



An  
Coimisiún  
Pleanála

## Inspector's Report

### ABP-320662-24

#### Development

The development of a solar farm on a site of 125 hectares and all associated site works & services. The solar farm will be operational for 40 years. A Natura Impact Statement was submitted with the planning application.

#### Location

Cloghboley - Carrowgarraff North, Co. Galway

#### Planning Authority

Galway County Council

#### Planning Authority Reg. Ref.

2361143

#### Applicant(s)

Harmony Solar Galway Limited

#### Type of Application

Permission.

#### Planning Authority Decision

Refuse planning permission.

#### Type of Appeal

First Party

#### Appellant(s)

Harmony Solar Galway Limited.

#### Observer(s)

Joan Curry

Brendan McCormack

Steven Long

Bernie Austin

Sean Farren

Gabriel Faherty

Johan Molenaar

Tracy Kirby

FP Logue LLP (Julie Faherty)

**Date of Site Inspection**

6<sup>th</sup> & 7<sup>th</sup> March 2025.

**Inspector**

Paul Kelly

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## 1.0 Introduction

- 1.1. Under the provisions of Section 37 of the Planning and Development Act, 2000 (as amended) a first party appellant, Harmony Solar Galway Limited, has appealed the decision of Galway County Council (“GCC”) to refuse planning permission on 24th September 2024, subject to 4 no. reasons, for the development of a Solar Farm on the subject site at Cloghboley – Carrowgarra North, Co. Galway. The application includes a Natura Impact Statement (NIS).
- 1.2. The Coimisiún should note that the planning application included significant further information and revised plans at the planning application stage. The Coimisiún should ensure that it reviews the most recent plans submitted to GCC in the response to the further information request, which were received on 17<sup>th</sup> May 2024.
- 1.3. The Coimisiún should also note that further information was requested at appeal stage on 18<sup>th</sup> March 2025. This further information was received by the Coimisiún on 17<sup>th</sup> June 2025 and is described in further detail in Section of 7.4 of this report.
- 1.4. For information a timeline of the planning application is set out in Table 1 below:

| Table 1: Timeline of the planning application               |            |
|-------------------------------------------------------------|------------|
| Planning Application received by GCC                        | 24/09/2023 |
| Further Information Requested by GCC                        | 17/11/2023 |
| Further Information Received by GCC                         | 17/05/2024 |
| Revised Public Notices Requested by GCC                     | 17/05/2024 |
| Revised Public Notices Received by GCC                      | 31/05/2024 |
| Decision of GCC                                             | 25/07/2024 |
| First Party Appeal Received by An Bord Pleanála             | 21/08/2024 |
| Further Information Requested by An Coimisiún Pleanála      | 18/03/2025 |
| Further Information Received by An Coimisiún Pleanála       | 17/06/2025 |
| Further Information Circulated to Observers, GCC and DAU    | 27/06/2025 |
| Further Information Re-circulated to Observers, GCC and DAU | 07/07/2025 |

## **2.0 Site Location and Description**

- 2.1. The subject site has an area of approx. 125ha and consists of three separate parcels, the 'northern', 'central' and 'southern' parcels. It is located in the rural townlands of Cloghboley - Carrowgarraff North, Co, Galway and is approx. 4km east of Kinvara, 4km west of Ardahan and 17km southeast of Galway City, Co. Galway respectively.
- 2.2. The site is generally accessed from the M18 (Exit 17) to the northeast via the R458 to Ardahan (over a distance of approx. 2.8km). From Ardahan the site central and southern parcels are accessed via the R347 (over a distance of approx. 4km). The northern parcel is accessed via local road L4505 a distance of approx. 800m from the R347. The posted speed limited on the regional and local roads is 80 km/hr. The site may also be accessed via the N67 and R347 from Kinvara to the west.
- 2.3. The site is located within a rural and agricultural environment, with gentle elevations and grassland fields bounded by stonewalls, hedgerows and treelines. The site ranges between 20m to 30m above Ordnance Datum (maOD). The predominant land use is currently high intensity grazing (cattle/horses). Otherwise, there are a number of one-off rural dwellings in the vicinity of the site which are in a typical sporadic pattern including ribbon developments.
- 2.4. There are no mapped watercourses or permanent water bodies within or adjoining the site and the site is located within Flood Zone C. The site is located within a karst landscape and there are a number of mapped turloughs (temporary lakes) within and adjoining the subject site. There are a significant number of natural heritage and European sites in close proximity to, and within the wider environment of the site. There are a number of recorded archaeological sites listed in the statutory Record of Monuments and Places ("RMP") within the site, which is otherwise located within a landscape of significant archaeological activity.

## **3.0 Proposed Development**

- 3.1. Planning permission is sought to construct a Solar Farm on a site with a total area of 125ha, comprising three parcels of land identified as the 'northern', 'central' and 'southern' parcel(s). The proposed development consists of:

- 570,952 sq.m of solar photovoltaic panels on ground mounted steel frames (panel arrays will be 3.2m high);
- 18 no. hardstanding locations, with each containing 3 no. electrical skids surrounded by a palisade fence with gates;
- Underground power and communications cables and ducts, including cabling along the L-8560, L-4505, L-4506 and R347 public roads;
- 4 no. joint bays, new internal access tracks (approx. 7km), a new access from the R347 public road;
- Upgrade to existing access points along the L-4505 and R347 public roads;
- Access gates, security gates, landscaping and biodiversity enhancement measures, boundary fencing (approx. 16km), and
- all associated ancillary development, site works and services including infrared closed-circuit television (CCTV) cameras.

3.2. The appropriate period sought for the proposed development is 10 years and it is requested that the operational period is for 40 years. Once commenced it is expected that the overall construction period will be 12 months. The application is accompanied by a Natura Impact Statement ("NIS").

The export capacity to the grid is estimated to be 143MW.

It is proposed to connect the solar farm to the national grid by way of a new 110kV substation and loop in/loop out connection, which will be underground. The applicant advises that this will be by means of a separate application to the Coimisiún under Section 182A of the Planning and Development Act, 2000 (as amended) ("PDA"). In this regard the Coimisiún will note that on 23<sup>rd</sup> April, 2023 the Board issued an opinion to the applicant that the proposed 110kV substation and loop-in/loop-out connection to existing 110kV overhead power lines falls within the scope of section 182A of the PDA, would be strategic infrastructure and therefore any application for approval must be made directly to the Board. At the time of writing an application for the 110kV substation has not been made and the applicant advises that this is pending a decision on the subject appeal.

A more detailed development description is set out in Section 1.3 and 3.0 of the applicants 'Planning Statement'.

For the purposes of ecological and environmental screenings and assessment the applicant includes information on the entire project, that is the solar farm, the substation and grid connection, albeit permission is only sought for the solar farm under this application. These considerations are factored into the assessment of this report below.

### 3.3. Documents Supporting the Proposed Development

3.3.1. The following documents were submitted to GCC in the first instance in support of the proposed development:

- Statutory particulars (Public Notices (newspaper & site), application form, landowner consent) and application cover letter
- Infrastructural Drawings (Site Location map(s), site layout plan(s), & plans, sections and elevations together with a schedule of drawings) and Landscape Plans
- Planning Statement
- Environmental Impact Assessment Screening Report
- Environmental Considerations Report (Three Parts) ("ECR") –  
**Appendix A** - drawings & figures,  
**Appendix B** - Glint & Glare Assessment ("GGA"),  
**Appendix C** - Outline Construction Environmental Management Plan ("OCEMP"),  
**Appendix D** – Flood Risk Assessment ("FRA"),  
**Appendix E** – Biodiversity Survey Reports,  
**Appendix F** – Noise,  
**Appendix G** – Landscape,  
**Appendix H** – Cultural Heritage, and  
**Appendix I** – Traffic and Transport Assessment ("TTA")
- Appropriate Assessment Screening Report and Natura Impact Statement ("AASR" and "NIS")

3.3.2. It is noted that the further information submitted to GCC on 17<sup>th</sup> May 2024 (*in response to the further information request of 1<sup>st</sup> November 2023*) included, inter alia, the following documents:

- Updated: Appropriate Assessment Screening Report and Natura Impact Statement ("AASR" and "NIS"), Environmental Considerations Report

(“ECR”), Glint & Glare Assessment, Traffic and Transport Assessment Report (“TTA”), and Construction Environmental Management Plan (“CEMP”)

- Decommissioning and Restoration Plan (“DRP”)
- Bird and Bat Fatality Monitoring Plan (“BBFMP”)
- Road Safety Audit (Stage 1) and a Road Safety Technical Note
- Construction Noise Assessment (“CNA”)
- Biodiversity Management Plan (“BMP”)
- Substation Exterior Lighting document, Letter from AECOM regarding F.I. item no.15 (Hedgerow Loss), Road Layout Plan, and a Technical Note – Aquatic Insects and Solar Farms

## 4.0 Planning Authority Decision

### 4.1. Decision

A notification of a decision to refuse planning permission for 4no. reasons was issued by GCC on 25<sup>th</sup> July 2024 as follows:

1. *The proposed development contains 14no. sites/monuments that are listed on the Record of Monuments and Places (RMP) which is subject to statutory protection in the Record of Monuments and Places, established under Section 12 of the National Monuments (Amendment) Act 1994. The Planning Authority is not satisfied based on the submission received, and in the absence of an Archaeological Impact Assessment (including geophysical survey and investigative works), that the proposed development would not have an undue impact on the integrity of said National Sites/Monuments and therefore that the proposed development would not contravene the provisions of the Galway County Development Plan 2022 – 2028 including Policy Objectives ARC1, ARC2, ARC4, ARC 5, ARC9 and ARC10. The proposed development would, accordingly, be contrary to the proper planning and sustainable development of the area.*
2. *Having regard to the existing public road network serving the proposed development and associated underground public road cabling works required, the future associated substation works required, including considerations of public road capacity, width and alignment, and the surface/structural condition of the pavement, and future maintenance requirements in conjunction with the deficiencies in submitted details, it is considered that road network, is unsuitable to carry the additional road traffic and turning movements likely to*

result from the proposed development. Furthermore, the proposed site entrances on to the road network is also deemed unsatisfactory, owing to the restricted sightlines available at the road frontage, precluding the provision, and maintenance of, a safe and satisfactory means of vehicular access. It is considered the scale of remedial works required to provide the sightlines from the entrances of the development site(s), would constitute significant roadside intervention on local and regional routes in contravention of DM Standard 28 and Policy Objective NNR1, NNR2 and NR1, of the Galway County Development Plan 2022 – 2028, which seeks to safeguard national, regional and local roads. Therefore, it is considered that the proposed development would interfere with the safety and free flow of traffic and endanger public safety by reason of traffic hazard, obstruction of road users or otherwise and therefore would be contrary to the proper planning and sustainable development of the area.

3. *Having regard to a large portion of the development being located within an area designated as less likely viability for solar potential within the Councils Renewable Energy Strategy, the absence of a robust assessment in terms of the loss of agricultural lands and no estimated quantum in terms of potential megawatts of energy which would be generated, the Planning Authority is not satisfied that the development of the scale proposed has been satisfactorily justified. In the absence of sufficient robust analysis, the proposed development would therefore result in the loss of a substantial area of agricultural land which would be contrary to Policy Objective RE 4 and DM Standard 70 of the Galway County Development Plan 2022-2028 and would set an undesirable precedent for similar future development in the rural area, and therefore would be contrary to the proper planning and sustainable development of the area.*
  
4. *The proposed solar farm is located on rural site within 300 metres of the Lough Fingall Complex SAC, which form part of the Natura 2000 network of sites of highest biodiversity importance for rare and threatened habitats and species across the European Union. These European sites are protected under the EU Habitats Directive (92/43/EEC) & EU Birds Directive (79/409/EEC, as amended by Directive 2009/147/EC) and the European Communities (Natural Habitats) Regulations 1997, as amended by the European Communities (Birds and Natural Habitats) Regulations 2011 and are also further protected under Policy Objective NHB 1, Policy Objective NHB 2, Policy Objective NHB 3, Policy Objective NHB 5, NHB 9 and DM Standard 50 of the Galway County Development Plan, 2022-2028. Having regard to the requirements of Article 6(3) and 6(4) of the Habitats Directive, the Planning Authority is not satisfied, based on the information available and the information included in the planning application, that the proposed project will not have an adverse effect individually or in combination with other plans or projects on the integrity and qualifying interests/conservation objectives of the nearby European Sites. Furthermore, the Natura Impact Statement in the absence of Bat Surveys being conducted in the summer months has failed to satisfactorily consider the impacts on the Lesser Horseshoe Bat which is a qualifying interest of the Lough Fingall Complex SAC. Therefore, in the absence of addressing these potential impacts, the Planning Authority cannot*

*be satisfied that the proposed development will not have an adverse impact on the integrity and qualifying interests/conservation objectives of designated European sites, in view of their conservation objectives. Therefore, if permitted as proposed the development would contravene materially policy objectives and a development management standard contained in the current Galway County Development Plan would set an undesirable precedent for similar future development within European sites and therefore would be contrary to the proper planning and sustainable development of the area.*

#### **4.2. Planning Authority Report No.1**

- 4.2.1. This report dated 17<sup>th</sup> November 2023 sets out the site location and description and pre-planning consultations. The absence of a planning history is noted. The relevant national, regional and local policy context is set out and the relevant planning guidelines are noted. The submissions received were summarised under common themes and topics. The various internal and statutory consultation reports are set out. The report goes on to carry out an assessment of the proposed development. In respect of EIA the report notes the submitted EIA Screening Report which concludes that EIA is not required. The report opines that the information submitted is ambiguous and opines that an updated EIA Screening Report is required. In relation to AA, the report notes the submitted NIS and the consultation response from the DHLGH which identifies significant lacunae in same. The report opines that an updated NIS is required which includes consideration of all Natura 2000 sites within 15km of the application site. The Stage 1 and 2 Flood Risk Assessment which identifies the location of the site within 'Flood Zone C' is noted and the report considers that the development is acceptable from a flood risk perspective.

The report proceeds to assesses several topics including: strategic policy, roads & access, design, landscape and visual, glint & glare, archaeology, grid connection and restoration plan.

- 4.2.2. The report concludes with a Request for Further Information in respect of fifteen items including: an updated NIS, an updated Environmental Considerations Report, a Biodiversity Management Plan, an updated Archaeological Impact Assessment, a justification for the proposed development on lands designated as 'less likely viability' for solar, excavation methodology (with regard to the roots of nearby trees), proposals for a bond to ensure satisfactory restoration, confirmation of the estimated capacity to be generated, a revised Glint & Glare Assessment, a revised Traffic &

Transport Assessment, a Road Safety Audit, a swept path analysis and details of passing bays and an updated EIA Screening Report which specifies the extent of hedgerow loss. Further information in accordance with this report was formally requested on 17<sup>th</sup> November 2023. A further information response was subsequently received on 17<sup>th</sup> May 2024. GCC deemed that this further information response contained 'significant additional information' and on the 17<sup>th</sup> May 2024 required new public notices in accordance with Article 35(1) of the Planning and Development Regulations, 2001, as amended ("PDR"). New notices were subsequently submitted to GCC on 31<sup>st</sup> May 2024.

#### **4.3. Planning Authority Report No.2**

- 4.3.1. The second planning report dated 25<sup>th</sup> July 2024 details the submissions received in respect of the further information response together with the various internal and statutory consultation reports. This report concludes that the likelihood of adverse impacts on Lough Fingall Complex SAC cannot be excluded having regard to the insufficient information submitted with regard to Bat Surveys and in particular the absence of summer surveys concerning the Lesser Horseshoe Bat. The report notes the clarification in relation to the extent of hedgerow removal and opines that the applicant's response is satisfactory. I note that the report does not revisit the consideration of EIA screening.
- 4.3.2. This report otherwise concluded that the response to all items of further information was satisfactory with the exception of the response to Item No.6, 7 and 11-14 (inc). In respect of Item No.6 the report does not accept the applicant's proposal to defer archaeological investigative works including a geophysical survey to a post-consent stage. In respect of Item No.7 the report notes that the potential megawatt capacity of the proposed development has not been specified and considers that the justification for the proposed solar farm on agricultural lands designated with 'less likely viability' for solar farm development is inadequate. In relation to Items No. 11-14 concerning roads and traffic considerations the report refers to concerns of the Roads & Transportation Department that the local road network does not have the capacity, width, alignment or structural condition to cater for the proposed development and that safe visibility splays are not available.

4.3.3. Accordingly, the report recommends that planning permission be refused for four reasons concerning archaeology, traffic safety, inadequate justification and impact(s) on a Natura 2000 site as detailed in the refusal reasons set out in Section 4.1 above.

#### 4.3.4. **Other Technical Reports**

##### *Original Reports:*

- GCC Roads Report (17/11/2023): Recommends further information be sought for a revised Glint & Glare Assessment, revised Traffic & Transport Assessment, a Road Safety Audit and a Swept Path Analysis with proposals for passing bays.

##### *Further Information Reports*

- GCC Roads Report (25/07/2024): Recommends that permission be refused for the following reasons: the capacity, width, alignment and surface/structural condition of the road network is unsuitable to the additional road traffic, the proposed site entrances are unsatisfactory owing to restricted sightlines available, and the remedial works required would constitute significant roadside intervention contrary to DM Standard 28 and Policy Objective NNR1, NNR2 and NR1 of the GCDP.

#### 4.4. **Prescribed Bodies**

##### 4.4.1. **Transport Infrastructure Ireland (TII)**

A first report dated 17<sup>th</sup> October 2023 relies on the planning authority to abide by official policy as outlined in DoECLG Spatial Planning and National Roads Guidelines for Planning Authorities (2012). It notes the GGA conclusion of negligible impact on the motorway owing to road receptors experiencing only momentary effects. The report opines that this can present a significant safety consideration due to potential for knee-jerk reaction(s) to a sudden flash of light and requests that all mitigation measures are in place before installation of the solar panels.

A second report dated 18<sup>th</sup> June 2024 relies on the planning authority to abide by official policy as outlined in DoECLG Spatial Planning and National Roads Guidelines for Planning Authorities (2012) with specific regard to the provisions of Chapter 3.

#### 4.4.2. Department of Housing Local Government and Heritage (DHLGH)

In a comprehensive first report dated 24<sup>th</sup> October 2023 the DHLGH made the following comments:

##### ***Nature Conservation***

In relation to the submitted NIS and Appropriate Assessment concerns were raised regarding potential disturbance impacts and the severing of commuting routes for bats, noting that gaps in hedgerow (even of 5m) could have a significant impact particularly for breeding and lactating females at a nearby roost. Additional surveys were recommended during the summer months in an attempt to identify favoured Lesser Horseshoe Bats (LHB) commuting routes (specifically in the context of the Loug Fingall complex Special Area of Conservation (Site Code: 000606)) and year-round surveys (*not solely bat activity*) were also recommended to fully understand the potential impacts on biodiversity and to set an appropriate baseline for future monitoring.

The location of works within 30m of turlough habitats was noted and the DHLGH highlighted that the timing of these works was not considered relative to potential disturbance or displacement effects on Wigeon (a QI species of Galway Bay SPA). It was also noted that the reflection of polarised light was not considered as a potential impact for QI bird species of the Inner Galway Bay SPA. An operational phase programme of Bird and Bat fatality monitoring is recommended, with clear targets and indicators providing for accessible data.

The limited use of energy efficient (LED) lighting was otherwise recommended together with use of 'warm white' lighting with a Correlated Colour Temperature (CCT) of below 2700 kelvins together with best practice natural regeneration of naturally occurring wildflowers and grasses through appropriate site management.

In relation to Nature Conservation generally the report comments:

- Pre-commencement surveys should have regard to Flora Protection Order species *vicia orobus*.
- A comprehensive Biodiversity Management Plan should be prepared which includes the specific management of grassland areas outside of the array footprint for ground nesting birds, clarifies the extent of hedgerow to be

removed, and which outlines how no net biodiversity loss will occur within the lifetime of the plan.

- A pre-commencement winter survey of the turloughs should be carried out to ascertain max flood levels and to adjust the siting of the panels accordingly.
- It is recommended that all vegetation clearance works be undertaken outside of the bird nesting period of 1<sup>st</sup> March to 31<sup>st</sup> August and that this be a condition of any permission. (*The DHLGH notes that there is no mechanism in the Wildlife Act for a derogation licence for such works during the nesting season and opines that surveying prior to removal of vegetation is not a practical measure to protect nesting birds and has a low chance of success.*)
- A decommissioning and recycling plan is also recommended (within 5 years of commencement of operation).
- The report recommends that the source of panel wash waters should be clarified.

### **Archaeology**

In relation to archaeology the report notes the large scale of the site which encompasses 15 no. Recorded Monuments and which is otherwise located in a wider landscape that contains a relatively high density of Recorded Monuments. The report notes that advance geophysical survey, archaeological test excavation and a Historic Landscape Characterisation (HLC) study were not carried out as recommended at pre-planning stage. In the absence of this information the report opines that appropriate and informed archaeological recommendations could not be made and the deferral of the recommended investigations to a post-consent stage cannot be supported. An updated Archaeological Impact Assessment is recommended including geophysical survey, test excavation and a HLC.

A second report dated 4<sup>th</sup> July 2024 the DHLGH noted that the developer did not carry out any of the archaeological survey or investigative works recommended. The report recommends that these archaeological requirements are re-requested as part of a 'clarification of further information' and advises that in the absence of same it may recommend a refusal of permission.

This report makes no further comments in relation to nature conservation.

#### 4.5. Third Party Observations

- 4.5.1. There were 23 submissions from third parties in respect the planning application to GCC and 9 no. additional submissions to the significant further information. All of these submissions are noted.

### 5.0 Planning History

- 5.1. A review of the GCC Planning Portal and the Board's case files was carried out on 23<sup>rd</sup> and 25<sup>th</sup> July 2025 to collate any recent and relevant planning history (within 10 years) for the subject site. This was reviewed on 16<sup>th</sup> September 2025.

There is no recent planning history on the subject site itself and a limited planning history in the vicinity and wider area of the subject site. This primarily consists of rural residential, domestic and agricultural type developments.

### 6.0 Policy Context

#### 6.1. National Policy and Legislation

At a high level, the Coimisiún should note the following relevant legislation, policy and guidance which will be relied upon in the assessment. These include:

6.1.1. **Climate Action and Low Carbon Development Act, 2015, as amended.**

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.

#### **6.1.2. Climate Action Plan 2024 (“CAP24”) and 2025 (“CAP25”)**

Under the Climate Action and Low Carbon Development Act, 2015, as amended, Ireland's national climate objective requires the State to transition to a climate resilient, biodiversity rich, environmentally sustainable and climate neutral economy by no later than the end of 2050. This national climate objective meets Ireland's obligations under EU and international treaties, including the Paris Agreement (2015), the European Green Deal and the EU's objective to reduce GHG emissions by at least 51% by 2030 (compared to 2018) and achieve climate neutrality by 2050.

To meet its targets and obligations CAP 24 sets a course for Ireland to halve emissions by 2030 and reach net-zero no later than 2050. In terms of the electricity sector a 75% reduction in emissions based on 2018 levels is required by 2030 and CAP 24 provides that central to achieving this is the strategic increase in the share of renewable electricity to 80% by 2030 including ambitious targets of deploying 9GW of onshore wind, 8GW of solar power and at least 5GW from offshore wind projects.

CAP 2025 was published on 15<sup>th</sup> April, 2025. It re-affirms the previous commitment to increase the share of renewable electricity generation to 50% by 2025 and 80% by 2030 including solar targets of up to 5GWs by 2025 and 8 GWs by 2030.

#### **6.1.3. Ireland's Long-term Strategy on Greenhouse Gas Emissions Reductions 2024**

The National long-term Climate Action Strategy, entitled Ireland's Long-term Strategy on Greenhouse Gas Emissions Reductions 2024, sets out indicative pathways, beyond 2030, towards achieving carbon neutrality for Ireland by 2050. The Strategy provides a pathway to a whole-of-society transformation and serves as a vital link between shorter-term Climate Action Plans and Carbon Budgets and the longer-term objective of the European Climate Law and Ireland's National Climate Objective.

#### **6.1.4. The National Adaptation Framework; Planning for a Climate Resilient Ireland (June 2024)**

The most recent approved national adaptation framework, the National Adaptation Framework; Planning for a Climate Resilient Ireland June 2024 (NAF) is Ireland's

second statutory National Adaptation Framework (NAF) and was published on 5th of June 2024.

The NAF and its successors do not identify specific locations or propose adaptation measures or projects in individual sectors, but sets out the context to ensure local authorities, regions and key sectors can assess the key risks and vulnerabilities of climate change, implement climate resilience actions and ensure climate adaptation considerations are mainstreamed into all local, regional and national policy making.

The NAF identifies 13 (previously 12) priority sectors under 7 lead Departments that are required to prepare sectoral adaptation plans under the Climate Act in accordance with the Sectoral Planning Guidelines for Climate Change Adaptation which were published in 2018 and updated in 2024. The original 12 sectoral Plans prepared in 2019 and a new sectoral Plan for tourism are to be updated/prepared by end of Q3 2025. The following Electricity and Gas Sectoral Plan is relevant to the subject proposal.

