



An
Bord
Pleanála

Inspector's Report PL92.248089.

Development

Planning permission for a solar photovoltaic installation comprising of up to 36,500 m² of solar panels on ground mounted frames, 6 no inverters housed in 3 units, 1 no 20kV. Substation, security fencing, new entrance onto public road, CCTV, underground cable & ducts including cable and ducts along the public road to the entrance of the existing Deerpark substation and all associated ancillary development works and services. A Natura Impact Statement (NIS) accompanies the application. Planning Permission is sought for a period of 10 years.

Location

Towlands of Ballynagrana & Deerparklodge, Carrick on Suir, County Tipperary.

Planning Authority

Tipperary County Council.

Planning Authority Reg. Ref.

16/600640.

Applicant(s)

Solar Sense SPV 1 Ltd.

Type of Application

Permission.

Planning Authority Decision

Grant Permission subject to conditions

Type of Appeals

Third Party

Appellants

Brigid Dalton
Ed Hogan & Maria Meaney

Date of Site Inspection

16th June 2017.

Inspector

Bríd Maxwell.

1.0 Site Location and Description

- 1.1. The appeal site which has a stated area of 13.44 hectares is located within a rural setting within the townland of Ballynagrana approximately 600m to the northwest of Carrick on Suir Town in County Tipperary. The main body of the site is irregular in shape and is located within three agricultural field patterns. The site also incorporates a section of the R696 roadway extending to Deerpark Substation c403m to the south east of the main body of the appeal site.
- 1.2. The site is undulating in character and is accessed from the south via the Regional Road R696. Field boundaries are defined by trees and hedgerows. There are two ponds within the site and one just outside the southern site boundary (dry on the date of my site visit). There is a woodland area along the eastern boundary of the site sloping down to riparian habitat of the Glen River a tributary of the river Suir which runs outside the site parallel to part of the sites north eastern boundary.
- 1.3. The location of the site is within predominantly pastoral farmland characterised by medium sized fields within a network of low clipped hedgerows and taller tree lined hedgerows. There are a number of farmsteads in the local area with sporadic residential development with a notable cluster a short distance away on the opposite side of the glen River in Ballyrichard. The Glen River to the east of the site has some semi-natural riparian woodland within its incised corridor.

2.0 Proposed Development

- 2.1. The proposal seeks planning permission for a solar photovoltaic installation comprising of up to 36,500 m² of solar panels on ground mounted frames, 6 no inverters housed in 3 units, 1 no 20kV substation, security fencing, new entrance onto public road, CCTV, underground cable and ducts including along the public road to the entrance of the existing Deerpark substation and all associated ancillary development works and services. The proposal represents a maximum installed capacity of 5.74MW.
- 2.2. A Natura Impact Statement (NIS) accompanies the application. Planning Permission is sought for a period of 10 years on the basis that the proposed development is dependent on achieving a suitable connection to the grid network. The application

seeks permission for operational period of 30 years from commissioning of the solar farm.

- 2.3 The total land take requirement for the solar farm is approximately 13.44 hectares including infrastructure spacing between solar arrays, access tracks cable and cable trench and land required temporarily for construction compound. The physical footprint of the PV Arrays and other associated infrastructure such as switchgear / substation, inverters and cabling is approximately 4.2 hectares. Permission is sought for the optimal export capacity at the site approximating to 5.74mW representing an annual electricity output of 5,158MWh (a calculation based on solar irradiation levels for southern Ireland utilising PV Sol proprietary software). For environmental assessment purposes an alternative design / layout is also addressed for which there is a larger spacing between the arrays and one less inverter. Such a scheme would approximate to 5.2MW. The purpose of assessing two different capacity options results from uncertainty over the permissible capacity and associated costs of new distributed energy to the local electricity distribution network.
- 2.4 The maximum scale solar farm will be made up of nearly 21,700 solar panels. Individual PV panels will be arranged in module units typically made up of around 3 x 24 panels one above another in a landscape orientation on a mounting structure comprising a metal frame anchored to the ground using piles therefore no requirement for concrete foundations. Multiple module units will be connected to form rows or arrays. Each row would be elevated above ground on the mounting frame with the bottom (southern) edge at a height of 1m above ground level and the top (northern) edge at a height of 2.72m. The module units would be orientated south and are expected to have an inclination angle of 15 degrees in order to optimise the installed capacity within the available site area.
- 2.5 Grid connection is at the existing 38/10kV Deerpark substation via an underground medium voltage cable. The cable route forms part of the application and it is outlined that a grid connection application has been made. On site cabling is proposed at a depth of no greater than 1.0m. A new site entrance is proposed onto the R696 with a new track will be constructed to give access to the construction compound, the site substation and principal fields in which the arrays are sited. The temporary

construction compound will be required for the construction phase in the southwestern corner of the site. The compound will provide materials and plant storage and welfare facilities during the construction phase. The site will be securely fenced (2m high metal post and wire mesh) and monitored with motion activated infra-red security cameras. Gaps will be provided to allow mammals and birds to traverse.

