



An
Bord
Pleanála

Inspector's Report PL92.249060.

Development	58 hectare Solar PV Farm.
Location	Leonards Bog, The Sheehy's, Derrymore, Roscrea.
Planning Authority	Tipperary County Council.
Planning Authority Reg. Ref.	1660917.
Applicant	IGP Solar
Type of Application	Permission.
Planning Authority Decision	Grant with conditions.
Type of Appeal	Third Party
Appellants	Derrymore Solar Farm Concern Group
Observers	None.
Date of Site Inspection	5 th November 2017
Inspector	Philip Davis.

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1.0 Introduction

This appeal is by a residents group against the decision of the planning authority to grant permission for a c.58 hectare solar farm next to the M7 near Roscrea. The proposed solar farm is on reclaimed raised bog on low-lying land just north of the M7 which is currently used for grazing and as a windfarm. The grounds of appeal relate to the absence of national policy on solar developments, development plan policy and amenity issues. The application was accompanied by an NIS.

2.0 Site Location and Description

Leonards Bog, Lisnagonogue and Commons, and surrounds

The appeal site is in a townland known as **Leonards Bog**, just under 5 km south-east of the town of **Roscrea** and just north of the M7 between Junction 21 (Borris-in-Ossary) and junction 22 (N62/Roscrea). The area is characterised by flat open lands, much of it former raised bog and now either drained or planted with conifers. The M7 dominates the local landscape. The N62 Thurles to Roscrea Road runs to the far west of the area, with a straight third class road known as the **New Road** running south-east from Roscrea, crossing the M7 on an overpass west of Leonards Bog. The upper reaches of the **River Nore** flows north-east through the area in an engineered channel.

The area is sparsely populated, with a handful of farm dwellings and ribbons of dwellings along the New Road. The land east of the New Road is intersected with farm, forestry and wind turbine access tracks. A 15 turbine windfarm is a prominent feature on the landscape as viewed from nearby roads and there is a single large farmstead within the wider landholding of the appeal site.

Appeal site

The appeal site, with a site area given as 58.11 hectares, is a flat open area of former raised bog, now drained and used for grazing, located just north of the M7, south of an extensive area of conifer plantation, and west of the windfarm (one turbine is on the land) and the Nore. An overhead power line crosses the site roughly north to south. The eastern part of the site is bounded by a canalised section of the River Nore. A dwelling with farm complex (owned by the landowner) is just outside the site area on the western side. Access is via a minor road with a

junction on the New Road next to the M7 overpass, which turns into a private track and serves the farm dwelling and both the conifer plantation and windfarm. The quality of this access road degenerates into a series of minor farm, turbine and forestry access tracks east of the farmhouse.

3.0 Proposed Development

The appeal site is described on the site notice as follows:

The erection of a 58.11 hectare Solar PV Farm. The proposed solar farm will consist of the installation of a 30 year operation and subsequent decommissioning of a series of ground mounted solar photovoltaic PV panels, mounted on steel support structures 3 m in height, together with 1 single storey ESB control room, 25 electrical transformation enclosures, underground cabling, CCTV poles and cameras, deer type security fencing, wooden fence along part of the M7 Motorway, wooden fence placed along the western site boundary, site entrance and access roads, including landscaping along the western and south eastern site boundaries, and other associated development works, for the purpose of generating renewable energy electricity. The proposed solar farm will have a capacity of 25 MW.

Following the submission of revised information, a new site notice in May 2017 revised the proposed development to include a reduction in the number of transformer enclosures, re-orientation of panels, and the addition of a screening berm with additional planting and the removal of wooden fencing along the south-western site boundary, in addition further details on landscaping, biodiversity, glint and glare suppression, site restoration and decommissioning. **An NIS was submitted with the revised application.**

4.0 Planning Authority Decision

4.1. Decision

The planning authority decided to grant permission subject to 14 standard reasons.

4.2. Planning Authority Reports

4.2.1. Planning Reports

There are two planning reports on file. The first noted the following points:

- The planning history of the site relates to windfarms and associated electric power lines.
- Notes a significant number of objections from local residents.
- Notes Policy CEF6 which states it is policy to promote and facilitate solar energy installations subject to specific constraints.
- The sites visibility from a number of sensitive receptors is noted, it is concluded that it would have a moderate to minor adverse impacts on the local area and on local viewpoints, which is not considered significant.
- Concerns are raised that the glint and glare proposal does not fully address the impact as viewed from the motorway.
- It is considered that the Stage 1 assessment was not completed adequately and that a stage 2 AA (NIS) is required.
- Further information was requested with regard to national policy, visual impact assessment (including revised screening and site restoration), glint and glare, access arrangements, and a submission of an NIS.

