



An
Bord
Pleanála

Inspector's Report ABP 321242-24

Development	10-year permission for a solar farm and associated development works.
Location	Townland of Ardgoulbeg, near Rathkeale, Co. Limerick.
Planning Authority	Limerick City and County Council
Planning Authority Reg. Ref.	2460320
Applicant(s)	Harmony Solar Rathkeale
Type of Application	Normal Planning Appeal
Planning Authority Decision	Refuse Permission
Type of Appeal	First Party
Appellant(s)	Harmony Solar Rathkeale
Observer(s)	None.
Date of Site Inspection	03 rd March 2025
Inspector	Brendan Coyne

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1.0 Site Location and Description

- 1.1.1. The site of the proposed development is located in the townland of Ardgoulbeg, approx. 3 km to the northwest of Rathkeale in County Limerick. The site has a stated area of 63.4 hectares and comprises agricultural land used for livestock grazing and grass fodder production. The site is bound to the west by the River Deel, which flows south to north, and the L1219 local road runs along the southern boundary. The northern, eastern and internal boundaries are defined by treelines and hedgerows, which subdivide the land into fields. Several medium to high-voltage overhead power lines traverse the site, which connect to the existing Rathkeale 110 kV substation, located on land adjoining the southeastern corner boundary. A two-storey dwelling is located in the central portions of the site (outside the red line of the application site), and a dwelling adjoins the site along the L1219.
- 1.1.2. The topography of the site is relatively flat, sloping from c. 60m at the eastern boundary to c. 21m at the western boundary along the River Deel. Surface water runoff drains into the River Deel, which flows into the River Shannon and River Fergus Estuaries SPA (Site Code: 004077) and the Lower River Shannon SAC (002165) located c. 9.5km to the north of the site. The site is not located in any designated environmental areas. OPW preliminary flood risk assessment (PFRA) maps indicate portions of the site within Flood Zones A, B, and C, with banks on both sides of the River Deel subject to flooding. Two recorded archaeological monuments are located within the site boundary, both ringforts (Ref. Nos. LI020-100 and LI020-103). There are 26 archaeological sites within 1km of the site boundary. Kilcool Bridge adjacent the site along the L1219 is a Protected Structure (RPS Reg. No. 19 / NIAH Reg. No. 21902006).
- 1.1.3. The nearest motorway to the site is the M20, which is c. 18 km northeast, linking Limerick with Cork. The N21 national primary road is c. 2.6km to the southeast of the site, linking Limerick to Tralee via the towns of Abbeyfeale, Newcastle West and Adare. Neither the M20 nor the N21 form part of the proposed haul route. The N69 national secondary road is c. 6.9km north of the site, which also connects Limerick to Tralee via Mungret, Clarina, Kildimo, Askeaton (bypass), Foynes, Loghill, Glin, Tarbert, and Listowel. The N69 provides access to Foynes Port and forms part of the haul route for the proposed development. The nearest regional road to the site is the

R518, located c. 1.5km southeast of the site entrance, linking Kilmallock to Askeaton via Rathkeale. The R518 forms part of the proposed haul route from the N69 Junction east of Askeaton to the R518/L6050 junction and R518/L1219 junctions near Rathkeale. The L1219 local road runs along the site's southern boundary, connecting the townland of Ardgoulbeg to the R518 to the southeast. The speed limit along the L1219 is 60km/h. An existing field entrance along the L1219 provides access to the site. Other nearby local roads include the L6050, which also forms part of the construction haul route for the proposed development. Kilcool Bridge over the River Deel is located adjacent to the site to the southwest.

- 1.2. The landscape character of the surrounding area is mostly flat, with some hills and ridges, and characterised by dispersed farmsteads, agricultural farmland and 'one-off' rural housing along the local road network.

2.0 Proposed Development

- 2.1. The Applicant, Harmony Solar Rathkeale Ltd, seeks 10-year permission under Section 34 of the Planning and Development Act 2000 (as amended) for the development of a solar farm on a site of 63.4 hectares consisting of the following:
 - Solar PV arrays with a surface area of 301,000 square metres of Solar Photovoltaic (PV) panels on ground-mounted steel frames within a total site area of c. 63.4 hectares;
 - Installation of 10 no. electrical skid hardstandings for electrical inverter units (17.2 m x 11.1 m);
 - Upgrading and construction of c. 3,293 metres of new and existing internal tracks;
 - Creation of a new site entrance with access gates from the L1219 local road, with sight lines of 90 metres at either side of the new entrance onto the public road;
 - Construction of 1 no. on-site transformer compound of 834 m² to facilitate an associated 'under-the-fence' connection to the existing Rathkeale 110 kV substation, which is located adjacent to the site;

- The on-site transformer compound will enclose an independent power producer building (30.8 sqm), a 110 kV transformer, an 18m high lightning monopole mast, and associated ancillary development.
- Construction of perimeter security fencing of c. 4,922 metres, including mammal access gaps;
- Installation of underground power and communications cabling and ducts;
- Installation of CCTV passive infra-red cameras;
- Provision of screening, landscaping and ecology/biodiversity enhancement areas;
- Construction of security gates and perimeter security fencing of c. 4,922 metres, including mammal access gaps;
- Associated ancillary development, works and services, including:
 - 2 no. temporary site compounds: the main compound (80 m x 35 m) and a second compound (60 m x 35 m).
 - Both compound areas will be used for storage, site facilities and associated works during construction
- An operational period of 40 years for the solar farm is sought.
- The MW output of the proposed solar farm is not specified in the public notices.

2.1.1. Submitted Documentation

2.1.2. The application included the following accompanying documents:

- Planning and Environment Report
- Construction Environmental Management Plan
- Flood Risk Assessment
- Ecological Impact Assessment
- Appropriate Assessment Screening Report
- Noise Assessment
- Landscape and Visual Impact Assessment
- Glint & Glare Assessment

- Archaeological & Cultural Heritage Assessment
- Detailed drawings

2.1.3. Subsequent to a Request for Further Information by the Planning Authority, the following documents were submitted:

- Further Information Response Report
- Revised layout plan showing a 20m buffer from the River Deel
- Cultural heritage photomontages

2.1.4. Subsequent to a Request for Clarification of Further Information by the Planning Authority, the following document was submitted:

- Planning Report

3.0 Planning Authority Decision

3.1. Decision

3.1.1. Limerick City and County Council REFUSED permission for the proposed development for the following reason:

1. The Planning Authority is not satisfied that the development as proposed complies with Objective EN O37 Preservation of Unrecorded/Newly Discovered Archaeological Heritage which prioritises the preservation of unrecorded and newly discovered archaeological heritage. The objective emphasises the need to protect and preserve archaeological remains of potential cultural, historical, or scientific importance, particularly when such remains are discovered during development works. The lack of appropriate archaeological assessment could result in the irreversible loss of valuable heritage assets. As such, the proposed development is inconsistent with the objective's requirement to ensure the protection and preservation of our shared archaeological heritage therefore contrary to the proper planning and sustainable development of the area.

3.2. Planning Authority Reports

3.2.1. First Report (04/06/2024)

3.2.2. A summary of issues raised in the initial planning report is summarised below:

- Regarding AA Screening, it is considered that there is a weak hydrological connection between the site and the Lower River Shannon SAC and the River Shannon and River Fergus Estuaries SPA via the River Deel, given the separation distance between both.
- The Heritage Officer is satisfied that effects on the local Natura 2000 network, including the Lower River Shannon, are unlikely.
- The AA Screening examination concludes the proposed development would not significantly affect the conservation status of any SAC or SPA.
- Regarding EIA Screening, the proposed development is not a class of development listed in Schedule 5 of the Planning and Development Regulations 2001 (as amended). Therefore, an EIA/EIAR is not required.
- There are several recent planning applications for similar-sized solar farms where An Bord Pleanála determined that EIA was not required. These include (i) ABP Ref: PL01.307891: 127ha solar farm in County Carlow, granted in 2021; (ii) ABP Ref: PL26.306065: 100ha solar farm in County Wexford, granted in 2020; and (iii) ABP Ref: PL26.302475: 153ha solar farm in County Wexford, granted in 2019.
- S.I. No. 235/2008 - Planning and Development Regulations, 2008 amends the development classes to which Schedule 5 of S.I. 6000 of 2001 includes: "All private roads which would exceed 2000 metres in length. The proposal contains c. 3293 sqm of internal roads. As noted in the decision by An Bord Pleanála under ABP Ref 26.247217, access tracks installed for solar PV development do not fall within the definition of a road and, therefore, do not qualify as subthreshold development.
- Inland Fisheries Ireland raised no objections to the proposed development. The report recommends that the buffer zone to the River Deel be increased to 20m to reflect policy EH 018 of the Limerick Development Plan, that the river be fenced off to prevent livestock access, and the implementation of riparian preservation and enhancement measures.
- An Taisce recommends that the proposed development be assessed against Article 4 of the Water Framework Directive to ensure it does not cause a deterioration of the status of a surface or groundwater body.

- The solar panels will have a maximum height of 3.2m and will be orientated southwards for maximum solar capture. The panels and arrays will be fixed with no moving parts, tilted at 15 degrees towards the sun and connected to inverters and transformer modules.
- The solar farm will facilitate a future connection to the national grid by way of a future connection to the existing 110kv Rathkeale substation adjacent to the site.
- The proposed solar farm's medium voltage (MV) power will be 'stepped up' to 110 kV by an on-site Transformer Compound to connect to the adjacent Rathkeale 110 kV substation. The Transformer will be enclosed by security fencing in a 'transformer compound' with a control module cabin, underground cabling and equipment.
- A 2m high secure fence with timber posts and wire fencing is proposed inside the hedgerows. The fence will include 300mm x 300mm mammal access points at 100m intervals.
- The internal existing field boundaries will be kept and maintained. A biodiversity area at the northern end of the site will contain bee banks, which will be maintained by stripping vegetation as and when needed. This area will be allowed to regenerate naturally with vegetation.
- There is an existing riparian woodland inside the western boundary adjacent to the River Deel consisting of ash, sycamore, hawthorn, crack willow, nettle and cleavers.
- The application proposes a minimum 10m riparian buffer from the River Deal bank at the site's western boundary. Objective EH 018 of the Limerick Development Plan requires the maintenance of a 20m riparian buffer zone along watercourses on greenfield sites to maintain riverbank vegetation. Inland Fisheries Ireland and An Taise also recommend a 20m riparian buffer zone. On this basis, the Planning Authority considers a 20m buffer to be more appropriate in this instance.
- The glint and glare assessment submitted finds that under the 'bald earth scenario', there is the potential for 22 of the 29 residential properties and 50 out of 71 road points assessed to be impacted. However, existing screening would reduce this impact to 12 properties and 10 road points.

- Mitigation measures, including anti-reflective coatings on the PV panels, would reduce impacts to Negligible/None to Very Low at most residential properties and Medium to Low at two residential properties (H13 and H21).
- Lighting will only be installed around the temporary construction compounds during construction, directed internally away from hedgerows, riparian buffers, and residential dwellings near the solar farm's boundary. No lighting is proposed during the solar farm's operational phase.
- The western and southwestern boundaries are within Flood Zones A and B, as detailed in CFRAM maps. The solar panels will be raised 1.1 m above the existing ground level to give sufficient freeboard above the modelled flood level.
- The solar panel array's construction involves using narrow steel pole sets. This construction method will have minimal impact on the conveyance of flood waters in this area and will not reduce the available floodplain storage.
- The Flooding Department recommend that a maintenance plan be put in place to ensure that any water-borne material that may snag on the solar arm frames within Flood Zones A and B is removed regularly to ensure that essential flow paths or routes are not disrupted.
- There are two Recorded Monuments within the site - a ringfort (LI020-103) at the site's northeast corner and a second ringfort (LI020-100) closer to the public road to the south. No works are proposed within the buffer zone of either recorded monument.
- The Geophysical Survey carried out as part of the Archaeological Impact Assessment submitted with the application suggests the presence of 3 further possible enclosure sites, 2 rectilinear ditch-type features, a small rectangular enclosure and parallel linear responses indicative of a former trackway or road.
- The Conservation Officer deems the level of screening acceptable but requests further photomontages from additional viewpoints and a revised Construction and Environmental Management Plan (CEMP) addressing the potential impact of construction vehicles using the Kilcool Bridge.
- The Council Archaeologist requests further investigation of the anomalies found in the geophysical survey.

- Recommendation: Request further information.

3.2.2.1. Further information was requested, requiring the following:

1. (a) A revised CEMP addressing the potential impacts and mitigation measures concerning the nearby Kilcool Bridge, a Protected Structure. This should include measures such as diverting all incoming/outgoing construction traffic away from the bridge and onto alternative routes.
(b) Additional CGI photomontage of the visual impact of the proposed solar farm on Protected Structures, including the Kilcool bridge, Scart House (Ref. No. 690), Vulcan Forge (Ref. No. 708), Riddlestown Park (Ref. No. 665). The solar farm should be fully screened from these viewpoints as part of their proposed mitigation measures.
(c) A revised chapter on archaeological and cultural heritage prepared by a suitably qualified architectural conservation professional considering the potential impacts of the proposed development on the setting of the neighbouring Protected Structures.
2. A revised site layout drawing showing a 20m buffer to the River Deel in accordance with Objective EH 018 of the Limerick Development Plan.
3. A revised site layout indicating a 20m buffer between the existing dwelling fronting onto the L1219 and the proposed solar panels.
4. The Applicant shall commission a licensed archaeologist to carry out a series of test trenches to further investigate the anomalies identified during the geophysical survey (excluding enclosures Nos. 3, 37 & 67 and their buffers). The trench layout shall be submitted to the Planning Authority Archaeologist before submission to Licensing (NMS). Having completed the work, the archaeologist shall submit a written report to the Planning Authority and the Department of Housing, Local Government & Heritage before the planning decision.

The Applicant shall revise the proposed development showing a 25m buffer around the Recorded Monument, LI020-100, a 20m buffer around the Recorded Monument, LI020-103, and Planning Authority agreed extended buffers around the

newly recorded enclosures designated No.3, No. 37 & No.67 in the geophysical report where no development shall occur.

3.2.3. Second Report in response to Further Information submitted (29/08/24):

- The Applicant has submitted photos of the four requested locations and an updated Archaeological and Cultural Heritage Chapter.
- The photomontages submitted show that the panels are not visible from Scart House, Vulcan Forge, or Riddlestown Park (Protected Structures).
- The Applicant notes that the CEMP, as submitted originally, confirms that the main haul route for the development does not require the crossing of Kilcool Bridge.
- The bridge might be crossed for the operation and maintenance of the site. However, the traffic volumes and types of vehicles will not significantly impact the bridge's Condition as these will be typically light goods vehicles, creating infrequent traffic volumes.
- The Conservation Officer is satisfied that the response to the further information request has answered all conservation concerns.
- The revised site layout submitted provides a 20m riparian buffer in accordance with Objective EH O18 of the Limerick Development Plan.
- The revised site layout provides a 20m buffer around the curtilage of the existing dwelling fronting onto the L1219, in accordance with Objective EH 018 of the Development Plan.
- The Applicant submits that the site is used for agricultural purposes, and archaeological trenching would cause significant disturbance. The Applicant requests that a condition be attached to any grant of permission requiring that the test trenching be carried out prior to construction.
- The Council's Archaeologist states that there are two known archaeological monuments, LI020-100 & LI020-103, within the site and the presence of three further enclosures, as established by the geophysical survey report, namely No 3 (Field M3), No 37(Fields M12/13) and No 67 (Field M21). In addition, 7 potential archaeological features were identified: 3 no. further possible enclosures, 2 no.

rectilinear ditch-type features, another small rectangular enclosure and a possible track or road. Should all these features prove to be archaeological in nature, there would be a minimum of 12 sites within the 63.4ha site and potential associated features surrounding the recently identified enclosures.

- Without further information regarding the remaining seven features, planning permission cannot be granted.
- Advanced archaeological test trenching is essential to provide significant sampling in areas of future ground disturbance. Further clarification is required on this issue.
- Recommendation: Request Clarification of Further Information.

3.2.3.1. Clarification of Further information was requested, requiring the following:

1. The Applicant is requested to conduct pre-development testing on the significant remains identified during the geophysical survey and undertake advanced archaeological test trenching to provide significant sampling in areas of future ground disturbance.

3.2.4. **Third Report in Response to Further Information submitted (21/10/24)**

- The Applicant maintains that it is not viable or practical to carry out the sampling when there is no certainty that the proposed development will be constructed.
- The Applicant submits that no other ground-mounted solar PV projects in Ireland have had to carry out advanced archaeological test trenching for a project before receiving planning permission.
- The Applicant submits that it is appropriate to include the requirements for archaeological test trenching as a condition of permission instead of requesting it to be carried out before planning permission.
- The Planning Authority disagrees with the Applicant's argument that if features are found on site before the commencement of construction, the layout and design of the scheme can be amended appropriately.
- Any changes to the layout and design could require new planning permission if changes to layout, design, and redline boundaries are altered due to archaeological findings and would not be considered minor.

