



An
Bord
Pleanála

Inspector's Report ABP-305383-19

Development	Solar PV Panel Array and all Associated Works
Location	Lisbrien, Nenagh County Tipperary
Planning Authority	Tipperary County Council
Planning Authority Reg. Ref.	19600111
Applicant	John Fogarty
Type of Application	Permission
Planning Authority Decision	Grant
Type of Appeal	Third Party v Grant
Appellant	Kieran Timmons
Date of Site Inspection	6 th , May 2020
Inspector	Paddy Keogh

1.0 Site Location and Description

- 1.1.1. The site of the proposed development which has a stated area of c. 8.3 hectares is located c. 4.5 km to the south-west of Nenagh in the townland of Lisbrien. The surrounding landscape is predominantly rural/agricultural characterised by a light scattering of rural dwellings, farmhouses and a local national school. The submitted documentation indicates that the site forms part of a significantly larger land holding in the ownership of the applicant. The entire landholding extends to both the north and south of the application site. The M7 (Dublin to Limerick) Motorway runs c. 2 km to the north of the site. Lisbrien is approached from Junction 26 of the Motorway.
- 1.1.2. The site is currently in use as pastureland. Levels across the site fall away in a southerly direction from a high point at the northern end of the site of c. 125m OD to a lowest point at the southern end of the site of c. 109m OD.
- 1.1.3. The site is bounded to the west and south by existing agricultural lands. The site is bounded to the east for c. 470 m. by a third-class local road (L6065) beyond which lies Lissenhall National School. The site is bounded to the north in part by a public road (L2141 – Nenagh to Capparoe Road) and in part by the rear gardens of dwellings fronting onto this public road.
- 1.1.4. Except for some relatively small gaps, the boundaries of the site are enclosed by mature hedgerow planting.

2.0 Proposed Development

The proposed development consists of a solar farm on a site of c. 8.3 hectares. The proposed development is to generate a maximum of up to 4.96 MW of renewable electricity once the site becomes fully operational. It is proposed that the energy will be exported into the national grid. Details of the site layout and associated works and structures are provided in planning application drawings submitted as part of this application. These include plans, sections, elevations and details of the proposed development which comprises the following:

- The provision of a solar photovoltaic (PV) panel array consisting of 22,500 sq. m. of solar panels on ground mounted steel frames,
- 2 no. electricity control cabins,

- 4 no. inverter units (to convert current generated from DC to AC),
- Underground cable ducts,
- Hardstanding area, boundary security fence,
- Site entrance and access,
- Landscaping,
- CCTV and
- All associated site works.

- 2.1.1. It is proposed to access the development via an existing entrance from the L2141 (Nenagh to Capparoo Road). The public road and site compound will be accessed via a 180m track within the site which will run parallel to existing minor road to the east of the site (L6065).
- 2.1.2. Each solar panel will be placed onto a pre-erected support structure frame comprising a galvanised steel frame. The frames will be arranged in a series of rows which are proposed to be between 3m and 6m apart. The rows will be arranged in an east-west alignment across the site (angled between 20 and 30 degrees) facing south in order to maximise solar irradiance.
- 2.1.3. A 2m high palisade steel gate and deer fencing is proposed for security fencing.
- 2.1.4. A closed-circuit television (CCTV) will be established around the perimeter of the site. 12 no. cameras mounted on 3.9 m. high poles are proposed.
- 2.1.5. The proposed 2 no. control cabins (measuring 20 sq. m. / 3.5 m high & 36 sq. m. / 3.96 m high will be moss green in colour and will be located within the site compound.
- 2.1.6. The 4 no. inverter units will be c. 2.3 m. high and will be located throughout the site.
- 2.1.7. Underground ducting throughout the site will link the inverters to the control cabin at the site compound.
- 2.1.8. An existing 38 KV line traverses the site. A 20 m buffer (containing no solar panels) will be provided beneath this line. An existing 20KV overhead line also traverses the site. It is proposed to underground this line within the site.

2.1.9. Most of the existing boundary hedgerows are to be retained in the proposed development. these will be augmented by additional planting especially along the southern and northern boundaries to residential property.

2.1.10. The application was accompanied by the following:

- A Planning and Environmental Report prepared by McCarthy Keville O’Sullivan accompanied the application lodged with the planning authority. (Sections contained within the report include: Solar Energy & Industry Trends; Statutory Planning Context; Archaeology; Landscape & Visual Assessment; Flora & Fauna; Glint & Glare; Traffic & Transportation; Water & Drainage).
- Noise & Vibration Assessment
- Ecological Impact Assessment
- Archaeological Impact Assessment
- Archaeological Report on Trial Trenching (Reg. Ref. 15/601002 – application subsequently withdrawn)
- Archaeological Report on the Excavation of Burnt Spread
- Appropriate Assessment Screening Report
- Photomontages

2.1.11. A Glint & Glare Assessment accompanied the applicant’s response to the submitted third party appeal

2.2. **Grid Connection**

2.2.1. It is proposed to connect the proposed solar farm to the National Electricity Grid via an existing electrical sub-station (c. 5km to the north-west of the subject site) at Tyone, Nenagh. A grid connection offer has been received by the applicant. Two separate options are proposed.

OPTION A: This involves a 5.1 km. underground cable route between the site any the sub-station at Tyone. The underground cable will be laid in the existing public road corridor along the L2141, Stafford Street, Nenagh and the R498. The proposed route will traverse a culverted section of a minor tributary of the Nenagh River. No culvert alteration/instream works are required.

OPTION B: This involves connecting to an existing overhead 38KV power line which crosses the application site.

2.2.2. Option B is stated to be the preferred option.

2.2.3. Both Option A and Option B have been included and assessed in the Appropriate Assessment Screening Report submitted with the application.

3.0 Planning Authority Decision

3.1 Decision

3.1.1. Notification of a decision to grant planning permission for the proposed development subject to 14 conditions issued from the planning authority per Order dated 15th, August 2019.

3.1.2. The planning permission was granted with a life of 5 years.

- Condition No. 5 stipulated that the planning permission was granted for a period of 25 years from the date of commissioning of the Solar farm.
- Condition No. 3 states:

Prior to the commencement of development, final format, dimensions and precise location of the proposed control cabins, inverter units and Solar PV Modules/Panels shall be submitted for written agreement of the planning authority. The control cabins and inverter units shall be dark green in colour.

Reason: *To clarify the terms of this permission.*

- Condition No. 6 requires that boundary landscaping proposals be carried out within the first planting season following the commencement of the construction of the solar PV array and that additional screening and/or planting shall be planted to ensure that there is no glint impact on adjoining dwellings/schools/roads as a result of the proposed development together with a requirement for glint impact monitoring for a period of 2 years following commissioning of the development.

- Condition No. 8 states:

Security lighting shall be angled and constructed to as to reduce, as far as possible, the light scatter and to ensure that no glare is caused to users of the public road/railway in the vicinity of the site.

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

3.2. Planning Authority Reports

3.2.1. Planning Reports

3.2.2. A report from the planning authority Senior Executive Planner dated 1st, April 2019 includes:

- The principle of the development of renewable energy resources is fully supported by policy set out in the County Development Plan.
- An Archaeological Impact Assessment was submitted by the applicant. The contents of this report are generally considered to be acceptable. The impacts on archaeological sites in and adjacent to the appeal site are deemed to be acceptable subject to the mitigation measures recommended in the report (the support frames for solar panels be mounted on precast concrete shoes to reduce impact on the ground, screen planting etc.).
- The proposal will be visible from outside the site boundaries. However, it is considered that visual impacts are acceptable taking into account the existing character of the area which consists of a rolling landscape with strong field boundaries.
- The findings of the report submitted by the applicant that the proposed development will not present detrimental impact on the surrounding area in terms of glint and glare are accepted.
- It is considered that the section of road from the junction of the Newport Road (outside Lissenhall National School) to the site is very narrow and in poor condition. Therefore, proposals for the resurfacing/upgrading of the road to facilitate construction traffic associated with the proposed development should be sought.

- The contents of the report submitted by the applicant in relation to surface water drainage arrangements are generally considered to be acceptable.
- The findings of the report submitted by the applicant that the proposed development will not have a significant impact in terms of noise are generally accepted. However, further details are required in respect of the impact of the proposed development arising from a potential issue of wind channelling and potential noise impact during the decommissioning phase.
- The submitted documentation indicates potential for variance to the design of the proposed development (at construction phase) in terms of potential for variation in the dimensions and location of control panels, variation in the dimensions and location of inverter units and variation to the size, appearance and characteristics of particular solar panels (depending on the manufacturer). Details of these potential variations should be submitted for assessment.

3.2.3. The report from the Senior Executive Planner dated 1st, April 2019 concludes by recommending that 8 items of further information be requested from the applicant. These relate to (i) Traffic, (ii) Noise, (iii) Restoration, (iv) Control Cabins/details of potential variation, (v) Inverter Units/details of potential variation, (vi) Solar PV modules/details of potential variation, (vii) Security fencing/details of type and colour and provision of gap at bottom to facilitate mammal movement etc. and (viii) details of proposed access arrangements to the former quarry field.

3.2.4. A subsequent report from the planning authority Senior Executive Planner dated 15th, August 2019, following the receipt of further information submissions from the applicant on 20th, May 2019 and 25th, July 2019 states that the applicant has addressed all items on the further information request and, therefore, the proposed development which is in line with policy is considered to be acceptable.

3.2.5. The planning authority decision to grant planning permission for the proposed development reflects the recommendation of the Senior Executive Planner.

3.2.6. Other Technical Reports

- **District Engineer:** No report.
- **Chief Fire Officer:** No report.

- **Environment Section:** No written Report. The report from the planning authority Senior Executive Planner dated 1st, April 2019, states that a verbal report was received 29th, March 2019 from the Environment Section stating that there was no objection to the proposed development subject to conditions concerning a requirement for a Construction and Environmental Management Plan, noise and details relating to fencing and wildlife movement.

3.3. Prescribed Bodies

- **An Taisce:** No report.
- **Heritage Council:** No report.
- **Minister for Culture, Heritage & The Gaeltacht:** No report.
- **Commission for Energy Regulation:** No report.
- **Southern & Eastern Regional Assembly:** No report.