#### **6.1.5. Electricity and Gas Sectoral Plan 2019**

The aim of the Plan is to address the risks posed by climate change to the electricity and gas networks. The plan focuses on identifying vulnerabilities such as extreme weather and changing temperature patterns and how they could affect the electricity and gas networks. Specific measures to minimise the potential negative effects of climate change are outlined including the strengthening of the grid and ensuring reliable gas supply. The Plan also seeks to exploit opportunities and the potential benefits arising from climate change adaptation such as increased energy efficiency and the development of new renewable energy sources.

#### **6.1.6. Project Ireland 2040: National Planning Framework (“NPF”), First Revision of the NPF and the National Development Plan (“NDP 2018-2027)**

Project Ireland 2040 is the Government’s long-term overarching strategy to make Ireland a better country for all and to build a more resilient and sustainable future. The NPF and the NDP combine to form Project Ireland 2040.

The NPF sets out to deliver a spatial strategy through a set of National Strategic Outcomes (“NSO’s”), including: ‘*Transition to a Low Carbon and Climate Resilient Society*’ which establishes a national objective of achieving transition to a

competitive, low carbon, climate resilient and environmentally sustainable economy by 2050. The first revision of the NPF has been approved by both Houses of the Oireachtas, following the decision of the Government to approve the final revised NPF on 8<sup>th</sup> April, 2025. The 'First Revision' introduces regional renewable electricity capacity allocations for each of the three Regional Assemblies to be achieved by 2030 which for the Northern and Western Regional Area is an additional 959MW, for solar PV or 12% of the National share in 2030. This is the minimum required for solar generation to meet the 2030 emission reductions in the electricity sector.

The NDP 2018-2027 sets out the investment priorities that will underpin the implementation of the National Planning Framework, through a total investment of approx. €116 billion. It recognises that Ireland's energy system requires radical transformation in order to achieve its 2030 and 2050 targets and objectives. It recognises that investment in renewable energy sources affords Ireland an opportunity to decarbonise our energy generation, but that this must be complemented by wider measures to moderate growth in energy demand, increase energy security, diversify supply sources and facilitate more variable electricity generation on the grid.

#### **6.1.7. National Biodiversity Action Plan (NBAP) 2023-2030**

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.

#### **6.1.8. 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.

## **6.2. Regional Planning Policy**

### **6.2.1. Regional Spatial & Economic Strategy for the Northern & Western Region (“RSES”) 2020-2032.**

The RSES is a high-level development framework for the region that supports the implementation of the NPF and the relevant economic policies and objectives of Government. A key issue for the RSES is how climate change will impact on land-use change and increasing demands on natural resources into the future. It recognises that the national position on climate action sets a fundamental national objective to achieve the transition to a competitive, low carbon, climate resilient and environmentally sustainable economy by 2050. International obligations and the commitment to a reduction of greenhouse gases and power generation from sustainably produced electricity are also acknowledged. The five growth ambitions of the strategic vision include focussing on the aggressive pursuit of a low carbon approach to enhance regional differentiation and the provision and maintenance of energy infrastructure to delivery compact growth and a connected, vibrant, inclusive, resilient and smart region.

- 6.2.2. The RSES states that the region has unique natural endowment of ample carbon-neutral, energy supplies that gives opportunity to forge and lead a new clean economy of the future. This opportunity is seen as both an environmental and economic growth strategy. Regional Policy Objectives include (inter alia) ‘*to encourage the development of the transmission and distribution grids to facilitate the development of renewable energy projects and the effective utilisation of the energy generated from renewable sources having regard to the future potential of the region*

*over the lifetime of the strategy and beyond' (RPO 4.17) and, to 'support the development of secure, reliable and safe supplies of renewable energy, to maximise their value, maintain the inward investment, support indigenous industry and create jobs' (RPO 4.18).*

**6.3. Local**

**6.4. Galway County Development Plan 2022-2028**

- 6.4.1. The Galway County Development Plan, 2022-2028 ("GCDP") is the relevant plan for the subject site. There is no specific land use zoning for the site which is located in a rural environment. The relevant Objectives and Policies of the GCDP are detailed in Table 2 below:

| <b>Table 2: Relevant Policies and Objectives of the GCDP</b>                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chapter 4: Rural Living and Development                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Policy Objective <b>RD 2</b> (Smart Economy)                                          | To support and develop a diverse base of smart economic specialisms as dynamic drivers in our rural economy, including innovation and diversification in agriculture and sustainable energy and green agenda projects.                                                                                                                                                                                                                                                                                                                                                                                               |
| Policy Objective <b>AD 2</b> (Agricultural Lands)                                     | To protect good quality agricultural lands from development which could be accommodated elsewhere and that would undermine the future agricultural productivity of the lands or irreversibly harm the commercial viability of existing or adjoining agricultural land.                                                                                                                                                                                                                                                                                                                                               |
| Chapter 6: Transport and Movement                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Policy Objective <b>NR1</b> (Protection of Strategic Roads)                           | To protect the strategic transport function of national roads and associated national road junctions, including motorways through the implementation of the 'Spatial Planning and National Roads Guidelines for Planning Authorities' DECLG, (2012) and the Trans-European Networks (TEN-T) Regulations.                                                                                                                                                                                                                                                                                                             |
| Policy Objective <b>NRR1</b> (Restricted Regional Roads)                              | To safeguard the capacity and safety of Restricted Regional Roads listed in Table 6.3, against development where a maximum speed limit applies in order to protect the carrying capacity and safety of such roads.                                                                                                                                                                                                                                                                                                                                                                                                   |
| Policy Objective <b>NRR2</b> (Safeguard Regional and Local Roads)                     | To safeguard the carrying capacity and safety of the County's regional and local road network.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Chapter 8: Tourism and Landscape                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Policy Objective <b>LCM 2</b> (Landscape Sensitivity Classification)                  | The Planning Authority shall have regard to the landscape sensitivity classification of sites in the consideration of any significant development proposals and, where necessary, require a Landscape/Visual Impact Assessment to accompany such proposals. This shall be balanced against the need to develop key strategic infrastructure to meet the strategic aims of the plan.                                                                                                                                                                                                                                  |
| Chapter 10: Natural Heritage, Biodiversity and Green/Blue Infrastructure              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Policy Objective <b>NHB 1</b> (Natural Heritage and Biodiversity of Designated Sites) | <p>Protect and where possible enhance the natural heritage sites designated under EU Legislation and National Legislation (Habitats Directive, Birds Directive, European Communities (Birds and Natural Habitats) Regulations 2011 and Wildlife Acts) and extend to any additions or alterations to sites that may occur during the lifetime of this plan.</p> <p>Protect and, where possible, enhance the plant and animal species and their habitats that have been identified under European legislation (Habitats and Birds Directive) and protected under national Legislation (European Communities (Birds</p> |

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|                                                                                    | <p>and Natural Habitats) Regulations 2011 (SI 477 of 2011), Wildlife Acts 1976-2010 and the Flora Protection Order (SI 94 of 1999).</p> <p>Support the protection, conservation and enhancement of natural heritage and biodiversity, including the protection of the integrity of European sites, that form part of the Natura 2000 network, the protection of Natural Heritage Areas, proposed Natural Heritage Areas, Ramsar Sites, Nature Reserves, Wild Fowl Sanctuaries (and other designated sites including any future designations) and the promotion of the development of a green/ecological network.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Policy Objective <b>NHB 2</b><br>(European Sites and<br>Appropriate<br>Assessment) | To implement Article 6 of the Habitats Directive and to ensure that Appropriate Assessment is carried out in relation to works, plans and projects likely to impact on European sites (SACs and SPAs), whether directly or indirectly or in combination with any other plan(s) or Project(s). All assessments must be in compliance with the European Communities (Birds and Natural Habitats) Regulations 2011. All such projects and plans will also be required to comply with statutory Environmental Impact Assessment requirements where relevant.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Policy Objective <b>NHB 3</b><br>(Protection of European<br>Sites)                 | No plans, programmes, or projects etc. giving rise to significant cumulative, direct, indirect or secondary impacts on European sites arising from their size or scale, land take, proximity, resource requirements, emissions (disposal to land, water or air), transportation requirements, duration of construction, operation, decommissioning or from any other effects shall be permitted on the basis of this Plan (either individually or in combination with other plans, programmes, etc. or projects).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Policy Objective <b>NHB 5</b><br>(Ecological Connectivity<br>and Corridors)        | Support the protection and enhancement of biodiversity and ecological connectivity in non-designated sites, including woodlands, trees, hedgerows, semi-natural grasslands, rivers, streams, natural springs, wetlands, stonewalls, geological and geo-morphological systems, other landscape features and associated wildlife areas where these form part of the ecological network and/or may be considered as ecological corridors in the context of Article 10 of the Habitats Directive.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Policy Objective <b>NHB 9</b><br>(Protection of Bats and<br>Bats Habitats)         | Seek to protect bats and their roosts, their feeding areas, flight paths and commuting routes. Ensure that development proposals in areas which are potentially important for bats, including areas of woodland, linear features such as hedgerows, stonewalls, watercourses and associated riparian vegetation which may provide migratory/foraging uses shall be subject to suitable assessment for potential impacts on bats. This will include an assessment of the cumulative loss of habitat or the impact on bat populations and activity in the area and may include a specific bat survey. Assessments shall be carried out by a suitably qualified professional and where development is likely to result in significant adverse effects on bat populations or activity in the area, development will be prohibited or require mitigation and/or compensatory measures, as appropriate. The impact of lighting on bats and their roosts and the lighting up of objects of cultural heritage must be adequately assessed in relation to new developments and the upgrading of existing lighting systems. |
| Chapter 12: Architectural, Archaeological and Cultural Heritage                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Policy Objective <b>ARC 1</b><br>(Legislative Context)                             | Support and promote the preservation, conservation and appropriate management and enhancement of the County's archaeological sites and monuments, together with the settings of these monuments, having regard to the legislative, statutory and policy provisions relevant to the conservation of the archaeological heritage.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Policy Objective <b>ARC 2</b><br>(Archaeological Sites)                            | Seek to encourage and promote awareness of and access to archaeological heritage of the County for all, through the provision of information to landowners and the community generally, in co-operation with statutory and other partners.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

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| Policy Objective <b>ARC 4</b><br>(Protection of Archaeological Sites)                                        | Protect archaeological sites and monuments their settings and visual amenity and archaeological objects and underwater archaeological sites that are listed in the Record of Monuments and Places, in the ownership/guardianship of the State, or that are subject of Preservation Orders or have been registered in the Register of Historic Monuments, or that are newly discovered and seek to protect important archaeological landscapes.                                                                                                                                                                                                                                                     |
| Policy Objective <b>ARC 5</b><br>(Development Management)                                                    | All planning applications for new development, redevelopment, any ground works, refurbishment, and restoration, etc. within areas of archaeological potential or within close proximity to Recorded Monuments or within the historic towns of County Galway will take account of the archaeological heritage of the area and the need for archaeological mitigation.                                                                                                                                                                                                                                                                                                                               |
| Policy Objective <b>ARC 9</b><br>(Recorded Monuments)                                                        | Ensure that any development in the immediate vicinity of a Recorded Monument is sensitively designed and sited and does not detract from the monument or its visual amenity.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Policy Objective <b>ARC 10</b> (Zones of Archaeological Potential)                                           | To protect the Zones of Archaeological Potential located within both urban and rural areas and around archaeological monuments generally as identified in the Record of Monuments and Places. Any development within the ZAPs will need to take cognisance of the potential for subsurface archaeology and if archaeology is demonstrated to be present appropriate mitigation (such as preservation in situ/buffer zones) will be required.                                                                                                                                                                                                                                                       |
| Chapter 14: Climate Change, Energy and Renewable Resource                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Policy Objective <b>CC 6</b><br>(Local Authority Renewable Energy Strategy (LARES))                          | To support the implementation of the Renewable Energy Strategy contained in Appendix 1 of the Galway County Development Plan to facilitate the transition to a low carbon county.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Policy Objective <b>RE 1</b><br>(Renewable Energy Generation and ancillary facilities)                       | To facilitate and support appropriate levels of renewable energy generation and ancillary facilities in the county to meet national, regional and county renewable energy targets, to facilitate a reduction in CO2 emissions and the promotion of a low carbon economy.                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Policy Objective <b>RE 4</b><br>(Solar Energy Developments)                                                  | Promote and facilitate solar farm developments in suitable locations, having regard to areas of the County designated for this purpose in the Local Authority Renewable Energy Strategy. The Planning Authority will assess any planning application proposals for solar energy production having due regard to the Habitats Directive and to the detailed policy objectives and Development Standards set out in the Local Authority Renewable Energy Strategy.                                                                                                                                                                                                                                   |
| Chapter 15: Development Management Standards                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>DM Standard 28</b> (Sight Distances required for Access onto National, Regional, Local and Private Roads) | <p>(<i>Inter alia</i>)</p> <ul style="list-style-type: none"> <li>• Visibility splays shall be measured a minimum distance of 2.4m from the edge of the carriageway ('x' distance) or as determined by Galway County Council. In limited instances this may be reduced to 2.4m and to 2.0m in difficult circumstances on urban roads.</li> <li>• Site visibility requirements shall be provided within the development boundary of the site or on lands in the control of the applicant or lands in public ownership.</li> <li>• A vehicle turning into the proposed development shall be visible to an approaching vehicle for a distance of Y in order to avoid a rear end collision.</li> </ul> |

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|                                                                          | <ul style="list-style-type: none"> <li>• A vehicle turning right into the proposed development shall have a forward visibility to the centre of the opposite lane for a distance of Y to ensure they can safely cross the path of an on-coming vehicle.</li> <li>• Sight distance requirements for design speeds on National, Regional and Local Roads: <ul style="list-style-type: none"> <li>- Design Speed: 100 kph/Y distance: 215m</li> <li>- Design Speed: 85kph/Y distance: 160m</li> <li>- Design Speed 70kph/Y distance: 120m</li> </ul> </li> <li>• On narrow Local Roads with poor horizontal and vertical alignment and where the 80 km/h speed limit applies, the design speed applied for access visibility requirements should be the speed (km/h) that one can drive the road in a safe manner. This can be assessed as the 85th percentile speed drivers travel on the road. The visibility will then be assessed on the 85th percentile speed for that road.</li> <li>• In general, where the capacity, width, surface condition or alignment of the road is deemed inadequate, development will not be favoured.</li> </ul>                                                                                                                                         |
| <b>DM Standard 47</b> (Field Patterns, Stone Walls, Trees and Hedgerows) | <p>Field patterns and associated stone walls, trees and hedgerows are an important part of the visual and environmental quality of rural areas and their removal and replacement with block walls and fencing leads to urban features in a rural environment. It can also have an effect on wildlife and lead to the removal of valuable hedgerows upon which wildlife depends. New developments will accordingly be subject to the following requirements in this regard:</p> <p>a) Existing Features<br/>Retain and incorporate existing field patterns and associated stone walls, trees and hedgerows into new development layouts wherever feasible.</p> <p>b) Intervention<br/>In general, only the minimum interference with existing field patterns, stone walls, trees and hedges shall be permitted.</p> <p>c) Planting<br/>The Council will also encourage the planting of native trees and hedgerows along all boundaries.</p> <p>d) Hedgerows<br/>Include consideration of native hedgerow with post and rail fencing along roadside frontages where existing hedgerow is being removed. Employ the appropriate management methods for the maintenance of roadside habitats to minimise damage (in particular to hedges) and observe the hedge cutting closed season.</p> |
| <b>DM Standard 50</b><br>(Environmental Assessments)                     | The measures to be applied in respect of Appropriate Assessment, Ecological Assessment and Environmental Assessment are noted.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>DM Standard 61</b><br>(Archaeological Conservation and                | The requirements for consultation of the Archaeological Constraints Map, pre-application consultations and regard to the applicable Guidelines and Principles is noted.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

|                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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| Preservation (Urban & Rural Areas)). |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>DM Standard 70</b> (Solar Energy) | <p>The following factors will be considered in assessing a planning application for a solar farm (summary):</p> <ul style="list-style-type: none"> <li>• Reuse of previously developed land (brownfield, contaminated, industrial or non-productive agricultural land (in preference to productive))</li> <li>• Proximity to electricity infrastructure and indicative grid connection proposals</li> <li>• Glint &amp; Glare</li> <li>• Additional impacts if the solar array will follow the daily movement of the sun</li> <li>• Security measures such as fencing &amp; lighting</li> <li>• Visual impacts on heritage assets and designated sites/sensitive landscapes</li> <li>• Ecological impact</li> <li>• Potential to mitigate landscape and visual impacts (siting, design, screening etc)</li> <li>• Cumulative impacts (with solar and wind)</li> <li>• Roads infrastructure and traffic safety</li> <li>• Drainage and flooding</li> <li>• Decommissioning.</li> </ul> |

## 6.5. Appendix 1 - Galway County Council Local Authority Renewable Energy Strategy (“LARES”)

The LARES outlines the renewable energy resource potential in County Galway. It estimates that by 2030 Galway will have the potential to realistically and sustainably deliver over 1.5GW of Renewable Energy making a significant contribution to the aims of the national Climate Action Plan. For the purposes of conservatively estimating the potential renewable energy contribution due to solar, the LARES estimates that the County has an ‘unconstrained’ potential to produce a total energy yield from solar of up to 500MW. However, it is acknowledged that this may be unrealistic due to a range of factors including an observed reluctance to convert land from agriculture and a revised contribution of 193MW by 2030 is estimated. The LARES takes account of new technologies in renewable energy and has been prepared using up-to-date and detailed mapping analysis of landscape and ecological sensitivities in tandem with the Landscape Character Assessment (LCA) for Galway. It is part of the GCDP and has been subject to SEA, SFRA and AA as part of the CDP review process.

- 6.5.1. The Strategy itself is set out in Part 3. This includes ‘Key Deployment Zones’ for each Renewable Energy Type with Map 16 showing deployment zones for ‘solar potential’. A corresponding description of the deployment zones for solar is then set out in Table 10 which can be summarised as follows:

| Mapping Key             | Meaning [to be read in conjunction with Policies in Section 19]                                                                                                                                                                                                                                                                                                                                       |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Solar Potential</b>  |                                                                                                                                                                                                                                                                                                                                                                                                       |
| Acceptable in Principle | Areas where Solar Energy development will be facilitated as an appropriate land use.                                                                                                                                                                                                                                                                                                                  |
| More Likely Viability   | Areas where Solar Energy development projects are more likely to be proposed by developers on account of superior viability. These are more likely to be favourably considered - subject to the results of more detailed assessment of policies and potential effects. Future additional energy supporting infrastructure is likely be prioritized in large areas where this designation is dominant. |
| Less Likely Viability   | Areas where Solar Energy development projects are less likely to be proposed by developers on account of superior viability. These are likely to be favourably considered - subject to the results of more detailed assessment of policies and potential effects. Future additional energy supporting infrastructure is likely be a lower priority in large areas where this designation is dominant. |
| Settlements             | Areas where Solar Energy development has a potential to be integrated with buildings, sites and urbanized areas. These are likely to be                                                                                                                                                                                                                                                               |

|                           |                                                                                                                                                                                                                                                           |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                           | favourably considered - subject to the results of more detailed assessment of policies and potential effects.                                                                                                                                             |
| Not Open to Consideration | Areas where Solar Energy Projects, would be likely to conflict with policies of the council to protect landscape, water, ecological resources and residential amenity. Such areas may also include areas and species protected by the Habitats Directive. |

6.5.2. The LARES sets out specific policy objectives for renewable energy together with a non-exhaustive list of factors to consider for larger solar farm developments. The relevant policy objectives and factors for solar energy are:

| Policy Objective                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Proposed Policy Objective                                                                                                                                                                                                                                                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>LARES Policy Objective 5 - Solar Energy Generation</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | To enable improved solar energy generation across County Galway.                                                                                                                                                                                                                           |
| <b>LARES Policy Objective 6 - Commercial Solar Energy</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Commercial scale solar energy development, where in accordance with the solar energy deployment zones identified in this LARES, will be considered favourably on brownfield sites within industrial and/or commercial settings and on agricultural land suitable for farm diversification. |
| <b>LARES Policy Objective 7 – Acceptable in Principle</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Solar energy development proposals in areas that are identified as 'Acceptable in Principle' will be considered in accordance with the LARES and the proper planning and sustainable development of the area.                                                                              |
| <b>LARES Policy Objective 8 - More Likely Viability</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Solar energy development proposals in areas that are identified as 'More Likely Viability' will be considered in accordance with the LARES and the proper planning and sustainable development of the area.                                                                                |
| <b>LARES Policy Objective 9 - Less Likely Viability</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Solar energy development proposals in areas that are identified as 'Less Likely Viability' will be considered in accordance with the LARES and the proper planning and sustainable development of the area                                                                                 |
| <b>Solar Farm factors to consider:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                            |
| <ul style="list-style-type: none"> <li>- Shaded areas should be avoided, where possible.</li> <li>- Vacant brownfield sites in predominantly industrial areas which have not been developed to date with access to the grid, access by vehicle and with associated transformers and power cables; should be considered for solar energy generation.</li> <li>- Land diversification should be considered where solar farms can be developed on agricultural land, where proposals include the continued agricultural use of the site or incorporate biodiversity measures within the project.</li> <li>- Typically suited to low lying-lands due to the need for level sites.</li> <li>- South facing aspect with either flat terrain or sloping gently.</li> </ul> |                                                                                                                                                                                                                                                                                            |

Prospective developments are otherwise required to demonstrate how they will proportionately contribute to the requirement in the Climate Action Plan to generate 1.5GW of solar PV by 2030.

#### 6.6. **Appendix 4 – Galway County Council Landscape Character Assessment (“LCA”)**

- 6.6.1. The subject site is located within the Landscape Character Type: ‘*Central Galway Complex Landscape*’ described as an extensive plain of grasslands comprising medium-to-large fields with low enclosures and many areas of low stone walls and containing the majority of the County’s population with high levels of rural housing, roads and settlements. Map No. 01 and description 2.3.6. refers. Within this landscape the site is located within the Landscape Character Unit: ‘*Kilchreest Basin*’ identified on Map No. 05 and described thereon as a ‘*long occupied working landscape with high levels of settlement and numerous smaller settlements as well as large road and rail corridors. Extensive low-lying area with many turloughs and areas of scrub woodland*’.
- 6.6.2. The LCA analyses a range of landscape sensitivity factors to assign a sensitivity rating to each part of the county for the purpose of determining robust and sensitive landscapes, facilitating policy formulation and supporting decision making. The proposed development site is located within a part of the County given a Landscape Sensitivity rating of ‘1’ or ‘Low’ meaning that it is unlikely to be adversely affected by change. Section 4 and Map No. 06 refers.
- 6.6.3. The LCA also designates scenic views and prospects and scenic routes. The only designated view within the wider area of the subject site is No.37 ‘*Ardrahan Church of Ireland and ruins*’ with 180° northwards facing angle of view. The focus of this view is the surrounding countryside and ruins to the east. Map No.08 and 6.4 *Schedule of Protected Views* refers. The only designated scenic route within the ‘*Central Galway Complex Landscape*’ is the ‘*Slieve Aughty Scenic Route*’ which runs east to west from Gort to Portumna. This route is described as passing through extensive areas of commercial forestry and areas of cut-over bog with parts of the route providing expansive and panoramic views north and south with large arrays of wind turbines visible along parts of the route. The ‘*Galway Bay Scenic Route*’ to the west is also noted. Map No. 09 refers.