- The Planning Authority acknowledge the argument that the trenching needed would disrupt the current operations of the landowner's farm. However, it can be argued that whether the trenching occurs now or after planning approval, it would still affect the farmland, with no certainty that the development could go ahead, especially if any archaeological materials were discovered.
- The Council Archaeologist notes that contrary to the testing layout submitted under the clarification response, the seven anomalies are confined to small areas of Fields M5, M6, M10, M15 & a larger area in M7.
- Precedents set by other local authorities hold no binding authority over decisions made by Limerick City and County Council.
- Regarding the application Ref. 22/1258 (solar farm on lands 24.7ha at Allaha and Mullagh Co. Limerick), this application was in two separate plots whereby no archaeological monuments or potential monuments were identified following field inspection. Plot 2 contained 2 no. recorded monuments, and buffers were created around them. Targeted geophysics was to be carried out in the area surrounding the buffer, followed by test trenching. In contrast, geophysics has been carried out under the current application, which identified 2 no. recorded monuments, 3 no. previously unknown enclosures, and potentially 7 no. additional sites, the latter of which must be authenticated prior to a decision following best practice. If the features in Field M7 prove to be archaeological, that could potentially exclude nearly half of that field from development.
- The application fails to adequately address the potential impact on unrecorded archaeological resources.
- Insufficient measures have been proposed to either survey or safeguard potential archaeological discoveries that may exist on the site.
- The lack of appropriate archaeological assessment could result in the irreversible loss of valuable heritage assets. On this basis, the proposed development does not comply with Objective HO 037 of the Limerick Development Plan, which prioritises the preservation of unrecorded and newly discovered archaeological heritage.
- Recommendation: Refuse Permission

3.2.5. Other Technical Reports

Local Authority Archaeologist (17/10/2024) - The Applicant's clarification of further information response is unacceptable.

Conservation Officer (27/05/2024) - further information requested.

Flooding Department – No objections on the grounds of flood risk.

Heritage Officer - No objections subject to Conditions

Roads Department - No objections

Fire and Emergency Services - No objections

Executive Scientist - No objections

3.3. Prescribed Bodies

3.3.1. An Taisce:

3.3.2. No objections. Recommendations include:

- The proposal should be assessed against Article 4 of the Water Framework Directive to determine whether the project may cause a deterioration of the status of a surface or groundwater body.
- Evaluate the adequacy of the 10m buffer zone between the River Deel and the proposed solar panel arrays, ensuring mitigation of construction and operation phase impacts and implementing riparian preservation and enhancement measures.

3.3.3. Inland Fisheries Ireland:

3.3.4. No objections. Recommendations include:

- The buffer zone to the River Deel should be increased to 20m to accord with Policy Objective EH-O18 of the Development Plan.
- Enhancement of the riparian strip along the riverbank would increase its structural stability and biodiversity.

4.0 Planning History

4.1.1. Subject Site:

There is no relevant planning history on the subject site.

4.1.2. Adjoining Rathkeale 110 kV Substation

P.A. Ref. 211625 Permission GRANTED on 01/03/2022 to EirGrid Plc for a 4.1m high single-storey extension (27.8 sq.m.) to the existing substation control building on its northern elevation. The proposed extension will include the provision of a new entrance on its eastern elevation with ramped and stepped access, as well as all associated ancillary site development works.

P.A. Ref. 207010 Permission GRANTED on 07/05/2020 to ESB for an extension of the duration of permission for planning reference 15/592.

P.A. Ref. 191222 Permission GRANTED on 10/06/2020 to ESB for (1) a 34 sq.m single-storey extension to the existing control building; (2) installation of two 15m high lightning monopoles; (3) relocation of existing 2.6m high palisade fence; and (4) ancillary site clearance and development works including provision of underground services and cables.

P.A. Ref. 15/592 Permission GRANTED on 21/10/2015 to ESB for alterations to the existing station to include two new bundled 38kV power transformers and transformer bays; two new bundled interface transformers; a new medium voltage (MV) module; adjustments to the existing compound fencing to accommodate the new works; associated drainage and site works.

P.A. Ref. 211625 Permission GRANTED on 01/03/2022 to Eirgrid to construct a single-storey extension to the existing substation control building on its existing northern elevation, of approximately 4.1m in height. The new gross floor space created by the development will be 27.8m². The proposed extension includes the provision of a new entrance on its eastern elevation with ramped and stepped access, and all associated and ancillary site development works.

4.1.3. Adjoining Lands

P.A. Ref. 23518 Permission GRANTED on 19/03/2024 for the refurbishment of the existing derelict cottage and to construct an extension to the rear & side of the cottage, new entrance, wastewater treatment and disposal system and boundary walls. It is located to the south of the subject application site.

P.A. Ref. 23516 Permission GRANTED on 27/03/2024 for the construction of a new dwelling house, site entrance, wastewater treatment system, percolation area and all associated site works. It is located to the southeast of the subject application site.

P.A. Ref. 22501 Permission GRANTED on 04/10/2022 for the construction of a new dwelling house, detached garage, site entrance, wastewater treatment system, percolation area and all associated site works. It is located to the southeast of the subject application site.

P.A. Ref. 2214 Permission GRANTED on 06/04/2022 for the construction of an extension to an existing slatted shed. It is located to the southeast of the site. It is located to the southeast of the site. It is located to the southeast of the subject application site.

P.A. Ref. 221336 Permission GRANTED on 29/08/2022 for the construction of a roof over the existing slatted feeding area and all associated site works. Permission was also granted for the retention of the cubicle shed. It is located to the northeast of the subject application site. It is located to the southwest of the site. It is located to the northwest of the site.

P.A. Ref. 2187 Permission GRANTED on 29/04/2021 for the construction of a new dwelling house, detached garage, site entrance, wastewater treatment system, percolation area and all associated site works. It is located to the southwest of the subject application site.

P.A. Ref. 19532 Permission GRANTED on 08/10/2019 for the construction of a dwelling house, garage, entrance, boundary walls an on-site wastewater treatment and disposal system and all associated works. It is located to the southwest of the subject application site.

P.A. Ref. 19439 Permission GRANTED on 25/07/2019 for the construction of a kitchen dining room extension to an existing dwelling house. It is located to the northwest of the subject application site.

P.A. Ref. 19421 Permission GRANTED on 25/02/2020 for the construction of a seven-unit glamping facility incorporating the conversion of an existing cottage to toilet and kitchen area, installation of a proprietary wastewater system and all associated services. It is located to the southwest of the site.

5.0 Policy and Context

5.1.1. EU Legislation/Policy

Renewable Energy Directive EU/2023/2413 - sets an EU target of at least 42.5% renewable energy by 2030, with the aspiration to reach 45% for all Member States. The Directive introduces several provisions to facilitate the deployment of photovoltaic (PV) projects, including the designation of renewable acceleration areas by Member States, a simplified and expedited permit granting process for solar PV projects and streamlined environmental assessment procedures for solar PV projects in designated renewable acceleration areas.

Climate and Energy Policy Framework 2030 Outlines EU climate and energy policies for 2020-2030, targeting a 40% reduction in greenhouse gas emissions and a 32% share of renewable energy consumption by 2030.

Effort Sharing Regulation (EU) 2018/842 Obligates member states to reduce greenhouse gas emissions 30% below 2005 levels by 2030, contributing to the Paris Agreement objectives.

EU Commission European Green Deal 2019 Aims for net-zero greenhouse gas emissions in the EU by 2050 and a 55% reduction by 2030, transforming EU and national economies towards environmental sustainability.

S.I. No. 77/2019 - European Union Environmental Objectives (Surface Waters) (Amendment) Regulations 2019

Directive 2008/50/EC on ambient air quality and cleaner air for Europe EU Adaptation Strategy 2021

5.1.2. National Context

National Planning Framework – Project Ireland 2040, DoHP&LG 2018 This plan sets a strategic national planning framework, emphasising the transition to a low-

carbon, climate-resilient society. It highlights the role of rural areas in renewable energy supply, aiming to harness the country's renewable energy potential and transition to a competitive, low-carbon economy by 2050. Key National Policy Objectives (NPOs) include:

- **NPO 21:** Enhance rural competitiveness through innovation and diversification into new sectors and services, including climate change and sustainability.
- **NPO 54:** Integrate climate action into planning to support national climate policy targets for mitigation and adaptation.
- **NPO 55:** Promote renewable energy use and generation in appropriate locations to meet national low-carbon economy objectives by 2050.

National Development Plan 2021-2030 This plan supports the NPF and provides a framework for investment priorities, including strategic investment in renewable energy.

National Development Plan 2021-2030 (NDP) The NDP sets out investment priorities underpinning the implementation of the NPF. Chapter 13 deals with NSO 8 Transition to a Climate-Neutral and Climate Resilient Society. Public capital investment choices must contribute to a 51% reduction in greenhouse gas emissions by 2030 and lay the pathway to achieve net-zero greenhouse gas emissions by 2050. This will require grid-scale renewable electricity generation and storage.

National Energy and Climate Plan, 2021-2030 (amended in 2023) This plan outlines Ireland's energy and climate policies for 2021-2030 and aims for at least 80% renewable energy in electricity by 2030. It sets specific targets for solar energy, with a target of 5 GW of solar energy by 2025.

Climate Action Plan 2024 sets ambitious targets to reduce emissions across various sectors, aiming for an increase in the share of renewable electricity to 80% by 2030 and a 75% reduction in emissions based on 2018 levels by 2030 through a significant upscaling of renewable energy. Key objectives include deploying up to 5 GW of solar power by 2025 and at least 8 GW by 2030.

5.1.3. **Climate Action and Low Carbon Development (Amendment) Act 2021**

The Act commits Ireland to the objective of becoming a carbon-neutral economy by 2050, reducing emissions by 51% by the end of the decade. Section 17 of the Climate Action and Low Carbon Development (Amendment) Act, 2021 amends the principle act such that Section 15(1) requires:

“(1) A relevant body shall, in so far as practicable, perform its functions in a manner consistent with—

- a) the most recent approved climate action plan,*
- b) the most recent approved national long term climate action strategy,*
- c) the most recent approved national adaptation framework and approved sectoral adaptation plans,*
- d) the furtherance of the national climate objective, and*
- e) the objective of mitigating greenhouse gas emissions and adapting to the effects of climate change in the State”.*

“Relevant body” means a prescribed body or a public body.

National Energy Security Framework (April 2022) The Framework addresses Ireland’s energy security needs in the context of the war in Ukraine. It coordinates energy security work across the electricity, gas and oil sectors. The Framework takes account of the need to decarbonise society and the economy, and of targets set out in the Climate Action Plan to reduce emissions. Theme 3 - Reducing our Dependency on Imported Fossil Fuels, focusses on three areas of work:

7.1 Reducing demand for fossil fuels.

7.2 Replacing fossil fuels with renewables, including solar energy.

7.3 Diversifying fossil fuel supplies.

Under 7.2, the statement notes that prioritising renewables is in line with the requirements of the recast Renewable Energy Directive and the EC REPowerEU action statement. The Commission has called on Member States to ensure that renewable energy generation projects are considered to be in the overriding public interest, and the interest of public safety, and the Government supports this request.

National Biodiversity Action Plan 2023 – 2030 (NBAP) Ireland’s 4th NBAP sets the biodiversity agenda for the period 2023 – 2030. The NBAP has a list of Objectives

which promotes biodiversity as follows, Objective 1 Adopt a whole of government, whole of society approach to biodiversity; Objective 2 Meet urgent conservation and restoration needs; Objective 3 Secure nature's contribution to people; Objective 4 Enhance the evidence base for action on biodiversity; Objective 5 Strengthen Ireland's contribution to international biodiversity initiatives.

National Landscape Strategy for Ireland, 2015-2025 This Strategy integrates landscape into sustainable development, identifying and describing landscape character and providing an integrated policy framework for landscape protection and management.

The Planning System and Flood Risk Management Guidelines, 2009 aim to avoid inappropriate development in flood-prone areas, advocating a sequential risk assessment approach and a justification test.

5.1.4. **Regional Context**

Southern Regional Spatial & Economic Strategy 2019-2031 - Aligns with Project Ireland 2040, the NPF, and the National Development Plan 2018-2027, coordinating City & County Development Plans and promoting sustainable electricity generation capacity. Key Regional Policy Objectives (RPOs) include:

RPO 4.84: Support the rural economy and initiatives in relation to diversification, agri business, rural tourism and renewable energy so as to sustain the employment opportunities in rural areas.

The Strategy supports an increase in the amount of new renewable energy sources in the Region. This includes the use of wind energy – both onshore and offshore, biomass, and solar photovoltaics and solar thermal, both on buildings and at a larger scale on appropriate sites in accordance with National policy and the Regional Policy Objectives outlined in this Strategy.

5.1.5. **Other Relevant Policy Documents**

- Ireland's Transition to a Low-Carbon Energy Future 2015-2030
- Climate Action Charter for Local Authorities (2019)
- Climate Change Sectoral Adaptation Plan (2020)

- Circular PL 20-13 - Review of Wind Energy and Renewable Energy Policies in Development Plans
- Traffic Management Guidelines, Department of Transport (2019)
- Traffic and Transport Assessment Guidelines (2014)
- TII standard DN-GEO-03060' Geometric Design of Junctions'
- Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities, Department of the Environment, Heritage and Local Government, (2009)
- OPR Practice Note PN01 - Appropriate Assessment Screening for Development Management (OPR, 2021)
- Architectural Heritage Protection – Guidelines for Planning Authorities (2011)
- National Biodiversity Action Plan 2023-2027
- Tree Preservation Guidelines DOELG (1994)
- Ireland's Invasive Alien Species Soil and Stone Pathway Action Plan 2023-2027
- BS 5228-1:2009+A1:2014 - Code of practice for noise and vibration control on construction and open sites – Noise (2009)
- Best Practice Guidelines for the Irish Wind Energy Industry (2012), published by the Irish Wind Energy Association
- Environmental Noise Guidance for Local Authority Planning & Enforcement Departments (2021), published by the Association of Acoustic Consultants of Ireland

5.1.6. Development Plan

Limerick City and County Council Development Plan 2022-2028 is the statutory plan for the area. The following provisions are considered relevant:

Policy CAF P1 Climate Action Policy: It is a policy of the Council to implement international and national objectives, to support Limerick's transition to a low carbon economy and support the climate action policies included in the Plan.

Objective CAF O27 Renewable Energy Production: It is an objective of the Council to encourage and facilitate the production of energy from renewable

sources, such as from bioenergy, solar, hydro, tidal, geothermal and wind energy, subject to appropriate levels of environmental assessment and planning considerations.

Policy CAF P6 Renewable Energy: It is a policy of the Council to support renewable energy commitments outlined in national and regional policy, by facilitating the development and exploitation of a range of renewable energy sources at suitable locations throughout Limerick, where such development does not have a negative impact on the surrounding environment landscape, biodiversity, water quality or local amenities, to ensure the long-term sustainable growth of Limerick

Section 9.4.3 Solar Energy – states *inter alia* that Proposals in relation to hybrid installations of large-scale solar PV and wind will be assessed by the Council on a site-by-site basis taking into account ecological, scenic and other normal planning considerations.

Normal planning considerations, including impact on the landscape, urban design, biodiversity, ecological impact, on-site water management, access to the grid, security fencing, decommissioning issues and residential amenity, including potential glint and glare, will require assessment.

Section 11.7.2.2 Solar - states that in the assessment of any applications for solar farms, the Council will consider these renewable energy developments having regard to:

- Any future Section 28 Guidance;
- Location design, specifications, orientation of the development;
- Landscape Character Areas of the County; • Visual impact, zones of influence from the solar arrays and associated infrastructure such as road access;
- Glint and Glare Assessments on roads, including in the vicinity of the strategic national road network, and other sensitive receptors;
- Archaeological Impact Assessment and Heritage Impact Assessment;
- Ecological Impact Assessment;
- Landscaping plans to integrate the development into the landscape;
- Security requirements such as CCTV, security lights, fencing etc.;

- Impacts from lighting;
- Construction impacts;
- Impacts on drainage patterns and water tables;
- Suitability of and access to the electricity grid;
- Decommissioning Plan for a site and its associated technologies.

For solar panels on existing structures, an outline of the possible visual effects of the development will be required. For larger scale developments this may take the form of photomontages. Details of grid connections, where applicable and alterations to existing electricity cables that are open to public view are to be provided. Note, this may not be necessary in the case of stand-alone developments intended to serve individual dwellings.

Objective EH O18 Riparian Buffers: It is an objective of the Council to maintain riverbank vegetation along watercourses and ensure protection of a 20m riparian buffer zone on greenfield sites and sites are maintained free from development. Proposals shall have cognisance of the contents of the Inland Fisheries Ireland document Planning for Watercourses in Urban Environments.

Objective HO 037 Preservation of unrecorded/newly discovered Archaeological Heritage: It is an objective of the Council to protect and preserve the preservation in situ (or at a minimum by record) of all sites and features of historical and archaeological interest, discovered subsequent to the publication of the Record of Monuments and Places.

Objective EH O39 Protection of the setting of Archaeological Monuments: It is an objective of the Council to ensure that no development shall have a negative impact on the character or setting of an archaeological monument.

Objective EH O40 Proper procedures during the planning process: It is an objective of the Council to:

- a) Ensure early engagement at preplanning stage is undertaken with the Local Authority Archaeologist to promote the 'preservation in situ' of archaeological remains and settings in development.
- b) Adopt a policy of archaeological monitoring of developments where the scale and nature of such developments may, in the opinion of the Planning Authority,

have a negative impact on previously unknown archaeological features/ artefacts.

- c) Require the preparation of an Archaeological Heritage Assessment in cases where it is deemed that Archaeological Heritage would be affected by a proposed development (due to their location, size or nature). The report shall be prepared by a suitably qualified archaeologist on the archaeological implications, if any, of the proposed development either prior to a decision on a planning application or prior to commencement of development on site.

Volume 5 Designated Sites, Recorded Monuments & Places

6.0 Natural Heritage Designations

6.1.1. Natura 2000 European Sites within 15km of the site are as follows:

6.1.1.1. Special Areas of Conservation (SACs)

- Askeaton Fen Complex SAC (Site Code: 002279) – located 1.7 km northeast of the site.
- Barrigone SAC (Site Code: 000432) - located 6.1 km northwest of the site.
- Curraghchase Woods SAC (Site Code: 000174) – located 6.3 km northeast of the site.
- Lower River Shannon SAC (Site Code: 002165) - located 7.57 north of the site.