3.4. Third Party Observations

3.4.1. Third party observations outlining grounds of objection to the proposed development were received by the planning authority from the following 12 parties (all with local addresses):

- (1) Maureen & Sean Gallagher
- (2) Tom Ryan
- (3) Graeme Quirke
- (4) Marianne Cusack
- (5) Kieran Timmons
- (6) Aíne Ryan Cazac
- (7) Gabrielle Timmons & Ciaran Timmons
- (8) Pauline Timmons
- (9) T. Timmons
- (10) Megan Timmons

(11) Ciaran Timmons Jnr. And

(12) Kieran & Louise Slattery

3.4.2. The submitted observations consist of a pro-forma letter/submission. The grounds of objection include:

- **Health Concerns** – The electromagnetic fields (EMF's) created by the proposed solar array give rise to long term safety concerns. EMF's are a recognised contributor to autism. The former Norwegian Prime Minister and former Director General of the World Health Organisation (Dr. Gro Harlem) has publicly admitted that she has no doubt as to the adverse health effects of EMF's. There are houses in close proximity to the proposed development and Lissenhall National School is adjacent to the site. In this context the proposed development is unacceptable. [The proposed development will devalue houses and house prices in the area.].
- **Visual Impact** – The photomontages submitted with the application do not accurately reflect the visual impact of the proposed development. No Zone of Theoretical Visibility has been indicated. The development will have a negative visual impact when viewed from nearby dwellings and from more distant vantage points. The site is located within an attractive area for walking and used when taking school children on nature walks. It is a safe and unspoiled route for children.
- **Environmental Impact** – The development will be out of character with the areas and will not sit sympathetically within its overall landscape context. The scenic quality and high degree of visual exposure of the land at this location deem it to be a sensitive landscape. The character of the landscape in the area has already been damaged by mining in the past.
- **Planning**: In the absence of national guidance for large scale solar developments, the proposal is a step into the unknown. Wind energy developments have already been successfully established in the area. In the absence of national guidelines, the British guidelines (*Planning Guidance for the development of large scale ground mounted solar PV systems – BRE 2013*) have been cited by the developer. The proposed development does not comply with many of the standards established in these guidelines e.g.

excessive distance to the substation at Tyone for grid connection, site area below the recommended minimum (25 acres), proximity to registered airfield etc.

- **Archaeology:** There are four recorded monuments in proximity to the site. It is therefore an archaeologically sensitive site. There is no national guidance in relation to solar energy developments adjacent to archaeological sites. The archaeological appraisal submitted by the applicant refers to guidance relating to Wind Farms. These are not relevant in the case of Solar Farms.
- **Community Involvement:** There has been no consultation by the applicant with the local community regarding this significant development.
- **Glint & Glare:** Solar PV panels are designed to absorb not reflect solar irradiation. Nonetheless, glint and glare are still resultant impacts with potential to effect local residents, a registered local airfield (Erinagh), Capparoo and motorists on the M7 Motorway. Documentation that has been extrapolated from Solar Farms in the USA and relied upon by the applicant is totally irrelevant in the context of the current application.
- **Inappropriate Use of Agricultural Land:** The use of good quality agricultural land (as in the current case) for a Solar Farm is sacrilege. In other countries Solar Farms are constructed on brownfield sites and industrial sites or on poor quality disused agricultural land.
- **Tracking System:** The optimal operation of a Solar Farm relies upon the use of a 'Tracking System' - to track the daily movement of the sun across the sky in order to maximise solar gain. A tracking system cannot be used at the site of the proposed development due to the location of the site too close to known flight paths. Thus, output from the proposed development will be sub-optimal.
- **Lifespan and Site Restoration:** No reassurances have been provided that funding will be available to restore the site for agricultural use following the retirement of the Solar Farm.

- **Operation and Maintenance:** An in-depth Operational and Maintenance Plan is essential to the successful operation of the proposed facility. Details of such a plan have not been provided by the applicant.
- **Safety:** A number of safety matters pertaining to the proposed development have not been satisfactorily addressed by the applicant viz. increased traffic; solar arrays attract lightening strikes; protection of solar panels from vandalism; potential for surface water run-off to have a high level of irradiation; potential of escape of highly toxic heavy metals from within solar panels in the event of damage to the panels.
- **Construction & Environmental Management Plan:** The Construction and Environmental Management Plan submitted by the applicant lacks detail.
- **Noise:** Potential for the generation of noise nuisance especially during the construction phase.
- **Quarrying:** Planning permission was obtained per Reg. Ref. 06510825 for the infilling of a disused quarry on the site. No reference to this permission has been made by the applicant.

4.0 Planning History

- 4.1.1. Reg Ref. 15/60/1002 – Application to the planning authority for planning permission for a solar panel array consisting of up to 31,500 sq. m. of solar panels on ground mounted steel frames, 2 no. electricity control panels, 5 no. inverter units, underground cable ducts, hard standing area, boundary security fence, site entrance, landscaping, CCTV and all associated site on a site incorporating the site of the current proposal. Application WITHDRAWN.
- 4.1.2. Reg. Ref. 06510825 - Planning permission granted by the planning authority in September 2006 to retain and complete filling of land (disused quarry) consequent on a grant of Waste Permit WP-TN-72. These lands are within the wider application. No part of the proposed solar array is located within the disused quarry.
- 4.1.3. There is no record of further recent planning history on the appeal site or adjoining lands.

5.0 Policy Context

5.1. UK Guidelines

There is a range of UK Guidance. The main guidance notes are '*Planning Practice Guidance for Renewables and Low Carbon Energy (DCLG 2013)*' and '*Planning Guidance for the development of large scale ground mounted Solar PV systems (BRE 2013)*'. Both refer to the desirability of preserving good agricultural lands and set out issues and mitigations. The BRE Guidance provides advisory information on planning application considerations including construction and operational works, landscape / visual impact, ecology, historic environment, glint and glare and duration of the planning permission. The document also provides guidance on the information which should be provided within a Landscape and Visual Impact Assessment. The document also provides guidance on EIA Screening procedures.

5.2. National Guidelines

5.2.1. National Planning Framework 2040

- A key element of Ireland 2040 is to support and strengthen more environmentally focused planning at local level. The Framework states that *the future planning and development of our communities at local level will be refocused to tackle Ireland's higher than average carbon-intensity per capita and enable a national transition to a competitive low carbon, climate resilient and environmentally sustainable economy by 2050, through harnessing our country's prodigious renewable energy potential.*
- **National Strategic Outcome 8** states that it is an objective to *deliver 40% of our electricity needs from renewable sources by 2020 with a strategic aim to increase renewable deployment in line with EU targets and national policy objectives out to 2030 and beyond. It is expected that this increase in renewable deployment will lead to a greater diversity of renewable technologies in the mix.*
- **National Policy Objective 55** seeks to *promote renewable energy use and generation at appropriate locations within the built and natural environment to meet national objectives towards achieving a low carbon economy by 2050.*

5.2.2. National Development Plan 2018 – 2027

- Published in tandem with the National Planning Framework, the National Development Plan recognises that in order to ensure the integrity of the state in achieving renewable energy resilience, a fundamental shift is required to shape the ways in which energy **is produced**.

5.2.3. The Government White Paper entitled 'Ireland's Transition to a Low Carbon Energy Future 2015 – 2030', published in December 2015

- The White Paper is a complete energy policy update, which sets out a framework to guide policy between now and 2030. The vision of the White Paper is to achieve a low carbon energy system that targets greenhouse gas (GHG) emissions from the energy sector that will be reduced by between 80% and 95%, compared to 1990 levels, by 2050, and will fall to zero or below by 2100. However, it does not supersede the NREAP (National Renewable Energy Action Plan), which set out Ireland's approach to achieving its (legally binding) targets, with a target of 40% of electricity consumption to be from renewable sources by 2020.
- Paragraph 137 of the White Paper states '*solar photovoltaic (PV) technology is rapidly becoming cost competitive for electricity generation, not only compared with other renewables but also compared with conventional forms of generation. The deployment of solar in Ireland has the potential to increase energy security, contribute to our renewable energy targets, and support economic growth and jobs. Solar also brings a number of benefits like relatively quick construction and a range of deployment options, including solar thermal for heat and solar PV for electricity. It can be deployed in roof-mounted or ground-mounted installations. In this way, it can empower Irish citizens and communities to take control of the production and consumption of energy. Solar technology is one of the technologies being considered in the context of the new support scheme for renewable electricity generation which will be available in 2016*'.
- The White Paper also sought to publish a Renewable Electricity Policy and Development Framework (with a spatial dimension) to underpin the proper planning and development of larger scale renewable electricity generation

development on land. It is envisaged that such a plan will give guidance to those seeking development consent and to planning authorities in relation to larger-scale onshore renewable electricity projects.

5.2.4. National Climate Change Strategy 2007-2012

- Under the Kyoto Protocol and as part of its contribution to the overall EU target, Ireland agreed to a target limiting its greenhouse gas emissions to 13% above 1990 levels over the period 2008-2012. The National Climate Change Strategy 2007-2012 sets out a range of measures, building on those already in place under the first National Climate Change Strategy (2000), to ensure Ireland reaches its target under the Kyoto Protocol. The Strategy provides a framework for action to reduce Ireland's greenhouse gas emissions in the areas of energy, transport, housing, industry, agriculture and waste as well as cross-sectoral actions. Local authorities are key agents for change at the local level in achieving target reductions.

5.2.5. Strategy for Renewable Energy: 2012-2020 - Department of Communications, Energy and Natural Resources (DCENR) (2012)

- The Government's overriding energy policy objective is to ensure competitive, secure and sustainable energy for the economy and for society.
- The development of renewable energy is central to overall energy policy in Ireland. Renewable energy reduces dependence on fossil fuels, improves security of supply, and reduces greenhouse gas emissions creating environmental benefits while delivering green jobs to the economy, thus contributing to national competitiveness and the jobs and growth agenda.
- Climate change, energy security and competitiveness are inter-related challenges that will be addressed through the transforming of Ireland's economy from one based on a predominantly import based fossil fuel dependence to a more indigenous low carbon economy based around energy efficiency, renewable energy and smart networks.
- The Government's overarching strategic objective is to make renewable energy an increasingly significant component of Ireland's energy supply by 2020, so that at a minimum we achieve our legally binding 2020 target in the most cost efficient manner for consumers.

5.2.6. **National Renewable Energy Action Plan (NREAP)**

- The EU Renewables Directive 2009/28/EC promotes the use of energy from renewable sources and sets the EU's 20% renewable energy target by 2020. Ireland was set a renewable energy target of 16% target by 2020. The National Renewable Energy Action Plan sets out the Government's strategic approach and concrete measures to deliver this target which includes:
 - 40% of electricity consumption from renewable sources by 2020.
 - 10% electric vehicles by 2020
 - 12% of renewable heat by 2020

5.2.7. The Government is also looking beyond 2020 in terms of the significant opportunities to develop Ireland's abundant offshore renewable energy resources, including offshore wind, wave and tidal energy.

5.3. **Mid-West Regional Planning Guidelines 2010 – 2022**

5.3.1. Solar energy is not directly referenced in the Guidelines. However, the region is recognised as having high potential for the provision of renewable energy.

5.3.2. Section 2.2.3 states:

'...the Vision stated in the Guidelines proposed that; "the high potential of the Region for the provision of renewable energy.....would be harnessed to the benefit of the economy and the environment alike'.

5.3.3. Section 4.1.8 states:

In order for the potential of the Region with regard to renewable and sustainable energies to be realised it will be necessary that a coordinated strategy is adopted across the various parts of the Region. The Region should adopt appropriate strategies to enable it to benefit from this very significant natural resource and to become a leader in the provision of renewable energies.....

5.4. **North Tipperary County Development Plan 2010 – 2016 ('the Development Plan')**

5.4.1. Tipperary Co. Council was established on 1st, June 2014 (amalgamation of North and South Tipperary). Following the establishment of Tipperary Co. Council the Development Plans for both North Tipperary and South Tipperary had their lifetimes

extended and will remain in effect until a new Regional Spatial and Economic Strategy is made after which a new Tipperary County Development Plan will be prepared.