## 6.7. Natural Heritage Designations

6.7.1. National or European sites generally in the vicinity of the site (<15km) are as follows:

| <b>National or Proposed National Heritage Areas (NHA's/pNHA's)</b>                             | <b>Distance from site<br/>(at closest point)</b> |
|------------------------------------------------------------------------------------------------|--------------------------------------------------|
| <b>Kiltiernan Turlough</b> proposed Natural Heritage Area (pNHA) (001285).                     | 150m north.                                      |
| <b>Lough Fingall Complex</b> proposed Natural Heritage Area (pNHA) (000606).                   | 300m northwest.                                  |
| <b>Castletaylor Complex</b> proposed Natural Heritage Area (pNHA) (000242).                    | 1.8km northeast.                                 |
| <b>Coole-Garryland Complex</b> proposed Natural Heritage Area (pNHA) (000252).                 | 2.6km southeast.                                 |
| <b>Galway Bay Complex</b> proposed Natural Heritage Area (pNHA) (000268).                      | 3km west.                                        |
| <b>Caherglassaun Turlough</b> proposed Natural Heritage Area (pNHA) (000238).                  | 3.5km south.                                     |
| <b>Rahasane Turlough</b> proposed Natural Heritage Area (pNHA) (000322).                       | 4.8km northeast.                                 |
| <b>Peterswell Turlough</b> proposed Natural Heritage Area (pNHA) (000318).                     | 7km southeast.                                   |
| <b>Cregganna Marsh</b> Natural Heritage Area (NHA) (000253).                                   | 9.5km northwest.                                 |
| <b>Lough Cutra</b> proposed Natural Heritage Area (pNHA) (000299).                             | 12km southeast.                                  |
| <b>Sonnagh Bog</b> proposed Natural Heritage Area (pNHA) (001913).                             | 13km southeast.                                  |
| <b>Moneen Mountain</b> proposed Natural Heritage Area (pNHA) (000054).                         | 14km southwest.                                  |
|                                                                                                |                                                  |
| <b>Special Areas of Conservation (SAC's)</b>                                                   | <b>Distance from site<br/>(at closest point)</b> |
| <b>Kiltiernan Turlough</b> Special Area of Conservation (SAC) (001285).                        | 150m north.                                      |
| <b>Ardrahan Grassland</b> Special Area of Conservation (SAC) (002244).                         | 250m east.                                       |
| <b>Lough Fingall Complex</b> Special Area of Conservation (SAC) (000606).                      | 300m northwest.                                  |
| <b>Castletaylor Complex</b> Special Area of Conservation (SAC) (000242).                       | 1.8km northeast.                                 |
| <b>Cahermore Turlough</b> Special Area of Conservation (SAC) (002294).                         | 2km south.                                       |
| <b>Coole-Garryland Complex</b> Special Area of Conservation (SAC) (000252).                    | 2.6km southeast.                                 |
| <b>Galway Bay Complex</b> Special Area of Conservation (SAC) (000268).                         | 3km west.                                        |
| <b>Caherglassaun Turlough</b> Special Area of Conservation (SAC) (000238).                     | 3.5km south.                                     |
| <b>Ballinduff Turlough</b> Special Area of Conservation (SAC) (002295).                        | 4km southeast.                                   |
| <b>Rahasane Turlough</b> Special Area of Conservation (SAC) (000322).                          | 4.8km northeast.                                 |
| <b>East Burren Complex</b> Special Area of Conservation (SAC) (001926).                        | 5.7km southwest.                                 |
| <b>Carrowbaun, Newhall and Ballylee Turloughs</b> Special Area of Conservation (SAC) (002293). | 6km southeast.                                   |
| <b>Peterswell Turlough</b> Special Area of Conservation (SAC) (000318).                        | 7km southeast.                                   |
| <b>Lough Coy</b> Special Area of Conservation (SAC) (002117).                                  | 7km southeast.                                   |
| <b>Termon Lough</b> Special Area of Conservation (SAC) (001321).                               | 10km south.                                      |
| <b>Lough Cutra</b> Special Area of Conservation (SAC) (000299).                                | 12km southeast.                                  |
| <b>Sonnagh Bog</b> Special Area of Conservation (SAC) (001913).                                | 13km southeast.                                  |
| <b>Moneen Mountain</b> Special Area of Conservation (SAC) (000054).                            | 14km southwest.                                  |
|                                                                                                |                                                  |
| <b>Special Protection Areas (SPA's)</b>                                                        | <b>Distance from site<br/>(at closest point)</b> |

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|------------------------------------------------------------------------|------------------|
| <b>Inner Galway Bay</b> Special Protection Area (SPA) (004031).        | 3km west.        |
| <b>Rahasane Turlough</b> Special Protection Area (SPA) (004089).       | 4.8km northeast. |
| <b>Slieve Aughty Mountains</b> Special Protection Area (SPA) (004168). | 9km southeast.   |
| Cregganna Marsh Special Protection Area (SPA) (004142).                | 9.5km northwest. |
| <b>Lough Cutra</b> Special Protection Area (SPA) (004056).             | 12km southeast.  |

## 7.0 The Appeal

### 7.1. Grounds of Appeal

A first party appeal was received from Gravis Planning on behalf of Harmony Solar Galway Limited against the decision made by Galway County Council to refuse planning permission for the proposed development. The appeal includes the following:

- First Party Appeal prepared by Gravis Planning
- Aecom response to Refusal Reason No.1
- Letter from Target Archaeological Geophysics Ltd (dated 16/08/2024)
- Traffic and Transport Assessment prepared by Martin Peters Associates
- National Land Cover – Methodology Report & Calculations prepared by Gaeltach Energy Services
- Lesser Horseshoe Bat Survey (August 2024) prepared by RPS
- Aecom Statement re: Bat Survey Results (dated 21/08/2024)
- GCC pre-planning consultation report and Gravis Planning meeting minutes.

The first party appeal sets out the grounds for appeal against both the reasons for refusal and the assessment of GCC. This is summarised in Table 3 below:

**Table 3 - First Party Grounds for appeal against GCC's reasons for refusal and associated assessment.**

| PA Reason for Refusal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | First Party Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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| <b>Ground:</b> Reason No.1 (Archaeology)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <p>The proposed development contains 14no. sites/monuments that are listed on the Record of Monuments and Places (RMP) which is subject to statutory protection in the Record of Monuments and Places, established under Section 12 of the National Monuments (Amendment) Act 1994. The Planning Authority is not satisfied based on the submission received, and in the absence of an Archaeological Impact Assessment (including geophysical survey and investigative works), that the proposed development would not have an undue impact on the integrity of said National Sites/Monuments and therefore that the proposed development would not contravene the provisions of the Galway County Development Plan 2022 – 2028 including Policy Objectives ARC1, ARC2, ARC4, ARC 5, ARC9 and ARC10. The proposed development would, accordingly, be contrary to the proper planning and sustainable development of the area.</p> | <p>The response notes that the assessment and decision of GCC is influenced by the DHLGH submissions on archaeology and requirement for 'pre-determination geophysical surveys and investigative works'.</p> <p>The appeal response is supported by a specific archaeological response from Aecom (<i>Appendix C</i>) and a letter from Target Archaeological Geophysics Ltd confirming that a geophysical survey could not be completed within the statutory timelines associated with the Section 34 planning application process (<i>Appendix D</i>).</p> <p>The premise of the appeal argument is that the DHLGH requirement for further pre-consent surveys and testing exceeds the requirements of policy, is inconsistent with the relevant guidelines and is a matter which can be addressed post consent by condition. The response points to a number of examples where DHLGH submission(s) and decisions by planning authorities and ACP have taken the approach of requiring further surveys (including geophysical surveys) by condition of a permission and contends that the deferral of further surveys and investigative works to a post consent stage is proportionate in this case based on the following arguments:</p> <ul style="list-style-type: none"> <li>• The proposed development has been sensitively designed and informed by a detailed Cultural Heritage Impact Assessment (prepared as part of the ECR). This includes no development works within Zones of Archaeological Potential (ZAPs) and a buffer zone of 5m from ZAPs.</li> <li>• The development will not be a permanent feature on the landscape and will be removed at decommissioning stage.</li> <li>• Appropriate mitigation measures have been proposed for archaeological testing, geophysical survey and resolution of archaeological issues, at the pre-construction phase including: <ul style="list-style-type: none"> <li>i. Alteration of design, or removal of blocks of solar panels, to avoid ground works in areas where archaeological activity is highlighted. Alternatively concrete shoes may be suitable to avoid subsurface penetration.</li> <li>ii. In areas where anomalies cannot be avoided, ground truthing will be carried out in the form of monitored mechanical excavation under licence. In the event that archaeological features are uncovered during testing or construction the NMS will be consulted to determine</li> </ul> </li> </ul> |

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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <p>appropriate mitigation measures which may include preservation in situ, preservation by record and/or further monitoring.</p> <p>iii. The process will include Method Statements and an Unexpected Find Protocol.</p> <p>For these reasons the appeal argues that the requirement by the DHLGH for geophysical surveying and testing prior to determination of the application goes far beyond the Policy requirements of the GCDP, and therefore a policy-based decision to refuse planning permission is not justified. The Coimisiún is invited to reconsider the decision to refuse planning permission on this basis and to attach a condition requiring pre-construction surveying and testing.</p> <p>The appeal response also confirmed that it was subsequently possible to confirm an earlier date for the requested geophysical survey. This was scheduled to be undertaken in October 2024 with the corresponding report available by December 2024.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Ground: Refusal Reason No.2</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <p>Having regard to the existing public road network serving the proposed development and associated underground public road cabling works required, the future associated substation works required, including considerations of public road capacity, width and alignment, and the surface/structural condition of the pavement, and future maintenance requirements in conjunction with the deficiencies in submitted details, it is considered that road network, is unsuitable to carry the additional road traffic and turning movements likely to result from the proposed development. Furthermore, the proposed site entrances on to the road network is also deemed unsatisfactory, owing to the restricted sightlines available at the road frontage, precluding the provision, and maintenance of, a safe and satisfactory means of vehicular access. It is considered the scale of remedial works required to provide the sightlines from the entrances of the development site(s), would constitute significant roadside intervention on local and regional routes in contravention of DM Standard 28 and Policy Objective NNR1,</p> | <p>The appeal response opines that the Councils reason for refusal is very general, that there is no evidence of a detailed assessment of the submitted traffic material having been carried out, that specific elements of concern are not identified and that Refusal Reason No.2 does not meet the requirement of being 'clear, unambiguous or easily understood'.</p> <p>The appeal response refers to the TTA and Technical Note 01 (TN01) submitted with the RFI response and supported by an additional TTA Addendum (TTA02) prepared by Martin Peters Associates, Consulting Engineers (<i>Appendix E</i>). TTA02 includes additional survey data and traffic counts. It supplements the TTA submitted as a part of the RFI response.</p> <p>In respect of DM Standard 28, the response confirms that the proposed access points have been designed in full compliance with DM Standard 28 with sightlines of 120m and 160m being provided relative to the corresponding 85<sup>th</sup> percentile speed on the adjoining road in accordance with the requirements of the GCDP. The response confirms that the provision of sightlines is within the applicant's control and that it is proposed to reconstruct stonewalls and replant hedgerows which are required to be set back. The appeal response submits that neither DM Standard 28, NNR1, NNR2 or NR1 make any reference to '<i>roadside intervention</i>' significant or otherwise when providing sightlines. The appeal argues that there is no basis for the PA position or refusal reason in this regard.</p> <p>The appeal response notes that PO NNR1 of the GCDP seeks to safeguard the carrying capacity and safety of restricted regional roads and that the R458, which is part of the construction traffic access route, is a restricted regional road. The appeal refers to the TTA Addendum (TTA02) included as Appendix E of the appeal response which demonstrates that the proposed development will have very limited impact on the R458, with peak traffic representing less than 2% of the road's capacity. This is considered negligible and temporary, with normal operating parameters returning at operational stage.</p> |

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| <p>NNR2 and NR1, of the Galway County Development Plan 2022 – 2028, which seeks to safeguard national, regional and local roads. Therefore, it is considered that the proposed development would interfere with the safety and free flow of traffic and endanger public safety by reason of traffic hazard, obstruction of road users or otherwise and therefore would be contrary to the proper planning and sustainable development of the area.</p> | <p>The appeal response notes that PO NNR2 of the GCDP seeks to safeguard the carrying capacity and safety of the regional and local road network. The appeal response again refers to Appendix E of the appeal response which states that the local road network will operate at 26%-55% capacity in the design year of 2028 and opines that construction traffic generated by the proposed development will not adversely impact the carrying capacity of the local road network.</p> <p>The appeal response notes that PO NR1 of the GCDP aims to protect the strategic function of national roads and associated national road junctions including motorways. The appeal notes that the nearest national road and junction to the site is the M18 and Junction 17. The appeal refers to the submitted TTA and states that the proposed development does not have any direct impact on the M18 through the creation of a new access or other physical change and will have a negligible impact on traffic volumes and carrying capacity with peak traffic from the project amounting to less than typical daily variations.</p> <p>Otherwise TTA02 confirms that the width and alignment of the public roads is adequate to cater for the type and class of vehicles used for construction. Road widths are confirmed as 3.5m at pinch points and 4.5m generally on local roads, 5-5.5m on the R347 and in excess of 7m on the R458. Passing bays will be provided on the L4505 with details set out on Section 2 of TN01. In respect of surface and structural concerns the developer is undertaking to resurface the relevant sections of the L8560 and L4506 (cable route) in their entirety and to resurface the L4505 from the junction with the R347 to the northern access. A pre- and post-construction survey will be undertaken on the L4506 (north), R458 and R347 along the construction route and the developer proposes to make good any damage in consultation with GCC and is happy to accept a condition to this effect.</p> <p>Construction Traffic Management proposals are also set out including the appointment of a Construction Traffic Manager who will also act as a Designated Community Liaison Officer.</p> <p>On this basis the appeal argues that it is unfair to suggest that there are deficiencies in the submitted information and that the proposed development is in compliance with DM Standard 28 and PO NNR1, NNR2 and NR1 of the GCDP.</p> |
| <p><b>Ground: Refusal Reason No.3</b></p>                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <p>Having regard to a large portion of the development being located within an area designated as less likely visibility viable for solar potential within the Councils Renewable Energy Strategy, the absence of a robust assessment in terms of the loss of agricultural lands and no estimated quantum in terms of potential megawatts of energy which would be generated, the Planning Authority is not satisfied that the</p>                     | <p>The appeal response notes that PO RE 4 seeks to promote and facilitate solar farm developments in suitable locations having regard to areas designated in the Local Authority's 'Renewable Energy Strategy' (LARES). The appeal response provides mapping and submits that the majority 65.97% is located in areas designated as either '<i>acceptable in principle</i>' or with '<i>more likely viability</i>'. It is accepted that 34.03% of the site is within land designated as '<i>less likely viability</i>', but it is argued that the GCDP is very clear that development on such land is 'likely to be favourably considered' subject to detailed assessment. The appeal response otherwise states that PO RE 4 does not in anyway refer to the 'loss of agricultural land'.</p> <p>It is accepted that DM Standard 70 of the GCDP does refer to a preference for the re-use of various land types over productive agricultural land and sets out a range of factors to consider when assessing</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

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| <p>development of the scale proposed has been satisfactorily justified. In the absence of sufficient robust analysis, the proposed development would therefore result in the loss of a substantial area of agricultural land which would be contrary to Policy Objective RE 4 and DM Standard 70 of the Galway County Development Plan 2022-2028 and would set an undesirable precedent for similar future development in the rural area, and therefore would be contrary to the proper planning and sustainable development of the area.</p> | <p>applications for solar farms. These factors are considered and an appeal response provided which can be summarised as follows:</p> <ul style="list-style-type: none"> <li>• The land is presently used for low-intensity livestock grazing, the vast majority of which (over 96%) will continue during the operational life of the solar farm. This limited loss must be assessed against the significant c.143MW generation capacity of the development.</li> <li>• It is proposed to connect the development to a 110kV substation approx. 360m east of the site via underground cabling.</li> <li>• A revised GGA was submitted as part of the response to the GCC RFI which concluded negligible or no impact at all dwellings, road and aviation receptors.</li> <li>• The solar panels will be fixed and will not rotate to track the sun.</li> <li>• No lighting is proposed as provided for in the RFI response to reduce potential effects on bats. The farm will be surrounded by a 2m high fence with small gaps for small mammal access. Inward facing CCTV installations are proposed using passive infrared technology.</li> <li>• Mitigation measures are proposed, as detailed in Section 10 &amp; 11 of the ECR and Appendix C of the appeal response, in relation to visual impacts on landscape and heritage assets.</li> <li>• The ECR, NIS, CEMP, BMP, Bird &amp; Bat Fatality Monitoring Plan and Decommissioning &amp; Restoration Plan include detailed mitigation measures to limit ecological impacts.</li> <li>• There are no visually sensitive sites, designated scenic routes, views or prospects within or near the proposed development site.</li> <li>• The submitted planning statement and ECR considered cumulative impact(s). Permitted solar farms are a significant distance from the site and will not have cumulative impact(s). Given the scale and distance of wind energy developments, they are not considered to have significant cumulative impact(s).</li> <li>• The submitted ECR concludes that potential residual impacts to the water environment are not significant, and no cumulative effects are expected.</li> <li>• A Decommissioning &amp; Restoration Plan was submitted with the RFI response. The CEMP and ECR also detailed best practice control measures and mitigation measures that will be implemented during decommissioning after which the site will be reinstated to agricultural use.</li> </ul> <p>For these reasons the appeal response submits that the proposed development is in compliance with PO RE 4 and DM Standard 10 of the GCDP.</p> |
| <p><b>Ground:</b> Refusal Reason No.4</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <p>The proposed solar farm is located on rural site within 300 metres of the Lough Fingall Complex SAC, which form part of the Natura 2000 network of sites of highest biodiversity</p>                                                                                                                                                                                                                                                                                                                                                       | <p>The appeal response notes that in the absence of bat surveys in the summer months, GCC considered that the NIS failed to adequately consider the potential impacts of the project on LHB which is a qualifying interest of the Lough Fingall Complex SAC.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

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| <p>importance for rare and threatened habitats and species across the European Union. These European sites are protected under the EU Habitats Directive (92/43/EEC) &amp; EU Birds Directive (79/409/EEC, as amended by Directive 2009/147/EC) and the European Communities (Natural Habitats) Regulations 1997, as amended by the European Communities (Birds and Natural Habitats) Regulations 2011 and are also further protected under Policy Objective NHB 1, Policy Objective NHB 2, Policy Objective NHB 3, Policy Objective NHB 5, NHB 9 and DM Standard 50 of the Galway County Development Plan, 2022-2028. Having regard to the requirements of Article 6(3) and 6(4) of the Habitats Directive, the Planning Authority is not satisfied, based on the information available and the information included in the planning application, that the proposed project will not have an adverse effect individually or in combination with other plans or projects on the integrity and qualifying interests/conservation objectives of the nearby European Sites. Furthermore, the Natura Impact Statement in the absence of Bat Surveys being conducted in the summer months has failed to satisfactorily consider the impacts on the Lesser Horseshoe Bat which is a qualifying interest of the Lough Fingall Complex SAC. Therefore, in the absence of addressing these potential impacts, the Planning Authority cannot be satisfied that the proposed development will not have an adverse impact on the integrity and qualifying interests/conservation objectives of designated European sites, in view of their conservation objectives. Therefore, if permitted as proposed the development would contravene materially policy objectives and a development</p> | <p>The appeal response relies on the revised NIS and ECR submitted in response to GCC's RFI together with the additional bat survey data carried out during August 2024 and submitted as Appendix G of the appeal response. The appeal submits that the summertime bat survey results do not alter the recommendations of the submitted NIS and ECR.</p> <p>The appeal submits that the proposed development does not give rise to significant cumulative impact(s) on European Sites and otherwise states that the project has been subject to comprehensive assessment of potential impacts on bats and includes a range of mitigation measures in accordance with applicable guidelines including the limitation of hedgerow removal to 42m, with no individual section exceeding 3.5m, no loss of linear habitat within 2.5km of a known LHB roost, planting of 3,786m of hedgerow and scrub-like trees as part of the BMP and ECR and no use of artificial light during construction or decommissioning.</p> <p>On this basis the applicant submits that the proposed development is in compliance with PO NHB1, NHB2, NHB3, NHB5, NHB9 and DM Standard 50 of the GCDP.</p> |
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| management standard contained in the current Galway County Development Plan would set an undesirable precedent for similar future development within European sites and therefore would be contrary to the proper planning and sustainable development of the area. |  |
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## **7.2. Planning Authority Response**

GCC did not provide a response to the first party appeal.

## **7.3. Observations**

A total of 9 no. observations were submitted concerning the first party appeal. These observations encompassed a broad spectrum of issues, many of which presented varying degrees of overlap, yet were articulated with distinct perspectives. I have summarised the issues raised under heading in Table 4 below:

| Table 4 – Concerns raised in third party observations. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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| Ground                                                 | Detail                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Noise                                                  | Disruption to local business and residents.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Validity                                               | <p>The inadequacy of the submitted plans and particulars in relation to archaeology and on wild birds, bat fauna and the conservation objectives of nearby European Sites fails to describe the works to which the application relates as required by Article 22(4)(a) of the PDR, 2001 (as amended). The appeal should be dismissed as it is grounded on an invalid application.</p> <p>The intention to supplement the application post consent with further surveys and particulars is not permissible and is an abuse of process which undermines public participation.</p> <p>An existing dwelling is incorrectly identified as a previously existing derelict dwelling. The derelict dwelling which was 29m from the site boundary was demolished in 2022. The replacement dwelling, which is 5m from the same site boundary is not shown correctly on the submitted plans and particulars.</p> |
| Site Entrances                                         | Adequate sightlines are not provided which is crucial for safe and effective vehicles access.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Traffic Safety                                         | <p>The development would create traffic hazards, obstruct road users and generally compromise pedestrian and road safety.</p> <p>The Traffic counts carried out in August and during the school holidays were not representative of peak or normal traffic volumes.</p> <p>The roads proposed for use by the development are signposted national cycle ways, regularly used by cycling groups. This was not assessed by the developer.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Inadequate road network Damage to Road Infrastructure  | The local road network is entirely unsuitable for a project of this scale, being narrow and poorly maintained cannot cater for the heavy construction related vehicles and additional traffic volumes associated with the project.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Lack of community consultation/benefit                 | The developer has failed to properly engage with the local community. There has been no meaningful engagement.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Decommissioning Plan                                   | Plan is inadequate. There is a high risk of a significant volume of waste materials, including hazardous waste accumulating.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Water                                                  | <p>Incomplete mitigation for protection of water supply, development area flooding intensity, frequency and impacts.</p> <p>Potential impacts on groundwater flow, waterborne pollution, run off, flooding, private wells and drinking water supply have not been adequately assessed.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Enforcement                                            | Inadequate measures for tracking and closure of environmental & biodiversity protections                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

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| Passings Bays                                     | Inadequate assessment of impacts on dry stone wall infrastructure and on biodiversity living in the stone walls.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Habitats Directive                                | Areas that are near SACs or SPAs should not be used for solar developments unless there are no suitable alternative sites elsewhere. Bord Na Mona has three exhausted bog sites available in east Galway which are identified in the GCDP. These sites should be utilised before other land is considered.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Impact on LHB colony at Lough Fingall Complex SAC | <p>The bat survey conducted during the planning application process is inadequate in timing scope and methodology and the additional survey deficient.</p> <p>A comprehensive survey typically requires multiple survey periods through the bat activity season (early, mid and late). This was not done. The additional survey only used three static detectors over five nights which is not sufficient for such a large solar farm site. More detectors at different heights should be deployed. The placement of one detector at the furthest point from the colony and none near water is questionable.</p> <p>Manual transect surveys should also have been conducted, with 3-5 walked per survey period.</p>                                                                                    |
| Biodiversity                                      | <p>The development will have a severe impact on local flora and fauna.</p> <p>More detail should be provided on other sound files detected. Knowing what other types of noise were recorded will assist understanding of background noise, the data collection process and may provide additional ecological insights.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Flood Impact Assessment                           | <p>A GSI report is cited as confirming that site is prone to annual flooding.</p> <p>Any damage to the surface or subsurface could lead to large scale flooding upstream and/or adversely affect well water and septic tanks.</p> <p>The aquifer underlying the site is classified as having extreme, high or medium vulnerability to contamination.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Archaeology                                       | It is crucial that a full archaeological survey be conducted in advance of planning consent for a project of this scale. It is unacceptable that an archaeological survey has not been carried out.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Policy                                            | <p>Policy Objective RE 4 requires that renewable energy must be done in a sustainable manner and in suitable locations. The project does not align with this PO due to its location in a less viable area for solar energy.</p> <p>The developments failure to provide robust data on energy generation and potential impacts on agricultural lands means it does not meet the requirements of DM Standard 70.</p> <p>GCC has already granted sufficient permissions for solar developments in its functional area. The objectives of the GCDP have therefore been achieved with more solar capacity permitted than targeted. The Coimisiún is precluded from granting permission for further large-scale solar farm developments under the current GCDP as the allocation for solar has been met.</p> |
| Zoning/Justification                              | Most of the northern parcel is designated as being 'less likely viable' for solar energy, yet not justification has been provided for proceeding with this part of the project. This is the land closest to SAC's, containing waterways and with the greatest                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                      | <p>biodiversity. Strong evidence of site-specific solar potential, clearly projected energy output, economic feasibility, mitigation strategies and compliance with policy should have been provided.</p> <p>Other lands such as brownfield land, large car parks, roofs of large factories or derelict land should be used before agricultural land. When used for fodder the land yields three cuts each season, the proposal would be a misuse of agricultural land which should be kept in use for climate change reasons. Increasing dependency on imported food products will only add to our carbon footprint.</p> <p>The land has only ever been used for silage and grazing of cattle. It cannot continue be used to graze cattle and horses as submitted by the applicant. The land has never been used to graze sheep.</p> |
| Lack of Trust        | The detail of the application demonstrates a disregard for ecological sensitivities, heritage preservation and proper consultation practices. Given the proximity of the site to SAC's and location along the WAW, the applicant should not be entrusted with environmental stewardship over such a sensitive area.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Public Health        | The construction period will negatively impact quality of life and human health as a result of noise and disruption, particularly on night shift workers, stay at home parents and those with long term illness or disabilities.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Aarhus Convention    | The lack of community engagement and the form of public notification was inadequate and did not meet the requirements of the Planning and Development Act and the Aarhus Convention.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Visual Amenity       | The perimeter fencing is not in keeping with the area and will become an eyesore especially for tourists leaving the motorway and travelling to the WAW.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Glint & Glare        | Screening will not be effective for 15 years. This will result in injury to residential amenity in the intervening time.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Property devaluation | The change in the character of the area from tranquil beauty to an industrial eyesore will have an adverse effect on the valuation of residential properties.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| EIA                  | The project includes 7km of what are describes as "tracks". GCC erred in not requiring the applicant to provide an EIAR and to give appropriate public notices as EIA is mandated for private roads in excess of 2,000m under Schedule 5 of the PDR, 2001 (as amended).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| EIA Screening        | <p>Having regard to the definition of "road" in the Roads Act, 1993 and to the broad and purposive interpretation of the EIA Directive, the "tracks" are roads and the project requires EIA.</p> <p>Whilst Irish Regulations provide for a "Preliminary Examination" of sub-threshold projects on a case-by-case basis, there is not specific provision in the EIA Directive for this type of examination. The preliminary examination must therefore be done according to the EIA Screening procedure which requires the developer to submit the information required under Schedule 7A.</p> <p>The documents submitted fail to identify numerous sensitive receptors potentially affected and where identified provide insufficient information for EIA Screening Determination. This includes:</p>                                 |