2.6 It is intended that the areas under and around the PV arrays will remain as grassland with some limited grazing. Biodiversity enhancements are proposed including fencing around ponds, planting of rough grassland meadow to east of substation, creation of rough grassland meadow around the margins of the panels and between panels, cessation of the trimming of hedgerows to allow the hedgerow to regenerate, native species planting to gaps in hedgerows, installation of insect hotels, bat boxes and bird boxes. On decommissioning it is proposed that piles, mounting structures and all above ground elements will be removed and the site reinstated to allow its return to agricultural use.

3.0 **Planning Authority Decision**

3.1. **Decision**

By order dated 8th February 2017 Tipperary County Council decided to grant permission and 16 conditions were attached, including the following:

- Condition 2. Permission valid for a period of 10 years.
- Condition 3. Permission for a period of 30 years from the date of commissioning.
- Condition 5. Container, inverter and fencing shall be dark green in colour. External walls of substation shall be in a neutral colour.
- Condition 12. Archaeological monitoring.
- Condition 13. Roadside boundary setback and access with required sightlines of 160m from a point 2.5m back from road edge. Roadside hedge to be replaced with a suitably planted earthen bank or sod and stone wall.
- Condition 14. Construction Management Plan.
- Condition 15. Development Contribution of €57,400.

3.2. Planning Authority Reports

3.2.1. Planning Reports

- Planner's initial report expresses concern regarding visual impact from Ballyrichard Road to the east and north. Notes reference within third party submissions to potential passage tomb beside Wilmar Mill and seeks further investigation in this regard. Conflicting details within the application documentation to be clarified.
- A request for additional information issued seeking amendment to proposals with respect to northerly arrays to mitigate impact from Ballyrichard Road, further investigation of possible passage tomb beside Wilmar Mill, details of potential surface water run-off and flooding. Sightlines to be demonstrated and details to be clarified.
- Planner's final report recommends permission subject to conditions.

3.2.2. Other Technical Reports

- Area Engineer's report asserts that 160m sight distance is required with 160m forward visibility for motorists travelling northbound along the R496 to vehicles waiting to turn right into the proposed entrance.

3.3. Prescribed Bodies

- Southern Regional Fisheries Board submission recommends measures to ensure that receiving waters are protected and measures to avoid the introduction of non-native invasive species.
- HSE South notes environmental report and indicates no objection.
- Department of Arts Heritage and the Gaeltacht submission notes potential for undiscovered archaeology and recommends monitoring of all groundworks.

3.4. Third Party Observations

- A number of third party submissions object to the proposal on grounds of health and safety impacts, environmental impact, reflection, run off, flooding, impact on wildlife, visual impact blight on landscape, devaluation of property. Proposal considered to be a contravention of the development plan zoning. Industrial development on prime agricultural land is inappropriate. Archaeological and architectural heritage impact. Flood risk. Long terms implications uncertain. Sustainability questionable on basis of subsidisation and future proofing.
- Numerous submissions by local residents and businesses indicating support for the application on grounds of economic and environmental benefit.
- Commission for Energy Regulation CER acknowledges referral of application.

4.0 Planning History

None

5.0 Policy Context

5.1 Development Plan

5.1.1 The South Tipperary County Development Plan 2009 as varied and Carrick on Suir Town Development Plan 2013 refer.

- The South Tipperary Renewable Energy Strategy 2014 (Appendix 6 of the South Tipperary County Development Plan 2009 as varied) expresses support for solar pv technologies. Policy RE 10: Ground Mounted Solar PV Installations *“It is the policy of the Council to facilitate solar energy installations where it is demonstrated to the satisfaction of the Council that there will be no significant adverse impact on the built and natural environment, the visual character of the landscape or on residential amenity. In the absence of Irish guidelines, the provisions of “Planning guidance for the development of large scale ground mounted solar PV systems’ BRE 2013, may be consulted.”*

- As regards the Landscape Character Assessment the site is located within the lowlands an area identified as Class 1: Low Sensitivity to change.
- Carrick on Suir Development Plan 2013. The north eastern corner of the site is located within the settlement boundary and is zoned Agriculture. The zoning objective is *“to provide for agricultural needs and to protect and enhance rural amenity”*.

5.2 Planning and Development Guidance Recommendations for Utility Scale Solar Photovoltaic Schemes in Ireland October 2016.

This is a research paper which was funded by the SEAI. It does not purport to be a policy document. The report contains a set of planning policy and development guidance recommendations, which it is suggested may contribute to the evidence base that will inform the development of Section 28 planning guidance for Utility Scale Solar Photovoltaic (USSPV) developments in Ireland.

It notes that over a hundred applications for USSPV developments have been lodged with planning authorities by October 2016 and that an estimated 594MW have been granted or are on appeal. The combined site area for these schemes is 1331.9 hectares.

Recommendations include that the development plans set out policy objectives to support USSPV development and put in place development management standards to control development. With respect to glint and glare assessments, it is recommended that a national standard for the undertaking of these assessments is developed. It is also recommended that the deployment of USSPV should not be prohibited in undulating landscapes and that a decommissioning statement should be included as a standard component of a planning application.