6.1.1.2. Special Protection Areas (SPAs)

- River Shannon and River Fergus Estuaries SPA (Site Code: 004077) – located 6.3 km north of the site.
- Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA (Site Code: 004161) - located 7.4 km to the west of the site.

6.1.1.3. Natural Heritage Areas (NHAs)

- Carrigkerry Bogs NHA (Site Code: 002399) - located 12km southwest of the site.
- Moyreen Bog NHA (Site Code: 002361) – located c. 14km west of the site.

6.1.1.4. Proposed Natural Heritage Areas (pNHAs)

- Ballymorrisheen Marsh (Site Code: 001425) – located to the northeast
- Cappagh Fen (Site Code: 001429) – located to the northeast
- Gorteennamrock (Site Code: 001433) – located to the northeast
- Ballinvirick Marsh (Site Code: 001427) – located to the northeast
- Curraghchase Woods (Site Code: 000174) – located to the northeast
- Adare Woodlands (Site Code: 000429) - located to the northeast
- Inner Shannon Estuary - South Shore (Site Code: 000435) – to the north
- Dromore & Bleach Loughs (Site Code: 001030) – located to the northeast
- Glenastar Wood (Site Code: 001431) – located to the southeast

7.0 **The Appeal**

7.1.1. A first-party appeal was received from Fehily Timoney and Co. Consultants representing the Applicant Harmony Solar Rathkeale Ltd. against the decision made by the Planning Authority to refuse permission for the proposed development.

7.1.2. **Context**

7.1.3. As an introduction, the appeal submission sets out the context of the grounds of appeal, summarised as follows:

- A geophysical survey of lands within the application site was carried out in June 2023 by John Nicholls of Target Archaeological Geophysics Ltd.
- The survey was undertaken under licence number 23R0255 issued by the National Monuments Service (NMS).
- The geophysical survey identified the location and extent of 2 no. recorded monument ringfort - rath sites (Ref Nos. LI020-103 and LI020-100) and identified 3 no. previously unknown enclosures within the site boundary. Refer to Fig. 1 in the submission for their locations and as detailed in the Architectural Impact Assessment (AIA) submitted.
- The proposed development avoids development within proximity of the two known recorded monuments.

- The proposed development would use concrete shoes near the 3 no. newly identified previously unknown enclosures. Limerick City and County Council did not raise any issues with this approach in their deliberations on the project.
- The Council's issue relates to areas outside of the now-known archaeological features. These areas are classified in the AIA and Geophysics reports as 'anomalies recorded during this geophysical survey'.
- The Applicant is committed to carrying out a programme of pre-development archaeological trenching under licence to investigate these anomaly areas. This would investigate any potential archaeological features identified during the geophysical survey.
- The AIA report notes that as a geophysics survey has been conducted, it is unlikely that the test trenching would identify any new area of archaeology but would provide a better record of the identified areas. As such, it is not expected to materially alter the design of the proposed solar farm (as per pg. 20 of the AIA report.)
- In response to the Planning Authority's request for further information, the Applicant responded by outlining why Item No. 4 requiring pre-approval test trenching could not be complied with in advance of planning permission. The Applicant is committed to conducting a comprehensive test trenching program on the site prior to construction.
- The Council issued a Clarification of Further Information and was not satisfied with the Applicant's response regarding pre-development testing on the significant remains identified during the geophysical survey and how this was not viable prior to planning consent.
- Notwithstanding the Applicant's commitment to carrying out pre-development testing and compliance with best practice advice by the Office of the Planning Regulator, the application was refused permission on the grounds of non-compliance with a County Development Plan policy objective.

7.2. Grounds of Appeal

- 7.2.1. The Applicant requests that An Bord Pleanála overturn Limerick City and County Council's reason for refusal on the following three grounds of appeal.

7.2.2. Ground of Appeal No. 1

- The reason for refusal cites Objective EN O37, which seeks the *'preservation of unrecorded/ newly discovered archaeological heritage which prioritises the preservation of unrecorded and newly discovered archaeological heritage'*.
- There is no Objective EN O37 in the Limerick City and County Council Development Plan. The closest is Objective EH O37, which seeks the *'Preservation of unrecorded/ newly discovered archaeological heritage: "It is an objective of the council to protect and preserve the preservation in situ bracket or at a minimum by record brackets of all sights and features of historical and archaeological interest, discovered subsequent to the publication of the record of monuments and places."*
- On this basis, the reason for refusal is incorrectly formulated and flawed.

7.2.3. Ground of Appeal No. 2

- The proposed development complies with Policy Objective EH 037 of the Limerick City and County Development Plan 2022-2028.
- The Council's reason for refusal is at variance with Policy Objective EH 037.
- The reason for refusal, which states that the objective seeks to *"prioritise the preservation of unrecorded and newly discovered archaeological heritage"*, is incorrect.
- The policy objective EH 037 seeks to *"protect and preserve the preservation in situ (or at a minimum by record)"*.
- The preservation in situ or, at a minimum, by record, is different from what is set out in the reason for refusal.
- The refusal reason stated the following - *The objective emphasises the need to protect and preserve archaeological remains of potential cultural, historical, or scientific importance, particularly when such remains are discovered during development works.* This is not contained in Policy EH O37.
- The information submitted with the planning application and the commitments by the Applicant as detailed in the AIA, along with the further information and

clarification of further information submissions, in accordance with best practice, demonstrates how the Applicant commits to *“Preserve unrecorded and newly discovered archaeological heritage”*.

- The Applicant has identified unrecorded archaeology on the site and incorporated mitigation measures into the design of the project to avoid impacts.
- The Applicant has committed to carrying out a comprehensive schedule of pre-commencement test trenching across all areas identified as anomalies in the geophysical surveys prior to the commencement of development. This aligns with best practice.
- The National Monument Service (NMS) issued a guidance document in 2016 titled ‘Solar Farm Developments - Internal Guidance Document’ (refer to Appendix 2 of the submission. This guidance document recognises that:

‘While solar developments can have large sites, they present relatively low levels of ground impact and that by their very nature, they also have design flexibility to avoid impacts’. The guidance document also recognises that *‘it may be acceptable to deal with areas of unclear archaeological potential by way of condition of grant of planning permission requiring geophysical survey and or testing followed by avoidance or appropriate mitigation’*.

- The Office of the Planning Regulator (OPR) has published ‘Practice Note (PN03) on planning conditions’ (2022). The OPR advises that planning permission can include a condition of planning permission requiring pre-development testing, as follows:

“The developer shall engage a suitably qualified archaeologist(licensed under the National Monuments Act) to carry out pre-development archaeological testing in areas of proposed ground disturbance and to submit an archaeological impact assessment report for the written agreement of the planning authority, following consultation with the National Monument Service, in addition of any site preparation works or groundworks, including site investigation works/ topsoil stripping/sight clearance/ dredging/ underwater works and/ or construction works...”

- On this basis, the Applicant submits that the reason for refusal by Limerick County Council is not proportionate, appropriate or in line with established precedent as detailed in the Clarification of Further Information Response and, therefore, should be overturned by An Bord Pleanála.

7.2.4. Ground of Appeal No. 3

- The Council's planning report assessment of the Applicant's clarification of further information response does not present a logical argument for refusing the project on archaeological grounds only.
- The Planning Report states that layout and design changes due to archaeological findings could require new planning permission. This argument is a theoretical assumption contrary to the NMS Guidance (2016), which recognises that solar development can accommodate a certain degree of flexibility without negatively impacting the integrity or viability of a solar project.
- If significant layout changes are required, the onus will be on the Applicant to ensure that appropriate planning consent is in place for the project due to changes that may materialise.
- The Planning Report acknowledges the impracticality of carrying out test trenching and that it would disrupt the current operations of the landowner's farm. However, the Planning report misinterprets test trenching requirements, stating that it would impact the farmland regardless of when it occurs, i.e. before or after securing planning permission.
- The Applicant submits that test trenching would only be carried out in accordance with a planning condition if the project progresses, ensuring that financial and grid agreements are secured.
- Uncertainty around the route to market is why consent is sought for 10 years and not the usual five years.
- The farmer can continue agricultural activities on the land until financial and connection agreements are in place and construction commences.

- If the trenching were to be carried out now before securing planning permission, the landowner and the agricultural practices carried out on the site would be impacted for a significant period.
- The Planners report dismisses planning precedents set by other local authorities, stating they have no statutory obligations governing development in Limerick City and County Council. The Applicant acknowledges this but submits that precedent is a recognised concept in decision-making.
- The Planning Authority report fails to address precedent cases decided by An Bord Pleanála, which hold some authority (refer to the Clarification of Further Information response for precedent cases).
- Notwithstanding the dismissal of precedence, the Planning Authority report selectively references certain cases to justify the Council's refusal.
- The Planning Authority report notes that the rationale for not refusing a project at Ballinknockane Solar Farm in Co. Limerick under P.A. Ref. 22/1258 or requesting test trenching before granting permission was based on the fact that no geophysical surveys were conducted. The Council, therefore, held sufficient justification for granting planning permission without the requirement to carry out test trenching before granting planning permission.
- The Applicant submits that the same standards regarding archaeology are not being applied across the jurisdiction of Limerick City and County Council.
- The Applicant has already conducted archaeological surveys for the site at great expense and has delayed the project, only to be told to carry out more surveys before permission is granted.
- The geophysical surveys have identified previously unrecorded archaeology, which has been incorporated into the project design. Areas of anomalies would be subject to test trenching prior to the commencement of development.
- The Applicant highlights that the project would still be viable if panels had to be removed due to archaeological findings. The AIA report recommends that such removals would be an unlikely requirement.

7.3. Planning Authority Response

- 7.3.1. The Planning Authority's response to the appeal was submitted to An Bord Pleanála outside the statutory timeframe and was, therefore, invalidated and returned.

7.4. Observations

- 7.4.1. None received

8.0 Assessment

- 8.1. Having examined the application details and all other documentation on file, including the first-party appeal, the reports of the Local Authority, having inspected the site, and having regard to the relevant local/regional/national policies and guidance, I consider the main issues to be considered in this appeal are as follows:

- Policy Context and the Principle of the Development
- Archaeology
- Landscape and Visual Impact
- Glint and Glare
- Flood Risk
- Drainage
- Biodiversity
- Traffic and Infrastructure
- Duration of Consent and Operational Period
- EIA Screening and
- Screening for Appropriate Assessment

- 8.1.1. These issues are addressed below accordingly.

8.2. Policy Context and the Principle of the Development

- 8.2.1. Renewable energy development, including solar photovoltaic farms, is strongly supported at European, national, regional, and local policy levels with collective support across government sectors for a move to a low-carbon future and an

acknowledgement of the need to encourage the use of renewable resources to reduce greenhouse gas emissions and to meet renewable energy targets set at European Level. The Renewable Energy Directive (RED III), which came into force on 20 November 2023, establishes a binding target for the EU to achieve at least a 42.5% share of renewable energy in its overall energy consumption by 2030. The EC REPowerEU plan, introduced in 2022, aims to rapidly decrease the EU's dependence on Russian fossil fuels and deploy over 320 GW of new solar photovoltaic capacity by 2025 and almost 600 GW by 2030. These targets are also set out in the EU Solar Energy Strategy (2022).

- 8.2.2. At the national level, the Climate Action Plan 2024 sets a target to achieve an 80% share of electricity generated from renewable sources by 2030. This includes achieving a target of deploying 8 GW of solar energy by 2030. The National Planning Framework - Project Ireland 2040 emphasises the transition to a low-carbon, climate-resilient society and highlights the role of rural areas in renewable energy supply. It aims to harness the country's renewable energy potential and transition to a competitive, low-carbon economy by 2050. National Policy Objective 55 promotes renewable energy use and generation in appropriate locations to meet national low-carbon economy objectives by 2050. The National Energy and Climate Plan, 2021-2030 (amended in 2023) outlines Ireland's energy and climate policies for 2021-2030 and aims for at least 80% renewable energy in electricity by 2030. It sets specific targets for solar energy, with a target of 5 GW of solar energy by 2025.
- 8.2.3. At the regional level, the Southern Regional Spatial & Economic Strategy 2019-2031 supports an increase in the amount of new renewable energy sources in the Region, including solar photovoltaics at a larger scale on appropriate sites in accordance with National policy and Regional Policy Objectives outlined in the Strategy. RPO 4.84 supports the rural economy and initiatives related to diversification, agribusiness, rural tourism, and renewable energy to sustain employment opportunities in rural areas.
- 8.2.4. At the local/county level, the Limerick City and County Development Plan 2022-2028 sets out a range of policies and objectives that seek to implement international and national objectives regarding the production of renewable energy, including solar energy development. Under Policy CAF P1, it is a policy of the Council to implement international and national objectives, to support Limerick's transition to a low-carbon economy and support the climate action policies included in the Plan. Objective CAF

O27 seeks to encourage and facilitate the production of energy from renewable sources, including solar energy, subject to appropriate levels of environmental assessment and planning considerations. Policy CAF P6 seeks to support renewable energy commitments outlined in national and regional policy by facilitating the development and exploitation of a range of renewable energy sources at suitable locations throughout Limerick, where such development does not have a negative impact on the surrounding environment landscape, biodiversity, water quality or local amenities, to ensure the long-term sustainable growth of Limerick. Section 9.4.3 Solar Energy states *inter alia* that proposals in relation to hybrid installations of large-scale solar PV will be assessed by the Council on a site-by-site basis, taking into account ecological, scenic and other normal planning considerations. Normal planning considerations, including impact on the landscape, urban design, biodiversity, ecological impact, on-site water management, access to the grid, security fencing, decommissioning issues and residential amenities, including potential glint and glare, will require assessment. Section 11.7.2.2 of the Development Plan sets out specific assessment criteria for solar farms, as detailed in Section 5.0 above.

- 8.2.5. The proposed development comprises a solar farm consisting of 301,000 sq.m. of solar photovoltaic panels on ground-mounted steel frames. The Planning and Environmental Planning Report submitted with the application does not explicitly state the estimated electricity output or generation capacity of the proposed solar farm. In the interest of clarity on the project's contribution to Ireland's renewable energy targets, the Board may wish to request further information from the Applicant detailing the estimated megawatt (MW) capacity and annual electricity generation of the proposed solar farm. Notwithstanding this, given the scale of the proposed solar farm spanning 63.4 hectares, it is reasonable to conclude that it would significantly contribute to Ireland's renewable energy target of 8GW of solar energy by 2030. I consider that this issue can be dealt with by way of a condition in the event of a grant of permission. The connection of the proposed development to the existing Rathkeale 110 kV substation, which adjoins the site by way of a future 'over-the-fence' connection, further enhances the project's feasibility and the integration of the electricity generated into the national grid. In the absence of capacity and electricity generation figures, I consider that this issue can be dealt with by way of a condition requiring the Applicant to submit final generation capacity details prior to the

commencement of development. On this basis, I consider the proposed development acceptable in principle, subject to further planning considerations and environmental assessment.

8.3. Archaeology

- 8.3.1. The Local Authority refused permission for the proposed development on the grounds that the lack of an appropriate archaeological assessment could result in the irreversible loss of valuable heritage assets and thereby does not comply with Objective EN O37 of the Development Plan, which seeks to ensure the protection and preservation of unrecorded/newly discovered archaeological heritage. The Planning Authority's rationale and stated reason for refusal are detailed in Sections 3.1 and 3.2 above.
- 8.3.2. The Applicant contests the Local Authority's reason for refusal, as detailed in Section 8.0 above. In summary, the Applicant submits that the reason for refusal is based on an incorrect citation of policy, a misinterpretation of policy requirements regarding archaeological preservation and an inconsistent approach to that taken in precedent cases in the county.
- 8.3.3. The Applicant's first ground of appeal submits that the reason for refusal cites Objective EN O37, which does not exist in the Limerick City and County Development Plan 2022-2028. The Applicant states that the closest corresponding policy is Objective EH O37, which refers to the 'Preservation of unrecorded/newly discovered Archaeological Heritage' and which seeks to *"protect and preserve the preservation in situ (or at a minimum by record) of all sites and features of historical and archaeological interest, discovered subsequent to the publication of the Record of Monuments and Places"*. The Applicant submits that this policy does not prioritise the preservation of unrecorded and newly discovered archaeological heritage in situ but instead allows for preservation by record where necessary, which the Applicant has demonstrated compliance with through the proposed mitigation measures.
- 8.3.4. The Applicant's second and third grounds of appeal put forward that the archaeological assessment submitted with the application has identified unrecorded archaeological features on the site and incorporated mitigation measures into the design of the project to avoid impacts. The Applicant submits that the National Monument Service internal

guidance document 2016 on 'Solar Farm Developments' and the OPR's Practice Note on Planning Conditions (2022) recognises that solar farms have a low ground impact and can accommodate design flexibility to avoid archaeological features. Furthermore, the Applicant contends that the Council's approach is inconsistent with previous decisions by both the Planning Authority and An Bord Pleanála. For example, in the absence of geophysical surveys, the Planning Authority did not request test trenching before granting permission for a solar farm at Ballinknockane in Co. Limerick under P.A. Ref. 22/1258. The Applicant also submits that the Planning Authority's approach to archaeology is not consistent with the approach taken by An Bord Pleanála on this issue in other jurisdictions, as detailed in the Applicant's clarification of further information response. The Applicant refers to precedent cases, including Ballyvalode Solar Farm, Co. Limerick (P.A. Ref. 21/1565 and ABP Ref. 312712-22), where An Bord Pleanála granted permission, determining that archaeological test testing could be dealt with by way of a condition (No.9) of planning permission rather than at pre-consent stage. Other precedent cases referred to include Delamain Solar Farm (ABP Ref. ABP-318785-24, Condition 13) and Rahanisky Solar Farm (ABP Ref. ABP-318852-24, Condition 17), where An Bord Pleanála required archaeological test trenching as a planning condition rather than a pre-consent requirement.