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                     | <ul style="list-style-type: none"> <li>○ Inadequacy of archaeological information on file. It is not lawful to develop mitigation as part of a CEMP. Mitigation is material to the EIA screening process and must be identified and described.</li> <li>○ A risk to bat mortality is identified and monitoring is proposed. This is contrary to EU Law, A.12 of the Habitats Directive which prohibits deliberate killing of bat species. Such activity is a criminal offence. The Coimisiún is therefore precluded from granting planning permission.</li> <li>○ The survey effort is inadequate.</li> <li>○ The methodology followed (Collins, 2016) has been superseded by Collins (2023).</li> <li>○ The literature review is deficient and has not had regard to recent published peer-reviewed journals. The applicant has not applied the recommendation of the “Lesser Horseshoe Bat Species Action Plan 2022 to 2026” which recommends that linear landscape features within 5km of LHB roosts with 20 bats or more is essential.</li> <li>○ Two badger setts have been identified but there is insufficient information to assess the likely impacts on badgers or to make a screening determination. Mitigation is proposed for only one of the setts, but it does not demonstrate the extent of protection or the scientific basis for it. It appears that there will be a likely significant effect on badgers and permission should be refused on a precautionary principle.</li> </ul> |
| Temporal Validity   | <p>The dynamic nature of some receptors on site (bats, birds, hedgerows and European Sites) means an assessment to the requisite scientific standard cannot be carried out based on the possibility that the development may only be completed up to 10 years from a grant of permission. This is not acceptable for the purposes of EIA or AA.</p> <p>The application stresses the need for a 10-year permission but doesn't explain the need given the development is reasonably easy to construct.</p> <p>If there is uncertainty about enabling infrastructure, then the development is entirely premature.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Project Splitting   | There is project splitting through the omission of the substation and grid connection from the assessment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Tourism             | The proposed solar farm is situated in the Burren Lowlands near the renowned WAW. The solar farm will obstruct scenic views and mar the landscape detracting from the overall experience, deterring visitors and negatively impacting tourism.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Residential Amenity | <p>The location of solar panels which are 3.2m high and 2m high fencing, 6m (5.95m) from a boundary wall will have a negative impact on residential amenity of neighbouring dwelling. With solar panels surrounding this dwelling on all sides for many hectares this will result in a greater risk of flooding, contamination of wells, noise pollution, visual pollution and fire hazard. Light will be obstructed; food will be contaminated during construction and the hum from solar fans during operation will constitute unreasonable interference with the enjoyment of residential property.</p> <p>The proximity of an access road to residential property will result in a noise nuisance and health risk as a result of emissions and dust during construction.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

#### 7.4. Further Information An Coimisiún Pleanála

- 7.4.1. Following a review of the application and appeal documentation, it was noted that a full Archaeological Impact Assessment (“AIA”) (including a Historic Landscape Character assessment (“HLC”), geophysical survey and test excavation) as required by the DHLGH (at S.34 application stage) remained outstanding, but that a geophysical survey had been commissioned and would be available from the end of December 2024. In these circumstances it was considered that further information was required from the appellant in order to assist with the assessment of the appeal.
- 7.4.2. On 18<sup>th</sup> March 2024 ACP sought further information in accordance with Section 132 of the PDA, 2000 (as amended) for the following:

1. *The applicant is requested to engage the services of a suitably qualified Archaeologist to carry out and submit an updated Archaeological Impact Assessment (AIA) to include a Historic Landscape Characterisation study (HLC), a programme of Archaeological Geophysical Survey and subsequent targeted Archaeological Test Excavation, in accordance with the following:*
  - i. *The archaeologist shall interrogate the information gathered to date, inspect the proposed development site, detail the historical and archaeological background of the site (consulting appropriate documentary sources), and review all cartographic sources and aerial photographs for the area.*
  - ii. *The Historic Landscape Characterisation Study shall, inter alia, account for the setting of, and inter-visibility between, monuments and alterations to the character and amenity of the over historical/archaeological landscape and shall be carried out in accordance with the ‘Historic Landscape Characterisation in Ireland: Best Practice Guidance’ (The Heritage Council of Ireland, 2013).*
  - iii. *The Archaeological Geophysical Survey and Test Excavation shall be carried out under consent/licence from the National Monuments Services of the Department of Housing, Local Government and Heritage (“DHLGH”) in accordance with an approved method statement. The applicant should note that a period of 4-5 weeks should be allowed to facilitate processing and approval of the consent/licence applications and method statement(s).*
  - iv. *Archaeological Test Excavation shall be informed and supplemented by licensed archaeological metal detection survey.*

- v. *Test trenches shall be excavated at locations chosen by the Archaeologist, having consulted the site drawings and the results of the geophysical survey. Excavation is to take place to the uppermost archaeological horizons only, where they survive. Where archaeological material is shown to be present, the Archaeologist shall suspend works in the area of archaeological interest pending a decision of the National Monuments Service of the DHLGH regarding appropriate mitigation. The applicant should note that all features/archaeological surfaces within the test trenches are to be hand-cleaned and clearly visible for photographic purposes. No sub-surface work shall be undertaken in the absence of the Archaeologist with his/her consent.*
  - vi. *Having completed the work, the Archaeologist shall prepare a written report describing the findings of the AIA, including the results of the Archaeological Geophysical Survey and Test Excavation. The report, which shall be submitted as part of the further information response, shall comment on the degree to which the extent, location and levels of all proposed ground works, service trenches and other sub-surface works required for the development will affect the archaeological remains. This shall be illustrated with appropriate plans, sections etc.*
2. *The applicant is requested to submit any revised/updated information, if required, in the EIA Screening Report and Natura Impact Statement (NIS) that may arise from its response(s) to this further information request including addressing cumulative or in-combination considerations.*
  3. *The applicant is requested to submit a revised/updated Environmental Considerations Report (ECR) and Outline Construction Environment Management Plan (CEMP) to incorporate any significant findings that emerge from the updated AIA process including the location of any archaeological or cultural heritage constraints relevant to the proposed development and appropriate mitigation measures to protect the archaeological or cultural heritage environment.*

7.4.3. A S.132 response to the further information (“RFI”) was received on 17<sup>th</sup> June 2025. This consisted of the following:

- Geophysical Survey Reports (“GSR”) prepared by Target Archaeological Geophysics Ltd
- Archaeological Testing Report (“ATR”) prepared by John Cronin & Associates

- Historic Landscape Characterisation Study (“HLC”) prepared by Aecom
- Statement re: EIA Screening and NIS prepared by Aecom
- Updated CEMP prepared by Aecom
- Updated ECR Cultural Heritage Chapter (11) to reflect the GSR, ATR and HLC.

The RFI was circulated to GCC, statutory bodies and observers on 27<sup>th</sup> June, 2025. It was recirculated on 7<sup>th</sup> July 2025 with a closing date for receipt of submissions or observations of 28<sup>th</sup> July 2025.

## 7.5. Planning Authority Response

GCC did not provide a response to the RFI. No further technical reports were received.

## 7.6. Prescribed bodies

### 7.6.1. Department of Housing Local Government and Heritage (DHLGH)

In a reported dated 28<sup>th</sup> July 2025, the DHLGH made the following comments:

#### ***Archaeology***

The DHLGH recommends conditions in relation to a second phase of archaeological test excavation (pre-commencement) and a boundary survey and construction stage archaeological monitoring. These conditions align with sample conditions C.3, 4, 5 & 6 as set out in the OPR *Practice Note PN03: Planning Conditions* (October 2022) with appropriate site-specific adaptations. The DHLGH requires that the wording of its conditions be used verbatim by ACP in any grant of permission which may issue.

#### ***Nature Conservation***

The DHLGH reviewed the LHB bat survey and report (*carried out in August 2024 and submitted with the appeal and not as part of the RFI*) and is satisfied with the mitigation and enhancement measures provided.

I note that the DHLGH observes that it did not receive an updated copy of Chapter 11 ‘Cultural Heritage’ of the ECR which was circulated as part of the S.131 referral. I have examined Chapter 11 of the ECR and note that it adopts the assessment and conclusions of the ATR and HLC which were circulated to the DHLGH for response. On this basis and given that the DHLGH previously received the ECR, I am satisfied

that there is no material deficit in the information made available to the DHLGH and which informed their statutory report. I note that the DHLGH was happy to recommend conditions on the basis of the information received and in the event that planning permission is granted.

#### **7.7. Observations**

A total of 8 no. observations were submitted concerning the RFI. These observations encompassed a broad spectrum of issues, many of which were raised in the initial observations to the appeal and are not repeated here. Issues raised in relation to the RFI are summarised in Table 5 below:

| Table 5 – Concerns raised in third party observations to RFI |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ground                                                       | Detail                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Stone walls                                                  | The area surrounding the proposed solar farm features extensive examples of traditional Irish dry-stone walls, forming a part of the regions historic fieldscape. In December 2024, UNESCO inscribed Ireland's dry stone wall construction on the 'Representative List' of the 'Intangible Cultural Heritage of Humanity'. This places obligations on the state to ensure development protects the integrity of the craft and its setting, safeguards continuity of knowledge and community practice and avoids undermining public respect for or the visibility of this heritage. The development risks removal or fragmentation of dry-stone walls, the industrialisation of a landscape culturally dependent on its historical wall network, and erosion of traditional knowledge by disrupting a landscape that showcases the craft.    |
| Archaeology                                                  | Archaeologist was not present during excavation of trenches for archaeological testing. The lack of supervision is contrary to guidelines and best practice and could have resulted in the loss of valuable archaeological material and undermines the credibility of the process.<br>Inadequate test trenches carried out equating to a sampling rate of 4.7% below the recommended 5-10%.<br>The geophysical survey did not investigate all features or anomalies and areas deemed unsuitable for survey were not justified.                                                                                                                                                                                                                                                                                                              |
| Substation                                                   | The inclusion of the substation in the RFI is unethical. It circumvents due process and misleads stakeholders and undermines transparency and integrity of this planning process.<br>The substation was supposed to be the subject of a separate SID application to ACP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| HLC                                                          | The development will have a detrimental impact on the historic landscape of the area especially the visibility of heritage assets such ringforts and church ruins (GA113-094, GA113-096). The development would involve the removal of short sections of historic townland boundaries, key elements of Irelands medieval landscape. The intervisibility study used a bare earth model, as a result the conclusions maybe overly optimistic failing to capture a real-world visual impact. Whilst the landscape is classified as having 'low sensitivity' this overlooks significant cultural and historical value which could be disrupted by the proposed development.<br>The HLC p.20 states that no stone walls will be removed, yet Section 4.3.3. states that 15 x 3m sections will be removed and not replaced until decommissioning. |
| RED III                                                      | The site should not be considered for accelerated renewable energy development under RED III.<br>No permission should be granted on the site until the RAA designation status of the area is confirmed and public transparency on environmental sensitivity and screening process is provided.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Procedure & process                                          | There are careless omissions in the information submitted. P. 178-186 of the ECR refers to photomontages, but none are provided.<br>Information in paper form made reading impossible. There is no proper organisation of the material, no document control, and no way to track what is new or updated.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| WFD                                                          | The applicant refers to Kilchreest GWB and states there is no threat from the development to it. The proposed development is not on this GWB. The GWB which is under the development site is the Kinvara-Gort GWB which is vulnerable to damage.<br>Leeching from the panels will affect soil and water, this is not addressed.<br>Rainfall diversion could have negative effects on septic tanks and wells.                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Omission of Protected Fauna                                  | Common Frogs have not been adequately assessed. Sky Lark has not been properly considered. Hen Harrier have been spotted in the area, has this been investigated? Sika and Red deer use the site but have not been considered.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                                              | The White-Tailed Eagle has not been considered in any of the environmental reports. A white-tailed Eagle is a Schedule 1/Annex I protected species and an individual was released in Limerick in 2021 (tag "U") and along with another individual has been repeatedly logged at Rashane Turlough.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Enforcement                                                  | Operational phase management of grassland contingent on voluntary adherence of landowner, with operators only responsible if landowner does not graze sheep. Grassland management measures could be totally ignored.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

## 8.0 Assessment

Having examined the application and appeal documentation on file and having regard to relevant policy and guidance, it is considered that the key issues in this appeal are the reasons for refusal as stated by the Planning Authority. It is also proposed to address some procedural matters, the principle of development and other relevant planning assessment considerations, including technical matters relating to EIA, AA and WFD under the following headings:

- Procedural Matters
- Principle of Development
- Refusal Reason No.1 (*Archaeology*)
- Refusal Reason No.2 (*Traffic & Transport*)
- Refusal Reason No.3 (*zoning, land use & justification*)
- Refusal Reason No.4 (*Appropriate Assessment*)
- Other material planning considerations:
  - Landscape & Visual (including Tourism)
  - Residential Amenity (including noise and property devaluation)
  - Glint & Glare
  - Flood risk & water (other than addressed in WFD)
  - Biodiversity (Matters other than those addressed in AA/EIA processes)
  - Consultation & community engagement
  - Project splitting.
  - Operational Period
- EIA Screening
- AA Screening & Appropriate Assessment
- WFD Screening

## **8.1. Procedural matters**

- 8.1.1. Third parties raise a number of procedural type concerns in relation to the subject application and appeal. In terms of validity many of the observers submit that the extent of the requirement for revised, updated or supplemental information in the planning application process (in relation to, inter alia, archaeology, bird and bats etc) rendered the application incomplete and therefore invalid. I am satisfied however that the content of the application met the requirements of the PDR, 2001 (as amended) for the making of a valid application, and that the requirement for additional and/or further information is a normal part of the planning application process which does not raise questions in relation to validity.
- 8.1.2. Third parties also raised concerns in relation to what they observe as typographical errors in the submitted documents, an excessive volume of material, poor document control and missing documents. I accept that for public parties to the application and the appeal, the range of updated environmental reports and additional information could have presented challenges. However, I am satisfied that there are no serious errors or deficiencies in the submitted material outside of norms or which would be prejudicial to its assessment. I consider that the sequential revision of environmental documents in response to the requests for further information is sufficiently clear, the volume of material is typical and not unduly voluminous and that all records referred to are present and available. Specifically, I would note that a Bat and Bird Fatality Monitoring Plan (BBFMP) was submitted as part of the further information response to GCC ON 17<sup>th</sup> May 2024 and that LVIA photomontages are available as Appendix G to the ECR.
- 8.1.3. I note that third parties to the appeal opine that this development should not be accelerated under the RED III Directive. This is not a RED III application as it predates the transposition of the Directive into Irish law. In addition, the RED III Directive does not apply in respect of appeals to the Coimisiún but only in relation to applications made to the first authority, that is directly to a Planning Authority or the Coimisiún. Accordingly, the permit granting procedures associated with the Directive are not applicable.
- 8.1.4. Many of the third parties to the appeal were concerned that the appellant was attempting to also seek planning permission for the associated substation and grid

connection in the information submitted to the Coimisiún, when this was not sought in the parent planning application. Third parties were concerned that this was unethical and undermined the integrity and transparency of the planning process. It is the case that the third parties are mistaken in this regard. The appellant has simply referred to the associated substation and grid connection in the cumulative and in-combination assessment of potential environmental effects.

## 8.2. Principle of Development

The site is located on key deployment zones for solar energy which are designated as being: '*acceptable in principle*', '*more likely viability*' and '*less likely viability*' in Map 16 & Table 10 of Part 3 the LARES. It is noted that the appellant submits that 65.97% of the proposed development site is located within lands deemed '*acceptable in principle*' or '*more likely viability*' for solar development and that only 34.03% is located within lands deemed '*less likely viability*'. It is accepted that the greater proportion of the site is located on lands where solar development is acceptable in principle or more likely viable. On such lands the LARES provides that solar energy proposals will be facilitated as an appropriate landuse and are more likely to be favourably considered subject to a detailed assessment of policies and potential effects. Notwithstanding that part of the site is deemed '*less likely viability*', there is no prohibition in the LARES or GCDP in relation to solar energy development on such lands, rather the LARES provides that proposals are likely to be favourably considered subject to the results of a more detailed assessment of policies and potential effects. No part of the site is located within lands that are 'not open to consideration' for solar energy development in the LARES. The proposed development site also satisfies the factors & considerations set out in the LARES for large solar farm developments in that the proposed development site is not shaded, consists of agricultural land where livestock grazing can continue and biodiversity measures are also incorporated, is low-lying and south facing.

The site is otherwise located within a landscape (type & unit) which is given a sensitivity rating of '1' or 'low' in the LCA meaning that it is unlikely to be adversely affected by change and there are no constraints in respect of designated views, prospects or scenic routes relating to the site.

8.2.1. The GCDP supports the implementation of the LARES to facilitate the transition to a low carbon county (PO CC 6). It is furthermore supports 'appropriate levels of renewable energy generation to meet national, regional and county renewable energy targets' (PO RE 1) and promotes and facilitates 'solar farm developments in suitable locations having regard to areas of the County designated for this purposes' in the LARES subject to assessment against the Habitats Directive and the policy objectives and DM standards of the LARES (PO RE 4). The NPF, RSES and GCDP (*PO CC6 and PO RE 1*) are clear in their support for renewable energy, including solar energy, at appropriate locations and the general provisions of the LARES and the GCDP is clear that this includes agricultural lands (PO RD 2 & LARES O 6). The development is also consistent with the targets for renewable electricity generation and sectoral reduction in emissions, including for solar, set out in CAP24 and CAP25. In this regard I note that a third party observer to the appeal submitted that GCC had already permitted sufficient solar energy developments to meet its targets under the GCDP and LARES, however I am satisfied that targets are not a limit and that a policy ceiling does not apply. This is not considered to be a material issues, particularly when the necessary progress towards national climate targets is considered.

8.2.2. I am satisfied that the principle of development is acceptable subject to a 'detailed assessment of policies and potential effects' as required by the LARES. I am satisfied that the required detailed assessment is fully addressed in my assessment of AA, EIA, WFD, the reasons for refusal and other material planning considerations addressed in the following sections of my report.

### **8.3. Reason for Refusal No.1 (Archaeology)**

8.3.1. GCC's first refusal reason concerned archaeology. It is set out in full in Section 4.1 of this report. The PA noted the presence of 14 no. sites/monuments listed on the RMP and was not satisfied on the basis of a desktop AIA and in the absence of a geophysical survey and investigative works, that the proposed development would not have an undue impact on the integrity of national sites/monuments. For this reason, the PA was not satisfied that the development would not contravene PO ARC 1, 2, 4, 5, 9 and 10 of the GCDP. This refusal reason was influenced by the DHLGH reports opining that a full AIA including a geophysical survey and HLC was required for assessment and could not be deferred to a post consent stage.

- 8.3.2. PO ARC 1, 2, 4, 5, 9 and 10 of the GCDP are wide ranging in their scope and extent, but are primarily concerned with the preservation, conservation and protection of archaeological sites and monuments. They are also concerned with the visual amenity and setting of archaeological sites and monuments
- 8.3.3. The central issue in this refusal reason was the DHLGH position that the desk-based assessment did not adequately characterise the baseline archaeological environment, did not allow for the possibility of preservation in situ of newly identified archaeological remains (unrecorded archaeological deposits) and did not consider the character of the archaeological landscape and the setting/inter-visibility between monuments. At both pre-planning and s.34 application stage the DHLGH required an AIA to specifically include a geophysical survey, test excavation and HLC.
- 8.3.4. These matters were not addressed by the appellant in the first party appeal. However, they were the subject of the further information request by ACP on 18<sup>th</sup> March 2025 and were subsequently received as part of the RFI on 17<sup>th</sup> June 2025.

***Baseline archaeological environment & investigations***

- 8.3.5. A geophysical survey was carried out by Target Geophysics Ltd in late 2024 under detection licence no. 24R0448 and this survey found no response of definite archaeological character and no clear archaeological patterns associated with the RMPs within the proposed development site boundary. However, the survey identified responses of potential archaeological note, including 2 probable ring-ditches and part of a circular enclosure within the northern parcel, and 5 responses of possible burnt/fired origin within the central and southern parcel. An abundance of small-scale anomalies was also contained in the survey data which were expected to derive from effects of recent landuse, modern ferrous and natural soil/geological variation. In total the geophysical survey identified 38 no. anomalies.
- 8.3.6. An Archaeological Testing Report (“ATR”) was then prepared by John Cronin & Associates which included targeted archaeological testing of the geophysical responses between the 6<sup>th</sup> and 13<sup>th</sup> May 2025. This consisted of 44 no. linear trenches with a combined length of 1205m, with the methodology described in Section 3 of the ATR. Of the 38 no. anomalies identified in the geophysical survey, 4 no. were excluded from testing as they were located in areas where physical development is not proposed (*p.16 and anomaly No. 2, 9, 19 and 28 refers*). The

testing programme revealed a total of 14 no. archaeological and potential archaeological features. These are listed on Table 3 of the ATR, with 5 in the northern parcel, 4 in the central parcel and 5 in the southern parcel. Within the northern parcel (Area A) the features identified were all located within trench T9 and were tentatively interpreted as prehistoric funerary activity, a possible structural element and structural postholes. Within the central (Area B) and southern (Area C) parcels the features identified were considered likely to be related to early metal production activity consisting of a potential oval-shaped posthole, a circular pit and charcoal rich deposits with fragments of iron, slag and bloom<sup>1</sup>.

- 8.3.7. It is noted that the majority of trenches did not contain archaeological features and that the geophysical anomalies investigated were typically geological and associated with land clearance, or modern disturbance consistent with field reclamation and that this was supported in field evidence by the frequent revealing of buried stones and concentrations of rubble. The upcast from the trenches was scanned for archaeological artefacts using metal detection, with no artefacts identified.
- 8.3.8. Otherwise, the updated ECR quantifies 17 no. recorded archaeological sites within the proposed development site, and 58 no. archaeological sites within the 1km study area (as discussed in section 11.4.1.3). In terms of recorded monuments within the proposed development site, the majority (13no.) are located within the northern parcel. The best-preserved feature is a Cashel (GA113-094) which is described as being enclosed by a substantial double-faced drystone wall, forming an interior space measuring 50m (east-west) by 42m (north-south). Within this cashel are the foundations of four house sites (GA113-094002 to GA113-094005), with House 1 (GA113-094002) in the NW quadrant the best preserved with double faced stone walls measuring 6m by 4m. It is noted that this structure partially overlays a T-shaped souterrain (GA113-094001) consisting of two chambers. It is otherwise noted that most features of a rath (GA103-112) have disappeared and that Cashel (GA113-095) and (GA113-096) are poorly preserved. Within the central parcel it is noted that of the 6-no. recorded archaeological sites, 3 no. are now classified as redundant (GA113-077, GA113-134 and GA113-207) and are non-archaeological. Of the 3 no. remaining sites, an early Medieval cashel (GA113-132) formed by a circular

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<sup>1</sup> Trenches T16, 17, 35 & 36 refer.

enclosure of stone blocks and its associated house site (GA113-132001) formed by a single row of boulders, are located to the NW periphery of the site. A fulacht fia (GA113-210) is also located somewhat centrally on the northern boundary of the central parcel. Within the southern parcel, cashel (GA113-108) is located on the northern boundary and whilst this site appeared on the 1838 1st edition OS map as a circular enclosure, it is noted that it does not appear on later editions and by the 1950's no traces remained.

- 8.3.9. I am satisfied that the baseline archaeological environment has now been robustly established and that a proportionate level of investigation consisting of geophysical survey and targeted test excavations has been carried out to examine the likelihood of unrecorded sub-surface archaeological remains. I am satisfied that it is of sufficient scope and detail to assess the overall archaeological impact of the proposal.