It is noted that four out of the seven developments refused planning permission (October 2016) have had glint and glare concerns cited as a ground of refusal. The sensitive receptors are loosely categorised as being: Residential dwellings, Historical Monuments/Heritage Landscapes, Road Networks and Aviation Infrastructure.

5.3 International Guidance

Planning guidance for the development of large scale ground mounted solar PV systems BRE (Building Research Establishment 2013).

In relation to glint and glare:

“Glint may be produced as a direct reflection of the sun in the surface of the solar PV panel. It may be the source of the visual issues regarding viewer distraction. Glare is a continuous source of brightness, relative to diffused lighting. This is not a direct reflection of the sun, but rather a reflection of the bright sky around the sun. Glare is significantly less intense than glint. Solar PV panels are designed to absorb, not reflect, irradiation. However, the sensitivities associated with glint and glare, and the landscape/ visual impact and the potential impact on aircraft safety, should be a consideration. In some instances, it may be necessary to seek a glint and glare assessment as part of a planning application. This may be particularly important if ‘tracking’ panels are proposed as these may cause differential diurnal and/or seasonal impacts. The potential for solar PV panels, frames and supports to have a combined reflective quality should be assessed. This assessment needs to consider the likely reflective capacity of all of the materials used in the construction of the solar PV farm.”

5.4 Natural Heritage Designations

The site is note within a designated sites. Those in the vicinity are:

- Lower River Suir SAC (Site Code 002137) located 1km south 1.5km east of the site/
- Comeragh Mountains SAC Site Code 001952) located c 12 km to the southwest of the site
- Huggingstown Fen SAC (Site Code 000404) located 14.3km to the northeast of the site.
- The River Suir below Carrick On Suir pNHA (Site Code 000655) is located c 2km to the southeast of the site.
- Tibberaghny Marshes pHNA (Site Code 000411) is c 4km to the southeast.

- Fiddown Island pNHA (site Code 00669) is c 7.4km southeast.
- Portlaw Woods pNHA (Site Code 000669) c8.5km southeast.
- Slievenamon Bog NHA (Site Code 002388) c9.5km northwest.

6.0 The Appeal

6.1. Grounds of Appeal

6.1.1 There are two third party appeals which raise similar and associated issues. The first third party appeal is submitted by Brigid Dalton, Ballyrichard. Grounds of appeal are summarised as follows:

- Health and safety concerns. Solar panels contain pure silicon, exposure to which can cause lung disease.
- Solar cells are non-recyclable.
- Significant sun reflection on appellant's dwelling.
- Heat will have negative impact on wildlife
- Devaluation of property.
- Fire risk.
- Area previously considered for designation as special area of conservation.
- Glen River flooding Impact.

6.1.2 The second third party appeal is submitted by Ed Hogan and Maria Meany, Ballyrichard. Grounds of appeal are summarised as follows

- Development contravenes the zoning objectives of the Carrick on Suir Town Development Plan 2013. Industrial development is not permitted on agricultural land.
- Negative impact on residential amenity and rural amenity.

- Visual impact is significant. Screening will take 3-4 years to become established.
- Duration of permission unwarranted.
- As solar farming is a new phenomenon there is no guarantee regarding impact on soil and subsoil.
- Wilmor Mill included a stone arch bridge across the Glen river of which remnants remain. Wilmor Mill should be considered for protection as a historically sensitive location.
- Development will exacerbate flooding in Mill Street and surrounds.
- Question the accuracy of Environmental Assessment given the discrepancy in terms of export capacity.
- Negative impact on wildlife, otter, bats.
- Negative impact on fishery and tourism.
- Potential for noise magnification due to location within the valley of Glen River.
- Potential contamination by hazardous substances within the solar panels.

6.2. First Party Response

6.2.1 The response submitted by Fehily Timoney and Company on behalf of the first party is summarised as follows:

- The Carrick on Suir solar farm scheme has been subject to a number of design iterations including provision for greater set back distances from dwellings and additional landscape screening.
- Notably of 25 no third party submissions only three were objections.
- Solar farm development is compatible with agriculture use.
- Note ABP Ref PL93.247310 where permission was granted on lands zoned Masterplan Zone 2 in the Tramore LAP.