Following the submission of further information (with a revised site notice), a second report noted the following:

- The submitted NIS was considered satisfactory and that it could be concluded there would be no significant effects.
- The revised proposals for landscaping, including replacing a proposed timber fence with a 2.5 metres high landscaped embankment, is considered acceptable (it is noted that TII and Council Roads Department agree on this point).
- Revised proposals on restoration and sightlines are considered acceptable.
- Permission is recommended.

4.2.2. Other Technical Reports

The application was submitted with a number of technical documents including a glint and glare study (revised during the application); an archaeological study (including geophysical investigations) an AA screening assessment (along with ecological impact assessment and biodiversity management plan); a 3D modelling supplementary report with GIS maps; a noise assessment report; a traffic management plan; a construction environmental management plan; a flood risk assessment; a landscape and visual impact assessment; a report on community consultation, and an EIA Screening (concluding that an EIS is not required); a planning statement/report in addition to plans and specifications.

Following a request for further information, an NIS plus additional reports and revised plans were submitted.

The **Environment Section** requested additional information, including an NIS. The planners report makes reference to a number of other internal consultations.

4.3. Prescribed Bodies

The **Commission for Energy Regulation** acknowledged receipt of the application but did not comment.

The **HSE** commented that a condition should be set to allow ongoing monitoring of the impact of glint and glare on road users.

Department of Arts, Heritage, Regional and Rural and Gaeltacht Affairs recommend a condition on archaeology.

Inland Fisheries Ireland noted that they had been consulted by the applicant prior to permission – no objection but recommended conditions to protect local watercourses and to allow access by IFI inspectors to the riverbanks (restated following the submission of additional information).

Transport Infrastructure Ireland objected to the proposed development, expressing concerns about the impact of glare on M7 users. Following the revised submission, the TII requested that a monitoring programme be put in place to allow for additional mitigation if necessary if there is any impact on road safety.

4.4. **Third Party Observations**

A significant number of objections are on file or are referred to in the planning file. **The Lodge and Springfield House Stud** objected for the reason that both construction and operation could impact on horses. **Michael Smith** (local Councillor) requested consideration on a number of issues. A number of local residents submitted objections citing concerns about traffic impacts, construction impacts, health and amenity, impacts on local landscape, etc.

5.0 **Planning History**

03/51/0957: Planning permission for a 10 turbine windfarm and associated works (granted).

09/51/0084: Permission for 10 turbine windfarm (granted)

11/51/1203: Modification to above (granted).

11/51/10442: Overhead 38kV power line (granted)

12/51/0171: Additional 5 turbines to approved 10 turbine windfarm (granted).

The above permissions apply to a wider area, including extensive lands to the east of the appeal site.

6.0 **Policy Context**

6.1. **Development Plan**

The appeal site is in an unzoned rural area in the North Tipperary County Development Plan, 2010-2016. Policy on solar energy is set out in Section 8.4.4 and Policy CEF6. Additional relevant policies relate to landscape management and protection (LH1), biodiversity (LG5) and archaeology (LH16).

6.2. **Natural Heritage Designations**

There are two NHA's within one kilometre – the Monaincha Bog/Ballaghmore Bog NHA to the north, and the Nore Valley Bogs to the south, across from the M7. The

adjoining River Nore flows about 5 km east to the River Nore SPA and approximately 10 km downstream, the River Barrow and River Nore SAC.

7.0 The Appeal

7.1. Grounds of Appeal

The planning appeal is by a group of local residents.

- It is argued that it is contrary to the development plan in that it does not support community investment in local renewable energy (RE3) and that the proposed development does not satisfy the requirements of the solar energy strategy with regards to impacts on the environment, the landscape, and amenity.
- It is argued that it should be refused on the basis of a national policy vacuum – refers to policy on telecommunications masts with regard to time limited permissions.
- It is argued that conditions relating to the timescale for the permission are ambiguous and contrary to the Development Management guidelines.
- It is argued that the conditions set are not enforceable, due to the long time period of the permission.
- It is argued that a temporary permission – as granted – is *ultra vires*.
- It is argued that the provision of earth berms has not been supported by the evidence – it is submitted that this will require 10,000 cubic metres of earth, and this impact is not addressed in the supporting documents and most particularly the NIS (AA).
- It is argued that the conditions relating to glint/glare surveys are unenforceable and contrary to the Development Management Guidelines.
- It is argued that the construction environmental management plan does not address the construction of the earth berms.
- It is submitted that the condition for public access is *ultra vires*.
- It is also argued that the decommissioning condition is *ultra vires*.