- 8.3.5. As part of the subject application, the Applicant submitted an Archaeological Assessment report prepared by John Cronin, dated January 2024. The methodology of the archaeological assessment included a desktop survey, a geophysical survey, and a site inspection by a suitably qualified archaeologist. The desktop survey identified known archaeological sites within 1km of the site boundary, using various sources, including the Archaeological Survey of Ireland (ASI), Sites and Monuments Records (SMRs), the Record of Monuments and Places (RMP), historic maps, aerial photography, Database of Irish Excavation Reports, and the Placenames Database of Ireland. This review identified 26 archaeological sites within 1km of the study area, including two recorded monument ringforts (LI020-100 and LI020-103) within the application site. Following this, a geophysical survey was undertaken by Target Archaeological Geophysics Ltd. in June 2023 under a detection license issued by the National Monuments Service (NMS). Following this, a qualified archaeologist, Mr. Colm Chambers, conducted a site visit, including a drone survey, to examine features identified in the geophysical survey. The study area was assessed with regard to

historic landscape characteristics, land use, vegetation cover, presence and potential undetected archaeological and architectural heritage sites/features.

- 8.3.6. The study found that no national monuments are located within the study area, and it describes the two ringforts recorded within the application site. Ringfort (L/020-100) is described as a circular area enclosed by an earth-and-stone bank, and Ringfort (L/020-103) is described as an embanked circular enclosure. Table 1 in the report provides a list and details of the 26 recorded archaeological sites within 1km of the application site, including the two recorded monuments within the site. These consist predominantly of ringforts (raths), two enclosures, a mound, a designed landscape (tree-ring), a castle tower house and a bawn.
- 8.3.7. The geophysical survey of the site identifies the location and extent of ringforts LI020-100 and LI020-103 within the application site and identifies three previously unknown enclosures within the site boundary. These include two rectilinear ditch-type features, a small rectangular enclosure, and parallel linear responses indicative of a former trackway or road. The survey also identifies remnants of former buildings/structures depicted on historical mapping and the extensive remains of former boundaries, land divisions and field systems, some of the latter potentially medieval, perhaps earlier, in origin. Remnants of former cultivation, strong magnetic responses of modern origin, and natural soil/geological variations were also recorded. Table 3 of the survey provides a detailed description of the individual fields on the site and the archaeological features found in each field.
- 8.3.8. The Archaeological Assessment report concludes that appropriate archaeological buffers around the two recorded monument ringforts (LI020-100 and LI020-103) have been incorporated into the design of the project, and no ground disturbance will occur above or within 20m of the three previously unknown enclosures. The report states that subject to the agreement of the Planning Authority and National Monuments Service, these areas could be used for the installation of solar panels subject to the use of non-invasive concrete footings (or 'shoes'). No ground disturbance and subsurface works would occur above the areas of archaeological activity identified during the geophysical survey or within 20m of these features (including drainage channels, underground cables, fence posts, lighting, roads, etc). The report states that potential disturbance by the use of machines during construction where concrete shoes are proposed will be considered and mitigated by the use of 'bog mats' and

limiting the size of machinery operating within the buffer zones. The report states that any proposed works within these areas would be carried out under archaeological supervision.

8.3.9. The Archaeological Assessment report states that a program of targeted pre-development archaeological test trenching, under a license issued by the NMS, would be carried out by a suitably qualified archaeologist. This program of work would be undertaken prior to the commencement of development. Site investigations would be undertaken in all areas where extensive sub-surface excavation works within the site are required (such as along proposed access roads, cable trenches, temporary hardstanding areas, sub-stations, and site storage areas). Test trenching would be carried out to investigate any potential archaeological features identified during the geophysical survey to be impacted by the proposed development, and the extent of these investigations would be determined in consultation with the NMS. The report states that as a geophysical survey has been conducted, it is unlikely that the test trenching will identify any new area of archaeology but would provide a better record of those areas identified. The report states that this is not expected to materially alter the design of the solar farm. The report recommends that the test trenching regime be conducted prior to construction, subject to a condition of permission.

8.3.10. The Archaeological Assessment concludes with a series of recommendations, advising that Limerick City and County Council align its planning conditions with sample conditions C.2 and C.5 in the OPR's Practice Note on Planning Conditions (2022). The report recommends that a suitably qualified archaeologist be engaged to conduct an updated Archaeological Impact Assessment (AIA) in advance of any site works. This should incorporate prior findings and subsequent test excavations. A comprehensive archaeological impact statement and mitigation strategy should be submitted for the written agreement of the Planning Authority. If archaeological remains are found, preservation measures, buffer and work exclusion zones, or excavation may be required further to consultation with the National Monuments Service. A final archaeological report would be submitted to the Planning Authority and NMS following the completion of all archaeological work on the site. The Construction Environmental Management Plan (CEMP) and any future decommissioning or restoration plans would be updated to include the location of all archaeological or cultural heritage constraints relevant to the proposed development

and present appropriate mitigation measures to be employed to protect the archaeological or cultural heritage environment during all phases of site preparation and construction activity.

- 8.3.11. Of relevance to this issue is the OPR's Practice Note PN03 on Planning Conditions (2022), which includes sample conditions regarding Archaeology that allow for planning permission with condition(s) requiring the completion of an Archaeological Impact Assessment (AIA) in advance of development, following consultation with the NMS. Furthermore, the NMS Explanatory Note and Glossary of Terms to Accompany Sample Archaeology Conditions (referred to in the OPR's Practice Note) states that in cases where there is potential for archaeological remains to survive or where a desk-based Archaeological Impact Assessment submitted with the planning application has identified potential for the survival of archaeological remains, the NMS may recommend pre-development archaeological testing, to be undertaken in advance of any site preparation and/or construction works. In such instances, planning permission may be granted with a condition requiring pre-development archaeological testing (refer to C3).
- 8.3.12. At the county level, Objective HO 037 of the Limerick City and County Development Plan 2022-2028 refers to the preservation of unrecorded/newly discovered Archaeological Heritage and states that *"It is an objective of the Council to protect and preserve the preservation in situ (or at a minimum by record) of all sites and features of historical and archaeological interest, discovered subsequent to the publication of the Record of Monuments and Places"*. Other relevant policy objectives relating to archaeology are detailed in Section 5.1.5 above.
- 8.3.13. Having examined all associated documentation, it is my view that the proposed development would not have significant adverse impacts on archaeology, subject to the implementation of the proposed mitigation measures and compliance with a condition requiring the completion of an Archaeological Impact Assessment prior to the commencement of development, following consultation with the NMS. I am satisfied that the Applicant has carried out a comprehensive archaeological assessment in accordance with Objective EH O40 and Section 11.7.2.2 of the Development Plan. The archaeological assessment incorporates a desktop study, geophysical survey, and site inspection by a qualified archaeologist. Its findings identify the two recorded monument ringforts and three previously unknown

enclosures, which have informed the design of the project. The proposed mitigation measures include, inter alia, ensuring appropriate archaeological buffers around the two recorded monument ringforts (LI020-100 and LI020-103) and that no ground disturbance will occur above or within 20m of the three previously unknown enclosures. The OPR Practice Note PN03 on Planning Conditions (2022) confirms the use of planning conditions to address archaeological concerns post-consent, and the associated NMS Explanatory Note and Glossary of Terms acknowledges that in cases where archaeological remains may be present, planning permission may be granted with a condition requiring pre-development archaeological testing. I have taken into consideration the stated precedent cases where An Bord Pleanála granted permission for solar farms subject to conditions requiring pre-development test trenching. I am satisfied that the Planning Authority's concerns regarding potential impacts on archaeology on the site can be dealt with by way of Condition in the event of a grant of permission. On this basis, I conclude that the proposed development complies with Objective EH O37 of the Limerick City and County Development Plan 2022-2028. Therefore, I recommend the Board not uphold the Planning Authority's reason for refusal.

8.4. Landscape and Visual Impact

- 8.4.1. The Applicant has submitted a Landscape and Visual Impact Assessment prepared by Macro Works Ltd., dated February 2024. The methodology, which follows guidelines from the EPA and the Landscape Institute, involved a desktop study to establish relevant landscape designations in the Limerick County Development Plan and fieldwork to establish the landscape character of the receiving environment and viewpoints for visual assessment. The assessment evaluates landscape and visual sensitivity against the magnitude of impact, using photomontages from select viewpoints to support the assessment.
- 8.4.2. The report describes the existing environment as predominantly pastoral farmland, with medium to large fields bound by mature tree-lined hedgerows and some areas of mature woodland. The River Deel flows along the western boundary and is characterised with mature trees and vegetation along the river corridor. The report details the visual baseline, stating that due to the sloping nature of the site, which generally slopes to the west towards the River Deel corridor, the most notable areas

of visibility occur in the west of the site along the east-facing slopes of the River Deel valley. The report provides a Zone of Theoretical Visibility (ZTV) analysis and states that, in general, visibility throughout the site is sporadic due to the low-rolling nature of the terrain. The ZTV finds the potential for visibility throughout the southern half of the area as very limited, with only isolated areas between 20-40% of the panels potentially afforded visibility. The report states that the proposed PV panels will not rise more than 3.2m above the underlying terrain and will therefore be considerably screened by surrounding and intervening hedgerow vegetation, trees and numerous buildings, walls and embankments scattered throughout the study area, resulting in a much lesser degree of actual visibility.

- 8.4.3. Section 1.2.2.1 of the Landscape and Visual Impact Assessment identifies 13 Viewshed Reference Points (VRPs) representing key receptor types, including local community views, scenic routes, amenity/heritage features, and transport corridors. These VRPs are used to assess the proposed development's visual impact from various receptor types, distances, and angles.
- 8.4.4. The report provides a range of mitigation and restoration measures, including retaining and reinforcing existing hedgerow boundaries, planting new boundary hedgerows (4m high) and trees, and providing a riparian woodland extension (c. 24,378 sq.m.) along the River Deel. These measures aim to reduce the visibility of the solar panels and integrate the development into the landscape (refer to Landscape Mitigation Plan Dwg. No. LD.ARDGLBEG 1.1 for details). The report states that the proposed landscape works would have a limited effect on the existing land surface, and all new cabling would be underground. The proposed perimeter 2.0m high stock-proof fence will be inside the site boundaries and designed to allow wild fauna access throughout the site. An un-grazed margin between perimeter fencing and solar panels will be maintained for biodiversity enhancement. The report states that low-intensity sheep grazing will be the primary land use under the panels. On-site access will use existing farm tracks and follow existing topography to minimise ground disturbance. Temporary construction areas and construction compounds would be backfilled with solar panels towards the end of the construction phase, and any disturbed areas would be restored with appropriate grass seedlings.
- 8.4.5. The report states that decommissioning would involve removing all solar panels and associated fencing, storage and operation facilities. The site would be fully restored to

agricultural use by reseeding appropriate grass species. Any site access tracks not required for agricultural purposes would be excavated and topsoiled to reinstate them for productive agricultural use. The site would be fully restored to agricultural use in accordance with the decommissioning report submitted with the application.

- 8.4.6. The report assesses the proposed solar farm's impact on the area's landscape character and visual amenity. The report states that if viewed from a distance, the proposed solar panel structures will read as a single homogenous, ground-hugging land cover contained within the prevailing field pattern. While the proposed development would represent an increase in the intensity of built development in the immediate landscape context, it would add to the diversity of land use in an area characterised by more traditional forms of agricultural land use. Given its medium-low landscape sensitivity and medium magnitude of impact, landscape impacts are considered moderate-slight within 1km of the site. The report determines that the landscape impact decreases to slight or imperceptible beyond this range.
- 8.4.7. Regarding visual impact and the sensitivity of visual receptors, the report states that most views toward the site are of pleasant agricultural landscapes without any scenic designations. The report acknowledges the channelled views along the River Deel, which present a high degree of scenic amenity and distinctiveness and are more susceptible to change.
- 8.4.8. The table in Section 1.4.2.2 evaluates the magnitude of visual impact from 13 viewpoints, assessing sensitivity, pre- and post-mitigation impact and significance. Most viewpoints have medium-low sensitivity, with pre-mitigation visual impacts ranging from negligible to moderate-slight, mostly where the solar panels are intermittently visible (VP4 and VP5). Post-mitigation, visual impacts are reduced due to screening from existing and proposed vegetation, resulting in slight to imperceptible effects in most cases. Photomontages are provided showing existing views, outline views in the absence of screening and montage views pre- and post-mitigation.
- 8.4.9. The LVIA report concludes that the proposed development would have a modest physical impact on the application site as it is consolidated within the existing hedgerow network and would not require significant excavation work to construct the solar panels or the access and maintenance tracks. While the proposed solar development represents introducing a new and relatively unfamiliar form of built

development into a typical rural setting, it is not a tall or bulky form of development. The report states that it would be anchored within the existing field pattern and would be enhanced as part of the mitigation strategy. The report states that landscape impacts would not exceed 'moderate-slight' significance, and visual impacts would not exceed 'slight-imperceptible' significance.

- 8.4.10. Having inspected the site and surrounding area and reviewed the LVIA and associated drawings and photomontages, I consider the proposed development would not significantly impact the landscape character and visual amenity of the site and surrounding area. The area's landscape character, as detailed in Map 6.1 of the Development Plan, is classified as 'Agricultural Lowlands'. As detailed in Table 6.1 of the Development Plan, this area is characterised as a farming landscape defined by a series of regular field boundaries. In terms of topography, the landscape of the site is relatively flat, sloping westward towards the River Deel. A specific objective of this landscape character area is to encourage the retention of existing landscape features such as hedgerows and trees and their incorporation into landscaping for new developments. I am satisfied that the proposed retention and enhancement of existing field boundary hedgerows meet this objective.
- 8.4.11. The LVIA demonstrates the proposed solar farm has been designed to integrate effectively within the receiving landscape while minimising visual impact. The site's undulating topography and landscape character, characterised by fields enclosed by mature hedgerows and trees, would significantly limit the visibility of the solar farm, particularly beyond 1km from the site. The ZTV analysis in the LVIA establishes that most of the site is not highly visible, with intermittent views mainly concentrated westward along the River Deel valley. Given the solar panels would have a maximum height of 3.2m, I consider they would be adequately screened by existing and proposed vegetation.
- 8.4.12. The LVIA assessment of 13 key receptors Viewshed Reference Points (VRPs) finds that most receptors have medium-low sensitivity, and the visual impact of the development is categorised as negligible to moderate-slight pre-mitigation, with further reductions following the implementation of mitigation measures. The most affected viewpoints (VP4 along the L1222 at Ballyan and VP5 along the L1219 at Ardlaman) would experience intermittent glimpses of the development. However, given that the proposed development would be contained within the existing field patterns, I do not

consider it would significantly impact the landscape character of the area. The proposed mitigation measures, including the retention and enhancement of existing hedgerows and planting of an additional 4m high hedgerow and a 24,378 sq.m. riparian woodland extension along the River Deel corridor, would effectively screen the solar farm from key viewpoints and reduce potential impacts on the landscape character and visual amenity of the surrounding area.

8.4.13. In conclusion, I consider the proposed development would not significantly impact the landscape character or visual amenities of the site and surrounding area.

8.5. Glint and Glare

8.5.1. A glint and glare assessment was submitted with the application. The methodology follows a multi-step approach to identify receptors potentially affected by glint and glare. The study area extends 1 km from the site boundary. A total of 29 dwellings and 71 road receptor points were analysed for potential glare effects. Initial calculations find glint and glare possible at 22 residential dwelling receptors and 10 road receptors. However, the assessment states that post-mitigation measures, 11 residential dwellings receptors and 6 road receptors could potentially experience glint and glare. The report details how most affected dwellings would experience glare for very short periods, with the impact rated as negligible or very low. The report states that the potential for glare hazard to road users would be minimal, as glare would be outside drivers' primary field of view, i.e., offset greater than 110 degrees in the direction of travel.

8.5.2. Regarding the potential impact on aviation receptors, the report identifies relevant receptors and solar safeguard zones in accordance with IAA protocol and the Planning and Development (Solar Safeguarding Zone) Regulations 2022. The assessment confirms the site is not within any designated Solar Safeguarding Zones, and therefore, no detailed aviation-based glare analysis is required.

8.5.3. I note the Planning Authority raised no concerns regarding glint and glare. Having reviewed the documentation submitted and inspected the site and surrounding area, I am satisfied that, subject to the proposed mitigation measures, the proposed solar farm would not have significant glint and glare impacts on residential, transport, or aviation receptors. The glint and glare assessment confirms that every dwelling within

1km of the site would not experience residual glint and glare at ground and first-floor levels. The existing hedgerows, trees, and vegetation screening the site, along with the proposed mitigation measures, would effectively eliminate or minimise any potential effects. Any remaining instances of glint and glare would be brief and of low intensity and would not cause hazard or significant nuisance to nearby receptors.