- Only a small quantum of panels located within the Agriculturally Zoned land. Approximately 20% of Agricultural zoned land has solar panels.
- Visual impact and residential amenity were carefully considered and issues addressed. Separation distance of 218m to nearest residential property on Ballyrichard road reduces the vertical profile of the scheme significantly as the scheme is upslope and removed from the residences. Significant landscaping proposed. No overbearing impact or sense of encroachment.
- Photomontage prepared from Viewpoint VP 2, shows magnitude of visual impact following mitigation to be low.
- As regards glint and glare, the proposed panels will be oriented south and the front of houses on Ballyrichard road face east. Modelling exercise demonstrated a reflectance of up to 6 minutes in the morning from the appellant's (Mrs Dalton's) dwelling. Notably ameliorating factors such as screening or cloud cover have not been taken into account in the modelling.
- Screening provided as landscape and visual mitigation will reduce if not completely eliminate the glint and glare to dwellings on Ballyrichard road.
- Heritage assessment notes that no structures associated with the Wulmar mill are located on the site and the proposed development will not impact on the building given its location in a low river valley at the bottom of a slope. Tobar Archaeological Consultancy concluded that there is no evidence of a passage tomb at this location.
- Assessment of downstream flood risk confirms that the risk of an increase in flood level in the town as a result of the solar farm is insignificant.
- Detailed ecological appraisal and Natura Impact Statement carried out by a competent ecologist. Measures to enhance biodiversity and to minimise disturbance.
- No evidence of negative impact to wildlife, salmon or trout. Tourism will not be affected.
- PV plants do not present a greater fire risk than other technical facilities.

- Elements of the proposed infrastructure will be recycled. Module breakage is below 1% over 25 years over one third of which occurs during shipping or installation. Health and safety plan will be designed to serve and protect.
- No evidence of a relationship between property devaluation and solar farms.
- Alternative export capacity options addressed in Environmental Report.

6.3. Planning Authority Response

6.3.1 The Planning Authority response to the appeal asserts that the Planning Authority is satisfied that the land on which the proposed solar installation will be developed can also be used for agriculture. The proposed development is not in conflict with the land use zoning objectives for the lands as set out. The proposed development is in line with the proper planning and sustainable development of the area and request the Board to uphold the decision to grant permission.

7.0 Assessment

7.1 Having examined the file, considered the prevailing local and national policies and having inspected the site and assessed the proposal and all submissions, I consider the key issues to be considered in the Board's assessment of the proposed development can be addressed under the following headings:

- Policy Compliance – Principle of Development
- Requirement for Environment Impact Assessment
- Impacts on the residential and other amenities of the area. Landscape and Visual Residential and rural amenity. Cultural heritage and flooding
- Ecological Impact.
- Appropriate Assessment.

7.2 Policy Compliance – Principle of Development.

7.2.1 The appeal site is located in open countryside and the majority of the site does not have a specific zoning designation. The north eastern corner of the site is within the settlement boundary of the Carrick on Suir Town Development Plan 2013 and is zoned Agriculture the objective is “to provide for agricultural needs and to protect and enhance rural amenity.” The site is not located within an area zoned for landscape protection. In terms of the agricultural zoning I would tend to accept the argument made by the first party that given the extent of zoned land involved and compatibility of solar farm development with agriculture, (noting that it is proposed that the site will be used for sheep grazing), I am satisfied that the that the proposed development is in accordance with the zoning objective for the site.

7.2.2 As regards national policy on renewable energy, the proposed development is in accordance with national and EU policies which seek to promote the reduction of greenhouse gases and the advancement of renewable energy resources. There are no specific national or regional planning guidelines relating to the locational aspects of Solar PV farms. At County level Variation No 3 of the South Tipperary County Development Plan 2009 was made in September 2016 to incorporate the Tipperary Renewable Energy Strategy 2016. The Solar Energy Strategy is addressed at 6.8 where key considerations are outlined. Policy RE10: Ground Mounted Solar PV Installations sets out that “it is the policy of the Council to facilitate solar energy installations where it is demonstrated to the satisfaction of the Council that there will be no significant adverse impact on the built and natural environment, the visual character of the landscape or on residential amenity.”

7.2.3 On the basis of the foregoing it is evident that the provision of solar farms on suitable sites is acceptable in principle subject to normal proper planning and environmental considerations.

7.2.4 As regards the requested 10-year duration of permission, I note that as solar farms are likely to continue to be dependent on both financial support from the government and access agreements with ESB networks, there may be a significant delay in implementing the permission. On this basis I consider that a 10-year permission is

reasonable within the current policy context. As regards a 30-year lifetime of permission, I note that the Board has in relation to previous solar farm developments granted permission for a 25 year duration and I consider that this is therefore appropriate.

7.3 Requirement for Environmental Impact Assessment

7.3.1 Photovoltaic solar farms are not listed as a specific use category under Schedule 5 of the 2001 Regulations as amended and therefore EIA is not mandatory. In considering the criteria for determining whether a development would or would not be likely to have significant effects on the environment, I consider that having regard to the characteristics of the proposed development and the location of the development and the characteristics of potential impacts, the proposed development is not likely to have significant effects on the environment and therefore EIA is not required.

7.3.2 I note in relation to the submitted documentation the application includes a planning and Environment Report which addresses the key planning and environmental considerations for the proposed development having regard to the receiving environment and the characteristics of the proposed development.

7.4 Impact on the amenities of the area – Landscape and visual, residential and rural amenity.

7.4.1 The landscape and visual impact of the development is addressed in Chapter 13 of the Planning and Environmental Report. The assessment prepared by Macro Work Ltd. notes that the solar farm is likely to be difficult to discern beyond approximately 5km and is not likely to give rise to significant landscape or visual impacts beyond 2km. The zone of theoretical visibility prepared to aid assessment is set out in figure 13.1. It demonstrates that the greatest potential for visibility is in the immediate vicinity and for a distance of approximately 500m from the southern and western boundaries with visibility falling away more quickly to the north and within the corridor of the Glen River to the east.