7.2. Applicant Response

- The applicant questions the standing of the appellant.
- It is argued in great detail that the proposed development is consistent with both national and local planning policy, and it is noted that a number of community benefits have been agreed with local representatives.
- It is argued (with reference to the Landscape and Visual Impact Assessment submitted with the application), that the landscape has the capacity to absorb the development and that the overall impacts are relatively slight. It is stated that the only dwelling nearby belongs to the landowner.
- It is noted that the site has the benefit of a grid connection point.
- It is argued that the key problems raised with regards to glint and glare were addressed by the revised design and the conditions.
- It is noted with regard to EIS that the planning authority ruled on this issue that one was not required.
- It is argued – with examples – that there are many precedents for time limited permissions and related conditions.
- It is submitted that the berms will require just under 7,000 cubic metre of soil. Correspondence with the applicants Hydrological Consultant has been submitted to support the argument that this quantity of material can be obtained within the site without impacting on the hydrology of the site.
- An addendum to the Construction Environmental Management Plan is attached to the submission with regard to items raised by the appellant.
- It is stated that condition 12 relating to public access is welcomed by the applicant and has already committed to allowing community access to the site when completed.
- A series of enclosures with the response address detailed technical issues.

7.3. **Planning Authority Response**

The planning authority stated that they have noted the grounds of appeal and have no additional observations to make.

7.4. **Further Responses**

- It is submitted that the appeal is under the umbrella name for some of the original objectors so it's a legal appeal.
- It is submitted that the applicant has not made allowance for compaction of the berms, and it is restated that 10,000 cubic metres would be required, and this is not accessible within the site.
- It is argued that the proposed development is a material contravention of the plan, with particular regard to policies RE3, RES 2.4.7, RES 6.4 and other related national and local policies.
- It is reiterated that it is considered that there would be a serious impact from glint and glare.

8.0 **Assessment**

8.1. Having inspected the site and reviewed the file documents, I consider that the appeal can be addressed under the following broad headings.

- General points on the appeal
- EIS
- National policy
- Regional planning policy
- Development Plan policy
- Planning precedents
- General overview of the site
- Landscape impacts
- Glint and Glare
- Noise, amenity and health

- Highway access
- Construction issues
- Heritage and archaeology
- Flooding and hydrology
- Ecology
- Community gain/site access
- Other issues
- Appropriate Assessment

8.2. General points on the appeal

The appellant has made detailed submissions with regard to conditions set by the planning authority. I have read and have had regard to these points in the following assessment, but as the application will be decided *de novo* by the Board, with new conditions (if granted), I do not consider it necessary to address each point raised, except for when it is directly relevant in recommending any conditions.

I would note the arguments submitted by appellant with regard to time limiting developments. The Board will be aware that for many energy and telecommunications type development conditions setting a fixed number of years are standard and are entirely in accordance with the Development Management Guidelines and statutory requirements under the Planning Acts.

The applicant has noted that the appellant does not match with any of the original objections, so has questioned the legality of the appeal. I would note that the submission is not a legal 'person', and there is some inconsistency between the signatories and those in the original objections and observations to the planning application. Notwithstanding this, as the appellant raises legitimate planning grounds of appeal and the signatory of the letter appears to have made a previous submission I would not recommend that the Board reject the appeal on this ground or declare it to be vexatious.

8.3. EIS

The proposed development consists of a photovoltaic solar farm extending over some 58 hectares in County Tipperary near Roscrea. It is estimated as 25MW

output. It adjoins an existing windfarm. I note that the plans submitted with the appeal indicate that a grid connection will be via a substation within the site and would connect with power lines which cross the site and that an existing site access will be used. Photovoltaic solar farms are not listed as a specific use category under Schedule 5 of the 2001 Regulations as amended. Under Part 1, Article 2(a) relevant developments include:

A thermal power station or other combustion installation with a heat output of 300 megawatts or more.

The proposed development is for photovoltaics, so is not by any reasonable definition a 'thermal' power station and does not involve combustion, and will be of far lower capacity than 300 MW. I do not consider that any other categories under Part 1 apply.

Under Part 2, Article 3(a) includes: *Industrial installations for the production of electricity, steam and hot water not included in Part 1 of this Schedule with a heat output of 300 megawatts or more.* My interpretation of 3(a) is that EIA may apply for power plants of a thermal design independent of the source of energy – i.e. if they produce 'electricity, steam **and** (my emphasis) hot water'. I note that other non-thermal types of electricity generation such as hydroelectricity and wind power, are specifically included in other subsections. Photovoltaics are **not** included. As the proposed development is for the production of electricity by way of direct solar power using photovoltaics and does not involve the production of heat or hot water, I conclude that it does not come within this category. In any event, total output will be far below the 300MW threshold and so would be sub-threshold if 3(a) applied.

I conclude therefore that a photovoltaic (non-thermal) power station such as that proposed does not require a mandatory EIS as it does not come within any category in either Part 1 or Part 2 of Schedule 5 of the 2001 Regulations as amended.

The site is not on, or in the close vicinity of, a European site or NHA or area of ecological interest. The land is almost entirely former raised bog, now entirely cut and drained and is used for grazing. There are no other features of particular sensitivity on the site or the immediate vicinity.