8.6. Flood Risk

- 8.6.1. A Flood Risk Assessment (dated February 2024) was submitted with the planning application documentation. The primary watercourse near the site is the River Deel, which runs along the western boundary in a north-south direction.
- 8.6.2. The Flood Risk Assessment (FRA) notes how the OPWs national flood information portal shows no historic flooding at the site. However, flooding events have occurred in the wider area, as detailed in Figure 3-1 of the report. The FRA details how the National Indicative Fluvial Mapping (NIFM) study shows flooding in the areas near (to the west of) the site. However, the FRA states that predictive flooding does not impact the application site. The FRA details how the OPW Shannon River Basin District CFRAM study identifies part of the western boundary in Flood Zone A/B, where the 1% annual exceedance probability (AEP) and 0.1% AEP flood extents are close to each other.
- 8.6.3. The FRA assess the likelihood of flooding at the site using hydraulic modelling. The model considered 1% AEP (1 in 100-year flood) and 0.1% AEP (1 in 1000-year flood) scenarios, with additional allowances for climate change (Mid-Range Future Scenario - MRFS). Results indicate that the site's western boundary is within Flood Zone A/B, and most of the site remains in Flood Zone C. Flood depths in affected areas are predominately less than 0.75m, with some localised pockets greater than 0.75m. The modelling confirms that flood risk can be managed effectively by raising solar panels to 1.05m, where the panels are within Flood Zone A, which would provide a freeboard of 0.3m above the maximum allowable flood depth of 0.75m. The report states that no solar panels will be placed in areas that exceed the 0.75m flood depth. The report notes that the substation for the solar farm is located at the eastern boundary of the site in Flood Zone C and, thereby, has a low associated risk of flooding.

- 8.6.4. Regarding proposed flood mitigation measures, the FRA states that the solar panels will have a minimum height of 300mm above the 1% MRFS AEP event and 100mm above the 0.1% AEP flood level. No critical infrastructure (such as inverters or substations) will be located in Flood Zones A & B. All electrical connections will be placed above the 1% MRFS AEP water levels.
- 8.6.5. Regarding surface water management, the FRA states that the proposed development will not increase the discharge rate from the current pre-development runoff rates as there would be limited areas of hard standing associated with the development. The design of the arrays would provide spaces between the panels, allowing rainwater to pass through the arrays and disperse and infiltrate evenly. Care would be taken during construction to prevent soil compaction, and using permeable stone access tracks would ensure that construction traffic does not significantly affect the underlying soil conditions. Additional proposed mitigation measures include the promotion of long grass & wildflowers to enhance natural attenuation, providing a catch drain along the lower section of the site to retain excess water and chisel ploughing between panel rows to improve infiltration.
- 8.6.6. The FRA identifies that the main source of risk to the proposed development is blockage at the upstream Kilcool Bridge. The model results confirm that the proposed development would not be impacted if a partial blockage of the bridge was to occur.
- 8.6.7. I note the Local Authority's Flooding Department raised no objections to the proposed development on the grounds of flood risk. Having examined the Flood Risk Assessment submitted with the application, I consider the proposed development has been subject to a comprehensive flood risk assessment in accordance with the requirements of Objective CAF O20 of the Limerick City and County Development Plan and the Planning System & Flood Risk Management Guidelines (2009). The Flood Risk Assessment demonstrates that most of the site is located within Flood Zone C, where the risk of flooding is low. While the western boundary of the site is located within Flood Zone A/B, the proposed solar panels would be elevated above the projected flood levels. Critical infrastructure would be located outside this zone, within Flood Zone C. The project design incorporates sustainable drainage systems, including permeable access tracks, infiltration and long grass vegetation, which would reduce surface water runoff. Taking into consideration the proposed mitigation measures and the absence of objection from the Local Authority's Flooding

Department, I conclude the proposed development is acceptable in terms of flood risk and would not increase the risk of flooding to the site or surrounding area.

8.7. Drainage

- 8.7.1. The submitted Planning and Environmental Report provides an assessment of the impact of the proposed development on hydrology and water quality. The assessment methodology included a desk study and field assessment of the existing hydrological environment. The field assessment was carried out on the 16th of May 2023.
- 8.7.2. The report details the existing environment, stating how the site is located within the Deel (Newcastle west) sub-catchment and sub-basins. Surface water runoff mostly drains northwest towards the Deel stream. The report details how, according to EPA data, the water quality status of the Deel stream is rated as 'Moderate', and its waterbody risk is under 'Review'. Groundwater to the south of the site is classified as 'At Risk'. However, the report states that the installation of the solar panels would not affect groundwater and aquifers as they would be set on frames above ground without pathways to underlying aquifers.
- 8.7.3. Regarding hydrogeology, the Deel sub-basin underlies the entire extent of the study area, where the underlying aquifer is classified by the GSI as a 'Locally Important Aquifer'. The Deel stream flows northwards, where it enters the Shannon Estuary c. 9.5km to the north, which are designated the River Shannon and River Fergus Estuaries SPA (004077) and the Lower River Shannon SAC (002165). The site drainage field visit found no field drains or ponded areas on the site, except a filed drain between the parcels at the southwest of the site near the Deel stream.
- 8.7.4. Regarding potential impacts, the Applicant's Planning Report states that during the construction phase, the proposed development would have a low potential to lead to impacts on hydrology and water quality due to the small quantities of surface water being generated within the site and the nature of the construction activities. The report acknowledges that new access tracks and other new hard surfaces have the potential to contribute to an increase in runoff. However, the site layout has been designed to limit the extent of hard surfacing and impermeable paving.
- 8.7.5. Potential impacts on hydrology and water quality during construction would include, inter alia, an increased concentration of suspended solids as a result of the

disturbance of the underlying soils and the contamination of receiving water by cement-based products. However, the report considers the potential of such impacts as 'Slight'. Potential impacts on hydrology and water quality during the operation phase are considered not significant given the non-intrusive nature of site operations and the low volume of vehicles on the site. The report states that the potential impacts during the decommissioning phase would be similar to those associated with construction but of reduced magnitude and would not have a significant impact on hydrology and water quality.

- 8.7.6. Proposed drainage mitigation measures include the application of Sustainable Urban Drainage Systems to mitigate flood risk, enhance biodiversity, and protect and enhance visual amenity. An interceptor drain would be provided along the site entrance access track, where surface water runoff would be diffused from this drain into two diffusers located near the site entrance. The proposed 3.3km of new access tracks would be constructed from stone/gravel, which would be drained via open drainage where required. The 10 hardstanding areas would be covered with gravel to allow surface water to drain over the edge of the hardstanding area and infiltrate underground. Drains around the hard-standing areas of the site compounds would be in the form of shallow grassed swales to minimise the disturbance to subsoils.
- 8.7.7. The Planning Report states that surface water runoff from the compound would be directed through a Class 1 full retention oil interceptor before discharge to the drainage system for the site connected to a stilling pond before final discharge over land. Portaloo and/ or containerised toilets and welfare units with storage tanks would be used to provide site personnel with toilet facilities during construction. These will be serviced under contract with the supplier and removed off-site following completion of the construction phase. A gravel surface would be provided for the transformer compound, which would allow surface water runoff to permeate the soil below.
- 8.7.8. Proposed mitigation measures during the construction stage include managing surface water through silt fencing, silt traps, erosion control, interceptor drains, cross drains, roadside swales, and trench dams. Protective fencing would be installed around open water bodies, and construction would be halted during extreme weather events. Cable trenches would be excavated only on dry days, with surplus material removed to licensed facilities. Fuel and lubricants would be securely stored in a fenced compound, with refuelling restricted to this area. Daily visual inspections of

watercourses would ensure no sediment pollution occurs, and if excessive suspended solids are detected, construction would pause for immediate remediation. Solar panel bases would maintain a minimum 300 mm freeboard above the 1% AEP MRFS flood level, ensuring flood resilience.

- 8.7.9. For the operation and maintenance stage, the report states that no specific mitigation are required, but best practice measures are outlined in the CEMP submitted. These include promoting long meadow grasses and wildflowers under the panels to reduce surface water runoff and promote infiltration. If necessary, post-construction chisel ploughing would be carried out between solar panel rows to reduce soil compaction and improve infiltration rates. During decommissioning, mitigation measures would follow best practices, as detailed in the CEMP. Residual impacts are considered not significant.
- 8.7.10. In consideration of the above and the information in the documentation submitted, I consider that subject to the implementation of the proposed mitigation measures, the proposed development would not have significant adverse effects on the water environment. The submitted Planning and Environmental Report provides a comprehensive assessment of the potential impacts of the proposed development on hydrology. The proposed mitigation measures incorporate Sustainable Urban Drainage Systems, which would manage surface water runoff, enhance infiltration, and minimise hydrological disturbance. Mitigation measures, including interceptor drains, gravel-covered hardstanding areas, swales, silt traps, protective fencing, Class 1 full retention oil interceptors and adherence to best practices, would reduce the risk of pollution or sedimentation. Daily monitoring and visual inspections would ensure sediment pollution of watercourses would not occur. It is noted that the Planning Authority reports and submissions from An Taisce and Inland Fisheries Ireland raised no concerns regarding the proposed development's impact on ground or surface water. On this basis, and in the absence of evidence to demonstrate otherwise, I conclude that the proposed development would not adversely impact the water quality status of the Deel Stream or underlying aquifers. The potential impacts on Natura 2000 Sites and the Appropriate Assessment are addressed further below.

8.8. Biodiversity

- 8.8.1. An Ecological Impact Assessment Report (EclA), dated January 2024, was submitted with the application. Other relevant documents submitted include an Appropriate Assessment screening report, planning and environmental reports, and a Construction and Environmental Management Plan (CEMP). The potential impact of the proposed development on Natura 2000 European Sites is dealt with separately in my report under the heading 'Screening for Appropriate Assessment' below.

8.8.1.1. Methodology

- 8.8.2. The zone of influence of the EclA is confined to the footprint of the site and immediate surroundings. The EclA methodology included a desktop review of available ecological data for the receiving environment and surrounding area, including a review of Natura 2000 Sites within the zone of influence of the proposed development. Ecological field surveys of the receiving environment were undertaken on the 16th of May, 2023, to identify habitats, flora, fauna, avifauna, and bats within the proposed development's footprint.

8.8.2.1. Existing Environment

- 8.8.3. Regarding proposed/Natural Heritage Areas, the EclA states that no pathways exist between the site and any nationally designated sites. The only potential impacts on areas beyond the site's redline boundary are noise and lighting during construction. The report states that the closest pNHA (Ballymorrisheen Marsh pNHA; Site Code: 001425) is c. 1.7km from the site, which is beyond the range of impact from the construction noise and lighting.
- 8.8.4. The EclA confirms that no habitats within the application site conform to those listed under Annex I of the EU Habitats Directive. The habitats throughout the site are identified as Improved Agricultural Grassland (GAI), Hedgerows (WL2), Treelines (WII), Scrub (WSI), Riparian Woodland (WNS) and Depositing Rivers (FW2). The survey found that the connectivity of hedgerows and treelines on site is poor, with many gaps within and between liner habitats. Riparian woodland is present along the entire length of the site's western boundary adjacent to the River Deel and includes woodland on an island within the river.

- 8.8.5. The EclA confirms that no rare or protected flora species protected under the Flora Protection Order (2022), listed in Annex II and IV of the EU Habitats Directive (92/43/ECC), or listed in the Irish Red Data were recorded during the surveys. No invasive non-native flora will be spread or planted.
- 8.8.6. Regarding avifauna, site surveys on May 16th and December 5th 2023, recorded numerous bird species. The desktop review used the National Biodiversity Data Centre's (NBDC) data, which recorded 65 species within the 10km grid square R34. Of these, eight red-listed species and 19 amber-listed species were recorded (detailed in Table 3-2).
- 8.8.7. Regarding mammals, the EclA surveys recorded the presence of otters along the River Deel. The report states that the proposed works would maintain a minimum of 15m from otter signs. The surveys found no evidence of badgers on the other site.
- 8.8.8. Regarding bats, the bat roost assessment identified soprano and common pipistrelles at the farm buildings outside the redline boundary at the centre of the site. The report states that numerous trees within the riparian zone and on the island in the middle of the river Deel have moderate bat roost potential. The survey found that lone mature trees within the fields of the site have low to negligible bat roost potential due to their condition. The report acknowledges that the site is part of a moderate to high suitability landscape for all bats. Brown long-eared bat, Daubenton's, lesser horseshoe, Leisler, Natterer, common pipistrelle, and soprano pipistrelle were recorded in the NBDC 10 km grid square R34. The riparian zone adjacent to the River Deel, hedgerows and treelines at the proposed solar farm site offers potential foraging and commuting areas for bats. The site has good connectivity to the wider environment via the riparian corridor of the River Deel. It has a linear habitat in the form of hedgerows and treelines, suitable for commuting and foraging many bat species. The report notes that the open areas of grassland are of lower suitability for most bat species, which favour linear features for commuting and foraging. However, Leisler's bats are known to use open fields for foraging. Seven out of the nine bat species occurring in Ireland were recorded during bat activity transect surveys. During static detector surveys, eight out of the nine bat species were recorded. Tables 3-4 and 3-5 summarise activity data from the surveys. No other protected or invasive fauna were identified in the site.

8.8.8.1. Potential Impacts during construction

- 8.8.9. During the construction phase, the report states that given the distance and lack of a physical pathway to any nationally or European designated sites, with a minimum distance of 1.7km, there would be no impact on any pNHAs or NHAs. Potential impacts on European Sites are dealt with in the screening for appropriate assessment report, and below accordingly.
- 8.8.10. Regarding habitats and flora, the report states that agricultural grassland will be allowed to develop into species-rich grassland, mowed annually. To provide for the access tracks, c.125m of linear habitat (hedgerow/treeline) will be removed, a 240m section of poor-quality linear habitat will be removed, and a new high-quality hedgerow will be established behind the visibility splays to maintain unobstructed sightlines for the proposed new site entrance. The report states that new hedgerows, c. 843m long, will be planted to screen the development. This would include 240m of new hedgerow behind the visibility splays to maintain unobstructed sightlines for the site entrance and provide screening. Additionally, 4,870m of the existing linear habitat will be enhanced to screen the development. The report states that the effects of hedgerow removal will be negative, reversible, temporary, and slight in a local context. The impacts of new, high-quality hedgerow planting and hedgerow enhancement will cause positive, long-term, moderate effects on local wildlife. The report states that the riparian zone along the River Deel would remain intact, and all works would maintain a setback of a minimum of 10m from the banks of the river, thereby preventing them from being impacted.
- 8.8.11. Regarding avifauna, the EcIA states that hedgerow nesting species (goldcrest, house sparrow and willow warbler) could be impacted by habitat loss, injury or disturbance due to the proposed works. However, the report notes that only 125m of linear habitat (hedgerows/treelines) will be removed. The report notes that works undertaken during the breeding season would disturb these species, causing negative, reversible, short-term, slight effects in a local context. The report states that suitable breeding areas for swallow, swift, and house martin at the centre of the site, where there are some farm buildings, would not be impacted by the solar farm development. Additionally, the proposed development would not impact suitable nesting areas for coot, dipper, grey wagtail, mallard, and mute swans in the riparian habitat along River Deel and on the island in the river.

8.8.12. The report identifies how noise during construction could impact birds breeding adjacent to the works. This could cause negative, reversible, temporary, slight effects in a local context. The areas of improved agricultural grassland within the site would not provide suitable cover for breeding meadow pipit, skylark or snipe. However, some of these species may utilise the habitats for foraging, with impacts resulting from loss of habitats. However, the report states that similar lands are available in the vicinity of the site.

8.8.13. Regarding non-volant mammals, the report states that the overlap of construction noise with otter activity adjacent to the site is likely minimal. However, impacts on otters from noise and disturbance during construction could cause negative, reversible, temporary, and slight effects in a local context. As only short sections of hedgerow are to be removed, impacts to badgers would be slight, negative, short-term, reversible effects in a site context.

8.8.14. Regarding bats, the report states that roosting features in the riparian zone and farm buildings at the centre of the site would not be impacted by the proposed development. Foraging and commuting habitat for bats exists on the site would be maintained. Linear corridors (3m wide) of rough grassland/meadow grassland would be maintained between fencing around solar panel areas and hedgerows. The report states that in the absence of mitigation measures, there is potential for indirect effects on bats due to disturbance and lighting effects on potential roost features as well as commuting and foraging activity. However, construction works would be less than 1 year in duration and primarily associated with daytime working hours. Therefore, the effects are identified as moderate, negative, temporary, and reversible in a local context.

8.8.15. Regarding aquatic fauna, the report states that there are no hydrological pathways to the River Deel, and consequently, there will be no impacts on the aquatic environment. The report acknowledges potential impacts on aquatic insects due to polarised light pollution during the operational phase and the PF solar panels themselves. However, given the River Deel has a rapid rate of flow, aquatic insects would be less likely to be drawn to the solar PV panels, which mimic still-water.

8.8.15.1. Potential Impacts during Operation and Decommissioning

8.8.16. The EclA states that impacts on the flora and habitats during the operation phase would be imperceptible, as no further excavation or habitat loss would occur. The

report states that impact on avifauna would be imperceptible given the solar panels' grid-like panel design and anti-reflective surface treatment, which reduce collision events. As there would be no further excavation or construction works, impacts to non-volant mammals would not occur. The report states that there would be no impacts on Bats during the construction phase as lighting would be used on rare occasions at the transformer compounds when maintenance work is required during nighttime hours.

8.8.17. The report states that there would be some disturbance during decommissioning. However, any negative impact caused would be slight, negative, temporary and reversible.

8.8.17.1. Cumulative Impacts

8.8.18. Identified cumulative impacts include noise, lighting and increased human presence. The adjacent Rathkeale substation could cause a cumulative impact on light-sensitive species at and adjacent to the proposed solar farm site in the absence of mitigation. However, given the limited extent of lighting during the construction phase, effects are predicted to be slight, negative, temporary and reversible in a site context. The developments permitted at Rathkeale substation under P.A. Refs.211625; 207010; 191222 could cause cumulative noise and lighting impacts to local wildlife. However, the report states that such effects would be slight, negative, temporary and reversible.