***Integrity of archaeological monuments and sites***

- 8.3.10. The embedded design of the project provides for avoidance of RMPs through exclusion/buffer zones with no physical development works proposed within the associated ZOPs +5m. I note that the location of the RMPs is mainly on the periphery of the site, with many either poorly preserved, consisting of lost features or now redundant. I am satisfied that the extent of the site and the peripheral location of RMP's allows for both the orderly construction of a solar farm and the practical maintenance of the required exclusion/buffer zones for the preservation and protection of RMPs. I note that the DHLGH supports this position. I am satisfied that the embedded avoidance measures ensure best practice preservation in situ of all RMP's and that this is sufficient to ensure that there will be no physical surface or sub-surface, negative or direct impact on the integrity of RMPs.
- 8.3.11. Similarly, I am satisfied that the installation of appropriate works exclusion zones at all areas of sub-surface archaeology identified during the targeted archaeological test excavation is also sufficient to ensure that there will be no negative or direct impact on the integrity of unrecorded archaeological remains. I do not consider that the applicant's proposal for preservation in situ by using above ground structures or preservation by record represents best practice having regard to the 'Framework and

Principles for the Protection of the Archaeological Heritage<sup>2</sup> ("FPPAH"). I note that the conditions recommended by the DHLGH supports this position.

- 8.3.12. Otherwise, given the concentration of archaeological activity within the immediate landscape generally, further precautionary mitigation is proposed in the form of a second phase of (pre-construction) archaeological investigation in all remaining areas of proposed ground disturbance (cable trenches, hardstands, foundations, access roads etc). I note that the DHLGH is in agreement with this proposal.
- 8.3.13. I note that the efficacy of the archaeological investigations carried out was a concern for a third-party observer to the appeal, including whether or not test excavations were monitored. I am persuaded by the veracity of the information now provided, including photographic records, that test excavations were subject to monitoring and that the investigations and associated reports were carried out and prepared by competent experts in accordance with best practice, and the general principles for investigation, avoidance and preservation in situ of archaeological heritage<sup>3</sup>.
- 8.3.14. Accordingly, I am satisfied that the proposed development will not result in significant effects on the integrity of archaeological heritage, including RMP's and unrecorded archaeological remains, and therefore that the proposed development is not contrary to PO ARC 1, 2, 4, 5, 9 and 10 of the GCDP in so far as they seek to preserve, conserve and protect archaeological sites and monuments including their ZOP's.

#### ***Visual Amenity and Landscape Character***

- 8.3.15. In relation to the remaining matter of the archaeological landscape and the setting and inter-visibility of RMP's, a HLC (June 2025) was prepared by AECOM, with the methodology described in Section 2. It is noted that the HLC followed the HLC Ireland Guidance<sup>4</sup> to map and interpret findings and that only heritage assets which are visible in the landscape where considered. This resulted in 10 heritage assets which are listed in Table 4 of the HLC. All of these assets are RMP's and 2 no. are located within the proposed development site, namely: GA113-094 and GA113-096 both of which are ringfort-cashels as described in Section 8.3.8 of this report. The

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<sup>2</sup> Department of Arts, Heritage, Gaeltacht and the Islands

<sup>3</sup> FPPAH

<sup>4</sup> Historic Landscape Characterisation in Ireland: Best Practice Guidance prepared in 2013 on behalf of the Heritage Council.

visibility study used QGIS<sup>5</sup> intervisibility analysis, based on 1m contour data (informed by a DEM<sup>6</sup> model) and a solar panel height of 3.2m, and adopts a bare earth model as this considers the worst-case scenario. The importance of townland boundaries is noted and acknowledged in the HLC as providing visible physical evidence of historical territory or political boundaries and contributing to a sense of place and identity for the community. It is acknowledged in the ECR that many of the field boundaries of the subject site consist of dry stonewall boundaries, with Ireland's practice of dry-stone construction officially inscribed on the UNESCO Representative List of the Intangible Cultural Heritage of Humanity.

*Historic field and townland boundaries*

- 8.3.16. The HLC finds that the boundaries at the periphery of the site will be maintained intact and that the majority of the internal townland/field boundaries will be preserved, with only a limited number of localised (3/3.5m wide) access gaps created. This impact is assessed as minor and the HLC finds that the boundaries of the site will remain as visible and distinctive historical features in the landscape and that the proposed development would not impact the sense of place and identity of the local community. Having regard to the mitigation measures proposed, which provide that a perimeter fence will be erected 3-5m from the peripheral boundaries to protect them from damage and to the limited number and width of access gaps within internal field boundaries, which will be reinstated at decommissioning stage, I would concur with the findings of the HLC that impacts are minor, temporary and reversible. I note the condition recommended by the DHLGH that a boundary survey shall be carried out by an Archaeologist prior to the commencement of development to record the historic vernacular field boundary walls and townland boundaries at all locations where access works are proposed. I am satisfied that on the basis of HLC assessment, the finding of minor impacts, the mitigation measures proposed, and the condition recommended by the DHLGH that there will be no significant or adverse impact on historic field or townland boundaries within the archaeological landscape or their cultural heritage.
- 8.3.17. I note that the potential impacts on dry stone walls was a concern for third party observers to the appeal in the context of their UNESCO status, however having

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<sup>5</sup> Geographic Information System

<sup>6</sup> Digital Elevation Model

regard to the conclusions above I am satisfied that the minor, temporary and reversible impacts of the proposed development is not prejudicial to Ireland's practice of dry-stone wall construction or its human cultural heritage importance.

- 8.3.18. Accordingly, I am satisfied that the proposed development will not result in significant effects on the integrity of archaeological heritage, including historic townland and field boundaries, and therefore that the proposed development is not contrary to PO ARC 1, 2, 4, 5, 9 and 10 of the GCDP in so far as they seek to preserve, conserve and protect archaeological landscapes.

#### *Visual Impact(s)*

- 8.3.19. The primary impacts on intervisibility between heritage assets is assessed as occurring in the northern parcel of the proposed development site, where the two cashel-ringforts<sup>7</sup> are located. These are described in Table 4 of the HLC as Cashel 3 (GA113-094) and Cashel 4 (GA113-096). It is noted that the HLC finds that intervisibility between the two assets would be removed during the operational life of the solar farm, and intervisibility with the other heritage assets (outside the site) would decrease considerably. Cashel 3 would have intervisibility reduced from 7 to 4 other heritage assets. Cashel 4 would have no remaining intervisibility. The ECR assesses these heritage assets of regional interest and medium importance given their group value with the other assets as described in Section 8.3.8 of this report. The ECR finds that their settings will be impacted by the physical presence of the proposed solar farm development (at construction and operational stage), which will impact the special interest and qualities of these monuments and our ability to understand and appreciate them. The effect is assessed as significant, long-term, reversible and negative and the magnitude of impact is assessed as high. Within the central parcel of the proposed development site there are currently no visible heritage assets, however the HLC finds that the installation of solar panels in this parcel will obstruct views between Cashel 3, 4 (located in the northern parcel) and 7<sup>8</sup> (located outside and to the south of the central parcel) with the impact assessed as long-term, reversible and negative. The southern parcel of the proposed development sites is assessed as comprising exclusively modern features with no

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<sup>7</sup> GA113-094 and GA113-096

<sup>8</sup> GA113-082

heritage assets. The installation of solar panels at this location is not assessed to impact the intervisibility of heritage assets.

8.3.20. PO ARC 1 of the GCDP seeks to: “support and promote the preservation, conservation and appropriate management and enhancement of the County’s archaeological sites and monuments, **together with the settings of these monuments...**”, PO ARC 4 of the GCDP seeks to “*protect archaeological sites and monuments, **their settings and visual amenity**.....*”, and PO ARC 9 seeks to “*ensure that any development in the immediate vicinity of a Recorded Monument is **sensitively designed and sited and does not detract from the monument or its visual amenity.***” Having regard to the conclusions of the ECR, informed by the HLC, that the proposed solar farm development will significantly reduce the intervisibility of heritage assets of regional importance in the northern parcel and will impact the special interest and qualities of these monuments and our ability to understand and appreciate them, it is necessary to consider whether not the proposed development is contrary to PO ARC 1, 4 and 9 of the GCDP and whether or not that contravention is material.

8.3.21. I note that the DHLGH statutory report was silent on this matter in its comments on the HLC and that the FPPAH does not offer specific guidance on the visual amenity or setting of archaeological heritage other than in the context of historic towns within present day urban areas. I note that whilst the PA considered that the development was contrary to these policy provisions in a general sense, it did not consider this to be a material contravention and did not specifically highlight impact on setting or visual amenity as a concern.

*Visual amenity & setting.*

8.3.22. In simple terms visual amenity refers to the overall quality and character of a landscape view and the impacts created by a development within it. It is a basic premise that for visual amenity to be impacted, it must first exist. In this regard I consider that the potential impacts of the proposed development on the visual amenity and setting of archaeological sites concerns the 2 no. RMP’s within the northern parcel of the site, namely Cashel GA113-094 and Cashel GA113-096 as identified in the HLC. Having inspected the subject site I am of the view that the RMP’s in question are limited super structures located on private land at a remove

from the public road network and which are assimilated within the topography and vegetation of the landscape. They do not read on the landscape and do not have an identifiable or discernible presence within, or from, the public realm. They are not a material element within a view, prospect or vista. In my opinion they do not benefit from a unique or notable landscape setting of particular value nor display visual amenity characteristics which either define their setting, importance or which contribute to the landscape or its character<sup>9</sup>. On this basis I do not consider that visual amenity or setting considerations arise in respect of these RMP's which could be impacted by the proposed development. Consistent with the findings of the HLC I do not consider that the proposed development will (or can) impact the visual amenity or setting of sub-surface archaeology within the site, or that of RMP's outside the site. Accordingly, it is my view that material issues in respect of the visual amenity or setting of RMPs does not arise and therefore that the proposed development is not contrary to PO ARC 1, 4, and 9 of the GCDP in so far as they seek to protect the visual amenity of RMPs and their settings.

#### *Visibility and inter-visibility*

- 8.3.23. Visibility is the ability to be seen in the landscape, and inter-visibility (in this case) refers to the state of visibility between respective RMPs' (by direct line of sight) without obstruction by terrain or other features. It is important in the sense that this can assist our ability to read and understand the archaeological landscape. In the circumstances of this case the HLC assessed visibility/inter-visibility on the basis of a bare earth model, which did not figure in or account for vegetation screening or built structures. The finding of reduced visibility and inter-visibility is therefore theoretical and represents a worst-case scenario. It is my view from a detailed inspection of the site, that with the exception of Drumnaharsna Castle Ruins (GA113-110001)<sup>10</sup>, the identified RMPs are not visible or discernible features in the landscape as a result of their limited surface presence, undulating topography, distance from public road network(s) and screening vegetation. It follows that if the individual RMP's are not individually visible or discernible in the landscape, then they cannot be inter-visible. The landscape at this location consists of very shallow and gentle elevations and a

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<sup>9</sup> Please refer to Photograph 11.1 and 11.5 of Appendix C.2 of the ECR in support of this assessment.

<sup>10</sup> Please refer to photograph 11.26 of Appendix C.2 of the ECR for a visual reference of same. Note this ruin is located outside the site.

complex pattern of field boundaries, hedgerows, treelines and stone walls. Views are neither elevated, open nor panoramic, but are intermittent, brief, interrupted by terrain and vegetation and typically available over short distances. Within this landscape, it is my finding from an inspection of the site, that inter-visibility between the identified 10no. RMPs is not possible as predicted in modelling when real world conditions are factored in, particularly given the limited physical surface presence of most of the assets. It is therefore my view that the proposed solar farm development will not significantly impact the inter-visibility of the identified RMP's as significant inter-visibility is simply not available.

- 8.3.24. The exception to this is the intervisibility between the 2 no. RMP's within the northern parcel, which are located in close proximity to each other and have a clear visual reference. Consistent with my collective conclusions in the preceding section, these RMPs are not individually visible or discernible in the landscape from the public domain and are only discernible on close inspection from private land.

Notwithstanding same, it is accepted that their inter-visibility in a localised context within the site will be significantly reduced by the installation of the solar array. It is accepted that this impact could subjectively be considered contrary to PO ARC 1,4 and 9 which seeks to protect such monuments are their setting, but I am of the objective opinion that any such contravention would not be material. The proposed development provides for the preservation in situ of these RMP's with appropriate works exclusion zones around their ZOP +5m in accordance with best practice and FPPAH. The impact of the solar farm is also temporary and fully reversible.

Accordingly, there is no risk to the integrity of these RMP's, their special interest and qualities, or our continuing ability to understand and appreciate them and I have already established that the visual amenity and setting of these RMP's is not a material consideration. Accordingly, I am of the view that whilst the immediate localised impact of the development will reduce the intervisibility between Cashel 3 and 4, which could subjectively be considered to be contrary to PO ARC 1, 4 and 9 of the GCDP, I am of the view that this limited temporary and reversible impact is not material given the aforesaid considerations.

- 8.3.25. Having regard to the findings of my assessment above, specifically that the visual amenity and setting of RMPs will not be materially affected, that the RMPs are not visible or intervisible (from the public domain) in real world conditions, that the

archaeological heritage of the site will be preserved in situ in accordance with best practice and that the historic townland and field boundaries of the site will be preserved as visible and distinctive historical landscape features I am satisfied that the proposed development would not materially contravene PO ARC 1, 4 and 9 of the GCDP in so far as they seek to protect the visual amenity and settings of RMP's. Whilst I accept that the localised impact removing the intervisibility between GA113-094 and GA113-06 in the northern parcel could be considered contrary to PO ARC 1, 4 and 9 of the GCDP, I am of the view that this is not material.

8.3.26. Notwithstanding the archaeological landscape within which the development is located, this is a landscape which is designated in the LARES as a deployment area for solar energy development and which is assessed in the LCA as having a low sensitivity rating consisting of a landscape which is unlikely to be affected by change. I am satisfied that satisfactory embedded design and mitigation measures are in place for the protection of archaeological and heritage assets, and that any impacts which will occur are temporary and reversible. Given the pressing need for sustainable and renewable energy generation I do not consider that the limited archaeological impacts on the intervisibility of 2no. RMPs on private lands, which will otherwise be preserved in situ, are such that would warrant a refusal of permission.

#### **8.4. Refusal Reason No.2 (Transport & Traffic Safety)**

8.4.1. GCC's second refusal reason concerned transport and traffic safety. It is set out in full in Section 4.1 of this report. The PA was not satisfied that the capacity, width, alignment and surface/structural condition of the public road network serving the site was suitable to carry the additional traffic and turning movements associated with the proposed development. The PA was influenced in this regard by the extent of underground cabling works and the future associated substation and opined that 'complete and sufficient' details were not provided. The PA was also not satisfied that the proposed site entrances could provide for safe and satisfactory means of vehicular access owing to the restricted sight lines available and was of the opinion that remedial works would constitute significant roadside intervention. For this reason, the PA deemed the proposed development to contravene DM standard 28 and PO NNR1, NNR2 and NR1 of the GCDP.

- 8.4.2. I note that the planners report relies on the report of GCC Roads Dept. in recommending that planning permission be refused without further assessment or examination of the issues raised. I further note that the Roads Dept. report consists of an email, which states brief concerns without detailed assessment of the further information response submitted by the applicant consisting of a TTA01, TN01, RSA, new detailed visibility proposals and a swept path analysis.

***Sightlines/visibility splays***

- 8.4.3. In relation to the matter of sightlines, there are three construction entrances proposed to the development site. These consist of an access to the northern parcel via local road L4505 and separate accesses to the central and southern parcels via the regional road R347. The access to the northern and central parcels are existing entrances which will be upgraded. The access to the southern parcel is new. The position in relation to sightlines is substantively set out in the applicants further information response to GCC and as contained in TTA01 (April 2024), TN01 (May 2024), RSA (Stage 1 (May 2024)) and DWG No's 60687084\_PMI\_DR\_C\_001, 60687084\_PMI\_DR\_C\_002 and 60687084\_PMI\_DR\_C\_003 (received by GCC on 17<sup>th</sup> May, 2024).
- 8.4.4. In relation to access to the northern parcel DWG No. 60687084\_PMI\_DR\_C\_001 refers. This DWG shows visibility splays of 3m x 120m to the required technical standard and located on lands within the applicant's control. DM Standard 28 of the GCDP provides that on narrow local roads with poor horizontal and vertical alignment and where the 80 kph speed limit applies, visibility requirements will be determined by the 85<sup>th</sup> percentile speed for that road. The posted speed limit on this local road is 80 kph. The applicant carried out ATC surveys which recorded 85<sup>th</sup> percentile speeds on this road in December 2023 and in August 2024 with the results set out in TN01 and TTA02. I am satisfied that the applicant has established that the 85<sup>th</sup> percentile speed on this road is less than 70kph, which in accordance with the technical requirements of the GCDP and DM standard 28 corresponds with a design speed of 70kph and a visibility splay requirement of 120m. Accordingly, I am satisfied that visibility splays can be provided to standard at the entrance to the northern parcel.

8.4.5. In relation to the access to the central and southern parcels of the site DWG No. 60687084\_PMI\_DR\_C\_002 & 003 refers. These DWG's show visibility splays of 3m x 160m to the required technical standard and located on lands within the applicant's control. DM Standard 28 of the GCDP requires a visibility splay of 160m for a design speed of 85kph. The posted speed limited on this road is 80 kph, and therefore the visibility splays proposed by the applicant for the central and southern parcel access meet the technical requirements of DM standard 28 and the GCDP. I note that the provisions of the GCDP for visibility splays which are based on the 85<sup>th</sup> percentile speed of a road, applies to narrow local roads only. This is a regional road and therefore I am of the view that this provision does not apply. Notwithstanding same, I note that the applicant also established the 85<sup>th</sup> percentile speed for this road in the ATC surveys, which was evidenced as being just under 82 kph. Although the applicant is not relying on same, it is evident that the visibility splays set out in relation to the central and southern parcel access are appropriate for the 85<sup>th</sup> percentile speed on this road in addition to meeting the technical requirements of the GCDP.

8.4.6. I note that the access arrangements were subject to Stage 1 RSA (at F.I. stage) and I am satisfied that the problems identified therein in relation to visibility splays (Problem 2.1 & 2.2) have been resolved by the remedial works proposed in the revised drawings submitted on 17<sup>th</sup> May, 2024. Although not raised by the PA in its assessment or determination of the application, I note that the RSA also identified a problem in relation to stopping sight distances at the central parcel access (Problem 2.3). I am satisfied that this matter has also been addressed in DWG No. 60687084\_PMI\_DR\_C\_007 which shows that stopping sight distances<sup>11</sup> of 160m to standard can be achieved (within the applicant's control). Having inspected the subject site and reviewed the submitted drawings (including the further information response and appeal documentation), I am satisfied that all access arrangement designs can achieve sight line visibility and stopping sight distance requirements in accordance with DM Standard 28 of the GCDP.

***Significant roadside intervention***

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<sup>11</sup> Referred to thereon as 'forward sightlines'.

- 8.4.7. The PA was also of the view that the remedial works required to achieve visibility splays to standard would constitute '*significant roadside intervention*' contrary to DM Standard 28 of the GCDP. I am in agreement with the appellant that DM Standard 28 does not refer to '*roadside intervention*' and therefore the basis for this refusal reason is not sound. I do note however that DM Standard 47(b) of the GCDP states that in general, only minimum interference with existing field patterns, stone walls, tress and hedges shall be permitted. Accordingly, it is considered appropriate to assess the matter against DM Standard 47(b).
- 8.4.8. The entrance to the northern parcel is an existing agricultural entrance, with a field gate and bell mouth type entrance splay onto local road L4505. Accordingly, there is already a breach in the roadside boundary at this location which is otherwise characterised by a dry-stone wall, significant ivy growth, hedgerow and trees. In order to upgrade this entrance it is proposed to remove a limited number of trees and to maintain hedgerow to a height of 1m for a distance of 50m either side of the entrance, and to reposition the stone wall to the rear of the visibility splay<sup>12</sup>. I do not consider this remedial work to be 'significant'. The trees to be removed are neither substantial nor mature and they are very limited in number. I am of the view that this impact is consistent with typical residential boundaries in the area of the site and is lesser than the impact of the existing ribbon development to the west of the site. Having regard to the existence of an established access point, the retention of the stonewall and maintenance of hedgerow boundary features, I am of the view that the character of the landscape will not be adversely impacted and that the intervention comes within the scope of minimum intervention.
- 8.4.9. The entrance to the central parcel is also an existing agricultural entrance, with a field gate type character on regional road R347. Accordingly, there is already a breach in the roadside boundary at this location which is otherwise characterised primarily by sparse hedgerow and an overgrown low level stone wall within grass verges. In order to upgrade this entrance, it is proposed to reposition the roadside boundary/stone wall to the rear of the visibility splay over a short distance to either side of the entrance (approx. 40m). No tree removal is required. I do not consider this remedial work to be 'significant'. At this location, the stone wall roadside

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<sup>12</sup> This is required in response to a problem identified in the Stage 1 RSA.

boundary does not inform the landscape character as it is substantially overgrown and does not read. Beyond the site to the west, the area is characterised by typical one-off rural housing with inconsistent boundary features consisting of stone walls of varying quality and more contemporary rendered boundaries. In this context, and given the existence of an established entrance, I am of the view that the character of the landscape will not be adversely impacted and that the intervention comes within the scope of minimum intervention.

- 8.4.10. A new entrance is proposed to the southern parcel on regional road R347. This is located approx. 80m west of the upgraded entrance to the central parcel and therefore similar roadside conditions apply. The only material difference in the remedial works proposed at this access point is the removal of a limited number of scrub type trees to the west to achieve the required visibility splays. Although this entrance will constitute a new breach in the roadside boundary, I do not consider that a single new entrance serving the proposed development over its extent of 125ha is significant. Accordingly, I am also of the view that the entrance to the southern parcel will not adversely impact the character of the landscape and that this intervention also comes within the scope of minimum intervention.
- 8.4.11. Having inspected the subject site, I am satisfied that the proposed development consisting of the upgrade of 2 no. established entrances, and only 1 no. new entrance, with minimal tree removal, maintenance of hedgerows and reinstatement of stonewall boundaries (many of which do not currently read in the landscape) is not significant and comes within the scope of minimum intervention. I therefore conclude that the proposed development is not contrary to DM standard 28 or 47(b) of the GCDP.

***Capacity, width, alignment and condition of the public road network***

***Capacity***

- 8.4.12. The construction access route to the proposed development site is described in Section 3.3 of TTA01 and shown on Fig 3.1 thereof. Construction vehicles will access the proposed development site via the M18 to the west and exiting at Junction 17 onto the R458 to Ardrahan for 2.4km (approx.) before then travelling west along the R347 for 3.7km (approx.) to the site. The southern and central parcels are accessed from the R347. The northern parcel is accessed approx. 800m

from the R347 via the L4505. The road characteristics are described in Section 2.0, and it is considered that there are no capacity, width, alignment or condition constraints on the M18 or R458. The R347 is described as a single carriageway 2 lane road, with a width between 5 and 5.5m having edge & central road markings, narrow grass verges and an 80 kph speed limit. The L4505 is described as a narrow single carriageway 2 lane road, with a typical width of 4-4.5m, no road markings, narrow grass verges and an 80 kph speed limit. It is acknowledged that the L4505 has some narrow sections at 3.5m.

- 8.4.13. The applicant has submitted ATC survey data and a capacity assessment for the proposed construction access route, and this is set out in TTA01, supplemented by TN01 and updated in TTA02<sup>13</sup>. Surveys were carried out at three locations in December 2023 and five locations in August 2024 including at two new and additional survey locations. A design year of 2028 was taken with traffic growth projections from TII publications<sup>14</sup>. The data submitted shows that HGV traffic (two-way) for the northern parcel would peak at 27 movements per day and for the southern and central parcel at 23 movements, with staff/LGV traffic (two-way) for the northern parcel peaking at 81 movements per day and for the southern and central parcel at 69 movements. The assessment provides for a worst-case scenario where peak HGV and peak staff LGV/car movements would occur together; however, the construction schedule (Fig. 3.2 of TTA02) shows that this is unlikely to occur with peak HGV traffic during site set-up not coinciding with peak staff traffic during the main build and commissioning phases.
- 8.4.14. The submitted capacity assessment informed by TII publications<sup>15</sup> shows that the impact of the proposed development on L4505 is not significant at +4 % (average) and +9% (peak) for the L4505 over baseflow/capacity for 2028<sup>16</sup>. In terms of the R347 and R458 the submitted capacity assessment within TTA02 shows that construction related trips would account for less than +2% (peak) and +1% (average) over baseflow/capacity for 2028, which would have no effect on the operation and safety of these roads. In terms of the M18 it is important to note that a new access or physical changes are not proposed to this road. TTA01 & TTA02 otherwise evidence

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<sup>13</sup> Which includes additional August 2024 ATC survey

<sup>14</sup> Project Appraisal Guidelines for National Roads Unit 5.3 – Travel Demand Projections.