I therefore conclude that EIS is not mandatory for this proposed development and it does not come within the scope of Article 109 of the Regulations.

8.4. National policy

National policy (within the EU context) on renewable energy is set out in the **National Renewable Energy Action Plan (NREAP)** submitted under Article 4 of Directive 2009/28/EC, which sets out targets for increasing the proportion of renewable energy in the national energy mix. This sets out (Section 3.1) a target of 16% of all energy from renewable sources of 16% by 2020 (up from 3.1% in 2005). It does not provide specific target figures for solar PV. In addition, the 2015 White Paper '**Ireland's Transition to a low carbon energy future 2015-2030**' sets out targets for the further development of the renewable energy sector. This White Paper notes the potential importance of PV technology (paragraph 137), but does not provide specific targets. There are no specific national or regional planning guidelines relating to the locational aspects of solar PV farms. The **Sustainable Energy Authority of Ireland** have a best practice guide for solar electricity and the grid, but it does not address locational or planning aspects in detail.

8.5. Regional Policy

The **Mid West Regional Planning Guidelines** (2010-2022) have little direct policy on renewable energy – section 4.1.8 and 6.6.1 state that a coordinated strategy is needed in the various parts of the Region and that Development Plans should have specific requirements. Solar energy is not mentioned.

8.6. Development Plan policy

The North Tipperary County Development Plan 2010-2016 (updated, December 2017 to include the Tipperary Renewable Energy Strategy 2016), sets out policy for solar energy in Sections 4.6 and 6.8 of Appendix 6 of the Plan (the Renewable Energy Strategy).

Section 4.6.2 states:

The following site selection criteria for ground mounted arrays apply:

- *Typically suited to lowing-lands due to the need for level sites.*
- *Accessibility/proximity to electricity networks. Ability to achieve a network connection, typically via a 10kV or 20KV overhead cable on the distribution system. In general, it is not viable to locate solar farms over 1km from network infrastructure.*

- *Site area of at least 25 acres.*
- *South facing aspect with either flat terrain or sloping gently.*
- *Land free from obstacles that may cause shading.*

As they are relatively new, solar farms are not specifically identified in the classes of Environmental Impact Assessment (EIA) development listed either in the EIA Directive or in Schedule 5 to the Planning and Development Regulations.

Section 6.8 states:

There has been recent interest in the development of large-scale ground mounted solar PV installations. The Council will facilitate proposals for solar PV installations; subject the demonstration by the applicant that the proposal will not have a significant adverse impact on the built and natural environment, the visual character of the landscape or on residential amenity. Particular care must be taken in respect to proposals for commercial PV in Primary and Secondary Amenity Areas, where the Council may require a Visual Impact Assessment (VIA) in support of the proposal, particularly where there is potential for cumulative visual impact as a result on existing and permitted solar development in the area.

Key considerations are:

- (a) Site aspect, area and topography,*
- (b) Availability and method of grid connection,*
- (c) Impact on sensitive receptors including roads, residential development, areas of tourism and landscape amenity value, airfields and ecology,*
- (d) The visual impact of the proposal and other permitted large-scale solar PV developments on the visual character of the area having regard to the provisions of the LCA 2016,*
- (e) Management, fencing and upkeep of the site,*
- (f) Construction phase activities and impacts,*
- (g) Proposed lifespan of the development,*
- (h) Decommissioning and reinstatement of site subject to the satisfaction of the council.*

I would consider that the proposed development and the site selected largely meets the requirements set out in the above policies, so, subject to the detailed objectives being met, the proposed development is generally consistent with development plan policy.

8.7. Planning history

The only significant planning history for the site relates to its partial use (along with other adjoining lands) for wind energy and related energy apparatus. The mining of peat from the lands appear to have predated requirements for planning permission or appropriate assessment.

A significant number of solar farms have come to the Board on appeal within the past 2 years. As of writing this report, these appeals include the following:

PL93.248483, for 26,000 sq. m² at Keilogue, Co. Waterford (no decision yet);

PL27.248424, near Rathnew, Co. Wicklow (no decision yet)

PL04.248400, near Castlelyons, Co. Cork (no decision yet);

PL26.248364, near Gorey, Co. Wexford (28 hectares) (no decision yet);

PL.04.248278, near Fermoy, Cork (8.7 hectares), (no decision yet);

PL11.248244, near Mountmellick, Co. Laois (no decision yet);

PL22.248238, near Portlaoise, Co. Laois (no decision yet);

PL17.248146, Gillinst, Co. Meath (no decision yet);

PL92.248089, near Carrick-on-Suir, Co. Tipperary (no decision yet).

PL91.248066, Lisnagry, Co. Limerick (no decision yet);

PL17.248028, Ninch, County Meath (no decision yet);

PL10.247979, Knocktopher, Co. Kilkenny (no decision yet).