8.8.18.1. Mitigation measures

8.8.19. Proposed mitigation measures include the following:

- Perimeter security fencing will include mammal access gaps 300 x 300mm every 100m
- Only small sections of hedgerows and treelines will be removed for field access up to 5m per gap
- Lighting on site will be cowled and directed specifically to where it is needed, avoiding light overspill.
- All lighting will be directed away from the riparian zone, hedgerows, treelines, and individual trees within the site at all times.

- All works, and temporary storage of material will be restricted to the immediate footprint of the site.
- No plant or machinery will enter the riparian zone, and no materials will be stored there.
- No removal or cutting back of vegetation will be carried out within the bird breeding season (March 1st – August 31st). Where this cannot be avoided, a suitably qualified ecologist will be employed to protect nests and ensure appropriate buffer zones.
- A pre-construction mammal survey will be undertaken by a suitably qualified ecologist no more than 10-12 months prior to the commencement of works.
- If an active badger sett is identified, the NPWS will be informed, and NRA Guidelines for the Treatment of Badgers Prior to the Construction of National Road Schemes will be adhered to.
- A 30m buffer will be established around otter holts or couches if encountered.

8.8.20. Section 6 of the EclA details proposed ecology enhancement measures, including the following:

- Gaps in existing hedgerows (4,870m) will be filled with native fruiting species, and new sections of hedgerows (843m) will be planted.
- Riparian woodland along the River Deel will be enhanced with native trees and shrubs.
- Open areas will be left to rewild naturally into rough and meadow grassland or be managed as species-rich grassland/meadows by light grazing or annual cutting in September.
- Bat boxes (9) will be placed at three separate locations chosen by an ecologist in suitable trees on site.
- Bird boxes (various types), hedgehog houses (3), bee banks (3), and bee nest boxes (9) will be installed to support local fauna.
- Log piles, refugia, and hibernacula will be placed near hedgerows and treelines within the site to provide shelter for small mammals, insects, amphibians, and reptiles.

- Hedgerows will be cut every 3-4 years in rotation using appropriate tools to prevent damage. Hedgerow maintenance will not be carried out between the 1st of March and 31st of August to protect nesting birds.
- All ecology enhancement measures will be installed or supervised by an ecologist.

8.8.20.1. Assessment

8.8.21. I have taken into consideration the issues raised in the Planning Authority report and internal technical reports referred to therein as detailed in Sections 3.2 -3.6 above. I have also taken into consideration the issues and concerns raised in the submissions from the Prescribed Bodies, as detailed in Section 3.7. In particular, I note Inland Fisheries Ireland's recommendation that the buffer zone to the River Deel should be increased to 20m to accord with Policy Objective EH O18 of the Development Plan. Objective EH O18 refers to riparian buffers and states that *'It is an objective of the Council to maintain riverbank vegetation along watercourses and ensure protection of a 20m riparian buffer zone on greenfield sites and sites are maintained free from development. Proposals shall have cognisance of the contents of the Inland Fisheries Ireland document Planning for Watercourses in Urban Environments'*. As confirmed in the Planning Authority report (29/08/24), the revised site layout submitted by way of further information provides a 20m riparian buffer in accordance with Objective EH O18 of the Limerick Development Plan.

8.8.22. The site is not within or directly connected to any European or nationally designated sites, with no hydrological or ecological pathways linking the development to sensitive habitats. The closest designated site, Ballymorrisheen Marsh pNHA, located 1.7km to the north-east of the site would be beyond the range of impacts from construction noise or lighting. The EcIA confirms that no Annex I habitats, protected flora, or invasive species were identified within the site.

8.8.23. The existing biodiversity value of the site is largely characterised by improved agricultural grassland with fragmented hedgerows, treelines, scrub, and riparian woodland. The site does support bird and bat activity. However, these species rely mostly on existing linear features rather than open grassland, which would remain mostly undisturbed. I consider the retention and enhancement of hedgerows, treelines,

and riparian woodland would strengthen ecological corridors, thereby mitigating any potential habitat fragmentation.

- 8.8.24. During the construction phase, potential impacts on biodiversity would be local and temporary, mainly associated with the removal of habitats, and disturbance from noise, and lighting. However, I consider these impacts would be mitigated through the implementation of the proposed mitigation measures in the Ecological Impact Assessment Report and the Construction and Environmental Management Plan (CEMP) submitted with the application. The removal of the hedgerow would be minimal at 125m and compensated with 843m of new hedgerow and enhancement of 4,870m of existing linear habitats. There would be no in-stream works or disturbance to the River Deel riparian zone. Bat roosting features will not be impacted by the proposed development. As detailed in the CEMP, lighting during construction will be cowed and directed away from hedgerows/treelines, riparian planting and individual trees to prevent disturbance to foraging bats. There would be no removal, trimming or cutting of vegetation during the bird breeding season (March 1st - August 31st). Pre-construction ecological surveys will be carried out to identify and protect species such as otters, badgers, and nesting birds.
- 8.8.25. During the operation phase, I consider the proposed solar farm would not result in any significant adverse effects on biodiversity. The grid-like structure and reflective coatings of the solar panels would minimise risks to birds. No lighting is proposed during the operational phase of the solar farm. The change from intensively managed agricultural grassland to species-rich grassland would have a positive impact on biodiversity. The introduction of bat and bird boxes, hedgehog houses, bee banks, and refugia would provide further support for local wildlife. The enhancement of hedgerows and riparian planting would improve habitat connectivity for commuting and foraging. I note the National Biodiversity Data Centre Guidelines on Pollinator-Friendly Management of Solar Farms (2023) detail how studies have found that if solar farms are managed strategically, particularly on land that was previously managed intensively for agriculture, they can have positive impacts on local biodiversity. Furthermore, research has shown that managing vegetation on solar farms less intensively can increase local biodiversity.
- 8.8.26. In conclusion, I consider the evidence presented in the EcIA demonstrates that the proposed solar farm would not result in significant adverse impacts on biodiversity.

Impacts would be temporary, localised and adequately mitigated. The proposed development aligns with the NBDC Guidelines on Pollinator-Friendly Management of Solar Farms and relevant policy objectives of the Limerick City and County Development Plan 2022-2028, including Objective EH O18.

8.9. Traffic and Infrastructure

- 8.9.1. The Applicant's planning report provides a detailed summary of the receiving environment of the proposed development regarding roads and traffic. Section 8.3.1 of the report details the proposed delivery and haulage route. The site would be accessed via the N69 national road located c. 6.9km north of the site, providing access to Foynes Port. Regional roads to be used would include the R518 from the N69 Junction east of Askeaton to the R518/L6050 junction and R518/L1219 junctions near Rathkeale. Local roads to be used would include the L1219, which runs along the site's southern boundary and is subject to a 60km/h speed limit (as of 7th February 2025). Figure 8-1 in the Applicant's planning report illustrates the proposed transport route. The report notes that the haul route from the Roadstone Ballylin Quarry (northwest of the site) would follow the same route as the solar component deliveries, using the N69 and R518 for the majority of the route.
- 8.9.2. The proposed development would be accessed via a new field access inserted along the L1219 local road along the southern boundary. This access would be 50m west of an existing field entrance, which would be discontinued. The Applicant's planning report states that this access would be the main site entrance for construction and maintenance vehicles. Temporary road widening works would be provided at the site entrance to facilitate HGV movement in accordance with the Swept Path Analysis submitted. The report states that the entrance would adhere to right-in and left-out traffic movements to access and egress the site due to the nature of the L1219 local road. Site entrance gates would be setback c. 12 metres from the road edge to allow construction vehicles to park off the active carriageway. The entrance gates would open into the site to prevent potential collisions and would be secured and locked when not in use. Sight lines of 90m would be provided to both sides of the new entrance onto the public road in accordance with TII Standard DN-GEO-03031: Rural Road Link Design, June 2017, and in accordance with County Development Plans. (refer to Dwg. No. P23-095-0101-0001 Map 13/15).

- 8.9.3. The main temporary site compound, located in the southeastern portion of the site near the proposed entrance, would provide adequate off-carriageway parking facilities for all traffic associated with the proposed development, including delivery vehicles and service vehicles. The report states that a temporary aluminium access trackway would be used where needed to provide short-term access to areas of the site not served by the proposed aggregate tracks during the construction and decommissioning phase.
- 8.9.4. The submitted Construction and Environmental Management Plan (CEMP) contains an Outline Traffic Management Plan (TMP) for the proposed solar farm (Section 3.8). The planning report states that a TMP would be finalised following the appointment of the contractor and a Site-Specific Traffic Management Plan would be prepared before construction works commence, subject to load permits.
- 8.9.5. The Applicant's planning report acknowledges that transporting materials onto the site would increase traffic and associated impacts. However, these impacts would be temporary due to the very nature of construction. During the operation phase, the report states that traffic generated by the proposed development would be minimal. Construction traffic would require regular access to the site at varying times throughout the construction phase. However, the CTMP would put in place procedures to manage traffic effectively on-site and near the proposed project, to ensure the continued movement of traffic on the public roads and to minimise disturbance during transportation of materials particularly large loads.
- 8.9.6. During the decommissioning of the solar farm, the Applicant's planning report states that there would be increased traffic and potential risk of disturbance to underlying soils at the solar farm, leading to the potential for silt-laden run-off entering receiving watercourses from the wheels of vehicles. It is submitted that should the local authority agree, the access tracks would remain in situ. Details of the decommissioning of the proposed solar farm are outlined in the preliminary Decommissioning Plan within Appendix 2 of the accompanying CEMP.
- 8.9.7. The outline Traffic Management Plan details a range of traffic management measures that would be addressed in the final Traffic Management Plan, including the appointment of a dedicated Traffic Management Coordinator, the identification of specific roads for access and haul routes, and the possible implementation of one-way

systems on narrow roads. The proposed entry haul route would use the L6050 local road, and the exit haul route would use the L1219 local road to prevent a two-way flow of HGVs on the narrow roads in the vicinity of the proposed development. A pre-and post-road condition survey would be conducted, and any necessary road reinstatement would be carried out to the satisfaction of the road authority. The plan would include comprehensive site inductions for all workers, a 24-hour emergency contact number, temporary traffic management in line with best practices, and the appointment of a Community Liaison Officer to engage with local residents. Measures such as signage, road sweeping, and secure site entrances would also be implemented to ensure minimal disruption and safe traffic flow during construction.

- 8.9.8. Regarding construction vehicles, the project would involve a variety of HGVs transporting materials, solar panels, and machinery alongside LGVs used by workers and supervisors. All construction plant and vehicles would be regularly maintained, with emergency maintenance conducted in designated areas. A construction compound would be established, serving as the main point of coordination. The contractor would obtain necessary permits and notifying authorities of commencement dates. Local residents would be kept informed through flyer drops, signage, and direct consultation, with a Community Liaison Officer acting as a point of contact for concerns. Temporary road closures and diversions would be managed to ensure continuous local access, with safety measures agreed upon in advance by the council.
- 8.9.9. The Applicants Planning Report and outline traffic impact assessment details the predicted traffic impacts during the proposed development's installation, operation, and decommissioning phases. During the installation period, the project would generate 4,520 HGV trips (two-way) over the 10 months, averaging 18 HGV trips per day, with a peak of 35 trips per day. LGV traffic would generate an average of 18 trips per day, with a peak of 20 trips during the peak construction period. The stated combined HGV and LGV average daily would be 35 trips per day and rising to c. 50 trips per day during peak construction periods occurring in months 1-3. Roads, including the N69, R518, L6050, and L1219, would experience a temporary traffic increase, with the L1219 seeing the most significant percentage rise in traffic volume. However, the overall impact on national and regional routes would be relatively low, with peak increases of 0.77% on the N69 and 41.85% on the L1219.

- 8.9.10. In the operational phase, the report states that the solar farm would generate 1-2 visits per month for maintenance. The impact on the public road network is considered imperceptible. During the decommissioning phase, the report states that vehicle movements would be significantly lower than during the installation phase, as the removal of solar panels and support structures would be carried out manually. Impacts on the public road network are considered not significant.
- 8.9.11. Having examined the drawings and documentation received, and further to my inspection of the site and surrounding road network, it is my view that the proposed development would not significantly impact the local road network or create a traffic hazard. The submitted Planning Report and outline traffic impact assessment provide a comprehensive account of the proposed haul route serving the site, its impact on the local road network, and the proposed new site access. While the installation phase would generate a peak of 50 trips per day, this would be temporary for the first three months. Given that the Local Authority's Roads Department raised no objections to the proposed development, and in the absence of evidence to demonstrate otherwise, I am satisfied that the road network, including the N69, R518, L1219, and L6050 have the capacity to accommodate the increase in vehicle movements. The highest percentage increase in traffic would occur along the L1219. However, the overall impact on national and regional roads would be low. The applicant proposes the submission of a final Traffic Management Plan (TMP) to mitigate construction-related impacts, including traffic coordination by an appointed Traffic Management Coordinator, a one-way haul route system, site access control measures, and a pre- and post-construction road condition survey to ensure the reinstatement of roads where necessary. Traffic impacts during the operation phase would be negligible and impacts during the decommissioning phase would be significantly lower than those during the installation phase.
- 8.9.12. The sightlines at the proposed new access along the L1219 accord with TII road geometric standards DN-GEO-03060, which requires 2m x 90m for local roads subject to a 60km/h speed limit. The proposed access would provide temporary widening to facilitate HGV movement.
- 8.9.13. In consideration of the above, I conclude that the proposed development would not result in significant traffic impacts or create a road safety hazard. Any potential impacts

on the local road network would be mitigated by the implementation of a Traffic Management Plan, which should be conditioned in the event of a grant of permission.

8.10. Noise

8.10.1. Section 10 of the Planning and Environmental report submitted provides a detailed noise impact assessment detailing the existing environment, baseline noise survey undertaken and results, potential noise impacts during the phases of the development and proposed mitigation measures. The panels in themselves would not generate noise. The main noise sources would be from the transformer compound, which is located at the southeastern corner of the site, to the rear/north of the Rathkeale 110kV substation. Having regard to the position of this infrastructure removed from residential dwellings (the nearest dwelling is c. 240m to the southwest) and the existing baseline noise (largely dominated by traffic flows along the L1219), no significant noise impacts on residential amenity are anticipated. Inverter stations would also generate noise should they be installed. However, having regard to their removed positions away from residential properties, no significant noise that would negatively impact residential amenity is anticipated. The Applicant has committed to complying with BS5228-1:2009 and A1:2014 Code of Practice for Noise and best practice measures, as detailed in Section 10.7 of the Planning and Environmental report submitted. On this basis, I conclude that the proposed development would not generate significant noise impacts during the construction, operation and decommissioning phases of its development. A standard condition regarding noise levels should be imposed in the event of a grant of permission.

8.11. Duration of Consent and Operational Period

8.11.1. The applicant requests a 10-year duration of the permission from the date of grant of planning permission and that the development be granted planning permission for an operational period of 40 years from the date of commissioning of the solar farm. Regarding the duration of permission, the Applicant states that the proposed development would depend on achieving a suitable connection to the electricity grid network under the control of EirGrid or ESB Networks. A grid connection offer would be made to EirGrid or ESB Networks upon receiving planning permission, so the timeframe for receiving an offer is unknown. Furthermore, the timing of the

construction and installation works for the proposed solar farm would depend on several factors, including achieving planning permission for the development, which provides the context to pursue financial support mechanisms and facilitate the fulfilment of grid connection offers from ESB Networks/EirGrid. For this reason, a ten-year duration of permission is sought. Regarding the requested operation period, the Applicant states that ongoing technological progress has resulted in the expected operational lifetime of modern solar photovoltaic equipment at least 40 years. The Applicant details other solar energy developments where local authorities permitted a 40-year operation period, e.g. Tipperary County Council P.A. Ref. 19601323, Offaly County Council P.A. Ref. 21123 and Kerry County Council P.A. Ref. 23284.

8.11.2. Having regard to the nature and extent of the proposed development and the material considerations required for its development, including grid connection from EirGrid or ESB Networks and the need for financial certainty before progressing with construction, I am satisfied that ten-year permission would prolong the delivery of this renewable energy project. Furthermore, I consider the proposed 40-year operational period appropriate, having regard to the technological improvements in the industry, the longevity of solar panels, the minimal maintenance required, and the identified need to secure long-term replacement of carbon-intensive fuels in energy generation. Any consent concerning the proposed development should include an appropriate decommissioning condition in the interests of orderly development and ensure that the site is reinstated in the event of cessation of operations.