<sup>15</sup> Ta 46/97, Rural Road Link Design – Table 6.1

<sup>16</sup> Tabl2 3.5 of TTA02 refers.

that the proposed development will also not affect the operation and safety of this road with peak traffic flows accounting for less than a 2% increase in traffic which amounts to less than typical daily variations.

- 8.4.15. Although permission is sought for the cable route to the substation along the L8560 and L4506 (north) in the subject application, the associated trips were accounted for in the proposed substation trip generation. This equated to a peak of 20 HGV trips per day and an average of 10 HGV trips. This work will be carried out over three months and will be managed by a stop-go traffic management regime. In terms of the impact on the L8560 cable route, this is considered negligible at + 3% peak and +1.6% average.
- 8.4.16. It is considered that potential cumulative impacts would only arise in the context of the associated substation development. However, this aspect of the development will utilise a different construction access route via short sections of the R458 (from the M18) and L4506 to the north and therefore it is considered that cumulative impacts or effects on the capacity of the local road network will not occur. At operational stage, traffic movements and trip generation is negligible at 1 or 2 LGV/Car movements per week.
- 8.4.17. I acknowledge that the existing traffic volumes on the L4505 are currently very low and that, notwithstanding the results of the capacity assessment, this may result in a feeling or perception among local road users of exaggerated impacts during the construction stage. However, the construction stage is a short-term and temporary phase of 12 months, with peak HGV traffic limited to the initial set up period (approx. 3 months). This will be managed by a CTMP (within the CEMP), including with the operation of banksmen at site entrances and with a designated Community Liaison Officer (DCLO) in place. Having regard to my assessment of visibility splays, forward sight distances, swept path analysis, capacity assessment and passings bays in this report, I am satisfied that no significant impacts will arise as a result of the volume of traffic associated with the proposed development at construction stage and that the traffic volumes at operational stage are negligible. Otherwise, I note that third party observers to the appeal were concerned that the ATC surveys were not representative, however I am satisfied that the 3no. surveys in December 2023 and the 5 no. surveys in August 2024 are sufficiently representative of seasonal variations.

*Width and alignment.*

- 8.4.18. Having regard to the road characteristics described in Section 2.0 of TTA01 it is considered that there are no width or alignment constraints on the M18 or R458. The R347 is described as a single carriageway 2 lane road, with a width between 5 and 5.5m having edge & central road markings, narrow grass verges and an 80 kph speed limit. I am satisfied that the R347 is adequate to cater for the range of vehicle types associated with the proposed development (max. 12m rigid truck) without modification and that the information submitted, including a swept path analysis (DWG.No. 60687084\_PMI\_DR\_C\_005 refers), confirms this.
- 8.4.19. In relation to the L4505 the applicant acknowledges that parts of this road are narrow at 3.5m in width with existing conditions requiring opposing traffic to use informal passing areas to facilitate two-way traffic movements. In response to this, a series of 7 no. passing bays are proposed on the L4505 between the R347 and the northern parcel entrance. These are shown on Plan 1, 2 & 3 of DWG No. 06087084\_PMI\_DR\_C\_006 received on 17<sup>th</sup> May 2024 and described further in TN01. These passing bays have a minimum length of 40m and provide for a minimum public road width of 5.5m at their location. They are provided within public road space or land within the applicant's control. The swept path analysis submitted by the applicant otherwise shows that the range of vehicle types associated with the proposed development (max. 12m rigid truck) can be accommodated subject to a small section of surfacing on the public road grass verge (DWG.No. 60687084\_PMI\_DR\_C\_004 refers).
- 8.4.20. Having examined the relevant particulars and inspected the subject site I am satisfied that the proposed passings bays are located on roadside verges and are therefore within the existing road/fence line. I am also satisfied that they are appropriately located and spaced on the local road consisting of 7 no. locations over a distance of approx. 800m to serve the safety, freeflow and movement of traffic on the public road during construction and operational stage.
- 8.4.21. PO NR1, NNR1 and NNR1 of the GCDP are concerned with safeguarding the safety and capacity of strategic (national), restricted regional roads and regional and local roads respectively. Having regard to the conclusions drawn in the preceding sections of this report in relation to visibility splays, stopping distances, width, alignment and

capacity I am satisfied that the public road network serving the site has sufficient capacity to accommodate the proposed development and that the proposed development will not be prejudicial to the safety or carrying capacity of the public road network.

#### *Structural Condition*

8.4.22. In terms of surface and structural condition of the public road network I note that it 'in road' works are only proposed on the L8560 and L4506 associated with the cable route to the proposed substation. The applicant proposes to resurface these roads in their entirety. Furthermore, the applicant proposes to resurface the L4505 construction route access from the junction with R347 to the entrance to the northern parcel of the site. Otherwise, the applicant proposes a pre- and post-construction survey of the R347 and R458 and to make good any damage thereto as a result of construction traffic. I am satisfied that these measures are reasonable and can be secured by condition, and I note that the applicant is happy to accept a condition to this effect. Otherwise from my inspection of the site I noted no evidence to suggest that the surface or structural condition of the public road network consisted of deficiencies outside of norms such that it could not cater for the vehicular traffic associated with the proposed development or was susceptible to damage or disrepair which could not be addressed by the resurfacing and survey proposals submitted. I am satisfied that the surface and structural condition of the public road network is not adverse, that adequate arrangements are in place to ensure the protection and maintenance of same during and post-construction and that the negligible operational traffic associated with the solar farm does not present any continuing concerns in relation to the condition of the public road network.

8.4.23. As stated above, the proposed development was subject to Stage 1 RSA. In addition to the matters examined in the preceding sections of this report it is noted that the RSA also identified a potential problem (2.4) in relation to the discharge of surface water from the site entrances to the public road. In this regard I am satisfied that the further information submitted by the applicant on 17<sup>th</sup> May 2024 includes revised entrance design specifications to prevent the discharge of surface water to the public road (DWG No. 60687084\_PMI\_DR\_C\_009 refers).

8.4.24. Having regard to the conclusions drawn in the preceding sections 8.3.1 to 8.3.23 (inc) I consider that adequate details and information have been submitted, that the proposed development would be acceptable from a roads and traffic safety perspective and that it would not be contrary to DM Standard 28, 47(b) or PO NR1, NNR1 or NNR2 of the GCDP. It is recommended that conditions be attached which require the minimum sightlines to standard, a Stage 2 RSA and final CTMP and CEMP to be agreed prior to the commencement of development.

#### **8.5. Refusal Reason No.3 (Policy & Justification)**

8.5.1. This refusal reason concerns the location of the proposed development site within lands designated as being less likely viability for solar potential and the failure to quantify the potential megawatts of energy to be generated by the proposed development. For this reason, the PA was not satisfied that the proposed development would not result in the substantial loss of agricultural land contrary to PO RE 4 and DM Standard 70 of the GCDP. PO RE 4 provides, inter alia, that GCC will promote and facilitate solar farm developments in suitable locations having regard to areas designated for that purpose in the LARES, the Habitats Directive and the detailed policies, objectives and DM standards of the LARES. DM Standard 70 sets out a list of factors to be considered in assessing planning applications for a solar farm.

8.5.2. I am satisfied that the applicant has quantified the potential megawatts of energy which would be generated by the proposed development at 143 MW, and that this would make a significant contribution to the County and National climate targets for the reduction of greenhouse gases and increase in renewable energy. I am also satisfied that nothing within the GCDP, including the LARES, precludes the development of solar energy on agricultural land or requires a justification for it, indeed it is specifically provided for as an eligible location for solar energy developments. Similarly, there is nothing in the GCDP or LARES, which precludes the development of solar energy on lands deemed 'less likely solar potential'. Rather the GCDP is supportive of the diversification of agricultural land for sustainable energy and green agenda projects (PO RD 2) and states that it is likely to favourably consider solar energy development on areas 'less likely viability' subject to detailed assessment of policies and potential effects. A detailed assessment of policies and potential effects has been carried in this report in the assessment of the PA's

reasons for refusal, relevant planning considerations and in relation to EIA, AA and WFD. Having regard to the conclusions of same, I am satisfied that the proposed development is located at a suitable location having regard to the provisions of the GCDP and is not contrary to PO RE 4 or DM Standard 70 thereof.

#### **8.6. Refusal Reason No.4 (AA & European Sites)**

- 8.6.1. This refusal reason concerns the potential impact of the proposed development on nearby Natura 2000 sites and specifically on the Lough Fingall Complex SAC given the absence of summer surveys for the Lesser Horseshoe Bat. The PA was of the view as a result of these potential impacts that to permit the proposed development would materially contravene Policy Objective NHB1, 2, 3, 5 and 9 and DM Standard 50 of the GCDP.
- 8.6.2. PO NHB1 seeks to protect, conserve and enhance natural heritage, biodiversity and European sites, and PO NHB2 seeks to implement Article 6 of the Habitats Directive and ensure that Appropriate Assessment is carried out. PO NHB3 provides that no development giving rise to impacts on a European site will be permitted and PO NHB5 provides that the biodiversity and ecology of non-designated sites will be protected where it is ecologically connected to European sites. PO NHB 9 refers specifically to the protection of bats, their roosts, feeding areas, flight paths and commuting routes. DM standard 50 sets out measures to be applied in respect of AA, EA and EIA. Please refer to Table 2 of this report for additional detail.
- 8.6.3. This refusal reason was largely premised on the absence of summer surveys for LHB. The appellant addressed this deficiency with the provision of additional surveys for LHB in August 2024. The DHLGH has noted same and is satisfied with the mitigation and enhancement measures provided. The Appropriate Assessment set out at Appendix 3 and 4 of this report, otherwise specifically found in respect of LHB and the Lough Fingall Complex SAC (000606) that:
- The loss or decline of qualifying, supporting or functionally linked foraging habitat will not be significant;
  - That connectivity will be maintained for commuting LHB and there will not be a significant loss of linear habitat;

- The proposed development will not result in disturbance effects on LHB or a significant increase in artificial light intensity adjacent to a named roost or along commuting routes;
- The proposed development will not result in injury, mortality or changes in predator-prey interaction effects on LHB; and
- That the attributes and targets required to maintain the favourable conservation conditions of LHB within the SAC will not be adversely affected or undermined.

8.6.4. Please refer to Section 10.0 and Appendix 3 and 4 of this report which otherwise determines that adverse effects on site integrity of the Kiltiernan Turlough SAC (001285), Lough Fingal Complex SAC (000606), Inner Galway Bay SPA (004031), Coole-Garryland SPA (004107), Rahasane Turlough SPA (004089), Cregganna Marsh SPA (004142), Lough Cutra SPA (004056) and Lough Rea SPA (004134) can be excluded in view of the conservation objectives of these sites and that no reasonable scientific doubt remains as to the absence of such effects.

8.6.5. I am satisfied that an NIS was submitted and that Appropriate Assessment has been carried out as required by PO NHB 2 and DM standard 50 of the GCDP. I am also satisfied that it has been demonstrated beyond reasonable scientific doubt, that the proposed development will not adversely affect the protection, conservation and enhancement of European sites, including ecologically connected non-designated sites and specifically the QI species LHB of the Lough Fingall Complex SAC (000606), and that it is not, therefore, contrary to the provisions of PO NHB 1, 3, 5 or 9 of the GCDP.

8.6.6. Having regard to the conclusions of the Appropriate Assessment process I am satisfied that to permit the proposed development would not be contrary to, either materially or immaterially, PO NHB1, 2, 3, 5, 9 or DM Standard 50 of the GCDP.

#### **8.7. Other material planning considerations:**

#### **8.8. *Landscape & Visual Amenity (including Tourism)***

8.8.1. Landscape and visual amenity were not concerns raised in the assessment and determination of the planning application, including the statutory reports received. Third party observations to the appeal submitted that the proposed perimeter fencing

would be injurious to the character of the landscape and that the proposed development would be injurious to tourism and the WAW as a result of its location on the edge of the Burren. The PA considered that the overall impact from a visual perspective was acceptable, with intervening topography and vegetation providing a buffer to soften the impact for the most part.

- 8.8.2. A Landscape and Visual Impact Assessment (“LVIA”) was submitted with the application. The LVIA finds that during the construction phase that there will be temporary adverse landscape and visual effects associated with construction activity including the movement of construction vehicles and use of larger/higher structures such as cranes. Landscape change and visual effects as a result of construction is assessed as being mainly localised and confined to the immediate surroundings of the site and main entrances. It is assessed as high and significant/adverse at the local scale, although temporary, short term and reversible. The LVIA finds that the perception of landscape change and the impact of visual effects from construction reduces quickly with distance. In the middle-distance (at construction stage) landscape change is assessed as medium-low with significance ranging from moderate/adverse to slight/neutral and visual effects are assessed as medium with significance ranging between slight-moderate/adverse. Beyond 1km landscape change is considered to be less discernible and visual effects are assessed as medium/neutral to negligible/neutral to none.
- 8.8.3. Landscape change and visual effects will mainly occur at operational stage. The LVIA finds that direct and long-term landscape change will occur locally where the solar farm is physically located as the existing agricultural landscape of the site changes to energy harvesting/light industrial. The magnitude of landscape change in these local areas is assessed to be high and significant/adverse including in the immediate surrounds where open or partial views are available from the L4505, L4506 and R347 (within a 500m radius of the site). In the remaining study area (500m to 1km) landscape change is assessed as medium-low with significance ranging from moderate/adverse to slight/neutral with increasing distance from the site. Landscape effects are assessed as reducing quickly thereafter to not significant and are considered less discernible beyond 1km.
- 8.8.4. The LVIA finds that significant visual effects will occur in close views at residential receptors or from publicly accessible locations (<300m) along the L4505 between the

northern and central parcels, along the R347 bisecting the central and southern parcels, and along the L8556 bordering the southern parcel. These effects will increase slightly during winter months with intervening vegetation is without foliage. The LVIA finds that a number of views will be sequential of various parcels while travelling through the study area but that the solar arrays and associated infrastructure will not be visible in their entirety in views identified for visual receptors due to intervening landform, vegetation, distance and angle of views, and that the majority of views will be obscured when travelling along local roads. In middle distance views (beyond 300m to 1km) the LVIA finds that visibility is confined to residential receptors along the L8650, L8557 and L8556 as well as higher viewpoints such as the L4506 overpass of the M18. The majority of visual effects are considered to be localised, but significant if there is no screening vegetation. The LVIA finds that visual effects reduce quickly to not significant outside the 1km study area and cumulative landscape and visual effects are not anticipated as there are no similar developments or development types in the study area which have potential for cumulative effects.

- 8.8.5. Mitigation consists of careful design which has informed the layout within each parcel including limited access points, offsets from field boundaries and residential receptors, non-tracking solar arrays and underground cables in addition to the hedgerow planting detailed in the biodiversity enhancement measures (BMP) and landscape mitigation plan (DWG No. 60687084\_ACM\_DR\_PL\_SF\_017 (May 2024)).
- 8.8.6. I accept that the introduction of a light industrial scale/character renewable energy development into the local environment as a novel feature, will result in significant landscape and visual effects at a local scale in the immediate environs of the site. However, I am satisfied that these impacts are confined and mitigated by undulating topography, intervening vegetation, set back distances and relate to only partial or lesser elements of the proposed development in any one view. The views are not open or sustained, and the entirety of the project is not visible. I am of the view that the impacts are acceptable and although long-term, are reversible and I consider that they are not such that would warrant refusal. In terms of the middle distance (300m-1km), I note that views are available from higher elevations or locations which are unscreened, but that these are limited. The majority of views are screened by topography and intervening vegetation and having inspected the subject site I

consider that those views which do exist are of limited value, where the solar farm is viewed within a wider landscape of scale where significant road and electricity infrastructure exists and the development is only partially visible and assimilated within a wider landscape setting. This is considered to be reflective of the 'low' landscape sensitivity rating in the LCA which accepts that the landscape is unlikely to be affected by change, and the absence of designated views, prospects or scenic roads within the vicinity of the site. I consider that beyond 1km there are no landscape or visual concerns.

8.8.7. I note that third party observers to the appeal were concerned that the perimeter fencing would injure the visual amenities of the area and would be inconsistent with landscape character, and that the proposed development would be injurious to tourism and the WAW as a result of its location on the edge of the Burren. I am satisfied that the perimeter fencing will not injure the visual amenities of the area. The site is generally set back from the road edge and its presence mitigated by undulating topography, intervening vegetation and boundaries features. The perimeter fence is further set back from peripheral site boundaries in order to avoid damage and to preserve the landscape character of the area and will therefore be satisfactorily mitigated. The fence will consist of deer type fencing and a condition is recommended that the precise boundary details and specification be agreed with the PA prior to the commencement of development. I am satisfied that the proposed development is materially removed from the WAW and the Burren landscape. It is located within a different local authority area and it is not within the County Galway landscape units which frame the transitional environment on approach to the Burren (Karst Landscape Unit and Inner Galway Bay Landscape Unit). It is located within a separate and distinct landscape unit (Kilchreest Basin Unit) with a 'low' sensitivity rating and will not injure the amenities of the Burren landscape, the WAW or adversely impact tourism.

8.8.8. Overall, I am satisfied that visual effects are localised within a landscape that is not considered to be visually sensitive in the LCA or GCDP and will be satisfactorily mitigated by a combination of topography, screening, set back distances and design etc. Having regard to the absence of landscape and visual effects on the wider landscape, the absence of effects on designated scenic or tourist receptors, to my conclusions in relation to archaeological heritage and to the pressing need to dial up

renewable energy sources (including solar energy) and reduce GHG emissions, it is considered that these effects are acceptable.

#### 8.9. ***Residential Amenity (including noise and property devaluation)***

8.9.1. Residential amenity was not a concern raised by the PA in its assessment of the planning application. The statutory reports to the application and appeal did not raise noise related concerns. The third-party observations to the appeal do however raise concerns in relation to residential amenity concerning flooding, contamination of wells, noise, visual amenity, light, dust and fire hazard, including one observation which raises specific residential amenity concerns in the context of the incorrect location of a dwellinghouse on the submitted plans and particulars relative to the proposed development.

8.9.2. Noise impacts are assessed in Chapter 8 of the ECR<sup>17</sup>. At operational stage the ECR finds that the dominating source of noise from the solar farm development is from the inverters. Solar panels themselves do not generate noise. The inverters only generate noise during daylight hours, which during the summer months will include the nighttime hours of 4am to 7am. The inverter fan speed is related to the prevailing temperature and therefore is not expected to operate at full speed during night-time hours (which are cooler) or at 100% fan cooling speeds all of the time, meaning that inverter sound levels are likely to be lower than predicted in the worst-case scenario adopted in the assessment. Predicted operational noise levels at the 20 no. most affected Noise Sensitive Receptors (NSR's) is provided in Table 8-14 with the predicted (unmitigated) noise level compared with an adopted background noise level of 35dB (LAeq) for nighttime, 40dB (LAeq) for evening and 45dB (LAeq) for daytime, which is typical of an area of low background noise<sup>18</sup>. The results show no predicted exceedance of any of the daytime, evening or nighttime NG4 criterion for 'areas of low background noise' and therefore the ECR predicts no adverse impact with regards to operational noise, with impacts assessed as imperceptible or not significant. A 3D sound model was constructed using CadnaA 2021 MR2 acoustic modelling software to predict noise impacts and effects associated with

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<sup>17</sup> The Construction Noise Assessment submitted as F.I. to the PA, concerned impacts on Wigeon at Turloughs only and did not concern residential receptors.

<sup>18</sup> An area of low background noise was selected and as the site is less than 7.5km from the M18 and did not meet the criteria for a 'quiet area' in NG4 (Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4) (EPA,2016).

operational sources. I note the location of Inverters on electrical skids within compounds, which are not located in proximity to any residential property.

- 8.9.3. The conclusions of the ECR in relation to noise are considered to be reasonable. A condition to manage operational noise at appropriate levels is recommended. During the construction phase I note that there will be routine construction related pollution and nuisance generated with the potential to cause nuisance and impact on the amenities of nearby dwellings, particularly along the L4505. These impacts will be temporary and short term and will be controlled as part of the embedded design, standard and best practice construction measures as well as the specific mitigation measures set out in Section 9.6 of the ECR and the CEMP. I am satisfied that this matter can be safely controlled and regulated by condition in accordance with industry standards, and therefore a condition to manage construction noise is also recommended. Otherwise, no specific evidence has been provided to indicate that there will any impact on property prices due to the existence of a solar farm, nor has any corroborated evidence been submitted to indicate that this is the case elsewhere.
- 8.9.4. I note that in addition to the LVIA, an Residential Visual Amenity Screening (“RVAS”) was submitted as Appendix C to the ECR. The RVAS found that as a result of distance, orientation and screening, the development would not result in significant visual effects on direct or indirect views from the majority of properties and would not affect the living standards of those properties or render them an unattractive place to live when judged objectively in the public interest. An exception to this were impacts on views from upper floor windows (such as residential Group 6) which were predicted to experience a more open and significant change in views. These impacts are mitigated by the landscape strategy prepared for the proposed development by the landscape design team set out in DWG No. 60687084\_ACM\_DR\_PL\_SF\_017. Overall, the RVAS found that following mitigation significant adverse visual effects on residential properties were not identified such that any property would be overwhelmed with views blocked in several directions or unpleasantly encroached or dominated by the proposed development.
- 8.9.5. I accept the conclusions of the ECR, LVIA and RVAS in relation to residential amenity with a single exception. This concerns an existing dwellinghouse which adjoins Field No.30 to the west in the northern parcel and which has been identified

as H14 on the Glint & Glare Assessment. This dwellinghouse is located on the L4505 adjoining the proposed northern parcel, and in proximity to the vehicular entrance thereto. A third-party observation has opined that this existing dwellinghouse is not shown correctly on the application plans and particulars and submits that the footprint of an older historical house (now demolished) is shown as opposed to a newer replacement house at a different location. I am satisfied from an inspection of the site that the third-party observer is correct in this regard, and that the replacement house is constructed at a location that is closer to the western boundary of the proposed development site at the location of Field No.30. The import of this anomaly is to bring into question the findings of the ECR in so far as they apply to this property and noise, residential visual amenity and Glint & Glare. Generally, I am satisfied that the location of H14 in the GGA is sufficiently accurate to predict the impacts of glint & glare at this location. In this regard I note the findings of no solar reflections at H14 once existing screening and mitigation are taken into account and this gives sufficient reassurance notwithstanding that anti-reflective coatings will be applied in any event. No concerns arise in this regard. However, from a detailed inspection of the subject site I note that the solar farm is proposed in much closer proximity to this dwellinghouse than any other residential property and that the separation distance is such that there is a question of equity. For example, I note that the properties within a ribbon development further to the west will enjoy a separation distance from solar panels of 93m from the rear elevation, or 72m from the rear property boundary, with a double row of hedgerow mitigation. In contrast H14, will receive a single row of hedgerow mitigation and solar panels within a much lesser distance circa <20m from the side elevation. At such close proximity I would be concerned that noise impacts, particularly at construction stage, have not been adequately assessed or can be satisfactorily controlled, and would result in significant impacts on residential amenity. I am also concerned that the solar farm at this location would, contrary to the findings of the RVAS and LVIA, result in significant residential visual amenity impacts such that H14 would be unpleasantly encroached and dominated. In this regard I would refer to photograph 10b of Appendix G to the ECR which represents the solar arrays in the field (No.30) adjoining the property at this location. In my opinion the solar panels sit apart from the context of the rest of the development at this location and are inconsistent with

the assessment of the LVIA and RVAS, in that they are neither set back from the public road nor residential property or enjoy screening from terrain or vegetation such that would mitigate their presence. I am of the view that at this location the solar array would, as a result of proximity and scale, adversely affect the residential amenity of H14 such that it would be overwhelmed.

8.9.6. In my view this is a matter which requires remedy. In the absence of guidelines or guidance on this matter I am reluctant to set an arbitrary set back distance to protect the residential amenity of H14. I consider however that the matter can be effectively remedied by the omission of all solar panels from Field No.30 (Site Layout Plan Sheet 6 &7 refer) of the northern parcel. This will have the effect of removing development from proximity to H14 such that it will not give rise to adverse effects on residential amenity as a result of noise or visual effects. It will result in the omission of a very small number of panels within the overall scheme, such that I am satisfied that it will not have implications for commercial viability. I am satisfied that this will address the anomaly in the application particulars relative to the location of H14, is a commensurate response to the likely noise and visual amenity impacts and is sufficiently clear in what it requires so as to be both conditionable and enforceable. I would point out that the use of reference 'H14' from the GGA is simply used to identify the relevant residential property for the purposes of my assessment and framing of the recommended condition, in the absence of a better alternative. It does not imply that solar reflections are a concern.

8.9.7. Artificial lighting is not proposed as a part of the development and I am satisfied that in the absence of a BESS component, there is no identifiable fire hazard associated with the proposed development which presents a risk to residential amenity. Subject to the omission of solar panels from field No.30 and otherwise having regard to the conclusions of this assessment in relation to visual amenity, water & flooding, glint & glare, noise, traffic safety and human health I am satisfied that significant effects on property value is unlikely.