5.4.2. The North Tipperary County Development Plan 2010 – 2016, as varied, remains in force.

5.4.3. Section 2.4 'Strategic Core Aims of the Plan' includes in relation to 'Climate Change, Energy and Flooding' (Chapter 8):

'To ensure that the county continues to be a leader in addressing climate change through the facilitation of appropriately located renewable energy developments and through supporting energy efficiency in all sectors of the economy'.

5.4.4. Section 8.4.4 states:

'The Council supports the installation of solar systems on existing and new housing, public buildings and as commercial purpose built installations.....Commercial scale proposals should consider how the overall facility would affect the visual quality of the area'.

5.4.5. Policy 'CEF6 : Solar Energy', states:

'It is the policy of the Council to promote and 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'.

5.4.6. Policy 'TI12 : Noise Emissions', states:

'It is the policy of the Council to ensure that new development does not result in significant noise disturbance and to ensure that all new developments are designed and constructed to minimise noise disturbance in accordance with the Noise Action Plan 2013, the Development Management Standards set out in Chapter 10 and relevant standards and guidance that refer to noise management'.

5.4.7. Policy 'LH1 : Landscape Policy and Protection', states:

'It is the policy of the Council to facilitate new development which integrates and respects the character, sensitivity and value of the landscape in accordance with the designations of the County Landscape Character Assessments'

5.4.8. Policy 'LH16 : Archaeology & Cultural Heritage', states:

'It is the policy of the Council to safeguard sites, features and objects of archaeological interest, including monuments on the Sites and Monuments Record (SMR), the Record of Monuments and Places (as established under Section 12 of the National Monuments (Amendment) Act, 1994) and archaeological remains contained within Zones of Archaeological

Protection (ZAPs) located in historic towns and other urban and rural area...’.

5.5. **Natural Heritage Designations**

- The Silvermines Mountains West Special Area of Conservation (SAC) (Site Code 004058) is located c. 4.6 km to the south of the appeal site.
- Silvermines Mountain SAC (Site Code) 000939 is located c. 4.8m to the south of the appeal site.
- The Lower River Shannon SAC (Site Code 002165) is located c. 6 km to the south-west of the appeal site.
- Bolingbrook Hill SAC (Site Code)002124 is located c. 6 km south-east of the appeal site.
- Keeper Hill SAC (Site Code 001197) is located c. 7 km. south-west of the appeal site.
- Lough Derg North-East Shore SAC (Site Code 002241) is located c. 13 km north of the appeal site.
- The Lough Derg (Shannon) Special Protection Area (SPA) is located c. 8 km to the north-west of the appeal site.
- The Slievefelim to Silvermines Mountains SPA (Site Code 4165) is located c. 4.2 km to the south of the appeal site.

5.6. **EIA Screening**

- 5.6.1. Under the Planning and Development Regulations 2001 (as amended), current government and EU guidance, the Planning Authority must screen the proposed development for Environmental Impact Assessment (EIA) and decide if the planning application for the proposed development does or does not require the preparation of an Environmental Impact Assessment Report (EIAR).
- 5.6.2. The current requirements for EIA are outlined in Part X of the Planning and Development Act, 2000, as amended and Part 10 of the Planning and Development Regulation 2001, as amended. The prescribed classes of development and thresholds that trigger a mandatory EIS are set out in Schedule 5 of the Planning and Development Regulations 2001, as amended.

5.6.3. The proposed development does not fall into a class of development contained in Schedule 5, Parts 1 or 2 and therefore the requirements for an EIA can be screened out.

6.0 The Appeal

6.1. Grounds of Appeal

6.1.1. The submitted grounds of appeal include:

- *Glint & Glare:*

6.1.2. Glint and glare from the proposed development has the potential to create nuisance for local residents, the enjoyment of the landscape by recreational users and gives rise to safety concerns for road users (particularly the M7 Motorway to the north of the site). No glint and glare study has been submitted by the applicant. Condition No. 3 of the planning authority notification of decision to grant planning permission leaves the details of final design of the proposed solar panels open.

- *Visual Impact:*

6.1.3. The proposed development will be visible in the landscape from a number of vantage points including from the M7 Motorway. The visual impact of the proposed development will be exacerbated by the problem of glint and glare. The planting of trees to mitigate the glare from the proposed panels has not been proposed. Based on the requirements of Conditions No. 3 & 6 attached to the planning authority notification of decision to grant planning permission the applicant is unclear as to what exactly has been granted by the planning authority (this lack of clarity runs contrary to the '*Development Management Guidelines for Planning Authorities*' issued in the 2007).

- *Security:*

6.1.4. Condition No. 8 attached to the planning authority notification of decision to grant planning permission would appear to allow for security lighting to be illuminated on a 24/7 basis. Lighting continuously on will be a source of nuisance for local residents. It is disappointing that no 'dark sky' policy was implemented in the project.

- *Noise:*

6.1.5. The proposed development includes 4 no. local inverters. The submitted noise study assumes localised measures to ensure compliance with noise standards. This is not acceptable. Other solar farms require that inverters are located within properly constructed noise absorbent buildings. Condition No. 3 attached to the planning authority notification of decision to grant planning permission leaves scope of the location of inverters anywhere within the site including locations along the site boundary (adjacent to houses) and where the inverters will potentially be unsightly and generate noise nuisance at the boundary of the site.

- *Radio Frequency Interference (RFI) & Health*

6.1.6. The applicant has not properly demonstrated how RFI generated by high voltage equipment will be kept below acceptable limits.

- *Construction Traffic:*

6.1.7. Having regard to the rural nature of the area and the local road network it is submitted that the local road network cannot accommodate the construction traffic that would be associated with a development of this nature. There is a primary school that caters for c. 120 pupils located c. 20 m from the appeal site. The additional construction traffic associated with the proposed development poses a threat in terms of safety of the school and road users in the area.

- *Disused Quarry:*

6.1.8. The planning authority has endorsed the filling of a disused quarry (part of the site) without adequate assessment. Planning permission should have been obtained for the filling of the quarry.

- *Special Protection Area (SPA):*

6.1.9. The 'Wildlife Study' undertaken at the site failed to take account of birds of prey that were nesting in a Ring Fort adjacent to the site for the previous 4 years. These birds may have migrated from the Slieve Felim/Silvermines Mountains area. The SPA associated with the latter area is c. 4.2 km from the site. The Hen Harrier is a protected bird in the SPA. Installing solar panels at this location would not be in keeping with the conservation and protection of birds due to the high numbers of bird strikes these panels receive.

- *Archaeology & Heritage:*

6.1.10. The site of the proposed development is an elevated site with 5 Ring Forts within 400m radius of the site. These Ring Forts create a sense of place within the locality which should give a protection to the landscape under the provisions of the '*Tipperary Landscape Character Assessment 2016*'.

- *Silvermines Parish:*

6.1.11. Silvermines parish has suffered (and continues to suffer) landscape degradation as a consequence of historic mining activity in the area. The parish should not have to suffer due to further poor planning decisions. Alternative less environmentally damaging renewable energy scheme could be pursued in the area (e.g. an already mooted hydro scheme for the area).

6.2. Applicant Response

6.2.1. A submission from the applicant's agent, received by the Board on 8th, October 2019, in response to the submitted grounds of appeal, includes:

- An overview of the proposed development.
- An overview of National Policy & Guidelines, Regional Policy and Local Policy.

- *Glint & Glare:*

6.2.2. A '*Glint & Glare Assessment*' prepared by Macroworks accompanied the applicant's submission in response to the submitted grounds of appeal.

6.2.3. The submitted response to the grounds of appeal highlight Section 2.1.3 of the '*Planning & Development Guidance Recommendations for Utility Scale Solar Photovoltaic Schemes*' published by the Sustainable Energy Authority Ireland (SEAI) which states that:

As solar PV is specifically designed to absorb light rather than reflect it, glint and glare is therefore a relatively rare issue and is site specific. Glare is significantly less intense than glint. In the case of PV arrays, glint and glare are minimal. PV modules are found to reflect the same amount of sunlight, similar to or less than water bodies.....Internationally solar arrays have

been installed near airports [including].....London's Gatwick Airport.....Belfast International Airport, demonstrating that with good design glint and glare is not an issue for sensitive receptors.

6.2.4. The site is elevated above the surrounding roads and well enclosed by mature hedgerows. This will help screen the panels from view from nearby vantage points and will mitigate against any potential glint and glare which might occur. In a precedent Board decision (ABP-300596-18) the Board's Planning Inspector pointed out that *'in the UK context at least, there are numerous examples of large scale solar developments placed adjacent to motorways without any impact on traffic safety..'*

6.2.5. The submitted Glint and Glare Assessment makes it clear that PV solar panels are by no means a highly reflective surface and are designed to absorb sunlight and not reflect it. The assessment provided considers the impact of the proposed development on glint and glare and transport route receptors within 1 km of the proposed development and included additional locations outside the study area taking into consideration the specific locations raised by the appellant (including airfields/airstrips at 'Erinagh' and 'The Forge'). This report concludes that there will not be any significant nuisance effects from glint and glare at dwellings within the study area. Furthermore, it is considered highly unlikely that there will be any hazardous glint and glare effects upon either road, rail or aviation receptors resulting from the proposed solar farm.

- *Visual Impact:*

6.2.6. The appellant expressed concern in relation to the visual impact of the proposed development on the M7 motorway. The motorway passes c. 4km. to the west of the appeal site and c. 2 km to the north of the appeal site. Users of the motorway will not have full visibility of the site. Furthermore, motorway users only experience fleeting glimpses of an object due to motorway speed.

6.2.7. The appellant has expressed concerns in relation to the visual impact of the proposed development from 3 other vantage points (i) the Silvermines Mountains, (ii) Tony O'Brien's house – c. 1.3 m to the west of the appeal site and (iii) the Tulla Road. Photomontages submitted with the application to the planning authority indicate the visual impact of the proposed development when viewed from 4 different vantage points (previously agreed with the planning authority). These vantage points include

a location in the Silvermines mountains. The analysis accompanying the Photomontages concludes that the proposed development will be imperceptible in the landscape when viewed from this location. In relation to both Tony O'Brien's house and the Tulla Road it is pointed out that the submitted Glint & Glare Assessment concluded that neither of these locations will suffer as a consequence of any significant glint and glare. Similarly, it is not accepted that the solar farm will be visually obtrusive in the landscape or give rise to injury to the visual amenities of the area.

6.2.8. It is submitted that neither Condition No. 3 nor Condition No.6 attached to the planning authority notification of decision to grant planning permission (each being necessary, relevant to planning, relevant to the development to be permitted, enforceable, precise and reasonable) contravene the requirements of the Development Management Guidelines.

- *Security:*

6.2.9. No security lighting has been proposed as part of the proposed development. Should security lighting be deemed to be necessary (as alluded to in Condition No, 8 of the planning authority notification of decision to grant planning permission) the only position that such lighting would be necessary is at the site entrance. Consideration could also be given to lighting in the vicinity of the control cabins. In the event that the provision of such lighting is a requirement of the Board then such lighting should be operated by motion sensors in order to avoid light pollution.