8.11.3. In recommending both a 10-year operational period and a 40-year operational period, I note previous decisions by the Board which have also permitted permissions and operational periods of this length:

- PL19.316303 granted on 19 April 2024 (Derrycarney in County Offaly)
- PL93.317188 granted on 24 April 2024 (Carrick-on-Suir in County Waterford)
- PL04.318852 granted on 1 August 2024 (Rahanisky, in County Cork)
- PL10.318091 granted on 1 August 2024 (Brownstown in County Kilkenny)
- PL09.318785 granted on 20 August 2024 (Brannockstown in Kildare)
- PL92.319664 granted on 21 August 2024 (Jamestown, Clonmel in County Tipperary)

- PL04.317994 granted on 6 September 2024 (Scartlea in County Cork)
- PL04.317577 granted on 19 September 2024 (Coolcaum, Mallow in County Cork)
- PL19.318001 granted on 6 November 2024 (Tullamore in County Offaly)
- PL04.320298 granted on 22 November 2024 (Charleville in County Cork)

9.0 EIA Screening

- 9.1.1. The applicant has submitted Schedule 7 information, presented in Section 5.3 of the Planning and Environmental report submitted. Further below, Form 1 (Appendix 1) sets out the EIA Pre-Screening undertaken, and Form 2 (Appendix 2) sets out the EIA Preliminary Examination.
- 9.1.2. As detailed in the form, the development of a solar farm is not a specified class of development in Schedule 5, Part 2 of the Planning and Development Regulations 2001 (as amended). The length of hedgerows to be removed at c. 365m does not equal or exceed the relevant threshold under Schedule 5, Part 2, Class 1 (a), which sets out thresholds relating to agriculture, silviculture and aquaculture. Furthermore, no 'recontouring' is involved as part of the proposed development. There is no private road described as part of the proposed development. The proposed upgrading and construction of c. 3,293 metres of new and existing internal tracks do not constitute a private road. The Board has previously determined that such access tracks serving solar energy development do not fall under Schedule 5, Part 2, Class 10 (dd), where EIA is required for all private roads which would exceed 2000 metres in length (e.g. ABP Refs. 301028-18, 302681-18 and PL 17.248146).
- 9.1.3. I conclude, therefore, having regard to the nature and scale of development and the absence of any significant environmental sensitivity in the vicinity of the site, as well as the criteria set out in Schedule 7 of the Planning & Development Regulations, there is no real likelihood of significant effects on the environment arising from the proposed development. Therefore, the need for environmental impact assessment can be excluded at a preliminary examination, and a screening determination is not required.

10.0 Appropriate Assessment

10.1. Screening Determination

10.1.1. See Appendix 2 of this report for further details on the Screening for Appropriate Assessment.

10.1.2. In accordance with Section 177U(4) of the Planning and Development Act 2000 (as amended) and on the basis of objective information, I conclude that the proposed development would not have a likely significant effect on any European Site either alone or in combination with other plans or projects. It is, therefore, determined that Appropriate Assessment (Stage 2) [under Section 177V of the Planning and Development Act 2000] is not required.

10.1.3. This conclusion is based on:

- Objective information presented in the AA Screening Report.
- The layout and design of the proposed development would not impact riparian and bat commuting areas.
- The limited zone of influence of potential impacts.
- No hydrological link from the development area to sensitive SAC habitats.
- Compliance with standard best practices for pollution control and biodiversity protection.

10.1.4. No mitigation measures intended to avoid or reduce harmful effects on European sites were taken into account in reaching this conclusion.

11.0 Recommendation

11.1. Subject to the conditions below, I recommend that permission be granted.

12.0 Reasons and Considerations

12.1.1. In coming to its decision, the Board was consistent with the:

(a) Climate Action Plan 2024

(b) Climate Action and Low Carbon Development Act 2015, as amended.

12.1.2. In coming to its decision, the Board had regard to:

(a) The national, regional and local policy support for developing renewable energy, including:

- i. Project Ireland 2040 National Planning Framework (2018)
- ii. National Development Plan 2021-2030
- iii. National Biodiversity Action Plan 2023 – 2030
- iv. National Energy Security Framework (April 2022)
- v. National Energy & Climate Action Plan 2021-2030
- vi. The Regional Spatial and Economic Strategy 2019-2031 for the Southern Region,
- vii. Limerick City and County Development Plan 2022-2028

(b) The nature, scale and extent of the proposed development,

(c) The pattern of development within the area and context of the receiving environment,

(d) Measures proposed for the construction, operation and decommissioning of the development,

(e) The submissions on the file and

(f) The documentation submitted with the application and the appeal.

12.2. Proper Planning and Sustainable Development

12.2.1. It is considered that subject to compliance with the conditions set out below, the proposed development would be in accordance with European, national, and regional renewable energy policies and with the provisions of the Limerick City and County Development Plan 2022-2028, would not seriously injure the visual or residential amenities of the area or otherwise of property in the vicinity or have an of unacceptable impact on the character of the landscape or cultural or archaeological heritage, would not have a significant adverse impact on ecology, would be acceptable in terms of

traffic impacts and safety and would make a positive contribution to Ireland's renewable energy and security of energy supply requirements. The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area.

12.3. Appropriate Assessment Stage 1 Screening Determination

12.3.1. In accordance with Section 177U(4) of the Planning and Development Act 2000 (as amended) and on the basis of objective information, I conclude that the proposed development would not have a likely significant effect on any European Site either alone or in combination with other plans or projects. It is, therefore, determined that Appropriate Assessment (Stage 2) [under Section 177V of the Planning and Development Act 2000] is not required.

12.3.2. This conclusion is based on:

- Objective information presented in the AA Screening Report.
- The layout and design of the proposed development would not impact riparian and bat commuting areas.
- The limited zone of influence of potential impacts.
- No hydrological link from the development area to sensitive SAC habitats.
- Compliance with standard best practices for pollution control and biodiversity protection.

12.3.3. No mitigation measures intended to avoid or reduce harmful effects on European sites were taken into account in reaching this conclusion.

13.0 Conditions

1.	The development shall be carried out and completed in accordance with the plans and particulars lodged with the application, as amended by the further plans and particulars submitted on the 09th day of August 2024 and 25th day of September 2024, except as may otherwise be required in order to comply with the following conditions. Where such conditions require details to be agreed upon with the planning authority, the developer shall agree to such details in writing with the planning authority prior to the commencement of development, and the development shall be carried out and completed in accordance with the agreed-upon particulars. Reason: In the interest of clarity.
2.	The period during which the development hereby permitted may be carried out shall be 10 years from the date of this order. Reason: Having regard to the nature of the development, the Board considers it appropriate to specify a period of validity of this permission in excess of five years.
3.	a) The permission shall be for a period of 40 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 the 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, 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 prevailing circumstances and in the interest of orderly development.
4.	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.
5.	Prior to the commencement of development, the developer shall submit details to the Planning Authority confirming the anticipated megawatt capacity and annual electricity generation of the solar farm. Reason: In the interest of clarity.
6.	All of the environmental, construction and ecological mitigation measures, as set out in the Planning and Environmental Report, Ecological Impact Assessment, Construction and Environmental Management Plan, Flood Risk Assessment, Landscape and Visual Impact Assessment, Glint & Glare Assessment, Archaeological & Cultural Heritage 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 interests of clarity and of the protection of the environment during the construction and operational phases of the development.
7.	The developer shall appoint a suitably qualified ecologist to monitor and ensure that all avoidance/mitigation measures relating to the protection of flora and fauna are carried out in accordance with best ecological practice and to liaise with consultants, the site contractor, the NPWS and Inland Fisheries Ireland. A report on the implementation of these measures shall be submitted to the planning authority and retained on file as a matter of public record.

	Reason: To protect the environmental and natural heritage of the area.
8.	Prior to the commencement of development 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 approval to the Planning Authority. This shall be facilitated through the provision of mammal access gates designed generally in accordance with standard guidelines for the provision of mammal access (NRA 2008). Reason: To allow wildlife to continue to have access across the site, in the interest of biodiversity protection.
9.	a) All mitigation measures in relation to archaeology, as set out in the Archaeological Impact Assessment carried out by John Cronin and Associates, submitted with the application documentation and the addendum to the Archaeological and Cultural Heritage Chapter (Chapter 11) of the Planning and Environmental Report included as part of the Request for Further Information Response, shall be implemented in full, except as may otherwise be required in order to comply with other conditions here specified. b) The developer shall engage a suitably qualified archaeologist (licensed under the National Monuments Acts) to carry out an updated Archaeological Impact Assessment (AIA) in advance of any site preparation works and groundworks, including site investigation, enabling/access, topsoil stripping, site clearance, and construction works. c) The AIA shall incorporate the findings of reports prepared to date (i.e. an examination of all development layout/design drawings, completion of documentary/ cartographic/ photographic research) and include subsequent fieldwork, the latter to include archaeological test excavations to be agreed following consultation with Limerick City and County Council's Executive Archaeologist.

	d) The archaeologist shall prepare a comprehensive report, including an archaeological impact statement and mitigation strategy, to be submitted for the written agreement of the Planning Authority in advance of any site preparation works, groundworks and/or construction works. e) Where archaeological remains are identified, the developer shall implement appropriate mitigation measures, which may include redesigning the development to allow for preservation in situ, establishing buffer zones and/or work exclusion zones, conducting preservation by record (archaeological excavation) and/or undertaking archaeological monitoring. The Archaeological Impact Assessment (AIA) shall incorporate all necessary measures to ensure the preservation and/or recording of archaeological remains. f) The developer shall comply with any further archaeological mitigation requirements specified by the Planning Authority, following consultation with the National Monuments Services of the Department of Housing, Local Government and Heritage (DHLGH). g) Following the completion of all archaeological works on-site and any necessary post-excavation analysis, a final archaeological report detailing the results of all investigative works and/or monitoring shall be submitted to the Planning Authority and the National Monuments Service. All associated archaeological costs shall be borne by the developer. h) The Construction Environmental Management Plan (CEMP) shall be updated to incorporate the location of all archaeological and cultural heritage constraints relevant to the proposed development, as identified in the Archaeological Impact Assessment (AIA). The CEMP shall clearly outline all anticipated archaeological impacts, both direct and indirect, and detail the mitigation measures to be implemented to protect archaeological and cultural heritage resources during all phases of site preparation and construction.
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	i) Any Decommissioning and/or Restoration Plans shall be updated to include the location of all archaeological and cultural heritage constraints relevant to the proposed development and its subsequent decommissioning, as identified in the AIA. The plan shall clearly set out all likely archaeological impacts, both direct and indirect, and specify the mitigation measures to be applied to safeguard archaeological and cultural heritage resources throughout all phases of site decommissioning and restoration. Reason: To ensure the continued preservation either in situ or by record of sites, features or other objects of archaeological interest.
10.	Water supply and drainage arrangements, including the attenuation and disposal of surface water, shall comply with the requirements of the planning authority for such works and services. The developer shall agree such details in writing with the planning authority prior to commencement of development. Reason: In the interest of environmental protection.
11.	a) No artificial lighting shall be installed or operated on site unless authorised by a separate 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 unless otherwise agreed with the Planning Authority. d) The control units of the transformer compound and all fencing shall be dark green in colour unless otherwise agreed upon with the Planning Authority prior to the commencement of development. Reason: In the interests of clarity and of visual and residential amenities.
12.	Landscaping shall be carried out in accordance with the Landscape and Visual Impact Assessment report, Landscape Mitigation Plan and associated drawings submitted to the Planning Authority (dated February 2024). The developer shall plant screening vegetation as indicated in the

	drawings and documentation submitted not later than the planting season following the commencement of construction. Planting shall be protected from construction works using protected fencing in accordance with the requirements of the Planning Authority. All existing hedgerows and field boundaries shall be retained except where altered or amended by conditions in this permission. Reason: In the interests of visual amenity and to ensure the proper screening of the development from residential and other receptors.
13.	Cables from the solar arrays within the site shall be located underground. Reason: In the interests of health and safety and visual amenity.
14.	Site development and building works shall be carried out only between the hours of 0800 to 1800, Mondays to Fridays inclusive, between 0800 to 1400 hours on Saturdays and not at all on Sundays or public holidays. Deviation from these times will only be allowed in exceptional circumstances where prior written approval has been received from the Planning Authority. Reason: In order to safeguard the amenities of property in the vicinity.
15.	Prior to the commencement of any works on site, the applicant shall complete all works at the proposed new access to achieve the required sightlines, ensuring that the public road is maintained clean and free of any dirt or debris at all times. Reason: In the interest of traffic safety.
16.	The construction of the development shall be managed in accordance with a Construction and Environmental Management Plan, including a Construction Traffic Management Plan, which shall be submitted to and agreed upon in writing with the Planning Authority prior to the commencement of development. This plan shall provide details of the intended construction practice for the development, including: a) Details of the site and materials compound(s), including area(s) identified for the storage of construction refuse;

	b) Details of areas for construction site offices and staff facilities; 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, including proposals to facilitate the delivery of abnormal loads to the site; 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; and k) Means to ensure that surface water run-off is controlled such that no silt or other pollutants enter local surface water sewers or drains. 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 amenities, public health and safety
17.	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 at the developer's expense. Prior to commencement of development, a road condition survey shall be carried out to provide a basis for reinstatement works. Details in this regard shall be submitted to, and agreed in writing

	with, the planning authority prior to commencement of development. Reason: In order to ensure a satisfactory standard of development.
18.	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 property in the vicinity of the site.
19.	Prior to the commencement of development, the developer shall lodge with the Limerick City and County Council 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.
20.	Prior to the commencement of development, the developer shall lodge with the planning authority a cash deposit, a bond of an insurance company, or other security to secure the provision and satisfactory reinstatement of public roads that may be damaged by construction transport, coupled with an agreement empowering the local authority to apply such security or part

	thereof to the satisfactory completion of any part of the development. 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 the reinstatement of public roads that may be damaged by construction traffic
21.	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 the commencement of development or in such phased payments as the planning authority may facilitate and shall be subject to any applicable indexation provisions of the Scheme at the time of payment. Details of the application of the terms of the Scheme shall be agreed between the Planning Authority and the developer or, in default of such agreement, the matter shall be referred to 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

I confirm that this report represents my professional planning assessment, judgement and opinion on the matter assigned to me and that no person has influenced or sought to influence, directly or indirectly, the exercise of my professional judgement in an improper or inappropriate way.

Brendan Coyne
Planning Inspector

05th March 2025

Form 1

14.0 Appendix 1 - EIA Pre-Screening

An Bord Pleanála			
Case Reference			
Proposed Development Summary		Solar Farm and associated development works.	
Development Address		Townland of Ardgoulbeg, near Rathkeale, Co. Limerick.	
1. Does the proposed development come within the definition of a 'project' for the purposes of EIA? (that is involving construction works, demolition, or interventions in the natural surroundings)		Yes	✓
		No	
2. Is the proposed development of a CLASS specified in Part 1 or Part 2, Schedule 5, Planning and Development Regulations 2001 (as amended)?			
Yes	✓	The proposed development does not fall into any class of development contained in Schedule 5, Part 1 of the Planning and Development Regulations 2001 (as amended). The development of a solar farm is not a specified class of development in Schedule 5, Part 2 of the regulations.	

		The Applicant notes precedent An Bord Pleanála decisions (ABP Refs. PL04.244539, PL26.244351 and PL 27.246527), which the Applicant states support the fact that solar farm development does not come under the requirement of the EIA Directive. It is noted, however, that these referenced cases were decided in 2016. The Applicant also references how, on January 31st, 2020, in Sweetman v An Bord Pleanála and Others [2020] IEHC 39 it was confirmed that Solar PV projects are not a project type listed in the EIA Directive. The full judgement of this case can be found at the following link: Sweetman v An Bord Pleanala & Ors [2020] IEHC 39 High Court of Ireland Judgment Law CaseMine The Applicant also notes recent decisions by An Bord Pleanála (An Bord Pleanála Ref. PL26.247217), which confirm that access tracks installed for solar PV development do not fall within the definition of a road under the Roads Act 1993 and therefore do not qualify as subthreshold development. On this basis, the Applicant submits that the project is not a type of development currently identified as requiring mandatory EIA and that	
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		there is no mandatory requirement for the same for the proposed development. Notwithstanding this, consideration must be had to S.I 383 of 2023 Planning and Development (Amendment) (No.2) Regulations 2023, which amends Part 2 of Schedule 5 of the Planning and Development Regulations, by inserting under Class 1 ‘Agriculture, Silviculture and Aquaculture’ the following: <i>(a) Projects for the restructuring of rural land holdings, undertaken as part of a wider proposed development, and not as an agricultural activity that must comply with the European Communities (Environmental Impact Assessment) (Agriculture) Regulations 2011, where the length of field boundary to be removed is above 4 kilometres, or where re-contouring is above 5 hectares, or where the area of lands to be restructured by removal of field boundaries is above 50 hectares.</i> Consideration must also be given to Schedule 5, Part 2, Class 10 (dd), which classifies ‘<i>All private roads which would exceed 2000 metres in length</i>’ as requiring an EIA.	
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No			
3. Does the proposed development equal or exceed any relevant THRESHOLD set out in the relevant Class?			
No	✓	<u>Re. Schedule 5, Part 2, Class 1(a)</u> As detailed in the Ecological Impact Assessment report submitted, the proposed development includes the removal of c.125m of linear habitat (hedgerow/treeline) to provide for the access tracks and c. 240m section of poor-quality linear habitat to provide for the new site access sightlines required. A new high-quality hedgerow would be established behind the visibility splays to maintain unobstructed sightlines for the proposed new site entrance. The length of hedgerows to be removed at c. 365m does not equal or exceed the relevant threshold under Schedule 5, Part 2, Class 1 (a). There is no 'recontouring' involved as part of the proposed development. While there may be localised earthworks, cable trenching, temporary stockpiling or drainage works, it is not considered that these would amount to 'recontouring'. The excavated material from cable trenching would be reinstated. Overall, the topography of the land would not be	Proceed to Q4

		impacted as the panels would be installed to the existing topography by way of piling without excavation or alteration of levels. Should archaeological remains be uncovered during the installation phase, any excavation works would be subject to notification of, oversight and agreement with the National Monuments Service. <u>Re. Schedule 5, Part 2, Class 10 (dd)</u> There is no private road described as part of the proposed development. It is not considered the proposed tracks constitute a private road. The Board has previously determined that such access tracks serving solar energy development do not fall under Class 10 (e.g. ABP Refs. 301028-18, 302681-18 and PL 17.248146).	
4. Is the proposed development below the relevant threshold for the Class of development [sub-threshold development]?			
Yes		The length of hedgerows to be removed at c. 365m is well below the relevant threshold under Schedule 5, Part 2, Class 1 (a).	Preliminary examination required