7.4.2 There are several dwellings lining the Ballyrichard Road (including those of the third party appellants) on the opposite side of the Glen River which are key receptors in terms of visual impact. Design mitigation during the evolution of the proposed development involved an additional set back from the bank that defines the Glen river corridor. A new dense hedgerow consisting of three staggered rows of featured whips, semi mature trees and a high proportion of holly is proposed to be introduced to substantially screen the panels. Once established (3-4 growing seasons) it is proposed that this hedgerow will be managed at a maximum height of approximately 3-4m to balance screening of solar panels without foreshortening the longer distance views towards the Comeragh range. (VP3 mitigation photomontage demonstrates the strategy).

7.4.3 I consider that the assessment of landscape sensitivity as set out is reasonable. It notes that the site is within a fairly typical rural landscape. Rather than scenic or naturalistic values, the site and its immediate surrounds has landscape values associated with rural productivity and subsistence and is therefore considered to be medium low in terms of sensitivity. As regards landscape effects it is noted that the proposed solar farm will not require any significant excavation that would alter the landform or disrupt landcover pattern of the site. Construction and maintenance tracks will be similar to farm tracks and storage and operations structures will be modest and incongruous. Panels arranged in long rows facing in a southerly direction reference the linear cultivation furrows found through the Irish rural landscape. It is asserted that the receiving landscape will retain its salient rural characteristics and will not have a sense of becoming industrialised. The solar farm will be substantially screened by terrain and vegetation within a relatively short distance and it will be read as a singular type of development contained within the existing field matrix especially when viewed from further than about 500m. Viewpoints representing a variety of distances but with a particular focus on close views are provided. Residual visual impact range between moderate slight and imperceptible.

7.4.4 The visual impact assessment concludes that in terms of landscape impacts the proposed solar farm will have only a minor physical impact on the site and as it is contained within the existing hedgerow network and will not require significant

excavation works to construct either the solar panels or access and maintenance tracks. Following decommissioning there would be little evidence it ever existed. While there will be some noticeable impact on landscape character due to the introduction of a new and relatively intense form of built development, as this is a working landscape in close proximity to a significant settlement, the proposed solar farm is not considered to conflict unduly with the prevailing landscape character. Mitigation will help to amalgamate the development within the existing landscape pattern. I consider that the conclusions to be reasonable and the visual impact of the development is not significant.

7.4.5As regards construction impacts notably a 12-week construction period is envisaged. Over the entire construction period approximately 1,916 traffic movements are envisaged for construction material, equipment and personnel access to the site. The second week of construction will be the busiest week with an average of 58 daily traffic movements 29 to site and 29 from site. Average weekly movements of HGVs will be equal to 86 traffic movements. The development will result in a small localised impact on the local road network in terms of increase traffic volumes and cable route laying will result in traffic disruption and lane closures requiring a one-way system for a period of less than two weeks. I conclude that on the basis of the short term duration and subject to mitigation measures including the provision of traffic management plan there will be no significant disruption in terms of construction and roads impact.

7.4.6As regards cultural heritage there are no recorded monuments immediately adjacent to the site. The three monuments in Figlash townland to the north west have been ploughed out leaving no surface trace. The recorded enclosures to the west in Deerpark are also partially remaining and poorly preserved. Willmar Mill (in ruins) which is marked on the 1st and 2nd edition historic mapping is not a recorded monument, protected structure or listed on the NIAH. The mill is 115m from the eastern site boundary and 182m to the nearest proposed solar panels. I concur that the proposed development will not impact in the building given its position in a low river valley at the bottom of a slope. The proposed cable route is adjacent to a protected structure and NIAH record at Deerpark Lodge however no impact is predicted. I note that in response to the Council's request for additional information

the further assessment by Tobar Archaeological Services found no evidence of a passage tomb. I note the submission of the Department of Arts Heritage and the Gaeltacht recommending monitoring of ground works and I consider that this can be addressed by condition. I consider that on the basis of the information provided the impact of the development on cultural heritage is not significant.