- *Noise:*

6.2.10. Solar panels, when operational, are static and do not emit any noise. The proposed development will emit virtually no noise or other emissions. The panels contain no moveable parts and once in-situ there will be no interference with the panels. 4 no. converter units. The inverters require some cooling. A fan noise may be perceptible to people standing in close proximity to the converter units. The inverter units will be c. 2.3m. high. Each converter unit will be enclosed on three sides by bunding extending c. 0.5m above the height of the units. It is proposed that the inverter units will be enclosed with typical casting in accordance with standard specifications and practices for development of the nature being proposed.

6.2.11. The contention by the appellant that the proposed inverter units can be moved to any location within the site is incorrect. The location of inverter units is constrained by the

overall layout of the solar panel array and by the proximity to noise sensitive receptors (houses). It is proposed that a micro siting analysis for the inverters will be decided in conjunction with the planning authority. This will facilitate possible minor shifts in the location of solar panels and inverters to allow for any micro changes that might be required having regard to any advances that might occur in the technology relating to solar panels between the date of grant of planning permission and the date of commencement of the proposed development.

6.2.12. A 'Noise and Vibration Assessment' accompanied the application lodged with the planning authority. This report addresses issues relating to potential noise nuisance in both the construction and operational phase of the proposed development. The submitted grounds of appeal only relate to concerns in relation to noise during the operational phase. The 'Noise and Vibration Assessment' was based on consideration of baseline noise levels recorded at three locations measured in accordance with best practice issued by the Environmental Protection Agency (EPA). Based on an assessment of the impact of the 4 no. inverters at each of the measuring location it was concluded that predicted noise levels generated by the proposed inverters will be 20 to 28 dB(A) below typical daytime noise criterion identified in the EPA Guidance, 15 to 18 Db(a) below the typical evening time levels and 10 to 13 dB(A) below typical night time levels. The 'Noise and Vibration Assessment', thus, concludes that the proposed development will have no significant impact on the residential amenity of dwellings in the area as a consequence of noise nuisance.

- *Radio Frequency Interference (RFI) & Health*

6.2.13. No adverse health impacts are known to be associated with Solar Farms. The appellants concerns in relation to adverse health impacts as a consequence of RFI are unfounded. The electrical infrastructure for the solar farm is low voltage and lower voltage than the substation and grid connection. Any concerns are confined to potential injury to persons coming in contact with the high voltage equipment. This is a health & safety matter rather than a generalised public health concern relating to persons being impacted from a localised electromagnetic field (EMF). Standard, industry recognised, good practices in relation to health & safety will be adhered to throughout the development. There are currently no national guidelines in relation to solar energy in Ireland. Solar farms are not known to pose any particular health threat to members of the public. The results of current scientific research show that there are

no evident adverse health effects if exposure remains below the levels recommended by EU legislation. [A report from the Scientific Committee on Emerging and Newly Identified Health Risks (SCENIHR) on '*Potential Health Effects of Exposure to Electromagnetic Fields*' published in 2015 concludes that there are no significant risks to human health associated with exposure to Extremely Low Frequency (ELF) EMFs].

- *Construction Traffic:*

6.2.14. The public road serving the site (from the M7 Motorway) is deemed to be wholly suitable to accommodate the traffic movements that will be generated during the construction phase. The level of HGV movements associated with the proposed development during the construction phase is minimal (c. 4-6 HGV movements to and from the site per week) plus light vehicles movements consisting of c. 6 to 10 cars in the morning and again in the evening (used by construction workers). The local road network is well capable of accommodation this traffic without the need for upgrading. A Construction Management Plan will be put in place which will ensure that traffic movements during school hours will be minimised. The issue of construction traffic was addressed by the planning authority in terms of the documentation lodged with the original application to the planning authority and in the context of further information submitted to the planning authority. The planning authority were quite satisfied (subject to conditions attached to their notification of decision to grant planning permission) that there would be no serious adverse impacts on the area as a consequence of construction traffic movements. Traffic during the operational phase will be minimal.

- *Disused Quarry:*

6.2.15. The former quarried area occupied a c. 0.492 ha. of the wider application site. Planning permission was granted by the planning authority per Reg. Ref. 06/510825 in September 2006 to retain and complete the infilling of this land consequent on Waste Permit Ref. WP-TN-72. Spoil material from the construction phase of the Solar Farm could be used to reinstate the formerly quarried portion of the site with the overall intention being to return the site in its entirety to rough agricultural grazing land.

- *Special Protection Area:*

6.2.16. An Appropriate Assessment Screening Report (AASR) and an Ecological Impact Assessment were undertaken prior to the submission of the planning application.

These reports accompanied the application to the planning authority. The AASR was conducted by a suitably qualified expert and concluded that the proposed development does not have potential for significant effects on the Qualifying Interests (QI) and Special Qualifying Interests (SQI) of any European Site as a result of direct or indirect impacts. In relation to the Slievefelim to Silvermines Mountain Special Protection Area (Site Code 004165) which is c. 4.2 km from the site and within which the Hen Harrier is designated as a QI the AASR concludes the development will have no direct or indirect effects. A 2014 policy briefing by the Royal Society for the Protection of Birds (RSPB) in the United Kingdom concluded that *'if correctly sited (so as not to impact on sensitive sites and species) and with appropriate land/habitat management and other mitigation measures employed, the deployment of solar could be of benefit to wildlife and the wider countryside. There is little scientific evidence for fatality risks to birds associated with solar PV arrays'*. A review undertaken by Natural England (2017) cites authority (DeVault, 2014) for the fact that despite conducting 515 bird surveys at solar PV sites no evidence for bird casualties (panel strikes) was found.

- *Archaeology & Heritage:*

6.2.17. The site of the proposed development is not covered by any archaeology, heritage or conservation designations. There are 4 no. ringforts surrounding the site (one to the west, two to the south and one to the south-west. An Archaeological Impact Assessment was prepared for the earlier planning application in 2015 for a solar array at this location (Reg. Ref. 15/60/1002). This latter planning application which sought planning permission for 31,500 sq. m. of solar panels was significantly larger than the current proposal. The application was subsequently withdrawn in circumstances where there were concerns relating to the proximity of some of the proposed solar panels to the ringforts and potential archaeological remains. These concerns have been taken into consideration in the current proposal the layout of which has been devised in order to provide adequate separation distance from the ringforts.

6.2.18. There is a proliferation of medieval ringforts in the wider vicinity of the site. Development has been permitted in very close proximity to many of these historic sites. Farming practices in the area (as elsewhere in the country) up to the boundaries and in many cases through the ringforts.

- *Silvermines Parish:*

6.2.19. Solar development is an appropriate intervention in the area and will not impact on the character of the area. The 2009 *Landscape Character Assessment* (prepared on behalf of the planning authority) was updated in 2016. The most recent statement describes the Nenagh Corridor as landscape area 'A1' characterised by 'Plains, Lowland Pasture and Arable' lands. The objective for this area is to improve the appearance and character of the area. Agriculture, Forestry, Housing and Urbanisation and Infrastructure are all considered to be compatible uses within the area. The Nenagh Corridor within which the site is located is considered '*a high capacity/low sensitivity, Class 1 Landscape i.e Change or development generally acceptable – subject to all other relevant objectives and policies...*'. The introduction of temporary structures in this location which will positively contribute to Ireland's climate change target and overall thrust of national policy will not significantly detract from the landscape character of the area.

6.2.20. At the end of the life of the Solar Farm (25 years) the various components of the enterprise will be removed from the site over a period of c. 6 weeks and the site will begin to naturally regenerate. Many of the components of the wind farm will be recyclable.

6.3. **Planning Authority Response**

6.3.1. A submission from the planning authority per letter dated 17th, September 2019 states that the planning authority have examined the appeal submissions and have no further observations to make in relation to the appeal.

7.0 **Assessment**

7.1.1. The main issues in this appeal are those raised in the grounds of appeal and I am satisfied that no other substantive issues arise. The issue of appropriate assessment also needs to be addressed. The issues can be dealt with under the following headings:

- (1) Glint & Glare
- (2) Visual Amenity
- (3) Noise

- (4) Construction Traffic
- (5) Archaeology & Heritage
- (6) Other Matters
- (7) Appropriate Assessment Screening

(1) Glint & Glare

- 7.1.2. The submitted grounds of appeal argue that glint and glare from the proposed development has the potential to create nuisance for local residents, the enjoyment of the landscape by recreational users and gives rise to safety concerns for road users (particularly the M7 Motorway to the north of the site and nearby airfields/airstrips). No glint and glare study has been submitted by the applicant.
- 7.1.3. It should be noted that a 'Glint & Glare Assessment' (G&GA) prepared by Macroworks accompanied the applicant's submission in response to the submitted grounds of appeal. In this respect, the appellant's concerns in relation to the lack of such an assessment have been remedied. The assessment relates to a study area to the south, west and east of the proposed solar array (given the angle at which it is proposed to mount the solar array facing in a southerly direction it will not be geometrically possible to glint and glare impacts to the north of the site).
- 7.1.4. As has been pointed out on behalf of the applicant solar PV is specifically designed to absorb light rather than reflect it. Therefore, although an occasional problem, it is a relatively rare issue and is site specific. The applicant's response to the submitted grounds of appeal also references a UK Building Research Establishment finding that glint and glare assessments are considered to be more important in circumstances where tracking panels are being used. The proposed array at Lisbrien are static panels. It has also been pointed out that the appeal site is somewhat elevated relative to surrounding public roads and is well enclosed by mature boundary hedgerows. This configuration will help to mitigate against any potential problems of glint and glare in the immediate vicinity of the site. The potential for glint and glare effects reduces with increased distance from the site (source of glint and glare). The G&GA submitted with the applicant's response to the submitted grounds of appeal provides technical details in relation to the phenomenon of glint and glare including findings that the amount of

sunlight reflected from a solar panel is similar to that from still water and findings that the amount of sunlight reflected from a solar array is less than that reflected from many other features typical of Irish rural landscapes such as agricultural structures, plastic coverings, wet roads, corrugated metal roofs, snow etc.