PL27.247942, near Rathdrum, Co. Wicklow (no decision yet);

PL10.247941, Knocktopher, Co. Kilkenny (no decision yet).

PL26.247886, Ballyhoge, Co. Wexford for 268,000 sq. m² (no decision yet);

PL15.247808, near Dundalk, Co. Louth (no decision yet);

PL26.247801, near Murntown, Co. Wexford (no decision yet);

PL10.247616, Ballyhale, County Kilkenny (no decision yet)

PL08.247778, near Killarney, Kerry for 20,000 sq. m² (granted);
PL91.247653, near Listowel, Kerry, for 30,000 sq. m² (granted);
PL03.247632, Ballymorris, Co. Clare (granted)
PL93.247558, Kilmeaden, Waterford (withdrawn);
PL92.247443 near Caher, Tipperary for 32,000 sq. m². (amended condition on financial contribution);
PL26.247366 for 88,000 sq. m² of panels near Baldwinstown, Wexford (split decision, partial grant);
PL93.247310 near Tramore, County Waterford (granted);
PL26.247217 for nearly 99 hectares in Tomhaggard, Wexford (refused for reasons relating to visual and residential amenities and loss of agricultural land);
PL26.247179 in Clonroche, Wexford for nearly 20 hectares (granted);
PL26.247176, Enniscorthy, Co. Wexford, 12 hectares of solar (granted);
PL93.246902, in Cappoquin County Waterford (granted);
PL10.246875, near Belview, Kilkenny for solar farm (refused, by reason of its impact on the orderly expansion of Belview Port);
PL04.245862 for 33,000 sq. m. near Coachford, Cork (granted);
PL27.246527 for 13 hectares of solar panels near Avoca in county Wicklow, (granted);
PL04.244539, for 5,400 sq. m. near Lissarda, Co. Cork (granted);
PL26.244351 near Tintern, Wexford for a 5MW solar farm (granted); and,
PL04.233539 near Lissarda, Cork (granted).

I note with regard to the significant number of permissions granted, the Board has generally permitted extended dates for development having regard to uncertainty over national policy with regards to incentivising renewable power projects. The Board has in most of these grants set conditions to ensure that the panels should be removed (in the absence of further permission) with the lands fully restored to their previous agricultural use.

8.8. General overview of the site

The appeal site is in open countryside on a mined out raised bog. While rural and relatively uninhabited, the area has been extensively altered in the past century.

Older OS plans show an area with raised bogs with extensive areas of standing water with the Nore following a meandering route, to its present flat nature, dominated by deep drainage ditches, low grade grazing land, conifer plantation, a large wind farm, and most recently, the motorway running through the area. The site also has significant existing electrical infrastructure – an overhead line runs across the lands. The site is now largely used for grazing, but I note that the agricultural quality appears to be low, with a shallow topsoil of peaty soil overlying deep rocky till deposits.

I would note that while there is no direct planning guidance with regards to the most appropriate type of lands for solar farms, it would be reasonable, having regard to the totality of planning guidance for energy production and the protection of rural areas and habitats, to seek out sites which have already been much altered through industrial/agricultural processes, where the existing landscape qualities have been disturbed through infrastructure developments and commercial forestry, and where there is an existing infrastructure to facilitate electricity production. As such, I would consider this site to be close to ideal, except insofar as the Irish midlands are not exactly renowned for long hours of sunshine. But I would note that for large scale solar power generation, other site characteristics - such as proximity to the grid and land costs may outweigh such factors.

In broad planning terms I would therefore consider the site to be in many respects ideal for large scale solar development, especially with regard to the possible cumulative benefits of locating it close to the electricity infrastructure constructed for the windfarm.

8.9. Landscape impacts

The site is low-lying and in an area with a generally robust landscape, largely shielded from views by extensive areas of conifer plantation. The nearest natural elevated areas are Black Hill, about 7 km to the south, and a ridge about 5 km to the west. The foothills of the Slieve Bloom mountains are around 5 km to the north-east. Apart from the dwelling belonging to the landowner, I could not identify any clear views of the site from any dwelling or settlement. The clearest views to the site from public areas are from the M7, which is slightly elevated relative to the site, and the overpass on the New Road, as it crosses over the motorway. I would consider the landscape to be generally robust and capable of absorbing this type of

development. The site is not within any key viewpoints from historic landmarks or tourism attractions. I would also note that the lands have been very significantly altered over the years, mostly through peat mining, drainage works, forestry, and the construction of the motorway and windfarm.

I would not the potential for the site to be more visible from a distance at certain times of the day due to glint and glare reflections. This is most likely to be an impact on viewpoints from the south.

8.10. Glint and glare

The planning authority initially had concerns about glint and glare, with specific reference to the potential impact on traffic safety on the M7. The M7 is to the south of the site and is somewhat elevated relative to the lands. A Glint and Glare study was submitted with the application with revised details at further information stage.