#### 8.10. ***Human Health***

8.10.1. Having regard to the conclusions of this report in relation to noise, glint & glare, traffic & transport and residential amenity it is considered that there is no significant risk to human health. During the construction and operational phases risks to human

health arising from pollution and nuisances will be controlled as part of the standard and best practice construction and operational measures.

#### 8.11. ***Glint & Glare***

- 8.11.1. A revised Glint & Glare Assessment (“GGA”)(June 2024) was submitted as part of an RFI response to GCC at application stage. The PA was concerned on initial assessment that the initial GGA appeared to show that either theoretical or momentary reflectance might be experienced by users of the public road network. The applicant was therefore requested to submit a revised GGA which ensured that reflectance thresholds were controlled, however this was not then addressed by the PA in its assessment of the applicant’s further information response, and it is noted that this was not a consideration in the PA decision to refuse permission. In statutory reports at planning application stage TII required that all mitigation be in place prior to installation of the solar panels. Third party observations to the appeal raise concerns that screening will not be effective for 15 years, with resulting injury to residential amenity in the interim.
- 8.11.2. The GGA considered potential impacts on ground-based receptors such as roads and residential dwellings as well as aviation. A default 1km study area was identified<sup>19</sup>, and this area was then subject to analysis based on a 3D model of the development and a Digital Terrain Model (DTM) of the study area. This determined areas theoretically exposed to glint and glare effects based on a bare-earth worst case scenario which the GGA refers to as the ‘area of consideration for further analysis’. Residential and transport receptors were then identified, and further glint and glare analyses were executed using the DTM-based 3-D model to identify glint & glare at receptors in the absence of screening, with screening factored in (informed by site visit check) and finally with mitigation. Different receptor heights were factored for residential, road and rail having regard to ground and first floor levels and various driver eye levels. Four different potential PV panel tilt angles were also analysed (10, 15, 20 and 25 degrees). The GGA had regard to the south facing orientation of the panels, their fixed position, height of 3.2m and tilt of 15 from horizontal towards the south.

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<sup>19</sup> As it is not possible for glint or glare to occur north of panels, the 1km study area did not extend north of the site.

8.11.3. A total of 88 no. residential receptors were examined. The location of the residential receptors is shown on Fig. 7 & 8 of the GGA, and the results summarised in Table 3.2. (Full results are presented in Appendix A and C). The GGA concludes:

- Solar reflections is geometrically possible at 70 of the 88 receptors in a 'bald earth' scenario;
- When actual visibility was factored in (screening etc) the number of residential receptors with potential to be affected by solar reflections was reduced to 18 (H6-11, H13, H28, H43, H50, H55, H60, H61, H62, H66, H78, H80 & H83);
- Once (planting) mitigation measures were considered, the number of residential receptors with potential to be affected by solar reflections was reduced to 9 (H43, H50, H55, H60, H61, H62, H66, H80 & H83).

The 9 no. residential receptors with potential to be affected by solar reflections were then examined further. This further examination finds that the potential for solar reflections at all of these residential receptors is either medium to low or negligible/none even in the absence of mitigation due to the limited days and very brief durations of impact, orientation and distance relative to fenestration. The GGA concludes that with the installation of anti-reflective coating impacts were reduced to negligible/none at all residential receptors.

8.11.4. A total of 420 no. road receptor points were examined. The location of the roads within which the receptors are located is shown on Fig. 9 of the GGA and the results summarised in Table 3.3. (Full results are presented in Appendix B and D). The GGA concludes:

- Solar reflections are possible at 287 of the 420 road receptors in a 'bald earth' scenario;
- When actual visibility was factored in (screening etc) the number of road receptors with potential to be affected by solar reflections was reduced to 108;
- Once (planting) mitigation measures were considered, the number of road receptors with potential to be affected by solar reflections was reduced to 78.

Further investigation concludes that the installation of anti-reflective coating reduces impacts to negligible/none at all receptors due to the intensity of reflectance being reduced to that of the road itself and therefore there will be no material impact on road users within the study area.

The GGA otherwise concluded that there is no potential for glint and glare impacts at any of the identified aviation receptors.

8.11.5. I note that there is currently no regulation or guidance as to acceptable levels of glint and glare effects at receptors in Ireland. The applicant's consultant has had regard to US Federal Aviation Administration Policy and reports. I have considered the GGA submitted by the applicant and the methodology applied and consider it to be a reasonable and persuasive approach. I am satisfied that potential effects can be mitigated to negligible/none at all receptors and that the mitigation measures are practical and reasonable. Overall, I am satisfied that significant impacts from glint and glare are unlikely.

8.12. ***Flood risk & water (other than addressed in WFD)***

8.12.1. Please refer to Sections 10.0 and 11 of this report and associated Appendices 3,4 and 5 which determine that adverse effects on the integrity of European Sites can be excluded in view of conservation objectives and that no reasonable scientific doubt remains as to the absence of such effects (AA), and that the proposed development will not result in a risk of deterioration on any waterbody either qualitatively or quantitatively or on a temporary or permanent basis or otherwise jeopardise any water body in reaching its WFD objectives (WFD Screening). Both of these assessments considered potential impacts arising from the proposed development including flooding, and those on surface and ground waters. The finding of no adverse effects and no risks was based on embedded design, standard and best practice measures and mitigation measures, including: a 30m works exclusion zone from turloughs and their floodplains; pre-commencement surveys; control of dewatering; an Emergency Response & Control Plan including pollution prevention measures; and a Site Drainage Management Plan including measures to restrict flow velocity, reduce erosion and control sediment. I am satisfied that the conclusions of these assessments adequately consider the potential impacts which may arise on water receptors from the proposed development. I note that a concern is raised in the third-party submissions in relation to potential impacts on drinking wells/domestic potable water supplies but that no such sources were identified in the ECR. Notwithstanding same, I am satisfied that the measures in place for the protection of surface and ground waters, including those which protect against contamination and dewatering, are sufficient to mitigate any potential risks which may arise in relation to

domestic drinking wells and/or potable water supplies which may exist outside the subject site.

8.12.2. In relation to flooding a Flood Risk Assessment (“FRA”) was submitted with the application. This determined that the site is in Flood Zone C with a negligible risk from fluvial flooding and a low risk from coastal flooding and was not likely to result in an increased flood risk elsewhere. I note that the PA did not raised flooding as a concern and determined that the development was acceptable from a flood risk point of view. I note that the FRA does identify that the development is potentially at risk of a pluvial flooding event and recommends a 300mm freeboard in relation to the critical infrastructure of the project, however I am satisfied that the set back of 30m from turloughs and their associated flood plains adequately mitigates this risk to the development.

#### **8.13. Biodiversity (Matters other than those addressed in AA/EIA processes)**

8.13.1. Please refer to sections 9.0, 10.0 and 11.0 of this report and associated Appendices 2, 3, 4 and 5 which determine that the proposed development presents no real likelihood of significant effects on the environment, that adverse effects on the integrity of European Sites can be excluded and that the proposed development will not result in a risk of deterioration on any waterbody either qualitatively or quantitatively or on a temporary or permanent basis or otherwise jeopardise any water body in reaching its WFD objectives.

8.13.2. This section concerns general biodiversity and in particular the potential for impacts on habitats and species which are not qualifying interests of European Sites. The site itself does not have any specific natural heritage designations with the closest being the Kiltiernan Turlough proposed Natural Heritage Area (pNHA) (Site Code: 001285) located 150m to the north and the Lough Fingall Complex pNHA (Site Code: 000606) located 300m to the northwest. All natural heritage designations are listed and set out in Section 6.5 of this report, and they correspond with SAC’s or SPA’s which have been considered in the appropriate assessment process including detailed assessment of the QI habitat types ‘grassland’ and ‘turloughs’ and the QI/SCI species ‘LHB’ and ‘non-breeding birds’.

8.13.3. An Environmental Considerations Report (“ECR”) was submitted with the application. The ECR describes the baseline environment of the site as being agricultural land,

grazed by cattle and horses and bounded by stonewalls, hedgerows and treelines. At the time of field survey, it was noted that the field margins were less intensively grazed and had taller swards and greater floral species richness. The ECR noted no protected or notable native plant species and no invasive non-native species during surveys<sup>20</sup>. There are no watercourses or permanent waterbodies within, adjacent or downstream of the site which would support fish. No evidence of otter was identified during surveys, and the development site is considered unlikely to support otter. Field signs for mammals was limited, but the habitats of the site are considered suitable for foraging or shelter for species such as hedgehog, pine marten, red squirrel, pygmy shrew, Irish stoat and Irish Hare (*which was identified during field surveys*). In terms of amphibians and reptiles the habitats of the site are considered to be suitable foraging habitat for common lizard and common frog (*which was also identified in field surveys*). However, the site is not considered suitable for breeding given the limited areas of standing water within turloughs during spring and summer.

- 8.13.4. The ECR identified two potential outlier badger setts, each with a single entrance. BS1 and BS2 refer. The ECR opines that both could be actively used. BS1 is located 30m from proposed works areas and will not therefore be damaged or destroyed during works. The ECR and application particulars however confirm that BS2 is located in the only available location for an access track and is therefore likely to be damaged or lost. Adherence to the TII Guidelines<sup>21</sup> is proposed. Pre-construction surveys will be carried out to confirm usage of badger setts onsite and to check for any new territories since initial ecological surveys. It is proposed that a qualified ecologist will survey BS2 to confirm its usage and in consultation with NPWS will apply for approval to exclude and remove this outlier sett. During the breeding season no works will be undertaken within 50m of BS1 or any retained badger sett and outside of the breeding season no works will be undertaken within 30m of a retained sett. Otherwise fencing will incorporate mammal gates to ensure no barrier or disturbance effects, excavations will be left with a means of escape and will be checked at the start of each day and pipes will be capped or blocked to ensure no wildlife is trapped. All vehicles within the site will be restricted to a maximum speed

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<sup>20</sup> Although wood bitter-vetch (an FPO species) was recorded outside the site but near the northern parcel in 2006. I note the pre-commencement surveys proposed for same.

<sup>21</sup> Guidelines for the Treatment of Badgers Prior to the Construction of National Road Schemes (NRA, 2008)

of 30 kph to reduce risk of collision with mammals. Full mitigation measures are set out in the ECR, CEMP and BMP. The majority of grassland suitable for foraging will remain beneath and between panels and along field margins and badger movement will not be restricted. Potential effects on badger (pre-mitigation) were assessed as having either local or site level significance, and with mitigation the residual effects are assessed as being either no effect or a negligible effect.

8.13.5. I note that third party observers to the appeal are concerned that there will be a significant impact on badgers, including as a result of the loss of BS2. I have considered the proposal to exclude and remove BS2 and I am satisfied on the basis of the information available that BS2 is an outlier sett, and not a main, annex or subsidiary sett. This is based on the existence of a single entrance only and the absence otherwise of badger activity within the large extents of the proposed development site. On this basis I am satisfied that the exclusion and removal of this sett is very unlikely to result in a significant impact on the badger population or breeding population. I am also satisfied that the proposal to exclude badger(s) from this sett and to remove the sett is appropriate mitigation in accordance with TII guidance. However, I am aware that there is no mechanism for application to the NPWS for a licence to exclude a badger sett as proposed by the applicant, nor is a derogation required as badger is not an Annex IV species. Notwithstanding, there is a requirement to ensure that the exclusion of badger is carried out humanely and that the removal of the sett is carried out in accordance with best practice and in this regard a condition is recommended that the methodology be agreed with the PA prior to the commencement of development. Otherwise, as I am satisfied that as BS2 is an outlier sett there is no requirement for replacement with an artificial sett having regard to the available guidance<sup>22</sup>.

8.13.6. The ECR considers that the variety of habitats within the site would likely support notable breeding birds such as yellowhammer and redwing. During ecological surveys relatively common and widespread birds were recorded throughout the site, but surveys found bird numbers to be low, inconsistent and scattered across the proposed development site. The ECR opines that the bird populations using the site is likely to be less than 1% of the county population and therefore a local level of

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<sup>22</sup> Surveying for Badgers 'Good Practice Guidelines, 2018' (Scottish Badgers).

importance was considered appropriate for breeding birds. The protection of breeding birds under the Wildlife Acts during the breeding season (March to August inc) is noted. The ECR confirms that there will be a permanent loss of a small area of suitable habitat for breeding birds as a result of construction, including small quantities of open grassland habitat that could be used for ground nesting birds. This is quantified in the NIS to be 3%. Given that there is plentiful suitable habitat in the surrounding area for breeding birds, this loss is considered to have a site level significance only. In terms of mitigation the ECR opines a preference for vegetation clearance outside of the bird breeding season but states if this cannot be avoided a check will be carried out for active nests with exclusion zones put in place.

Otherwise, grassland nesting habitat along field margins will be retained, minimal tree and hedgerow removal is proposed (42m) and significant additional native hedgerow planting will be carried out as part of the biodiversity enhancement measures described in the BMP consisting of 3,192m of new hedgerow and 594m of supplemental hedgerow. The mitigation measures for grassland habitat including natural regeneration, monitoring to ensure floral species diversity and abundance, management of grasslands with sheep grazing, control of stock rates and field margin management (described in Section 6.1.3.1. of the NIS and comprehensively assessed in the AA section of this report) is also applicable to breeding birds and will ensure maintenance of suitable habitat including for ground nesting birds. The risk of injury or mortality as a result of mistaking solar panels for water, will be mitigated by the use of anti-reflective coating as described in Section 6.1.3.4. of the NIS).

Potential effects on birds (pre-mitigation) was assessed as having either local or site level significance, and with mitigation the residual effects are assessed as being either no effect or a negligible effect. I am in agreement with this assessment subject to the exclusion of any clearance works during the breeding season. In this regard I do not consider the proposal to survey for active nests and implement an exclusion zone to be best practice. I note that the DHLGH concurs and advises that no such derogation is available. This shall therefore be addressed by condition.

- 8.13.7. I note that a third party observation to the appeal states that a white tailed eagle has been repeatedly observed at Rashane Turlough (4.8km NE) and that this was not assessed in the application particulars. I note that white tailed eagle is not an SCI of any of the European sites which have been screened in for assessment and was not

identified in the survey effort. I also note that the species has been the subject of a successful re-introduction program by NPWS and is now dispersed across the country. The species is primarily dependent on habitats containing large expanses of water with abundant fish and waterbird prey and requires undisturbed areas with cliffs or large, old growth trees for nesting. It is not considered that this species is dependent on the habitats of the site, which contains grasslands and small temporary waterbodies. Notwithstanding, the small habitat loss of the site is not considered likely to significantly impact on any bird species.

8.13.8. The ECR opines that the variety of habitats within the site supports a variety of invertebrates including bees, beetles, flies and butterflies. Devil's-bit- scabious, which is the main larval food plant of the protected butterfly marsh fritillary<sup>23</sup> was present throughout the site and mainly along field margins (*locations identified on Appendix A Fig.A6-4 of the ECR*). Small blue (*Cupido minimus*) and wall butterfly (*Lasiommata megera*) which are both endangered in Ireland were also present during field surveys. Habitat which provides a range of flowering species for invertebrates could be degraded by solar panel coverage (shading) or ground disturbance impacting the abundance, diversity and richness of grassland species and removal/damage of Devil's-bit-scabious could reduce the suitability of this habitat for marsh fritillary and reduce their population if present<sup>24</sup>. The mitigation measures for grassland habitat and the use of anti-reflective coating as described in the preceding section of this report also apply to invertebrates. In this regard the AA noted that grassland management measures consisting of lower intensity grazing by sheep or an appropriate mowing regime can improve insect diversity and support biodiversity and that the recent National Biodiversity Data Centre (NBDC) guidelines (2023) support this approach. The AA also concluded that the installation of anti-reflective coating to the solar panels would address the risks to invertebrate reproductive success by eggs being mistakenly laid on the solar panels mistaken for water. Specific mitigation measures are set out for Devil's-bit-scabious, which includes avoidance, and where this is not possible larval searches followed by translocation to suitably retained field margins will be carried out as detailed in Section 5.6.1.1.5 of the ECR. Potential effects on grassland habitats (pre-mitigation)

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<sup>23</sup> Listed on Annex II of the Habitats Directive and considered endangered in Ireland

<sup>24</sup> Not noted during field surveys

was assessed as having county significance, and on invertebrates was assessed as having local site level significance. With mitigation the residual effects are assessed as being either no effect or a negligible effect, with the grassland management regime considered likely to positively benefit floral and invertebrate diversity including marsh fritillary.

8.13.9. I note that the ecological and field surveys carried out evidenced relatively modest or low levels of activity by mammals and birds, with activity predominant in common or widespread species. I note the absence of native or non-native plant species of note. This is considered consistent with the current use of the lands for agricultural grazing. In addition, very limited habitat loss will only occur as a result of the development from structures which is calculated at 3% of the application site area for grassland and 42m for hedgerow. It is considered that with the grassland management regime and biodiversity enhancement measures set out in the BMP habitat loss will not be significant with potential for net beneficial gains for local biodiversity, abundance and richness.

8.13.10. I consider that adequate detail has been provided on the biodiversity of the site and that it has been prepared by competent persons in accordance with relevant guidelines. Given the location of the site in an area characterised by agricultural grassland and the embedded design measures, standard best practice measures (Section 5.5.2 of the ECR and 6.1.2 of the NIS) and mitigation measures (Section 5.6 of the ECR and 6.1.3 of the NIS), including the BMP, I am satisfied that significant impacts will not arise on biodiversity and that the impacts on the ecology of the site and wider area would be acceptable.

#### **8.14. Consultation, community engagement and enforcement**

8.14.1. Third parties to the appeal were concerned that an absence of prior community engagement or consultation was contrary to the Aarhus Convention. I can see from the Planning Statement submitted in support of the application that a limited form of pre-planning consultation and engagement took place with 61 neighbours within 500m of the site invited by letter to submit their feedback on the proposed development within 3 weeks (of the 13<sup>th</sup> October 2022). A project website was also launched which included draft plans and information on the applicant, project and planning process. A public notice was placed in the Connacht Tribune of 21<sup>st</sup>

October 2022 directing the public to the website and inviting comments by 4<sup>th</sup> November 2022. A total of 15 no. responses were received which the applicant says resulted in a number of design changes to the development including additional screening mitigation and increased set back distances.

8.14.2. Notwithstanding, this is not a statutory requirement in this case and the application has been advertised as required by planning legislation (including the submission of significant further information), and the further information received by the Comisiún at appeal stage was circulated to all observers. The observers have engaged with the statutory planning application, appeal and environmental decision-making process at all stages and were not denied access to environmental information. I do not consider that an issue arises in relation to public rights under the Aarhus Convention and I do not consider that the limited community engagement is a material deficit which would warrant a refusal of permission. In this regard I note that the applicant proposes to provide community liaison arrangements during the construction phase, and I recommend a condition requiring this to be agreed with the planning authority as a part of the final CEMP and CTMP.

8.14.3. Responsibility for enforcement was raised by the third-party observers to the appeal. The enforcement of a planning permission and the terms and conditions to which it is subject is a matter for the planning authority. The Board does not have enforcement powers under the PDA.

#### **8.15. Requirement for EIA and Project splitting.**

8.15.1. The need for mandatory or sub-threshold EIA was submitted by third party observers to the appeal, together with the view that the making of separate applications for the solar farm and the substation (and grid connection) amounted to project splitting. The proposed solar farm development is part of a wider project in the area including a related substation and grid connection. A planning application for the substation and grid connection is required to be made directly to An Coimisiún and an opinion to this effect issued under Section 182E of the Act on 23<sup>rd</sup> April 2023. At the time of writing, this application has not been made.

8.15.2. The term 'project splitting' is associated with the avoidance of EIA requirements. As established in Appendix 1 & 2 of this report a solar farm is not a class for the purposes of the EIA Directive and there are no works associated with the proposed

development that would result in it requiring EIA. The planning application, including the ECR and NIS are clear in the presentation and assessment of the overall project. The cumulative impacts and in-combination effects have been factored into the assessment of the subject application under appeal. It is not considered that there is a requirement for EIA, and it is not considered that 'project splitting' is occurring.

8.15.3. A third party observer to the appeal also raised concerns in relation to the temporal validity of the conclusions of AA and EIA on the basis that the development may not be carried out for up to 10 years. It is considered that such a point would hold as valid in circumstances of uncertainty. I am satisfied that the proposed solar farm development is not a class for the purposes of the Directive and therefore no question arises in relation to the temporal validity of the EIA Preliminary Examination set out in Appendix 2 to this report. I am also satisfied that no reasonable scientific doubt remains as to the likelihood of adverse effects on the integrity of European Sites and therefore no question arises in relation to the temporal validity of the AA conclusion (Integrity Test) as set out in Appendix 4 to this report.

#### **8.16. Cumulative/in-combination effects**

8.16.1. I am satisfied that in-combination effects have been assessed adequately in the NIS and ECR. The proposed substation and grid connection has been assessed as part of the overall project and this provides that with the embedded design, best practice measures and mitigation measures to be implemented for both developments particularly in relation to lighting design, pollution prevention measures, grassland management, biodiversity enhancement and anti-reflective surfaces that there will be no significant in-combination effects. I am satisfied that no other plans or projects could combine to generate significant effects when mitigation measures are considered. I am satisfied that the applicant has demonstrated that no significant residual effects will remain post the application of mitigation measures and that there is no potential for in-combination effects.

#### **8.17. Operational Period**

The application has sought planning permission for a duration of 10 years and an operational life of 40-years. I consider the 10-year duration of the permission to be reasonable for a development of this scale, particularly when the separate consent process for the substation and grid connection is considered. This is typical for a

development of this scale and usually necessary for funding reasons. The applicant explains that solar panels have an operational life of 40 years after which they are redundant, and the solar farm will be decommissioned and removed. The applicant has not sought a permanent permission and replacement of redundant panels is not proposed (other than minimal replacement during the operational life). In this regard should the Coimisiún grant permission for the proposal a temporary permission is considered appropriate with requirement for a restoration plan. In conclusion a 40-year operational life is considered acceptable.

## **9.0 EIA Screening**

The proposed development has been subject to preliminary examination for environmental impact assessment (refer to Form 1 and Form 2 in the Appendices of this report). Having regard to the characteristics and location of the proposed development and the types and characteristics of potential impacts, it is considered that there is no real likelihood of significant effects on the environment. The proposed development, therefore, does not trigger a requirement for environmental impact assessment screening and an EIAR is not required.

## **10.0 AA Screening**

### **10.1. Screening Determination**

#### *Finding of likely significant effects*

In accordance with Section 177U of the Planning and Development Act 2000 (as amended) and on the basis of the objective information provided by the applicant, I conclude that it is not possible to exclude that the proposed development alone will give rise to significant effects on the Kiltiernan Turlough SAC (001285), Lough Fingall Complex SAC (000606), Inner Galway Bay SPA (004031), Coole-Garryland SPA (004107), Rahasane Turlough SPA (004089), Cregganna Marsh SPA (004142), Lough Cutra SPA (004056) and Lough Rea SPA (004134) in view of the sites conservation objectives and a number of qualifying interests of those sites (habitats and species). It is therefore determined that Appropriate Assessment (Stage 2) [under Section 177V of the Planning and Development Act, 2000, as amended] of the proposed development is required.

## 10.2. **Appropriate Assessment Conclusion: Integrity Test**

In screening the need for Appropriate Assessment, it was determined that the proposed development could result in significant effects on the Kiltiernan Turlough SAC (001285), Lough Fingal Complex SAC (000606), Inner Galway Bay SPA (004031), Coole-Garryland SPA (004107), Rahasane Turlough SPA (004089), Cregganna Marsh SPA (004142), Lough Cutra SPA (004056) and Lough Rea SPA (004134) in view of the conservation objectives of those sites and that Appropriate Assessment under the provisions of S177U was required. (Appendix 3 to this report refers).

Following an examination, analysis and evaluation of the NIS and all associated material submitted, I consider that adverse effects on site integrity of the Kiltiernan Turlough SAC (001285), Lough Fingal Complex SAC (000606), Inner Galway Bay SPA (004031), Coole-Garryland SPA (004107), Rahasane Turlough SPA (004089), Cregganna Marsh SPA (004142), Lough Cutra SPA (004056) and Lough Rea SPA (004134) can be excluded in view of the conservation objectives of these sites and that no reasonable scientific doubt remains as to the absence of such effects.

My conclusion is based on the following:

- Detailed assessment of construction, operational and decommissioning impacts.
- The respective site-specific conservation objectives, targets and attributes, QI's and SCI's of the respective European Sites as detailed and assessed in my Stage 2 AA as appended to this report (Appendix 4).
- Effectiveness of the mitigation measures proposed including: a 30m works exclusion zone from turloughs and their floodplains; pre-commencement surveys; control of dewatering; an Emergency Response & Control Plan including pollution prevention measures; a Site Drainage Management Plan including measures to restrict flow velocity, reduce erosion and control sediment; a Resource & Waste Management Plan; best practice grassland management measures including retention of natural grassland, natural regeneration, low intensity grazing or controlled mowing, retention of field margins, minimal hedgerow removal and no clearance works during the bird breeding season; daylight construction hours only; no use of artificial light; anti-

reflective coating installed to all solar panels; a 100m buffer from turloughs when water is present with noise controls; and post-construction biodiversity (floral diversity & bats) & ornithological monitoring all of which are primarily captured in the CEMP and will be under the control of a CEMP co-ordinator (CEMPC) supported by an Ecological Clerk of Works (ECoW).