5. Has Schedule 7A information been submitted?		
No	✓	Screening determination remains as above (Q1 to Q4)

Inspector: _____ Date: _____

Form 2

15.0 Appendix 2 - EIA Preliminary Examination

An Bord Pleanála Case Reference	ABP 321242-24
Proposed Development Summary	Solar Farm and associated development works.
Development Address	Townland of Ardgoulbeg, near Rathkeale, Co. Limerick.
The Board carried out a preliminary examination [ref. Art. 109(2)(a), Planning and Development regulations 2001, as amended] of at least the nature, size or location of the proposed development, having regard to the criteria set out in Schedule 7 of the Regulations. This preliminary examination should be read with, and in the light of, the rest of the Inspector's Report attached herewith.	
Characteristics of the proposed development (In particular, the size, design, cumulation with existing/proposed development, nature of demolition works, use of natural resources, production of waste, pollution and nuisance, risk of accidents/disasters and to human health).	The project itself will utilise agricultural land and will ensure that existing field boundaries are retained where possible. The quantum of land taken up by a solar farm is relatively small when considering the space between PV rows and arrays which is left undisturbed. No soil damage or permanent loss of agricultural potential will occur, and lands can be fully restored on decommissioning. The solar panels will be mounted on steel frames anchored by steel piles, causing minimal disturbance to the land. In

	certain instances, the panels will be mounted on the frames via earth screw fixings or concrete shoes. There will be no demolition works associated with the project. To facilitate internal and site access, 365m of hedgerows would be removed, however, landholdings would not be restructured. A permitted operational life of 40 years is requested for the solar farm. Post-decommissioning of the solar farm, the lands can revert to agricultural use, and permanent loss of agricultural land will not occur. PV power generation is conducive to multi-purpose land use and supports biodiversity of the site. The proposed development will retain the majority of existing hedgerows and provide for new ecology/biodiversity areas together with enhancement of existing hedgerows where appropriate. The construction, operation and decommissioning of the solar farm would not give rise to significant pollution emissions or nuisance, in respect of air, water, soils, ecology/biodiversity, noise, cultural heritage, landscape or residential amenity. As detailed in the Planning and Environmental Report and AA Screening Report submitted, excavated materials will be used for backfilling where possible. Surplus excavated materials will be levelled out across the site. Cut-offs from construction material, including cable rolls, will be taken off-site for re-use (where appropriate), recycled (in the case of cut-offs), or
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	taken to a licenced landfill facility. No domestic waste is likely to be generated by contractors. All wastes will be collected at the end of the construction day, taken off site, and reused, recycled or disposed of according to industry best practice at authorised facilities using licenced hauliers. The production of any waste associated with the development would not cause unusual, significant or adverse effects of a type that would require EIAR. Periodic maintenance may be required but will only utilise a small portion of the quantity of materials used in the initial construction phase. A planning search has been undertaken, and it is considered that there are no proposed developments within the vicinity of the project that are relevant to the subject proposal in terms of EIA Screening. In relation to planning history for solar farm development within the county relevant to the proposed development, 1 no. planning applications for solar farm development has been identified within the Limerick City and County administrative area (PA Ref. 1918) which is located 6km north-west of the subject site. Given the distance of the solar farm developments, it is considered that there would be no cumulative impact with the proposed Ardgoulbeg solar farm.
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	The grid connection for the proposed development is to connect the Ardgoulbeg solar farm via an under-the-fence connection to the adjacent Rathkeale 110kV substation. The connection route is included in this EIA Screening.
Location of development (The environmental sensitivity of geographical areas likely to be affected by the development in particular existing and approved land use, abundance/capacity of natural resources, absorption capacity of natural environment e.g. wetland, coastal zones, nature reserves, European sites, densely populated areas, landscapes, sites of historic, cultural or archaeological significance).	The existing land use in the area is agricultural. There are eight Natura 2000 sites within the 15km zone of influence of the project. These are detailed in Section 6.0 of the report. The River Deel adjoining the western boundary of the site is a surface water pathway to the Lower River Shannon SAC (Site Code: 002165) - located c. 7.5 north of the site. A 20-metre buffer would be maintained between the solar arrays and the River Deel. Section 9.7 of this report addresses potential impacts on the water environment. While there is the potential for surface water run from the proposed development, it is concluded that subject to the implementation of the proposed mitigation measures, the proposed development would not have significant adverse effects on the water environment. Given the separation distances involved, potential impacts on the downstream Lower River Shannon SAC would not occur.

Types and characteristics of potential impacts (Likely significant effects on environmental parameters, magnitude and spatial extent, nature of impact, transboundary, intensity and complexity, duration, cumulative effects and opportunities for mitigation).	During the construction phase, the proposed development would have a low potential impact on hydrology and water quality due to the small quantities of surface water being generated within the proposed development and the nature of the construction activities. New access tracks and other new hard surfaces have the potential to contribute to an increase in surface water runoff. However, the site layout has been designed to limit the extent of hard surfacing and impermeable paving. The access roads and substation area would be constructed from permeable material to allow surface water to permeate to the soil below. Taking into consideration the insignificant amount of new hard surfaces and the type of material used to construct these, the impact of the increased runoff on hydrology and water quality is not significant. There are several potential impacts on hydrology and water quality arising during construction activities. Standing water in excavations could contain an increased concentration of suspended solids as a result of the disturbance of the underlying soils. Silt carried on the wheels of vehicles leaving the site could be carried onto the public road. Inappropriate site management of excavations could lead to loss of suspended solids. Grid connections and internal cable trenches could act as a conduit for surface
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	water flows. The construction of new infrastructure has the potential to obstruct existing overland flow. Cement-based products could lead to contamination of receiving water. However, it is considered that subject to the implementation of the proposed mitigation measures in the documentation submitted, as detailed in Section 9.7 of this report, the potential impact of the release of suspended solids, hydrocarbons and cement-based products on hydrology and water quality would not be significant. Due to the non-intrusive nature of site operations, it is unlikely there would be a release of suspended solids during the operation phase. There is a potential risk of some hydrocarbons leaking from the vehicles used for site management. However, the volumes would be low and not significant. On this basis, it is considered that there would not be a significant impact on hydrology and water quality during the operation phase of the project. Potential impacts during the decommissioning phase would be similar to those associated with construction but of reduced magnitude. During decommissioning, it may be possible to reverse or at least reduce some of the impacts caused during construction by rehabilitating construction areas such as the Transformer Compound. This would be done by covering with
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	topsoil to encourage vegetation growth. There is a potential risk of releasing suspended solids during the excavation of the cables. However, the excavations would be shallow, and the cables would not be located in the proximity of the open water bodies. It is considered that the decommissioning phase of the proposed development would not have a significant impact on hydrology and water quality. Flood risk is addressed in section 9.6 of this report, where it is concluded that subject to the implementation of the proposed mitigation measures, the proposed development is acceptable in terms of flood risk and would not increase the risk of flooding to the site or surrounding area.
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Conclusion		
Likelihood of Significant Effects	Conclusion in respect of EIA	No
There is no real likelihood of significant effects on the environment.	EIA is not required.	
There is significant and realistic doubt regarding the likelihood of significant effects on the environment.		
There is a real likelihood of significant effects on the environment.		

Inspector: _____

Date: _____

16.0 Appendix 3 - AA Screening Determination

Screening for Appropriate Assessment Screening Determination

Step 1: Description of the project/proposal and local site characteristics

I have considered the proposed solar farm development in light of the requirements of S177U of the Planning and Development Act 2000 (as amended). An Appropriate Assessment Screening Report has been prepared by Fehily Timoney Consultants on behalf of the Applicant, and the objective information presented in that report informs this screening determination.

Description of the Project

The proposed development comprises a 10-year permission for the construction of a 40-year operational and subsequent decommissioning of a solar photovoltaic (PV) farm known as Ardgoulbeg Solar Farm, within a total site area of c. 64.3 5ha, located in the townland of Ardgoulbeg, c. 2km northwest of Rathkeale, in Co. Limerick. The proposed ground-mounted solar photovoltaic (PV) farm comprises the following:

- Solar PV arrays covering a ground area of 301,000m², mounted on steel frames.
- Installation of up to 10 hardstanding's for electrical / inverter units (at 11m x 17.2m).

- Installation of a transformer compound for grid connection to Rathkeale 110kV substation.
- 3,293m of internal access tracks and associated drainage infrastructure.
- Site access via a new entrance from the L1219 local road.
- Installation of 4,922m of deer-proof perimeter security fencing with mammal access gaps.
- Temporary site compounds for construction and logistics - 2,793 m² in the southern lands and 2,110m² in the northern lands of the site
- Biodiversity enhancement measures for hedgerows and grassland management.

Description of site characteristics:

A detailed description of the site is provided in Section 1.0 of this report. The habitats on site have been surveyed and are described in the Ecological Impact Assessment (dated January 2024) in accordance with standard practice (Fossitt 2000). There are no habitats within the proposed solar farm site that conform to those listed under Annex I of the EU Habitats Directive. The habitats throughout the site consist of Improved Agricultural Grassland (GA1), Hedgerows (WL2), Treelines (WL1), Scrub (WS1), Riparian Woodland (WN5) and Depositing Rivers (FW2). The only invasive species observed within the site boundary were sycamore and beech. These are not on the third scheduled list of invasive species in the European

Communities (Birds and Natural Habitats) Regulations 2011 [S.I.477/2011], and there is no legal requirement to eradicate these species. The River Deel is the most prominent water feature in the area and forms the western boundary of the site.

There are 6 no. Natura 2000 European sites are within 15km of the proposed development site or potentially hydrologically connected to it. The closest European site is Askeaton Fen Complex SAC, which is c. 1.7km to the northeast of the site (direct distance). The Barrigone SAC is located c. 6.1km northwest of the site, and the Curraghchase Woods SAC is located c. 6.3km northeast. The River Shannon and River Fergus Estuaries SPA is located c. 6.3km north of the site (direct distance), while the in-stream distance is c. 7.7km. The Lower River Shannon SAC is located ca. 7.3km north of the site, while the in-stream distance is ca. 9.5km. The Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA is located c. 7.4km to the west of the site.

European sites with pathways for potential effects arising from the sources of impact from the proposed project include the following:

- River Shannon and River Fergus Estuaries SPA (Site Code: 004077)
- Lower River Shannon SAC (Site Code: 002165)
- Curraghchase Woods SAC (Site Code: 000174)

There are no European Sites with groundwater-dependent habitats within 250m of the proposed development site, and no European sites designated for barnacle or greylag geese are within 25km of the proposed development site.

Relevant prescribed bodies consulted included

Submissions from Prescribed Bodies:

No Appropriate Assessment concerns have been raised by the Local Authority or Prescribed Bodies.

Step 2: Potential impact mechanisms from the project

The proposed development would not result in any direct effects, such as habitat loss on any European Site.

The Applicant has applied the source-pathway receptor model to determine possible impacts and effects of the proposed solar farm development.

Potential effect mechanisms from the project include:

- Habitat loss or deterioration.
- Species disturbance (notably otter and the lesser horseshoe bat).
- Surface water pollution from construction runoff.
- Groundwater contamination risks.
- Human disturbance, noise, dust, and lighting disturbance.
- Physical structures as barriers to species movement.
- Changes to existing land use and ecological networks.

Step 3: European Sites at Risk

Based on the AA Screening Report's Zone of Influence (Zol) assessment, the following European sites and qualifying features are at potential risk:

Table 1 European Sites at risk from impacts of the proposed project [example]

Effect mechanism	Impact pathway / Zone of influence	European Site(s)	Qualifying interest features at risk
A. Surface water runoff	Hydrological link via River Deel	Lower River Shannon SAC (002165)	Otter, Watercourses of plain to montane levels All Qualifying Interests are detailed at the following link - Lower River Shannon SAC National Parks & Wildlife Service
B. Disturbance of Mobile SCI Species	Connectivity via riparian habitats	River Shannon and River Fergus Estuaries SPA (004077)	Bird species, including the Bar-Tailed Godwit, Black-Headed Gull, Greenshank, Redshank, Shelduck, Snipe, Curlew, Teal, Wigeon, Golden Plover, Cormorant, Lapwing, Shoveler and Whooper Swan

			All Qualifying Interests are detailed at the following link - River Shannon and River Fergus Estuaries SPA National Parks & Wildlife Service
C. Habitat loss/barriers	Land-use changes in commuting zones	Curraghchase Woods SAC (000174)	Lesser Horseshoe Bat All Qualifying Interests are detailed at the following link - Curraghchase Woods SAC National Parks & Wildlife Service

Step 4: Likely significant effects on the European site(s) 'alone'

Having reviewed the documentation on file, the Conservation Objectives supporting documents for the above-referenced sites available through the NPWS website (www.npws.ie), and noting the nature, scale, design, and location of the proposed development, together with the nature of the qualifying interests which will not be in any way affected, I am satisfied that likely significant impacts on the qualifying interests of the subject European Sites that are not listed in the Tables below can be ruled out and do not require further consideration. As such, the tables below focus only on the qualifying interest features at risk having regard to the specifics of the proposed development.

Table 2: Could the project undermine the conservation objectives 'alone'					
European Site and qualifying feature	Conservation objective (summary)	Could the conservation objectives be undermined (Y/N)?			
		Surface water runoff	Disturbance of Mobile SCI Species	Habitat loss/ barriers	
Lower River Shannon SAC ▪ Otter, ▪ Watercourses of plain to montane levels	Restore and maintain favourable conservation status for otter and aquatic habitats. Full details at the following link - Site specific cons obj	N	N	N	
River Shannon & Fergus SPA ▪ Bar-Tailed Godwit, ▪ Black-Headed Gull, ▪ Greenshank, ▪ Redshank, ▪ Shelduck, ▪ Snipe,	Maintain the favourable conservation condition of qualifying interest bird species Full details at the following link - Site specific cons obj	N	N	N	

▪ Curlew, ▪ Teal, ▪ Wigeon, ▪ Golden Plover, ▪ Cormorant, ▪ Lapwing, ▪ Shoveler ▪ Whooper Swan					
Curraghchase Woods SAC	Restore the favourable conservation condition of Lesser Horseshoe Bat roosting and commuting routes. Full details at the following link - CO000174.pdf	N	N	N	

No work would take place in the riparian zone along the River Deel. The proposed development would maintain a 20m buffer zone from the River Deel. No otter holts, breeding or resting places were found along the banks of the River Deel adjacent to the site. While otter activity was confirmed at River Deel bordering the site, the 20m riparian buffer zone would maintain their habitat, connectivity and fish biomass availability. Therefore, the conservation condition of Otters along the River Deel adjacent

to the site would not be impacted. Any noise disturbance from construction would be temporary and restricted to the work period of c. 1 year. Mammal gaps would be provided every 100m to the proposed 3,363m site security fencing.

There are no drainage channels on the site that could provide a hydrological link to the River Deel. As such, there is no hydrological connection between the proposed project and the River Shannon and River Fergus Estuaries SPA (004077) and Lower River Shannon SAC (002165). Consequently, there would be no significant effects on River Lamprey, Brook Lamprey or Salmon spawning grounds within the River Deel.

Construction noise would not cause significant effects on occasional transient mobile SCI species at locations near the River Deel associated with the River Shannon and River Fergus Estuaries SPA. Any noise disturbance during construction would be temporary and restricted to the work period of c. 1 year.

Habitats in the Curraghchase Woods SAC (Site code: 000174) would not be affected by habitat loss, noise, lighting, invasive species or dust. The riparian zone and hedgerow at the northern boundary of the site, where the lesser horseshoe bat was recorded, would not be affected by the construction of the proposed solar farm. Habitats within the buildable area of the proposed solar farm are sub-optimal for lesser horseshoe bats due to poor habitat suitability and connectivity, proximity to the road along the southern boundary, and lighting at the existing substation and the farm building at the centre of the site. No lighting is proposed for the operational phase of the solar farm. Lighting used during the construction phase would generally take place during daylight hours.

I conclude that the proposed development would have no likely significant effect 'alone' on any qualifying feature(s) of the River Shannon and River Fergus Estuaries SPA, Lower River Shannon SAC and Curraghchase Woods SAC. Further AA screening in combination with other plans and projects is required.

Step 5: Where relevant, likely significant effects on the European site(s) 'in-combination with other plans and projects'

The AA Screening report submitted provides a detailed summary of permitted development in the surrounding area of the application site, environmental assessments undertaken (AA Screening Reports, NIS, EIAR and EcIA), determinations by the Planning Authority and a summary of characteristics of the potential interactions between the identified project and the proposed development under the subject application. Having reviewed these and the Limerick City and County Council and An Bord Pleanála's online mapping systems, I do not consider that there are any projects which could have the potential to have significant in-combination effects on a European Site when considered alongside the proposed development. Similarly, I am unaware of any plans that could potentially have in-combination effects on a European Site when considered alongside the proposed development.

I conclude that the proposed development would have no likely significant effect in combination with other plans and projects on the qualifying features of any European site(s). No further assessment is required for the project.

Overall Conclusion- Screening Determination

In accordance with Section 177U(4) of the Planning and Development Act 2000 (as amended) and on the basis of objective information, I conclude that the proposed development would not have a likely significant effect on any European Site either alone or in combination with other plans or projects. It is, therefore, determined that Appropriate Assessment (Stage 2) [under Section 177V of the Planning and Development Act 2000] is not required.

This conclusion is based on:

- Objective information presented in the AA Screening Report.
- The layout and design of the proposed development would not impact riparian and bat commuting areas.
- The limited zone of influence of potential impacts.
- No hydrological link from the development area to sensitive SAC habitats.
- Compliance with standard best practices for pollution control and biodiversity protection.

No mitigation measures intended to avoid or reduce harmful effects on European sites were taken into account in reaching this conclusion.