There is no published Irish guidance on this issue, but the UK guidance document ‘Renewable Energy Planning Guidance Note 2 – The Development of large scale (>50kW) solar PV arrays – Cornwall (UK) 2012’ states (page 26):

Glint may be produced as a direct reflection of the sun in the surface of the PV solar panel. It may be the source of the visual issues regarding viewer distraction. Glare is the 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 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 not be underestimated. 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. Discussions are ongoing with airport operators in Cornwall regarding the potential impact of large scale solar PV development.

The potential for 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 the materials used in the construction of the solar farm.

The key issue with regard to this appeal is the potential impact on traffic safety on the M7. The TII originally objected for this reason. However, I am not aware of any objective evidence that glare from solar panels is a major concern – I am aware of many examples of solar farms immediately adjacent to busy roads in Europe and the US without any apparent safety problem. I would note also that a site like this is likely to be prone to holding standing water during wet periods, which is approximately as reflective as solar panels, although the angle of reflection would be very different.

As the Board will note from the assessments on file and the plans and submissions, the site is visible, specifically from the eastbound carriageway on the M7, and it is on the southern side, so some reflections - especially in the morning hours - would seem quite possible. The applicant has submitted revisions including a landscaped bund between the site and the M7. I am satisfied that such a bund would reduce what is likely to be quite a low hazard to a very minimal one (although I would note it would take several years for trees to establish themselves on a bund). I therefore conclude that subject to the provision of appropriate landscaping glint and glare would not be a serious issue with the proposed development.

I note that the TII requested a condition relating to ongoing monitoring of any glint and glare from the proposed development, but I would question as to whether such a condition is practical to apply – other conditions relating to maintaining the bund and establishing landscape screening as rapidly as possible would seem more appropriate to ensure there is no long term impact.

8.11. Noise, amenity and health

The only dwelling close to the site is the landowner's farmstead. I am satisfied that there are no clear views of the site from any dwelling in the vicinity. The main impacts on local residents would be from construction (addressed in subsection 8.13 below). Most houses in the vicinity are on New Road, west of the site. There is scatter of dwellings from the M7 overpass north-west towards Roscrea.

While very rural in context, the area can hardly be considered undisturbed, as it adjoins a busy motorway and there is a windfarm and commercial forestry area on either side. There is no evidence to suggest that solar farms result in amenity impacts outside the immediate environs, except possibly from glint and glare, and I am satisfied that the latter issue will not impact on dwellings in the area.

8.12. Highway access

The appellant has argued that the access road is substandard. The planning authority are satisfied that with agreed alterations it is safe and appropriate. I note that the access road was and continues to be in use for both agriculture and forestry activities. The access appears to have been altered to facilitate the rise in levels of the road in order to bridge the M7. I would consider that both in terms of safety and in general geometry, with the agreed alterations it is a safe and appropriate access for the one-off importation of the solar arrays – in the longer term I would not anticipate the operation of a solar farm to have a significant impact on traffic levels – arguably it would result in fewer heavy vehicles as the existing farm would be de-intensified.

8.13. Construction

The works would include both significant internal earthworks to construct the bund, and the import of the solar arrays and associated equipment. It is not indicated that these would involve oversized loads.

The appellant has argued that the applicant significantly understates the amount of earthworks required for the bunding, and that not all the material (between 6 to 10,000 cubic metres) can be extracted from within the site. The appellant has argued that the figures provided by the applicant do not take account of compaction within the bund.

I note that the site appears to be entirely made up of a thin layer of peaty topsoil (essentially, drained peat) over a very stony till subsoil. This is not the natural ground level, as the original raised bog was probably several metres higher. Given the extent of the site – 58 hectares – then I would consider that even the larger figure of 10,000 cubic metres could quite easily be excavated, either by surface removal or in a number of borrow pits. It would equate to an average of lowering the site levels by 20cm or so. I would also question whether the subsoil – which is very rocky – would have a compaction level of much more than 5% or so. I would note that artificial compaction of a bund above that necessary for stability would not be appropriate for establishing vegetation. I am therefore satisfied that all the bund material can be sourced from within the site, with minimal overall impact on the area.

The importation of solar arrays along with aggregate needed for track and foundation bases would involve a very significant number of lorry trips on the local road network in quite a limited time – the **Traffic Management Plan** submitted with the revised information indicates (**Section 4.0**) that it will take place over a 12-week period in three main phases. Phase I initial preparation would be 3-4 per day on average, while it is estimated that 10 vehicles a day on average would arrive for Phase II, the construction of the arrays. Phase III (grid connection and testing), would average 38 vehicles per week. This would undoubtedly generate noise and disturbance for a period of several months, but having regard to the existing windfarm and forestry operations, and the short term extent of the construction works, I would consider it well within the bounds of normal impacts for such a rural area.