- 7.1.5. In the absence of regulatory guidance the Consultants responsible for the preparation of the G&GA have devised indicative textual categories of effect to categorise the scale of effect from 'none', 'very low' (more than 5% sunlight reflection for less than 36 days per year for periods of less than 15 minutes per day) etc. up to 'very high' (more than 50% sunlight reflection for more than 255 days per year for more than 45 mins each day) [see Table 1.1 of G&GA].
- 7.1.6. The analysis and findings set out in the G&GA show that the impact of the proposed solar array on nearby residential receptors will be 'low' to 'very low' without mitigation and will be 'none' with mitigation measures (boundary screening etc.) in place. Therefore, a conclusion of 'no substantial nuisance effects' is reached in relation to nearby dwellings.
- 7.1.7. The G&GA includes modelling of the potential impact of the proposed development on transportation routes (selected measurement points) in the vicinity of the site. The modelling results indicate that 26 of 48 road reception points and all 6 selected railway points have the potential to be negatively impacted due to glint and glare. However, further analysis taking account of the actual terrain and screening offered by building and hedgerows results in a finding of potential impact at 6 road points and no rail points. Only 2 road points have the potential to experience reflectance following proposed mitigation (planting) measures. On this basis it is concluded that post mitigation residual hazardous effects in terms of glint and glare are considered unlikely to prove hazardous for the surrounding roads and nearby railway line.
- 7.1.8. The G&GA includes an analysis of the impact of the proposed development on Erinagh Airfield and The Forge Airstrip. Based on an analysis of flight paths into and out of this airport (and the small number of flights) vis-à-vis the angle and direction of any glint and glare no hazardous impact at either aviation receptor was found.
- 7.1.9. The G&GA points out that (given the proposed angle in a southerly direction of the proposed solar array) it is not geometrically possible for features to the north of the site (including a section of the M7 (c. 2 km. from the site) to receive reflectance). The

report also discounts the potential impact in terms of glint and glare on four further sites identified by the appellant as being a cause for concern (Lissenhall Primary School; Silvermines Village; Silvermines Mountains and Carrigal) for reasons including distance from the site.

7.1.10. In my opinion, it is clear that solar panels are designed to absorb sunlight and not reflect it. Notwithstanding this fact, the potential for glint and glare nuisance (and hazard) from solar arrays remains. However, I consider that the findings and conclusions contained in the G&GA submitted on behalf of the applicant are robust and satisfactorily demonstrate that the proposed development will not seriously impact on the amenities of the area or on properties in the vicinity of the site due to glint and glare – impacts, if any, will be low to negligible and if and when they occur they will be for very limited time periods during the day and will occur on only a small number of days. Furthermore, I consider that, subject to proposed mitigation measures, the proposed development will not result in hazard due to glint and glare on roads, rail and aviation infrastructure in the area. In these circumstances, I consider that the applicant has satisfactorily addressed the appellant’s concerns in relation to glint and glare as set out in the submitted grounds of appeal. Accordingly, I consider that to refuse planning permission for reasons relating to glint and glare nuisance or hazard would be unwarranted.

7.1.11. The planning authority attached a condition to its notification of decision to grant planning permission requiring that screening planting and proposed mitigation measures be monitored (in terms of impact in addressing glint impacts) for a period of 2 years following the commissioning of the solar farm and shall provide any further mitigation measures that may be required by the planning authority during this period. I consider that it would be appropriate to attach a similar condition to any grant of planning permission that may issue by the Board in respect of the proposed

(2) Visual Amenity

7.1.12. The submitted grounds of appeal argue that the proposed development will be clearly visible from a number of nearby and distant vantage points in the vicinity of the site and will, thereby, result in injury to the visual amenities of the area. It is submitted that the visual impact of the proposed development will be exacerbated by the problem of glint and glare and that the planting of trees to mitigate the glare from the proposed

panels has not been proposed. The grounds of appeal reference 5 specific locations (including the M7 Motorway) from which the proposed development will be clearly visible. Based on the requirements of Conditions No. 3 & 6 attached to the planning authority notification of decision to grant planning permission the appellant is unclear as to what exactly has been granted by the planning authority (this lack of clarity is stated to run contrary to the 'Development Management Guidelines for Planning Authorities' issued in the 2007).

- 7.1.13. The visual impact of the proposed development in terms of glint and glare has been addressed at sub-section (1) above. Furthermore, it should be noted that a 'Glint & Glare Assessment' (not included in the application lodged with the planning authority) accompanied the applicant's response to the submitted grounds of appeal. This document references proposed planting to mitigate against glint and glare.
- 7.1.14. It has been submitted on behalf of the applicant, in response, that due to a combination of distance, topography, intervening vegetation and the fact that due to speed of travel vehicles on motorways only glimpse views of distant objects the proposed development will not significantly visual impact on the landscape when viewed from the M7. I would share this conclusion.
- 7.1.15. The submitted photomontages include a viewpoint in the Silvermines Mountains which clearly demonstrates that the proposed solar farm will not be unduly visually intrusive or obtrusive in the landscape when viewed from this location. 3 additional vantage points have been included in the submitted photomontages. Based on these photomontages, I consider that it is reasonable to conclude that the proposed solar farm (while visible) will not be unduly dominant in the landscape and will not seriously injure the visual amenities of the area.
- 7.1.16. The appellant has expressed concerns in relation to the visual impact of the proposed development from 2 other vantage points identified by the appellant - (i) Tony O'Brien's house – c. 1.3 m to the west of the appeal site and (ii) the Tulla Road. The appeal submission includes photos taken from each of these points.
- 7.1.17. The proposed development involves the placing of 22,500 sq. m. of PV panels on a c. 8.5 hectare site. The introduction of these manmade feature will clearly alter the appearance and character of an existing pastureland site. Nonetheless, I note that compared to solar arrays elsewhere in the UK and Europe (and permitted but not yet

built in Ireland) `the proposed solar farm is relatively small in scale. The proposed development will be screened from vantage points close to the site by reason of the fact that the site is slightly elevated compared to surrounding lands and public roads. The development will also be screened from vantage points close to the site by mature boundary planting and intervening trees and other vegetation between the site and local houses. From more distant vantage points the proposed solar farm will be visible in the landscape (as is the case with many other large manmade structures). However, I consider that the visual impact of the development will be lessened as distance from the site increases and will be softened by the presence of trees and mature hedgerows along the boundaries of the site and in the general vicinity of the site and as a consequence of the character and relatively low lying nature of the solar panels themselves. Accordingly, I consider that the proposed development will not be unduly intrusive or obtrusive in the landscape when viewed from vantage points in the vicinity of the site including those points referenced in the submitted grounds of appeal.

7.1.18. In relation to the appellant's concerns regarding Condition No. 3 attached to the planning authority notification of decision to grant planning permission, I agree that the *Development Management Guidelines* require that conditions be clear and precise. In this regard, I consider that the nature of what is being permitted (in terms of location and scale etc.) must be clear. Thus, I consider that the attachment of a condition similar to Condition No. 3 to any grant of planning permission that may issue from the Board would be unwarranted. However, I consider that the absence of such a condition would not preclude very minor and materially insignificant modifications to the permitted development. This would allow scope for the development to incorporate of any technological advances in relation to solar panels between now and the date of construction of the proposed development. I consider that the requirement of Condition No. 6 attached to the planning authority notification of decision to grant planning permission in respect of monitoring is reasonable and can be incorporated into revised conditions as recommended below.

(3) Noise

7.1.19. The submitted grounds of appeal raise concerns in relation to the potential for the proposed development to result in injury to the amenities of the area as a consequence of noise nuisance. The potential for noise nuisance from the proposed 4 no. invertor units are of particular concern especially in circumstances where Condition No. 3

attached to the planning authority notification of decision to grant planning permission leaves details of the precise location of these units open (potential for location along boundaries close to houses).

- 7.1.20. I note that a 'Noise and Vibration Assessment' (prepared by AWN Consulting) formed part of the application documentation lodged with the planning authority. This document present details in relation to projected noise impact during both the construction and operational phase of the proposed development. As has been pointed out on behalf of the applicant, the submitted grounds of appeal raise concern in relation to the noise impacts of the proposed solar farm during the operational phase only. The applicant's response to the submitted grounds of appeal points out that the proposed solar array will be static and without moving parts. Thus, the potential for noise from the panels themselves is very limited. It is acknowledged that low level noise might be generated from fans contained within the invertor units. However, the inverter units will be enclosed with typical casing in accordance with standard specifications and practices for development of the nature being proposed. This should satisfactorily dampen any noise from fans.
- 7.1.21. The Noise and Vibration Impact Study is based on measurements of existing noise levels compared to anticipated noise levels at three separate noise sensitive locations (NSLs) located on the site boundaries (Northern end of site (adjacent to the school) eastern boundary of the site adjacent to houses and eastern boundary of the site adjacent to a single house). The methodology of the baseline noise measurements and projected impact was in accordance with best practice recommended by the EPA. It was concluded that predicted noise levels generated by the proposed inverters will be 20 to 28 dB(A) below typical daytime noise criterion identified in the EPA Guidance, 15 to 18 Db(a) below the typical evening time levels and 10 to 13 dB(A) below typical night time levels.
- 7.1.22. On balance, based on the conclusions of the submitted Noise and Vibration Impact Study, I consider that the operation of the proposed solar farm will not result in injury to the amenities of the surrounding area or to the amenities of residents of dwellings in the vicinity of the site by reason of noise nuisance.

- 7.1.23. The planning authority sought further information concerning the potential for the generation of noise nuisance as a consequence of wind tunnelling noise from the solar array and potential noise nuisance during the decommissioning of the solar farm.
- 7.1.24. Further information submissions submitted on behalf of the applicant state that having consulted with the project Noise Consultant along with other professionals involved in solar farms they can find no evidence linking noise from wind channelling with solar arrays. Furthermore, it is stated that the proposed solar arrays will be enclosed within mature boundary hedgerows and planting which should protect nearby dwelling from any wind noise generated by the proposed development. In the absence of any evidence of wind channelling noise, I consider that the response from the applicant in respect of this issue is reasonable. In addition, having regard to the relatively low lying topography of the area in which the site is located I would tend to agree with the applicant that the mature boundary hedgerows enclosing the site should help act as a wind break and help to buffer local houses from any noise which may occur.
- 7.1.25. In response to the issue raised concerning potential noise nuisance during the decommissioning phase the applicant submitted report 'Comment of Potential Decommissioning Noise Impact of Fogarty Solar Farm' (prepared by AWN Consulting). This report states that noise sources during decommissioning include noise from a small tractor, a dumper and HGV movements. Mitigation measures proposed during decommissioning include: control of hours of work; liaison with neighbours; selection of quiet plant; control of noise sources; screening and noise & vibration monitoring. Site works during the decommissioning phase will also be carried out away from the local national school. Having regard to the transient nature of the decommissioning phase of the solar farm together with the nature of the works themselves (essentially involving the removal of solar panels that have reached the end of their operational life) I consider that subject to the proposed mitigation measures, the decommissioning of the proposed solar farm will not result in undue injury to the amenities of the area as a consequence of noise nuisance. This requirement can be achieved by the attachment of an appropriately worded condition to any grant of planning permission that may issue from the Board.

