees or hedging of similar size and species, unless otherwise agreed in writing with the planning authority

Reason: In the interests of biodiversity, the visual amenities of the area, and the residential amenities of property in the vicinity.

8. (a) No artificial lighting shall be installed or operated on site unless authorised by a prior grant of planning permission.
- (b) CCTV cameras shall be fixed and angled to face into the site and shall not be directed towards adjoining property or the road.
- (c) Cables within the site shall be located underground.
- (d) The inverter/transformer stations shall be dark green in colour.

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

9. 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 but not limited to, hours of working, noise and dust management measures, surface water management

proposals, the management of construction traffic, and the off-site disposal of construction waste.

Reason: In the interests of public safety, residential amenity and protection of the environment.

10. Drainage arrangements, including the attenuation and disposal of surface water, shall comply with the requirements of the planning authority for such works and services. Surface water from the site shall not be permitted to drain onto the adjoining public road or adjoining properties.

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

11. All road surfaces, culverts, watercourses, verges and public lands shall be protected during construction and, in the case of any damage occurring, shall be reinstated to the satisfaction of the planning authority. Prior to commencement of development, a road condition survey on the section of local road L-5092 which forms part of the identified access route for the site shall be taken to provide a basis for reinstatement works. Details in this regard shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development.

Reason: In order to ensure a satisfactory standard of development.

12. 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 on 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.

13. The developer shall pay to the planning authority a financial contribution in respect of public infrastructure and facilities benefiting development in the area of the planning authority that is provided or Intended to be provided by or on behalf of the authority in accordance with the terms of the Development Contribution Scheme made under section 48 of the Planning and Development Act 2000, as amended. The contribution shall be paid prior to commencement of development or in such phased payments as the planning authority may facilitate and shall be subject to any applicable indexation provisions of the Scheme at the time of payment. Details of the application of the terms of the Scheme shall be agreed between the planning authority and the developer or, in default of such agreement, the matter shall be referred to An Bord Pleanála to determine the proper application of the terms of the Scheme.

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

Pauline Fitzpatrick
Senior Planning Inspector

June, 2020