8.14. Heritage and archaeology

The site is entirely land which was formerly raised bog, but was extensively cut and drained over the past century. 19th Century OS plans show a raised bog with extensive areas of standing water. By the early 20th Century the adjoining Nore had been canalised and there is visible evidence of drainage works. The cutting and restoration for agriculture is relatively recent and certainly involved very significant landform alterations and disturbance of natural soil levels.

The applicants submitted a geographical survey and archaeological impact survey with the application. This included a desktop survey and a geophysical survey of extensive areas of the site. There are no recorded ancient monuments on or adjoining the site, but the geophysical survey identified a significant number of anomalies that could be the result of historical use of the bog, such as working bog iron or digging for bog oak. A number of possible enclosures in one field were identified, presumably it is considered possible that these predate the growth of the bog, although this is usually something associated with blanket bog, not raised bog. None of these features are likely to be disturbed by the proposed works (excepting the possible excavation of material for constructing bunds), which generally involve relatively small scale excavations for foundations and some trenching for cabling, etc. I would conclude that any impact on archaeology would be minimal. I would note that the removal of material for the bunding could result in some disturbance of

the possible remains identified in the survey, and so I would recommend a standard archaeological monitoring condition.

8.15. Flooding and hydrology

The site is low-lying, and from available information appears to have flooded in the past. It is intersected with a series of deep drainage ditches and the adjoining Nore is canalised. It is unclear as to whether any flooding is related to the river breaking its banks, or the sites low-lying and flat topography preventing pluvial run-off – I would consider the latter most likely.

The proposal includes the removal of a significant amount of sub and topsoil to create the bunding on the southern side. This will reduce levels, which will presumably increase the possibility of flooding, although the applicant states that this will not be significant. There is no evidence that flooding would impact on the operation of a solar farm, as all the panels will be raised significantly above ground level, and I assume that all electrical apparatus will be appropriately protected. The available information indicates that panels do not significantly reduce run-off from sites, although in other decisions the Board has recommended a SUDS type approach to ensure this is not the situation.

I would consider that flooding is not a risk from the site, with particular regard to the lands long history of use for peat mining and its drainage for agricultural purposes (and the generally low quality of the resulting grazing land). I would recommend a condition such that run-off levels would not exceed that expected from grassed pasture.

8.16. Ecology

The site is much altered from its previous condition and is now almost entirely low grade grazing land, likely to have very low ecological value. There is little available information on the impact of solar farms on ground ecology, although as the land will be used only for very low level agricultural use, it may well increase the quality of the grassland, and the planted bund would have positive values. I will address the issue of the impact on designated habitats in the NIS section below.

8.17. Community Gain/access issues.

The applicant has expressed a willingness to allow limited public access to the site as part of community gain for the site in line with development plan policy. At

present, the overall lands (including the conifer plantation to the north and the windfarm) are private, but it would seem there is some limited use by the public for walking as there are no direct barriers on the various access tracks. I do not consider that public access is necessary to justify such a proposed development, but it is certainly a point in its favour as a mix of such uses would be of interest and educational, especially for local schools. I would recommend that the details of this be agreed later to condition.

8.18. Other issues

I note that a letter from the applicant on file agreed to enter into a bond for decommissioning of the site. The applicant submitted a decommissioning and site restoration plan with the further information request - I would consider the details submitted in this to be acceptable and would form the basis for the bond request. I would recommend a standard bond condition to cover this.

The proposed development is subject to a S.48 development contribution in line with the adopted Scheme.

8.19. Appropriate Assessment

The planning authority carried out a screening and concluded that adverse impacts on an EU designated habitat could not be ruled out, so a Natural Impact Assessment was required. This was submitted with the application and appeal.

The study indicates that there are four Natura 2000 sites within a radius of 15 km of the site, with a fifth site approximately 24 km downriver from the site on the River Nore (the Nore runs past the site). I also note that there are two NHAs in close proximity.

The four designated sites within 15 km are as follows:

Slieve Bloom Mountains SPA site code 00160, 6 km away, the qualifying interest is the hen harrier.

Slieve Bloom Mountains SAC, site code 000412, 14 km away, with qualifying interests including wet heath, blanket bog and alluvial forest.

River Nore SPA, site code 004233, 9 km distant, with Kingfisher as qualifying interest.

Coolrain Bog SAC, site code 002332, 14.5km distant, a raised bog.

The more distant site is the **River Barrow and River Nores SAC**, site code 002162 which is 24 km downstream, with qualifying interests including a wide variety of habitats including tidal mudflats and salt meadows, floating river vegetation, tall herb communities, a variety of freshwater vertebrates and invertebrates, and individual species such as Killarney Fern.

The site survey with the NIS identified a number of locally important habitats within the site, including sections of reed and sedge swamp and bog. The most significant species identified on the site is **otter** (paw prints were noted along the banks of the Nore). The otter is an Annex II species under the Habitats Directive.