(4) Construction Traffic

- 7.1.26. The submitted grounds of appeal argue that the local road network serving the proposed development is unsuitable to safely accommodate the construction traffic associated with the proposed development. It is also submitted that the construction traffic would pose a safety risk for the nearby 120 pupil national school.
- 7.1.27. The issue of local road capacity (and the design of site entrance) was the subject of requests for further information issued by the planning authority.
- 7.1.28. Further information submissions from the applicant included technical details in relation to the design of the proposed site entrance (with capacity to accommodate turning movement of HGVs) in accordance with recognised standards. It is stated that development generated traffic is expected to travel from the M7 Motorway west along the R145 and then south to Carrow Cross Roads before finally turning east to the site (and vice versa). It is suggested that the level of HGV traffic associated with the construction phase will be minimal (4-6 small (max. 11m. length) HGV movements to and from the site per week. Approx. 6 to 10 car movements (construction workers) into the site in the morning and out again in the evening are anticipated on any given working day. Temporary parking spaces will be provided within the site and staff will not be permitted to park along the public road. It is submitted that the local road network is adequate to accommodate these movements and that no upgrade to the road network or roads in the immediate vicinity of the site will be required to accommodate these movements. The applicant is prepared to accept a condition attached to a grant of planning permission requiring the carrying out of a pre-construction road survey and any damage incurred as a result of the development shall be made good on completion of the construction phase.
- 7.1.29. Based on the documentation on file, including the information contained in the further information submissions from the applicant and the submission from the applicant in response to the submitted grounds of appeal I consider that the traffic volumes and movements generated by the proposed development during the construction phase are relatively modest and (subject to standard precautions in terms of construction traffic warning signalling etc.) can reasonably be accommodated without generating a traffic hazard or undue injury to the amenities of the area. In my opinion, the issue of potential danger and hazards associated with the proposed development during the construction phase can be adequately addressed by way of an agreed Construction (Traffic) Management Plan. The applicant's response to the submitted grounds of

appeal highlights the fact that the developer will liaise with the local school and schedule the timing of HGV movements outside normal school hours.

(5) Archaeology & Heritage

- 7.1.30. The submitted grounds of appeal point out that there are 5 ringforts within 400m radius of the site. It is submitted that these Ring Forts create a sense of place within the locality which should a protection.
- 7.1.31. It has been pointed out on behalf of the applicant, in response, that the site is not covered by any archaeology, heritage or conservation designations. Furthermore, a previous planning application for a 31,500 sq. m. solar array on a larger site incorporating the current appeal site was subsequently withdraw (Reg. Ref. 15/60/1002) because of concerns relating to the potential impact of the development on archaeology (ringforts) surrounding the site. The archaeological survey data gathered and impact analysis conducted in relation to the later project informed the current application for development of a smaller solar farm. The original proposal has been modified and reduced in scale to avoid any potential for adverse impacts on the archaeology of the area.
- 7.1.32. Three separate Archaeology Reports (each prepared by Anne Carey, Archaeological & Historic Buildings Consultant) were lodged with the application – (i) Archaeological Impact Assessment, (ii) Archaeological Report on Trial Trenching and (iii) Archaeological Report on the Excavation of Burnt Spread. The Archaeological Impact Assessment was prepared and submitted with the earlier (subsequently withdrawn) planning application. The Report on Trial Trenching relates to the excavation of 14 trial trenches conducted in November 2016 (after the initial application had been withdrawn). A burnt was identified within the site. The Archaeological Report on the Excavation of the Burnt Spread was subsequently prepared.
- 7.1.33. The Burnt Spread was identified at Trench No. 7 in field No. 6 within the site (see illustration No. 4 of Burnt Spread Report). It was established that this burnt area was of recent origin and of no archaeological significance. The Archaeological Impact Assessment notes that (with the exception of the potentially significant burnt spread) no other archaeological features were found in any of the 14 trenches excavated.
- 7.1.34. Five ringforts were recorded adjacent to site boundaries. Three of these were near site boundaries. The Archaeological Impact Assessment concludes that the proposed

solar farm will not have any significant impacts or result in disturbance of these ringforts. The Archaeological Impact Assessment concludes that the visual impact of the proposed development on the three ringforts nearest the site boundaries will be negligible, neutral and low.

7.1.35. I consider that the conclusions of the Archaeological Impact Assessment are robust. The proposed solar panels will be mounted on frames that can be placed on the ground without the need for excavation or foundations. Protective shoes are proposed for these frames to reduce impact on the ground surface. Other than the digging of trenches for the ducting of cables and limited areas of foundation for the control cabins and inverters, the only other significant ground works will be associated with the construction of the site entrance and internal road and compound areas. The latter areas largely coincide with the northern corner of the site which has already been substantially disturbed due to previous quarrying carried out on this portion of the site. The proposed development will have a life span of 25 years from the date of commencement after which I am satisfied that the site can be restored to its pre-development state without any significant impact on or injury to historic remains or features on or immediately adjacent to the site. Furthermore, given the character and relatively low-lying nature of the solar panels I consider that the proposed solar array will not seriously injure the visual setting or context of the Ring Forts.

(6) Other Matters

Security:

7.1.36. The submitted grounds of appeal raise concerns in relation to injury to the amenities of the area as a consequence of security lighting of the site. In response the applicant has highlighted that (although 12 no. CCTV cameras mounted on 3.9m. high poles are proposed) no security lighting has been proposed as part of the proposed development.

7.1.37. The planning authority notification of decision to grant planning permission included a condition (No. 8) stipulating that security lighting shall be installed and angles in a manner that reduces glare. The applicant's response to the submitted grounds of appeal state that it is not proposed to install security lighting, but if such lighting is required by the planning authority it will only be needed at the entrance to the site, will

be appropriately located (following consultation with the planning authority) and will be operated by motion sensors (and not illuminated on a 24/7 basis).

- 7.1.38. I consider that the appellants concerns have been satisfactorily addressed in the applicant's response to the grounds of appeal. Furthermore, in my opinion, the matter can be adequately addressed by way of the attachment of an appropriately worded condition to any grant of planning permission that may issue from the Board.

Radio Frequency Interference (RFI) & Health:

- 7.1.39. The submitted grounds of appeal highlight that the proposed development will be located only c. 20m. only from the local national school and raise concerns in relation to potential adverse impact of the proposed development on the health of school children and the local community as a consequence of the Electromagnetic Field (EMF) and Radio Frequency Interference generated by high voltage equipment. The appellant's initial objection made to the planning authority refers to comments made by a former Norwegian Minister (and former Director General of the World Health Organisation) stating that she had no doubt as to the adverse health effects of electromagnetic fields.

- 7.1.40. It has been submitted on behalf of the applicant, in response, that the electrical infrastructure for the proposed solar farm is low voltage (lower than the substation and grid connection) and that there are no adverse health impacts known to be associated with solar farms. It is submitted that the results of current scientific research show that there are no evident adverse health effects if exposure remains below the levels recommended by EU legislation. In support of this position the appellant cites a report from the European Scientific Committee on Emerging and Newly Identified Health Risks (SCENIHR - one of the independent scientific committees managed by the Directorate-General for Health and Consumer Protection of the EU) on 'Potential Health Effects of Exposure to Electromagnetic Fields' published in 2015 which concluded that there are no significant risks to human health associated with exposure to Extremely Low Frequency (ELF) EMFs.

- 7.1.41. As has been highlighted on behalf of the applicant, there are currently no national guidelines on solar energy in Ireland. *The Telecommunications Antennae and Support Structures Guidelines* (issued by the Department of Environment, Communications and Local Government in 1996) make it clear that issues relating to the health effects

of Non-Ionising Electromagnetic Radiation (NIEMR) are not matters of planning concern for the purposes of the guidelines. No similar policy statement exists in relation to solar farms. Nonetheless, in the absence of such guidelines and on the basis of the documentation on file, in particular details of the low level radio frequency generated in the Electromagnetic Field created by the development and the conclusion of the SCENIHR Report, I consider that a refusal of planning permission for the proposed development based on potential health risks associated with the development would be unwarranted.

7.1.42. Finally, I share the opinion, as expressed on behalf of the applicant, that any concerns relating to persons coming into contact with high voltage equipment associated with the substation etc. constitutes a Health & Safety matter. Standard industry best practices relating to health and safety should be adhered to throughout the development. Enforcement of these standards falls within the scope of Health & Safety legislation.

Disused Quarry:

7.1.43. The submitted grounds of appeal argue that the planning permission as granted by the planning authority endorses the filling of a disused quarry (part of the site) without adequate assessment. It is submitted that planning permission should have been obtained for the filling of the quarry.

7.1.44. It has been submitted on behalf of the applicant, in response, that the former quarried area occupied c. 0.492 ha. of the wider application site. It is stated that planning permission was granted by the planning authority per Reg. Ref. 06/510825 in September 2006 to retain and complete the infilling of this land consequent on Waste Permit Ref. WP-TN-72. It is further stated that spoil material from the construction phase of the Solar Farm could be used to reinstate the formerly quarried portion of the site with the overall intention being to return the site in its entirety to rough agricultural grazing land.

7.1.45. In my opinion, the appellant has raised a valid concern in respect of the overlap between the site of the proposed development and the site of a former quarry. The submitted drawings indicate the site of a former quarry on the northern portion of the proposed solar farm site adjoining the boundary with local road L2141 (Drg. 181039-02). Section 4.2.1.1 of the Ecological Impact Assessment accompanying the

application lodged with the planning authority describes the habitats present on the former quarry at the northern end of the site as including scrub; dry meadows and grassy verges; recolonising bare ground, spoil and bare ground. It appeared to me at the time of site that the former quarry was in the process of natural revegetation following the cessation of quarrying activity some time ago. It is unclear from the documentation on file whether or not the manner of rehabilitation and reinstatement of the quarry is in accordance with the terms of a grant of planning permission (possibly the 2006 planning permission) governing the reinstatement of the site or is simple the result of the natural rehabilitation following the cessation of quarrying activity.

7.1.46. Drawing No. 181039-05 contained within the submitted application documentation indicates the proposed location of the site compound, control cabins and a portion of the proposed new internal access road as being located with the former quarry site. In my opinion, planning permission should not now be granted for a solar farm the layout of which would undermine the terms and conditions attached to any grant of planning permission concerning the manner in which the quarry site was to be reinstated or rehabilitated following the completion of quarrying works. In order to achieve this requirement, it may prove necessary to relocate the proposed site compound and control cabins in southerly direction and the proposed site entrance and a portion of the proposed internal access route to the east. Furthermore, I note that Section 2.2.1 of the Ecological Impact Assessment states that all material excavated during track construction will be either reused for back filling and reinstatement adjacent to the track or exported off the site to an authorised waste recovery facility. In contrast, the applicant's response to the submitted grounds of appeal states that excess excavated material can be used for filling of the disused quarry. I consider that any grant of planning permission for the proposed solar farm should not conflict with the requirements of the terms of any planning permission or other approved plans for the reinstatement and rehabilitation of the disused quarry. In my opinion, this can be clearly expressed in the context of the attachment of an appropriately worded condition to any grant of planning permission that may issue from the Board. I consider that a refusal of planning permission based on the appellant's concerns in relation to this matter would be unwarranted.