7.4.7 On the issue of glint and glare this is assessed in chapter 14 of the Planning and Environmental report. The assessment identifies that glint and glare is theoretically possible at 15 no dwellings of the 15 potentially affected 1 dwelling house 27 is identified as having low a very low effect while the other 14 have a low effect. House no 2 and 3 locate to the west of the site are orientated in the direction of the proposed solar farm and both have the potential for glint and glare effects to occur in the early hours of the morning from 6.30am to 8.30 am. The maximum amount of glint and glare effects that could occur is for 10 minutes per day for infrequent period of spring summer and autumn. Houses 6 and 7 located directly to the south of the site are the nearest two houses to the proposed solar farm. Reflectance could emanate from the solar farm during the spring and summer months for a short period between 7.30 and 8.30pm. Glint and glare effects are only likely to occur for a maximum of 4 minutes during this time and as a result of a moderate amount of screening in the land surrounding both dwellings, it is likely that the glint and glare effects will be considerably reduced. House 9-16, the cluster located on the opposite side of the river valley are likely to be affected by glint and glare for intermittent periods during months of spring summer and autumn. The effects of glint and glare will only occur during the evening time between the hours of 6.00 pm and 8.30pm. The effects are only likely to occur for a maximum of 10 minutes per day. Patchy hedgerows surrounding the site are likely to reduce the effects of glint and glare. Houses 18 and 19 on the opposite side of the river valley to the east of the site are likely to be affected by glint and glare. Both houses are likely to receive these effects within the evening hours 6.30 to 8.30pm. Intervening hedgerows and a stand of conifers will reduce the effect. Both houses are located oblique to the site which will reduce the likelihood of nuisance. It is concluded that there will not be any significant nuisance effects on surrounding dwellings from glint and glare generated by the proposed solar farm.

7.4.8As regards road receptors, glint and glare is theoretically possible along three different stretches of road in the vicinity of the site. A 1km stretch of the Ballyrichard Road to the immediate east of the site is likely to be affected while smaller sections of the R696 and local road that diverges off the R696 to the west of the site are also likely to be affected. In respect of the Ballyrichard Road glint and glare effects are likely to take place during the evening hours between 6.00 and 8.30pm for intermittent periods during spring summer and autumn. Roadside hedgerows are likely to reduce these effects a great deal however these hedgerows become more intermittent along the Ballyrichard Road. Glint and glare effects may potentially occur on both roads to the west of the site during early morning hours 6.30 to 8.30am. The effects likely to occur during spring, summer and autumn however due to areas of dense hedgerows and roadside dwellings it is likely that effects will reduce significantly. I consider that the conclusions presented are reasonable with regard to the effects of glint and glare whereby it is determined that the impact on road receptors and residential receptors would be negligible and would not result in any significant nuisance or hazard.

7.4.9As regard the issue of potential flooding within the response to the request for additional information the assessment of downstream flood risk shows that the run off from the entire site following a 1 in 100 year event increases from 0.526m³ in the existing scenario to 0.528m³ in the post development or an additional 2 litres of run off per second. This equates to a 0.39% increase in run off rate from the site during a 1 in 100 year event. It concludes that given the small scale of the substation and compound and the proposed flow control measures on site, the minor 0.01% increase in flow in then Glen River and the restricting effect of the structures in Carrick on Suir the risk of an increase in flood level in the town as a result of the solar farm development is insignificant. I consider that as a precautionary measure I recommend that SUDS principles be applied to ensure that run off from the site is minimised. This can be addressed by condition.

7.5 Ecology

7.5.1 Ecology is addressed in Section 6 of the Planning and Environmental Report. I consider that the report presents an appropriate level of detail with regard to the

ecological impact of the proposed development. No Annex 1 sites are affected. In general, the development impacts on lands which are subject to reasonably intensive agricultural development. The habitats of highest value i.e. hedgerows will be largely retained and the development includes measures to strengthen and protect existing hedgerows and establish new hedgerows. In general, I consider that the conclusions with regard to the impact on habitats is well reasoned and the impact is acceptable.

7.5.2 As regards Fauna the potential impacts on birds, terrestrial mammals and bats are considered in detail. Notwithstanding temporary disturbance during construction, subject to the implementation of mitigation and enhancement measures the potential impact of the development on fauna are considered to be imperceptible. No significant adverse operational impacts are anticipated. I consider that the conclusion that the implementation of site enhancement measures for ecology will add to the ecological value of the area locally.

7.5.3 The potential for the impairment of water quality due to ingress of sediment or other pollutants during the construction phase of the development was considered in terms of aquatic habitats and species associated with the three ponds and the Glen river. There will be no disturbance to the existing drainage regime at the site and mitigation measures have been outlined to reduce potential impact including silt fencing, buffers as well as concrete and fuel management measures. I conclude that the impact on ecology does not present as a barrier to the proposed development of a solar farm on the site.

Appropriate Assessment.

7.6 Screening for Appropriate Assessment

7.6.1 The obligation to undertake appropriate assessment derives from Article 6(3) and 6(4) of the Habitats Directive. Essentially it involves a case by case examination for a Natura 2000 site and its conservation objectives. Appropriate Assessment involves consideration of whether the plan or project alone or in combination with other projects or plans will adversely affect the integrity of a European site in view of the

site's conservation objectives and includes consideration of any mitigation measures to avoid reduce or offset negative effects. This determination must be carried out before a decision is made or consent given for the proposed plan or project. Consent can only be given after having determined that the proposed development would not adversely affect the integrity of a European Site in view of its conservation objectives.

7.6.2 The Natura Impact Statement, dated June 2016 is prepared by Fehily Timoney and Company Ltd. The report examines the likely effects of the proposed solar energy development both alone and in combination with other projects on the conservation objectives of Natura 2000 sites within the zone of likely influence, that is within 15km of the proposed solar farm and considers whether any possible impacts on the conservation objectives of any Natura 2000 sites can be characterised as significant.