The NIS was submitted with additional details on habitat and landscape enhancements and mitigation measures, including specific habitat improvements such as artificial otter holts.

I am satisfied from the information provided that there are no pathways for any impacts on the Slieve Bloom Mountains SAC and SPA and the Coolrain Bog SAC. The obvious existing pathway for impacts or affects is on the Nore and Barrow – the SPA is closest, designated for its kingfisher population, the SAC is further downstream, with its complex network of mostly riverine habitats. I would consider that the key issue is whether the works, or the change of use of the lands, would in itself or in combination with other works, have an impact on river quality or flow and so impact on the qualifying interests of the SAC or SPA.

The applicants have submitted significant information on habitat enhancements on the site. I note that the lands are now almost entirely in use for pasture. I saw no evidence of agricultural pollution of the watercourses during my site visit, but there was also little or no vegetative barriers towards run-off into the ditches. I am quite satisfied that during the operation of the solar farm there should be no quantifiable decrease in the quality of the run-off – in all likelihood it will increase quality significantly due to a de-intensification of agriculture and the provision of additional planted areas as part of the landscaping scheme. The key issue – especially regard with those species dependent on high quality water flows (most notably the riverine vertebrates and invertebrates of the SAC) is run-off during the construction works, in particular the construction of the bund (and excavation of material) and the foundation levels for the array and associated structures. In this regard, I would

note of course that this is an already highly altered floodplain, with the drainage channels (including the Nore itself) having been highly engineered over many years. I am satisfied from the submissions that with standard conditions relating to construction works that the solar array and associated works can be constructed without significant alteration to the water quality or water flow to the Nore, and as such there would be no discernible impact downstream in the designated areas. I also consider that with the proposed mitigation there should be no disturbance to the Annex II species (the otter) on the Nore and that in the longer term the proposed development should improve the overall habitat quality of the site and the river. I consider it reasonable to conclude on the basis of the information on file, which I consider adequate in order to carry out a Stage 2 Appropriate Assessment, that the proposed development, individually or in combination with other plans and projects would not adversely affect the integrity of the European sites reference no's 002162 and 004233. or any other European sites, in view of the sites Conservation Objectives.

9.0 Recommendation

I recommend that subject to the conditions set out below, the proposed development would be in accordance with national and local policy and would not seriously injure the amenities of the area and would otherwise be acceptable for the reasons and considerations set out below.

10.0 Reasons and Considerations

Having regard to the provisions of the North Tipperary Development Plan for the area including the Tipperary Renewable Energy Strategy 2016, and to regional and national policy, it is considered that, subject to compliance with the conditions set out below, the proposed construction of a solar farm would not seriously injure the visual or residential amenities of the area, represent a hazard to traffic on the M7, or negatively impact upon the ecology or cultural heritage of the area and would not constitute a hazard to public health. The proposed development 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 appeal, 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. Details for the provision of managed public access to the site on the completion of the works shall be submitted to the planning authority prior to the activation of the solar farm.

Reason: In the interest of clarity.

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

Reason: In the interest of clarity.

4. All structures including foundations hereby authorised shall be removed not later than 30 years from the date of commencement of the development, and the site reinstated unless planning permission has been granted for their retention for a further period prior to that date.

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

Reason: To enable the planning authority to consider the impact of the

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

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

Reason: In the interest of visual and residential amenity.

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

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

7. All landscaping shall take place in the first planting season upon commencement of development and shall be in accordance with the scheme as submitted to the planning authority by way of further information. The landscaping and screening shall be maintained at regular intervals. Any trees or shrubs planted in accordance with this condition which are removed, die, become seriously damaged or diseased within two years of planting shall be replaced by trees or shrubs of similar size and species to those originally required to be planted.

Reason: In the interest of the amenities of this rural area.

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

Reason: In the interest of preventing flooding.

9. The construction of the development shall be managed in accordance with a Construction Environmental 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 interest of public safety and residential amenity.

10. Site development and building works, including the importation of materials, shall be carried out only between the hours of 0800 to 1900 Mondays to Fridays inclusive, between 0800 to 1400 hours on Saturdays and not at all on Sundays and public holidays. Deviation from these times will only be allowed in exceptional circumstances where prior written approval has been received from the planning authority.

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

11. Cables from the solar arrays to the compound shall be located underground.

Reason: In the interest of visual amenity.

12. The developer shall facilitate the preservation, recording and protection of archaeological materials or features that may exist within the site. In this regard, the developer shall -

(a) notify the planning authority in writing at least four weeks prior to the commencement of any site operation (including hydrological and geotechnical investigations) relating to the proposed development,

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

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

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

Reason: In order to conserve the archaeological heritage of the site and to secure the preservation and protection of any remains that may exist within the site.

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, 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.

Philip Davis

Planning Inspector

10th January 2018