Special Protection Area:

- 7.1.47. I consider that the matter raised in the submitted grounds of appeal in relation to the potential impact of the proposed development on the Slievefelim to Silvermines Mountains SPA (Site Code 4165) has been adequately addressed under heading No. (8) – ‘Appropriate Assessment’ below.
- 7.1.48. The submitted grounds of appeal make specific reference to concerns in relation to the Hen Harrier (a protected species). The Hen Harrier is territorial and occupies low lying ground for foraging etc. It has been pointed out on behalf of the applicant, it was not present on the site during pre-application site surveys conducted by the applicant and is unlikely to be found at a distance in excess of 2 km (and not at all at distances in excess of 5 km.) from the designated SPA site. The nearest SPA to the application site (the Slievefelim to Silvermines Mountains SPA (Site Code 4165) is located c. 4.2 km to the south of the appeal site). Concerns relating to the potential for bird fatalities associated with solar arrays arise in the context of birds mistaking the solar arrays for water and flying into them. However, such concerns are largely confined to wetland and waterbirds rather than ground nesting birds like the Hen Harrier found in open moorland and marginal grassland habitats. The applicant has also cited authority (Royal Society for the Protection of Birds (RSPB) in the United Kingdom & a review undertaken by Natural England (2017)) in support of the belief that (despite conducting 515 bird surveys at solar PV sites) no evidence for bird casualties (panel strikes) was found.

Silvermines Parish:

- 7.1.49. The appellant submits that Silvermines Parish and surrounding areas have suffered historic landscape degradation as a consequence of mining in the area. It is submitted that the area should be safeguarded from further environmentally damaging and unsuitable development and as a consequence of poor planning decisions.
- 7.1.50. It has been submitted on behalf of the applicant, in response, that the 2009 Landscape Character Assessment prepared on behalf of the planning authority (updated in 2016) describes the Nenagh Corridor as landscape are ‘A1’ characterised by ‘Plains, Lowland Pasture and Arable’ lands where agriculture, forestry, housing, urbanisation and infrastructure are all considered to be compatible uses. Furthermore, the area is

regarded as 'a high capacity/low sensitivity, Class 1 Landscape' where change and development can generally be accommodated.

7.1.51. I note the general support for renewable energy development (including solar) in national, regional and local policies and guidance as describe at Section 5.0 above. Furthermore, I consider that (as has been highlighted in submission on behalf of the applicant) that, in common with solar farms elsewhere, the proposed development will have a limited (25 year) life span at the end of which the site can be reasonably easily returned to its pre-development pastureland state. Thus, unlike mining and other activities the long term impact of the proposed development on the landscape can, in fact, be regarded as relatively light. In addition, I consider that, having regard to the relatively limited scale of the proposed solar array, the proposed development can be regarded as having a similarly light impact on the environment during its operational phase while also contributing to the achievement of Ireland's targets in reducing carbon emissions and shifting away from reliance on fossil fuels. In these circumstances, I see no reason to share the appellant's conclusion that the proposed development will result in degradation of the landscape or environment in the Silvermines area.

(7) Appropriate Assessment (AA) Screening

7.1.52. The submitted application included an 'Appropriate Assessment Screening Report' for the proposed development including the proposed underground grid connection route from the site to the electrical substation in Tyone, Nenagh.

7.1.53. The solar farm is not located within or immediately adjoining any designated European sites. However, the 8 designated European sites (Natura 2000) sites within a 15 km buffer zone from the site. These include 6 SACs and 2 SPAs, as follows:

SACs

- The Silvermines Mountains West Special Area of Conservation (SAC) (Site Code 004058)

The site is located c. 4.6 km to the south of the appeal site. The Qualifying Interests of the site are Northern Atlantic wet heaths; European dry heaths and Calaminarian grasslands of the *Violetalia calaminariae*. The conservation objective is to maintain or

restore the favorable conservation condition of the Annex I Habitats(s) and / or Annex II Species for which the SAC has been selected.

- Silvermines Mountain SAC (Site Code) 000939

The site is located c. 4.8m to the south of the appeal site. The Qualifying Interests for the site are Northern Atlantic wet heaths with *Erica tetralix* Species-rich *Nardus* grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe) (latter is a 'priority habitat'). – The conservation objective is to maintain or restore the favorable conservation condition of the Annex I Habitats(s) and / or Annex II Species for which the SAC has been selected. The site synopsis indicates that although small, the site is important for the presence of the priority habitat *Nardus* grassland and also for the nationally important population of the Red Data Book species *Pseudorchis albida* within this habitat. A small but intact example of wet heath is also present. A typical upland fauna occurs, with *Lagopus lagopus* and *Lepus timidus hibernicus*.

- The Lower River Shannon SAC (Site Code 002165)

The site is located c. 6 km to the south-west of the appeal site. The Qualifying Interests of the site area Sandbanks which are slightly covered by sea water all the time Estuaries, Mudflats and sandflats not covered by seawater at low tide, Coastal lagoons ('priority' habitat), Large shallow inlets and bays, Reefs, Perennial vegetation of stony banks, Vegetated sea cliffs of the Atlantic and Baltic coasts, *Salicornia* and other annuals colonising mud and sand, Atlantic salt meadows (*Glauco-Puccinellietalia maritima*), Mediterranean salt meadows (*Juncetalia maritimi*), Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitriche-Batrachion* vegetation, *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*), Alluvial forests('priority' habitat) (with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*), *Margaritifera margaritifera* (Freshwater Pearl Mussel). *Petromyzon marinus* (Sea Lamprey), *Lampetra planeri* (Brook Lamprey). *Lampetra fluviatilis* (River Lamprey), *Salmo salar* (Salmon), *Tursiops truncatus* (Common Bottlenose). The conservation objective is to maintain or restore the favorable conservation condition of the Annex I Habitats(s) and / or Annex II Species for which the SAC has been selected.

- Bolingbrook Hill SAC (Site Code)002124

This site is located c. 6 km south-east of the appeal site. The Qualifying Interests are Northern Atlantic wet heaths, European dry heaths, Species-rich *Nardus* grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe) ('priority' habitat. The conservation objective is to maintain or restore the favourable conservation condition of the Annex I Habitat(s) and / or Annex II Species for which the SAC has been selected. The 'Site Synopsis' states that Bolingbrook Hill is a comparatively small site which contains a range of habitats, and species, including three habitat types listed on the E.U. Habitats Directive. It is of particular importance for the good quality examples of species-rich, unimproved upland grassland found. This habitat is becoming increasingly rare in Ireland and Europe and is listed with priority status in the Directive. The presence of good quality wet and dry heath, which are also listed on this Annex, contributes to the overall importance of the site.

- Keeper Hill SAC (Site Code 001197)

This site is located c. 7 km. south-west of the appeal site. The Qualifying Interests are Northern Atlantic wet heaths with *Erica Tertralix* and Blanket Bogs (latter are 'priority' habitats if active). The conservation objective is to maintain or restore the favourable conservation condition of the Annex I Habitat(s) and/or Annex II Species for which the SAC has been selected. The 'Site Synopsis' states that the site supports a significant representation of intact blanket bog which has a varied topography and occurs in association with wet heath. *Falco peregrinus* and *Lagopus lagopus* breed within the site. Several rare bryophytes occur within the site.

Lough Derg North-East Shore SAC (Site Code 002241)

This site is located c. 13 km north of the appeal site. The Qualifying Interests are *Juniperus Communis* formations on heaths or calcareous grasslands, Calcareous fens with *Cladium Mariscus* and species of the *Caricion davallianae* ('priority' habitat), Alkaline fens' Limestone pavements ('priority' habitat). Alluvial forests ('priority' habitat) and *Taxus Baccata* woods of the British Isles ('priority' habitat). The conservation objective is to maintain or restore the favourable conservation condition of the Annex I Habitat(s) and / or Annex II Species for which the SAC has been selected. The 'Site Synopsis' states This site supports a wide range of habitats,

including Alkaline fens, Juniper scrub formations, limestone pavement, Yew woodlands, alluvial woodlands and Cladium fen. It also supports the only known population in the country for the Irish Red Data Book species *Inula salicina*. Other scarce plant species found here include *Sorbus aria* and *Rhamnus catharticus*. The endangered fish species *Coregonus autumnalis* has its European stronghold in Lough Derg. The open water areas of the lake itself are important for wintering wildfowl. Goat island holds a breeding colony of *Sterna hirundo*. A subflock of *Anser albifrons flavirostris* uses the callow lands around Slevoir Bay in Winter. A good population of *Cygnus olor* occurs.

SPAs

The Lough Derg (Shannon) Special Protection Area (SPA)

The site is located c. 8 km to the north-west of the appeal site. The Conservation Objective is to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA. The Qualifying Interests are the Cormorant (*Phalacrocorax carbo*), Tufted Duck (*Aythya fuligula*), Goldeneye (*Bucephala clangula*), Common Tern (*Sterna hirundo*). The 'Site Synopsis' states that the E.U. Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

The Slievefelim to Silvermines Mountains SPA (Site Code 4165)

The site is located c. 4.2 km to the south of the appeal site. The Conservation Objective of the site is to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA. The Qualifying Interest for this site is the Hen Harrier. The 'Site Synopsis' states that the site is one of the strongholds for Hen Harrier in the country. A survey in 2005 recorded five breeding pairs in the SPA, while nine pairs had been recorded in the 1998-2000 period. These numbers recorded in 2005 represent 3.7 % of the all-Ireland total. The mix of forestry and open areas provides optimum habitat conditions for this rare bird, which is listed on Annex I of the E.U. Birds Directive. The early stages of new and second-rotation conifer plantations are the most frequently used nesting sites, though some pairs may still nest in tall heather of unplanted bogs and heath. Hen Harriers will forage up to c.

5 km from the nest site, utilising open bog and moorland, young conifer plantations and hill farmland that is not too rank. Birds will often forage in openings and gaps within forests.

7.1.54. As the entire development is located outside any designated European site, there will be no direct effects on any European site as a consequence of the proposed development.

7.1.55. Potential sources of indirect effects include impacts arising from sediment generated during the construction phase entering local water courses and being transported to the designated sites. The nature of the proposed development involves the placing of structures to support individual solar panels in the solar array on the ground. This does not involve any significant excavation work. The construction of control cabins, inverters, the site compound, cable ducting and access road through the site will involve some excavation works with the potential to create sediment that could be transported from the site and carried to SACs or SPAs in the region. No other effluent or other discharges will be generated by the proposed development. The nearest designated site is located in excess of 4 km from the appeal site. In any event, (as has been highlighted in the Appropriate Assessment Screening Report submitted with the application) there are no watercourses within or adjacent to the proposed development which could act as conduits for pollution.

7.1.56. The Lough Derg (Shannon) SPA is located c. 8km from the appeal site. This site is designated and significant for Wetland and Waterbirds. The designation is focused particularly on wetlands. There is a concern that wetland and waterbirds can fly into solar arrays mistaking them for water resulting in bird fatalities. However, the appeal site is located at a significant distance from the nearest wetlands. Wetland and Waterbirds would not typically be found at such a significant distance from wetlands.

7.1.57. The Slievefelim to Silvermines Mountains SPA (Site Code 4165) is located c. 4.2 km from the appeal site at its nearest point. The site is designated as a stronghold for the Hen Harrier in the country (Annex I of EU Birds Directive) (5 breeding pairs recorded in 2005). A mix of forestry and open areas provides optimum habitat conditions for this bird. The early stages of new and second-rotation conifer plantations are the most frequently used nesting sites, though some pairs may still nest in tall heather of unplanted bogs and heath. Hen Harriers will forage up to c. 5 km from the nest site,

utilising open bog and moorland, young conifer plantations and hill farmland that is not too rank. Birds will often forage in openings and gaps within forests. The appeal site is at the outer limit of the foraging range of the Hen Harrier and the appeal site is not characterised by open bog or moorland or conifer plantations of any description making it an unsuitable habitat for the Hen Harrier.