7.6.3 In terms of step 1 of **Stage 1 Screening**, the European Sites which could potentially be affected using the Source-Pathway-Receptor model are identified as the three Natura 2000 sites within a 15km radius of the proposed windfarm site and the associated grid connection route, namely:

Site Name	Site Code	Distance
Lower River Suir SAC	Site Code 002137	1km south and c1.5km east
Comeragh Mountain SAC	Site Code 01952	12km southwest
Hugginstown Fen SAC	Site Code 000404	C14.3km northeast

7.6.4 Step 2: Identify the Conservation Objectives for these sites.

7.6.4.1 The Qualifying interests for the lower River Suir are as follows:

1029 Freshwater Pearl Mussel *Margaritifera margaritifera*

1092 White-clawed Crayfish *Austropotamobius pallipes*

1095 Sea Lamprey *Petromyzon marinus*

1096 Brook Lamprey *Lampetra planeri*

1099 River Lamprey *Lampetra fluviatilis*
1103 Twaite Shad *Alosa fallax fallax*
1106 Salmon *Salmo salar*
1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)
1355 Otter *Lutra lutra*
1410 Mediterranean salt meadows (*Juncetalia maritimi*)
3260 Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitriche-Batrachion* vegetation
6430 Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels
91A0 Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles
91E0 Alluvial forests with *Alnus Glutinosa* and *Fraxinus Excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*)
91J0 *Taxus baccata* woods of the British Isles

The conservation objectives for the Lower River Suir SAC, Version 1, 28th March 2017, note the overall aim of the habitats directive is to maintain or restore the favourable conservation status of habitats and species of community interest.

Favourable conservation status of a habitat is achieved when:

- its natural range, and area it covers within that range, are stable or increasing, and
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- the conservation status of its typical species is favourable.

The favourable conservation status of a species is achieved when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

7.6.4.2 The qualifying interest for the Comeragh Mountain SAC is

[3110] Oligotrophic Waters containing very few minerals

[3260] Floating River Vegetation

[4010] Wet Heath

[4030] Dry Heath

[4060] Alpine and Subalpine Heaths

[8110] Siliceous Scree

[8210] Calcareous Rocky Slopes

[8220] Siliceous Rocky Slopes

[1393] Slender Green Feather-moss (*Drepanocladus vernicosus*)

The conservation objectives version 5.0 dated 15/8/2016. Generic conservation objectives refer.

7.6.4.3 The qualifying interest for Huginstown Fen SAC is [7230] Alkaline Fens. The generic conservation objective 15/8/2016 to maintain or restore favourable conservation condition of the Annex 1 habitat and or Annex II species for which the SAC has been selected applies to the site.

7.6.5 Step 3. Identify the potential a) likely and b) Significant effects (direct or indirect) of the project along on the European sites solely within the contexts of the sites conservation objectives

7.6.5.1 The potential impacts with reference to the Natura 2000 sites' conservation objectives at various stages of the process include emissions to surface and ground water, run off, silt laden run off, hydrocarbon and other pollutants, fuels, construction materials to watercourses, loss of habitat for fauna, avoidance and disturbance.

7.6.5.2 I note that the Comeragh Mountains SAC and Huginstown Fen SAC are located 12km, and 14.3km respectively from the proposed development site and are not hydrologically connected with the appeal site of the proposed development.

7.6.5.3 No direct impacts are predicted on any Natura 2000 site. In the scenario of a large release of suspended sediment or fuel spillage to the Glen River there is potential for significant indirect impacts downstream. As the Lower River Suir is 1km downstream there could be indirect impacts via water quality.

7.6.6 Step 4. Identify the potential a) likely and b) Significant effects (direct or indirect) of the project in combination with other plans or projects on the European sites solely within the contexts of the sites conservation objectives

7.6.6.1 Cumulative effects are considered with regard to proposed grid connection, and other plans and projects. In the absence of mitigation, the potential for water quality impacts to the Lower River Suir the potential for significant cumulative effects cannot be discounted.

9.6.7 Step 5. Evaluate Potential Effects identified above using the source pathway receptor model.

9.6.7.1 No direct impacts on European sites are predicted. Indirect impacts however cannot be excluded. The identified pathways for potential impact on European sites are associated with the potential for water pollution and water quality impacts.

7.6.8 Step 6 Determine whether or not likely significant effects, either individually or in combination with other plans or projects on the European Sites can be reasonably ruled out on the basis of objective scientific information.

7.6.8.1 On the basis of the identified pathways for potential impacts in respect of Lower River Suir SAC having regard to the hydrological connection from the site significant effects cannot be ruled out.

7.6.8.2 I note that in respect of the following sites significant effects were screened out on the basis of the qualifying interests for these sites and due to distance and absence of complete impact source pathway receptor chain.