7.1.58. Based on the above analysis, it can be concluded that there is no potential for significant effects on the Qualifying Interests and Special Conservation Interests of any European Site as a result of direct or indirect impacts.

7.1.59. The submitted Appropriate Assessment Screening Report consulted the online planning system for Tipperary County Council in an attempt to gauge the potential for in-combination and cumulative impacts of the proposed development in conjunction with other plans and projects in the area. This revealed that in the last five years the only other planning permission granted in the townland of Lisbrien was a grant of planning permission for a temporary prefabricated building. Based on this finding, I consider that the proposed development does not have the potential to contribute to any cumulative impacts when considered in-combination with other plans and projects.

7.1.60. In conclusion, therefore, having regard to the nature and scale of development proposed and to the nature of the receiving environment and location relative to the nearest designated European sites, no appropriate assessment issues arise and it is considered that the proposed development would be unlikely to have a significant effect individually or in combination with other plans or projects on any European site, in view of the site's Conservation Objectives. Stage 2 Appropriate Assessment (and submission of a Natura Impact Statement) is not therefore required.

8.0 Recommendation

I recommend that planning permission for the proposed development be granted for the reasons and considerations and subject to the conditions as set out below.

9.0 Reasons and Considerations

Having regard to:

- the nature, scale and extent of the proposed development,

- the decision made in respect of appropriate assessment screening,
- the national targets for renewable energy contribution of 40% gross electricity consumption by 2020
- national and local policy support for developing renewable energy, in particular the:-
 - Government's Strategy for Renewable Energy, 2012-2020,
 - National Planning Framework, 2018, and,
 - Policy CEF6 'Solar Energy' of the North Tipperary County Development Plan 2010 -2016, as amended and as extended,
- the location of the proposed development within an area characterised as 'Plains, Lowland Pasture and Arable lands' in the planning authority *Landscape Character Assessment*
- the distance to dwellings or other sensitive receptors from the proposed development
- the planning history of the site and immediate area
- the submissions made in connection with the planning application and appeal
- the likely consequences for the environment and the proper planning and sustainable development of the area in which it is proposed to carry out the proposed development and the likely significant effects of the proposed development on European Sites.

The Board considered that the proposed development, subject to compliance with the conditions set out below, would:

- not have an unacceptable impact on the character of the landscape or on the cultural or archaeological heritage,
- not seriously injure the visual and residential amenities of the area,
- be acceptable in terms of public health, traffic safety and convenience,
- not have an unacceptable impact on the ecology of the area,
- make a positive contribution to Ireland's requirements for renewable energy,
- be in accordance with:-
 - Government's Strategy for Renewable Energy, 2012-2020,
 - the National Planning Framework, 2018 and

- Policy CEF6 'Solar Energy' of the North Tipperary County Development Plan 2010 -2016, as amended and as extended,

and would, therefore, be in accordance with the proper planning and sustainable development of the area.

7.2. **Appropriate Assessment Stage 1**

7.3. The Board considered the Screening Report for Appropriate Assessment and all other relevant submissions and carried out an appropriate assessment screening exercise in relation to the potential effects of the proposed development on designated European sites. The Board noted that the proposed development is not directly connected with or necessary for the management of a European Site and considered the nature, scale and location of the proposed development, as well as the report of the Inspector.

7.4. The Board agreed with the screening report submitted with the application and with the screening exercise carried out by the Inspector. The Board concluded that, having regard to the qualifying interests for which the sites were designated and in the absence of a hydrological connection between the application site and the European Sites at Silvermines Mountains West (SAC); Silvermines Mountain SAC; The Lower River Shannon SAC; Bolingbrook Hill SAC; Keeper Hill SAC; Lough Derg North-East Shore SAC; The Lough Derg (Shannon) Special Protection Area (SPA) and the Slievefelim to Silvermines Mountains SPA and the separation distance between the appeal site and the nearest European Sites the proposed development individually or in combination with other plans and projects would not be likely to have an effect on these European Sites or any other European Sites in view of the conservation objectives and that a Stage 2 Appropriate Assessment is, therefore, not required in relation to these European Sites.

Conditions

1. The development shall be carried out and completed in accordance with the plans and particulars lodged with the application and by the further plans and particulars received by the planning authority on the 20th, day of May 2019 and 25th, day of July 2019 and the further documentation received by An Bord

Pleanála on the 8th, day of October 2019, except as may otherwise be required in order to comply with the following conditions. Where such conditions require details to be agreed with the planning authority, the developer shall agree such details in writing with the planning authority prior to commencement of development and the development shall be carried out and completed in accordance with the agreed particulars.

Reason: In the interest of clarity

2. 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.

3. The proposed internal access road and site compound to be located on the northern end of the site within and bounding the site of a disused quarry shall not be provided in a manner that prevents the completion of any reinstatement and rehabilitation works to the quarry required under any previous grant of planning permission or consent process. Any modifications to the proposed internal access road and site compound layout required to ensure compliance with this condition shall be submitted to and agreed in writing with the planning authority prior to the commencement of development.

Reason: In the interest of orderly development.

4. All of the environmental, construction and ecological mitigation measures set out in the Planning and Environmental Report including the Ecological Impact Assessment, and other particulars submitted with the application shall be implemented by the developer in conjunction with the timelines set out therein, except as may otherwise be required in order to comply with the conditions of this order.

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

5. a) The date of commissioning of the solar PV development shall be notified to, and established in writing with, the planning authority prior to the commencement of operation. 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.
- b) Prior to commencement of development, a detailed restoration plan, including a timescale for its implementation, providing for the removal of the solar arrays, including all foundations, anchors, inverter/control cabins, substation, CCTV cameras, fencing and site access to a specific timescale, shall be submitted to, and agreed in writing with, the planning authority.
- c) On full or partial decommissioning of the solar farm, or if the solar farm ceases operation for a period of more than one year, the solar arrays, including foundations/anchors, and all associated equipment, shall be dismantled and removed permanently from the site. The site shall be restored in accordance with this plan and all decommissioned structures shall be removed within three months of decommissioning.

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

6. a) No additional artificial lighting or security lighting shall be installed or operated on site unless authorised by a prior grant of planning permission.
- b) CCTV cameras shall be fixed and angled to face into the site and shall not be directed towards adjoining property or the road.
- c) Cables within the site shall be located underground.
- d) The control cabins, inverter units and external fencing shall be dark green in colour.

Reason: In the interests of clarity, and of visual and residential amenity

7. Before construction commences on site, details of the structures of the security fence showing provision for the movement of mammals at regular intervals along the perimeter of the site shall be submitted for prior written agreement of the Planning Authority.

Reason: To allow wildlife to continue to have access across the site, in the interest of biodiversity protection

8. a) The developer shall employ a suitably qualified archaeologist to monitor all topsoil stripping and ground disturbance associated with the development. No ground works are to take place in the absence of the archaeologist, and four weeks written notice regarding the commencement of works on the site shall be submitted to the Department of Culture, Heritage & the Gaeltacht in advance of works commencing.

b) Details of how any archaeological material that is uncovered during monitoring is to be treated and recorded shall be submitted to and agreed in writing with the planning authority prior to the commencement of development.

c) Within 6 months of the date of commissioning of the development, the Department of Culture, Heritage & the Gaeltacht shall be furnished with a written report describing the result of the monitoring that has been carried out.

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.

9. Water supply and drainage arrangements, shall comply with the requirements of the planning authority for such works and services.

Reason: In the interest of public health.

10. a) Existing field boundaries shall be retained, except where its removal is necessary to facilitate the construction of the site entrance, internal access road and site compound and in accordance with the documentation and layout indicated in the documentation received by the planning authority and An Bord Pleanála.

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

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

11. Upon commissioning of the development and for a period of two years following first operation the developer/operator shall provide detailed glint surveys on an annual basis to the planning authority in order to monitor glint impact, if any. In the event of any recording of glint and associated nuisance the developer/operator shall provide such further mitigation measures as may be specified in writing the planning authority.

Reason: In the interest of residential amenity and to protect the amenities of the area.

12. The construction of the development shall be managed in accordance with a Construction Management Plan, which shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. This plan shall provide details of intended construction practice for the development, including:

- a) location of the site and materials compound(s) including area(s) identified for the storage of construction refuse
- b) Construction working hours
- c) details of site security fencing and hoardings
- d) details of on-site car parking facilities for site workers during the course of construction
- e) details of the timing and routing of construction traffic to and from the construction site and associated directional signage, to include proposals to

facilitate the delivery of abnormal loads to the site and to avoid HGV movements during normal school hours.

- f) measures to obviate queuing of construction traffic on the adjoining road network,
- g) measures to prevent the spillage or deposit of clay, rubble or other debris on the public road network,
- h) details of appropriate mitigation measures for noise, dust and vibration, and monitoring of such levels,
- i) containment of all construction-related fuel and oil within specially constructed bunds to ensure that fuel spillages are fully contained; such bunds shall be roofed to exclude rainwater,
- j) off-site disposal of construction / demolition waste and details of how it is proposed to manage excavated soil
- k) details of on-site re-fuelling arrangements, including use of drip trays,
- l) details of how it is proposed to manage excavated soil,
- m) means to ensure that surface water run-off is controlled such that no deleterious levels of silt or other pollutants enter local surface water drains or watercourses.

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

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

13. a) During the operational phase of the proposed development, the noise level arising from the development, as measured at the nearest noise sensitive location shall not exceed:
- i. An LAeqT value of 55 dB(A) during the period 0800 to 2200 hours from Monday to Saturday inclusive. [The T value shall be one hour.]
 - ii. An LAeqT value of 45 dB(A) at any other time. [The T value shall be 15 minutes]. The noise at such time shall not contain a tonal component.

At no time shall the noise generated on site result in an increase in noise level of more than 10 dB(A) above background levels at the boundary of the site.

b) All sound measurement shall be carried out in accordance with ISO Recommendation R 1996 “Assessment of Noise with respect of Community Response” as amended by ISO Recommendations R 1996 1, 2 or 3 “Description and Measurement of Environmental Noise” as applicable.

Reason: To protect the amenities of houses, local primary school and other property in the vicinity of the site

14. a) The access point from the public road shall be provided with a drainage kerb/cattle grid or approved equivalent surface water cut-off drain which shall discharge to a stone filled sump within the site.

b) New tracks within the site shall be surfaced with gravel or hardcore and shall not be hard topped with tarmacadam or concrete.

c) All road surfaces, culverts, watercourses, verges and public lands shall be protected during construction and, in the case of any damage occurring, shall be reinstated to the satisfaction of the planning authority. Prior to commencement of development, a road condition survey shall be taken to provide a basis for reinstatement works.

Details of the above shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development.

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

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

Reason: To ensure satisfactory reinstatement of the site

16. 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

Paddy Keogh
Planning Inspector

26th, July 2020