- Comeragh Mountains SAC
- Hugginstown Fen SAC

7.6.9 Appropriate Assessment.

7.6.9.1 The stage 2 NIS considers activities during each phase of the development (construction, operation, maintenance and decommissioning)

7.6.9.2 Steps 1-4 above from Stage 1 Screening are detailed above. The screening assessment identifies potential pathways for impact on the Lower river Suir through potential emissions to surface water.

7.6.9.3 In the scenario of a large release of suspended sediment to the Glen River during construction works there is potential for significant indirect impacts downstream of the development area. Indirect impacts via water quality on the key species and habitats for which the site has been designated. In the event of siltation or pollution of watercourses from the site the aquatic habitats and species of the Lower River Suir SAC could be indirectly damaged by changes in water turbidity and water quality. Reduction in water quality and habitat availability could affect population levels of qualifying interest species. Indirect effects from transportation requirements include potential introduction of dispersing of non-native invasive species.

7.6.9.4 In terms of an evaluation of the potential effects of the project on the conservation objectives of the sites taking account of mitigation, the mitigation measures include the provision of a buffer zone adjacent to the Glen River, silt traps, buffer zones and stilling ponds, emergency fuel/oil spill procedures, contained toilets and welfare units and water quality monitoring. Best practice guidelines and codes of practice will be implemented at various stages.

7.6.9.5 On the basis of detailed mitigation measures for protection of water quality in the proposed drainage design and site management programme in addition to the nature of the qualifying interest and the hydraulic distance impacts on downstream habitats are unlikely. It is thus concluded that the project would not affect the integrity of the **Lower River Suir SAC** either individually or in combination with other plans or projects.

7.6.9.6 On the basis of this conclusion it is considered that the project would not affect the integrity of the European Site either individually or in combination with other plans or projects.

7.6.9.7 Having considered the submitted report, I am satisfied that the methodology used in the NIS report is clearly explained and information sources set out. I consider that the level of information provided allows the Board as the competent authority to assess the impact of the proposed development on the integrity of the adjacent Natura 2000 sites. Having regard to the mitigation measures proposed I consider that the conclusion that the proposed development will not adversely impact the **Lower River Suir SAC** is reasonably supported.

7.6.9.8 On the basis of the details provided I accept the assertion of the first party that it has been demonstrated that the cumulative impact of the development will not have adverse effect on the Lower River Suir SAC in the light of its conservation objectives and that subject to the mitigation measures the proposed project will not adversely affect the integrity and conservation status of any Natura 2000 sites.

8.0 Recommendation

I recommend that planning permission should be granted, for the reasons and considerations as set out below.

9.0 Reasons and Considerations

Having regard to the provisions of the South Tipperary County Development Plan 2009 as varied, including the Tipperary Renewable Energy Strategy 2016, and the Carrick on Suir Town Development Plan 2013, and the nature and scale of the development proposed, the suitability of the aspect and topography of the site, the pattern of development in the area, it is considered that subject to compliance with the conditions set out below, the proposal would not seriously injure the amenities of the area and would not detract from the visual amenities of the area and would be in accordance with the proper planning and sustainable development of the area.

Conditions

1. The development shall be carried out and completed in accordance with the plans and particulars lodged with the application, as amended by the further plans and particulars submitted on the 15th November 2016, 7th December

2016, 31st January 2017 and 1st February 2017 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, and the 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.

Reason: To enable the planning authority to review the operation of the solar array having regard to the circumstances then prevailing and in the interest of orderly development.

3. Prior to commencement of development, a detailed restoration plan, providing for removal of all structures, 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: In the interest of orderly development.

4. No works shall commence without the submission for the approval of the planning authority final details for the chosen solar panels.

Reason: In the interest of clarity.

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. Cables from the solar arrays to the inverters and substation shall be located underground.

Reason: In the interest of visual amenity.

7. The site shall be landscaped in accordance with a comprehensive scheme of landscaping, details of which shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. All planting shall be adequately protected from damage until established. Any plants which die, are removed or become seriously damaged or diseased, within a period of 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 residential and visual amenity.

8. Before construction commences on site, details of the structures of the security fence showing provision for the movement of mammals shall be submitted for prior approval to the Planning Authority. This shall be facilitated through the provision of mammal access gates every 100m along the perimeter fence and in accordance with standard guidelines for provision of mammal access (NRA 2008).

Reason: To allow wildlife to continue to have access across the site.

9. Prior to the commencement of development, the developer shall submit for the written agreement of the Planning Authority details for a SUDS drainage management system, including swales and ponds if necessary to ensure that stormwater runoff from the site does not exceed that for normal grassed agricultural lands.

Reason: In the interest of preventing flooding.

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

(a) notify the planning authority in writing at least four weeks prior to the commencement of any site operation (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.

11. 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 noise management measures and off-site disposal of construction/demolition waste.

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

12. 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.

13. 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.

14. 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. The contribution shall be paid prior to the commencement of development or in such phased payments as the planning

authority may facilitate and shall be subject to any applicable indexation provisions of the Scheme at the time of payment. 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 the Board to determine the proper application of the terms of the Scheme.

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

Bríd Maxwell
Planning Inspector

27th June 2017