- Application of planning conditions to ensure these measures.
- The proposed development will not affect the attainment of conservation objectives for the Kiltiernan Turlough SAC (001285), Lough Fingal Complex SAC (000606), Inner Galway Bay SPA (004031), Coole-Garryland SPA (004107), Rahasane Turlough SPA (004089), Cregganna Marsh SPA (004142), Lough Cutra SPA (004056) and Lough Rea SPA (004134).

## **11.0 Screening the need for Water Framework Directive (WFD)**

### **Assessment**

I conclude on the basis of objective information, that the proposed development will not result in a risk of deterioration on any water body (rivers, lakes, groundwaters, transitional and coastal) either qualitatively or quantitatively or on a temporary or permanent basis or otherwise jeopardise any water body in reaching its WFD objectives and consequently can be excluded from further assessment. (Appendix 5 refers).

## **12.0 Recommendation**

I recommend that permission for the development be granted subject to conditions.

## **13.0 Reasons and Considerations**

The Coimisiún reached its decision in accordance with its duties under Section 15(1) of the Climate Action and Low Carbon Development Act, 2015, as amended, and the requirement to, in so far as practicable, perform its functions in a manner consistent with, inter alia, the Climate Action Plan 2025 and the furtherance of the national climate objective.

And in coming to its decision, the Coimisiún had regard to the following:

**European Policy/Legislation** including of particular relevance:

Directive 92/43/EEC (Habitats Directive) and Directive 79/409/EEC as amended by 2009/147/EC (Birds Directive) which set the requirements for Conservation of Natural Habitats and of Wild Fauna and Flora throughout the European Union.

EU Renewable Energy Directive 2009/28/EC which aims to promote the use of renewable energy and amending Directive EU/2023/2413 which aims to speed up the EU's clean energy transition as implemented by European Union (Planning and Development) Renewable Energy) Regulations 2025 (S.I. 274 of 2025).

Directive 2011/92/EU (The EIA Directive) as amended by Directive 2014/52/EU as implemented by Article 94 and Schedule 6 (paragraphs 1 and 2) of the Planning Regulations as amended.

Directive 2000/60/EC, the Water Framework Directive and the requirement to exercise its functions in a manner which is consistent with the provisions of the Directive, and which achieves or promotes compliance with the requirements of the Directive.

**National Policy and Guidance** including:

Project Ireland 2040: National Planning Framework ("NPF"), First Revision of the NPF;

National Development Plan 2021-2030

The objectives and targets of the National Biodiversity Action Plan 2023-2030;

Policy Statement on Security of Electricity Supply (November 2021);

National Energy Security Framework (April 2022);

National Energy and Climate Action Plan (2021-2030);

**Regional and Local Planning Policy**, including in particular:

Regional Spatial and Economic Strategy for the Northern and Western Region (2020-2032);

Galway County Development Plan 2022-2028;

- (a) The location, nature, scale and layout of the proposed development,
- (b) the pattern of development within the area and the context of the receiving environment,

- (c) The range of mitigation measures set out in the Natura Impact Statement,
- (d) The range of mitigation measures set out in the Environmental Considerations Report,
- (e) Measures proposed for the construction, operation and decommissioning of the development as set out in the Construction and Environmental Management Plan,
- (f) The submissions and observations received in relation to the appeal,
- (g) The Inspector's report and recommendation.

### **Proper Planning and Sustainable Development**

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 Galway 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 unacceptable impact on the character of the landscape or on 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.

### **Appropriate Assessment - Stage 1**

The Coimisiún considered the Screening Report for Appropriate Assessment, the Natura Impact Statement and all the other relevant submissions and carried out both an appropriate assessment screening exercise and an appropriate assessment in relation to the potential effects of the proposed development on designated European Sites. The Coimisiún agreed with and adopted the screening assessment and conclusion carried out in the Inspector's report that the following European sites in respect of which the proposed development has the potential to have a significant effects are Kiltiernan Turlough SAC (001285), Lough Fingal Complex SAC (000606), Inner Galway Bay SPA (004031), Coole-Garryland SPA (004107), Rahasane

Turlough SPA (004089), Cregganna Marsh SPA (004142), Lough Cutra SPA (004056) and Lough Rea SPA (004134).

## **Appropriate Assessment – Stage 2**

The Coimisiún considered the Natura Impact Statement and associated documentation submitted with the application, the mitigation measures contained therein, the submissions and observations on file, and the Inspector's assessment. The Coimisiún completed an appropriate assessment of the implications of the proposed development for the European sites for which potential to have a significant effect had been identified, in view of the site's conservation objectives. The Coimisiún considered that the information before it was adequate to allow the carrying out of an appropriate assessment. In completing the appropriate assessment, the Coimisiún considered, in particular, the following:

- i. the likely direct and indirect impacts arising from the proposed development both individually or in combination with other plans or projects,
- ii. the mitigation measures which are included as part of the current proposal, and
- iii. the conservation objectives for the European Sites.

In completing the Appropriate Assessment, the Coimisiún accepted and adopted the Appropriate Assessment carried out in the Inspector's report in respect of the potential effects of the proposed development on the aforementioned European Sites, having regard to the site's Conservation Objectives. In overall conclusion, the Coimisiún was satisfied that the proposed development, by itself or in combination with other plans or projects, would not adversely affect the integrity of the European Sites, in view of the sites' Conservation Objectives.

## **14.0 Conditions**

1. (a) The development shall be carried out and completed in accordance with the plans and particulars lodged with the planning application, as amended by the

further information and revised plans received by the planning authority on 17<sup>th</sup> day of May 2024 and by the Coimisiún on 17<sup>th</sup> June 2025, except as may otherwise be required in order to comply with the following conditions. Where such conditions require details to be agreed with the planning authority, the developer shall agree such details in writing with the planning authority prior to the commencement of development and the proposed development shall be carried out and completed in accordance with the agreed particulars.

(b) All solar panels shall be omitted from Field No.30 within the Northern Parcel as shown on Site Layout Map 6 of 13 (Sheet No. 06087084\_ACM\_DR\_PL\_SF\_009 (Rev P4) refers) and Site Layout Map 7 of 13 (Sheet No. 06087084\_ACM\_DR\_PL\_SF\_010 (Rev P4) refers). The proposed hedgerow mitigation measure within Field No. 30 shall be retained and implemented as proposed.

**Reason:** In the interest or clarity and to protect residential amenity.

2. The period during which the development hereby permitted may be carried out shall be ten years from the date of this Order.

**Reason:** Having regard to the nature and extent of the proposed development, the Board considered 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 decommissioned and removed unless, prior to the end of the period, planning permission shall have been granted for their continuance for a further period.  
(b) Prior to commencement of development, a Decommissioning Statement including a detailed restoration plan and a timescale for its implementation, providing for the removal of the solar arrays, including all foundations, anchors, concrete shoes, inverter/transformer stations, control building, CCTV cameras, fencing and site access to a specific timescale, shall be submitted to, and agreed in writing with, the planning authority. The Decommissioning Statement shall be updated in accordance with Condition No.16, 17 & 18 of this Order.

(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/concrete shoes, 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 relevant planning authority to review the operation of the solar farm in the light of the circumstances then prevailing.

4. The mitigation measures contained in the submitted Natura Impact Statement (NIS), shall be implemented in full.

**Reason:** To protect the integrity of European Sites.

5. All of the environmental, construction and ecological mitigation measures, as set out in the Environmental Considerations Report, Construction and Environmental Management Plan, Glint and Glare Assessment, Construction and Traffic Management Plan, Biodiversity Management Plan, Landscape Mitigation Plan, Bird and Bat Fatality Monitoring Plan, Archaeological Test (Excavations) Report and Construction Noise Assessment 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. Where such measures require details to be agreed with the Planning Authority, the developer shall agree such details in writing with the planning authority prior to the commencement of development.

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

6. 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.

7. (a) Prior to the commencement of development pre-commencement surveys for protected plant, animal species and invasive species shall be undertaken at the site and where required the appropriate licence to disturb or interfere with same shall be obtained from the National Parks and Wildlife Service.
- (b) Prior to the commencement of development, the precise methodology for the exclusion of badger(s) from sett BS2 and for the removal of this sett shall be submitted to the Planning Authority for written agreement. Exclusion and removal works shall only proceed in accordance with the agreed methodology.
- (c) No tree, hedgerow or vegetation clearance works shall be carried during the period of 1<sup>st</sup> March to 31<sup>st</sup> August inclusive.

**Reason:** In the interest of wildlife protection.

8. Before construction commences on site, precise details of the structure, materials, colour and finish of the perimeter security fence including provision for the movement of mammals at regular intervals, shall be submitted for the written agreement of the planning authority.

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

9. Site development and building works shall be carried out during daylight hours only within the hours of 0800 to 1900 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.

10. (a) No artificial lighting shall be installed or operated on site unless authorised by a prior grant of planning permission.
- (b) CCTV cameras shall be fixed and angled to face into the site and shall not be directed towards adjoining property or the road.
- (c) Cables within the site shall be located underground.

(d) The transformers/ inverters shall be dark green in colour.

**Reason:** In the interest of the long-term viability of this agricultural land and in order to minimise impacts on drainage patterns, clarity, visual and residential amenity.

11. During the operational phase of the proposed development the noise level shall not exceed (a) 55 dB(A) rated sound level between the hours of 0700 to 2300, and (b) 45 dB(A) 15min and 60 dB LAfmax, 15min at all other times, (corrected for a tonal or impulsive component) as measured at the nearest noise sensitive location. Procedures for the purpose of determining compliance with this limit shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development.

**Reason:** To protect the residential amenities of property in the vicinity of the site.

12. (a) Construction activity shall be managed in accordance with a construction noise and vibration management plan, which shall be agreed in writing with the planning authority prior to the commencement of development. This plan should be subject to periodic review and shall specify the construction practice, including measures for the suppression and mitigation of on-site noise and vibration.

(b) The plan shall be developed having regard to, and all construction activity shall be undertaken in accordance with, best practise guidelines, including BS 5228-1:2009+A1:2014, parts 1 & 2.

(c) The mitigation measures described in the Construction Noise Assessment, Environmental Considerations Report and the Construction and Environmental Management Plan shall be implemented in full.

**Reason:** In order to protect the amenities of the area.

13. (a) All road surfaces, culverts, verges and public lands shall be protected during construction and, in the case of any damage occurring, shall be reinstated to the satisfaction of the planning authority. Prior to the commencement of

development, a road condition survey shall be taken along the full extent of the R347 and R458 construction route 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 the commencement of development.

(b) The full extent of the L8650 and L4506, and the L4505 (from the junction with the R347 to the entrance to the northern parcel of the site) shall be resurfaced in accordance with details to be agreed with the Planning Authority prior to the commencement of development. The details to be agreed shall include the specification of the resurfacing works and the timing of the works to be carried out which shall be in accordance with the requirements of the Planning Authority.

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

14. (a) A Stage 2 Road Safety Audit (RSA) in accordance with TII requirements, which shall include all site entrances and passing bays, shall be submitted to the planning authority for written agreement.

(b) The final details of the operational access arrangements shall be submitted to and agreed with the planning authority prior to the commencement of development. Any gates shall open inwards only.

**Reason:** In the interests of traffic safety.

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

- a) location of the site and materials compound(s);
- b) location 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, to include proposals to facilitate the delivery of HGV traffic and associated loads to the site and to avoid conflict with schools and pre-schools;
- f) measures to facilitate demands for VRU's and 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, management of excavated soil, control of surface water run-off and control of on-site refuelling in accordance with the ecological and environmental mitigation measures set out in the NIS;
- j) off-site disposal of construction/demolition waste;
- n) details of compliance with Condition No.16, 17, & 18 of this order;
- o) community liaison details including how the developer intends to engage with relevant parties and notify the local community in advance of the delivery of oversized loads and/or HGV deliveries.

The finalised Construction and Environmental Management Plan shall also take account of the mitigation measures outlined within the NIS. A record of daily checks that the works are being undertaken shall be kept for inspection by the planning authority.

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

16. All mitigation measures in relation to archaeology and cultural heritage as set out in the Archaeological Testing Report (John Cronin & Associates: June 2025) shall be implemented in full except as maybe otherwise required in order to comply with the conditions hereunder in relation to archaeological heritage. The developer shall retain/engage a suitably qualified Archaeologist to advise on and implement appropriate archaeological mitigation strategies in advance of and during construction works, as follows:

- (a) In advance of the commencement of development, the appointed Archaeologist shall advise on and supervise the installation of appropriate works exclusion zones at all sites/monuments listed in the statutory Record of Monuments and Places (RMP), Sites and Monuments Record (SMR) and all areas of subsurface archaeology identified during the targeted archaeological test excavation within the development lands. The use of appropriate non-intrusive fencing (heras type or similar) shall be necessary to demarcate the works exclusions zones. No movement or storage of plant, machinery, equipment, spoils or sundries shall be permitted within these zones for the duration of all construction related activity.
- (b) In advance of the commencement of development, the appointed Archaeologist shall carry out a second phase of pre-construction archaeological test excavation in all remaining areas of proposed ground disturbance within the development site, including, but not limited to, construction compounds, substation/inverter station locations, hard-standing/lay down areas, access tracks and drainage location and cable array locations. Such works shall be carried out under licence from the National Monuments Service, Department of Housing, Local Government and Heritage.
- (c) Archaeological Test Excavation shall be informed and supplemented by licensed metal detection survey.
- (d) In advance of the commencement of development, the developer shall facilitate the Archaeologist in carrying out a Boundary Survey within the proposed development site. The Archaeologist shall record the historic vernacular field boundary walls and townland boundaries at all locations proposed for removal during construction within the development site.
- (e) Following completion of the archaeological works, the developer shall submit an updated archaeological impact assessment report for the written agreement of the Planning Authority, following consultation with the Department of Housing, Local Government and Heritage, in advance of any site preparation works or ground works, including site investigation works, topsoil stripping, site clearance works and construction works. The report shall

include an updated archaeological impact statement and mitigation strategy based on the findings of the Phase 2 excavation.

- (f) Where archaeological material is shown to be present, avoidance, preservation in situ, preservation by record (archaeological excavation) and/or monitoring may be required.
- (g) Any further archaeological mitigation requirements specified by the Planning Authority, following consultation with the Department of Housing, Local Government and Heritage, shall be complied with by the developer. No site enabling/preparation works or construction works shall be carried out on site until the Archaeologist's report has been submitted to, and written approval to proceed has been received from, the Planning Authority.

**Reason:** To ensure the continued preservation (either in situ or by record) of places, caves, sites features or other objects of archaeological interest.

17. Based on the findings of the Phase 2 Archaeological Test Excavation and following consultation with the Planning Authority and the Department of Housing, Local Government and Heritage, the appointed Archaeologist shall carry out a programme of Archaeological monitoring of remaining ground works required during construction. The use of appropriate machinery to ensure the preservation and recording of any surviving archaeological remains shall be necessary.

- (a) Should archaeological remains be identified during the course of archaeological monitoring, all works shall be suspended in the area of archaeological interest pending a decision of the Planning Authority, in consultation with the Department of Housing, Local Government and Heritage, regarding appropriate mitigation (preservation in situ/excavation).
- (b) Archaeological monitoring shall be informed and supplemented by licensed metal detection survey.
- (c) The developer shall facilitate the Archaeologist in recording any remains identified. Any further archaeological mitigation requirements specified by the Planning Authority, following consultation with the Department of Housing, Local Government and Heritage, shall be complied with by the developer.

**Reason:** To ensure the continued preservation (either in situ or by record) of places, caves, sites features or other objects of archaeological interest.

18. (a) The Archaeologist shall monitor and record the removal of sections of townland boundaries and. Where appropriate (based on the findings of the Boundary Survey), other historic field boundaries during construction stage.
- (b) Following completion of all archaeological work on site and any necessary post-excavation specialist analysis, the Planning Authority and the Department of Housing, Local Government and Heritage shall be furnished with a final archaeological report describing the results of the monitoring and any subsequent required archaeological investigative work/excavation. All resulting and associated archaeological costs shall be borne by the developer.
- (c) A final Construction and Environmental Management Plan (CEMP) shall incorporate the findings of the Phase 1 and Phase 2 archaeological works. The CEMP shall include the location of any and all archaeological constraints relevant to the proposed development, as set out in the Archaeological Test Excavation Report (Phase 1 – John Cronin & Associates; June 2025) and as may become relevant subsequent to Phase 2 archaeological works. The CEMP shall clearly describe all identified likely archaeological impacts, both direct and indirect, and present all mitigation measures to be employed to protect the archaeological environment during all phases of site preparation, construction activity and decommissioning.
- (d) All site personnel shall be appraised of the locations and sensitivities of the statutorily protected Recorded Monuments and sub-surface archaeological features identified within the development site. This shall be done through the appropriate dissemination of the CEMP and pre-commencement and regular tool-box talks.

**Reason:** To ensure the continued preservation (either in situ or by record) of places, caves, sites features or other objects of archaeological interest.

19. Prior to commencement of development, the developer shall lodge with the planning authority a cash deposit, a bond of an insurance company, or such other security as may be acceptable to the planning authority, to secure the reinstatement of public roads which may be damaged by the transport of

materials to the site, coupled with an agreement empowering the planning authority to apply such security or part thereof to the satisfactory reinstatement of the public road. 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 Coimisiún Pleanála for determination.

**Reason:** In the interest of traffic safety and the proper planning and sustainable development of the area.

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

**Reason:** To ensure satisfactory reinstatement of the site.

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 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 Coimisiún 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.

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Paul Kelly  
Senior Planning Inspector

17<sup>th</sup> September 2025

## Appendix 1 (Form 1) - EIA Pre-Screening

|                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| <b>Case Reference</b>                                                                                                                                                                                                                                                                                                                                                                       | ABP-320662-24                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Proposed Development Summary</b>                                                                                                                                                                                                                                                                                                                                                         | <p>Planning permission is sought for a period of 10 years for the development of a solar farm on a site of 125ha and consisting of:</p> <ul style="list-style-type: none"> <li>• 570,952 sq.m of solar photovoltaic panels on ground mounted steel frames (panel arrays will be 3.2m high);</li> <li>• 18 no. hardstanding locations, with each containing 3 no. electrical skids surrounded by a palisade fence with gates;</li> <li>• Underground power and communications cables and ducts, including cabling along the L-8560, L-4505, L-4506 and R347 public roads;</li> <li>• 4 no. joint bays, new internal access tracks (approx. 7km), a new access from the R347 public road;</li> <li>• Upgrade to existing access points along the L-4505 and R347 public roads;</li> <li>• Access gates, security gates, landscaping and biodiversity enhancement measures, boundary fencing (approx. 16km), and</li> <li>• all associated ancillary development, site works and services including infrared closed-circuit television (CCTV) cameras.</li> </ul> |
| <b>Development Address</b>                                                                                                                                                                                                                                                                                                                                                                  | Cloghboley – Carrowgarra North, Co. Galway.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                                                                                                                                                             | <b>In all cases check box /or leave blank</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>1. Does the proposed development come within the definition of a 'project' for the purposes of EIA?</b><br><br>(For the purposes of the Directive, "Project" means:<br>- The execution of construction works or of other installations or schemes,<br><br>- Other interventions in the natural surroundings and landscape including those involving the extraction of mineral resources) | <input checked="" type="checkbox"/> Yes, it is a 'Project'. Proceed to Q2.<br><br><input type="checkbox"/> No, No further action required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>2. Is the proposed development of a CLASS specified in <u>Part 1</u>, Schedule 5 of the Planning and Development Regulations 2001 (as amended)?</b>                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <input type="checkbox"/> Yes, it is a Class specified in Part 1.                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

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| <p><b>EIA is mandatory. No Screening required. EIAR to be requested. Discuss with ADP.</b></p>                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <p><input checked="" type="checkbox"/> No, it is not a Class specified in Part 1. Proceed to Q3</p>                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <p><b>3. Is the proposed development of a CLASS specified in Part 2, Schedule 5, Planning and Development Regulations 2001 (as amended) OR a prescribed type of proposed road development under Article 8 of Roads Regulations 1994, AND does it meet/exceed the thresholds?</b></p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <p><input type="checkbox"/> No, the development is not of a Class Specified in Part 2, Schedule 5 or a prescribed type of proposed road development under Article 8 of the Roads Regulations, 1994.</p> <p><b>No Screening required.</b></p>                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <p><input type="checkbox"/> Yes, the proposed development is of a Class and meets/exceeds the threshold.</p> <p><b>EIA is Mandatory. No Screening Required</b></p>                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <p><input checked="" type="checkbox"/> Yes, the proposed development is of a Class but is sub-threshold.</p> <p><b>Preliminary examination required. (Form 2)</b></p>                                                                                                                | <p>The development of a solar farm is not a specified class of development in Part 1 or Part 2 of Schedule 5 of the Regulations. In particular I note the recent 2024 Treascon and Clondoolusk -v- An Bord Pleanala Supreme Court decision [2024 IESC 28] which confirms this position. In the interests of completeness, the assessment of the proposed solar farm development in relation to the following classes of Part 2 of Schedule 5 of the Regulations is as follows:</p> <ul style="list-style-type: none"> <li>▪ <b>Schedule 5, Part 2, Class 1 (a) Rural Restructuring.</b> This includes: <p><i>“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-countering is above 5 hectares, or where the area of lands to be restructured by removal of field boundaries is above 50 hectares”.</i></p> </li> </ul> <p>The proposed solar farm development will involve some</p> |

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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|  | <p>minor hedgerow removal to facilitate access but significantly below the 4km threshold. This will not involve the amalgamation, enlargement or restructuring of existing fields. Re-contouring is not proposed as a part of the development. It is considered that the development does come within the scope of this class on the basis that it involves the removal of field boundary hedgerow but that it is subthreshold. Accordingly, an EIA preliminary Examination is required.</p> |
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| <b>4. Has Schedule 7A information been submitted AND is the development a Class of Development for the purposes of the EIA Directive (as identified in Q3)?</b> |                                                                    |
| No <input checked="" type="checkbox"/>                                                                                                                          | Pre-screening determination conclusion remains as above (Q1 to Q3) |

Inspector: \_\_\_\_\_ Date: \_\_\_\_\_

## Appendix 2 (Form 2) - EIA Preliminary Examination

|                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| <b>Case Reference</b>                                                                                                                                                                                                                                                                        | ABP-320662-24                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Proposed Development Summary</b>                                                                                                                                                                                                                                                          | <p>Planning permission is sought for a period of 10 years for the development of a solar farm on a site of 125ha and consisting of:</p> <ul style="list-style-type: none"> <li>• 570,952 sq.m of solar photovoltaic panels on ground mounted steel frames (panel arrays will be 3.2m high);</li> <li>• 18 no. hardstanding locations, with each containing 3 no. electrical skids surrounded by a palisade fence with gates;</li> <li>• Underground power and communications cables and ducts, including cabling along the L-8560, L-4505, L-4506 and R347 public roads;</li> <li>• 4 no. joint bays, new internal access tracks (approx. 7km), a new access from the R347 public road;</li> <li>• Upgrade to existing access points along the L-4505 and R347 public roads;</li> <li>• Access gates, security gates, landscaping and biodiversity enhancement measures, boundary fencing (approx. 16km), and</li> <li>• all associated ancillary development, site works and services including infrared closed-circuit television (CCTV) cameras.</li> </ul> |
| <b>Development Address</b>                                                                                                                                                                                                                                                                   | Cloghboley – Carrowgarraff North, Co. Galway.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>This preliminary examination should be read with, and in the light of, the rest of the Inspector's Report attached herewith.</b>                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Characteristics of proposed development</b><br><br>(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). | <p>The element of the project which consists of the removal of hedgerow is limited to that required for the provision of internal access gaps between fields within the respective southern, central and northern parcels of the project site. It will not result in the enlargement or amalgamation of fields nor the restructuring of lands.</p> <p>The hedgerow removal required for internal access between the fields of the project site is very limited and quantified as 42m in total with each access point not exceeding 3.5m. The hedgerow intervention required for the achievement of visibility splays is limited to maintenance trimming to a height of 1m.</p>                                                                                                                                                                                                                                                                                                                                                                                 |

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|                                                                                                                                                                                                                                                                                                                                                                                                                                              | <p>The substantive pattern of hedgerow (and stone walls) at the site will be retained and the field pattern will be maintained. Hedgerow which will be lost, will be replanted and/or augmented by additional planting set out in the BMP which will result in enhanced hedgerow provision versus the status quo.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <p><b>Location of development</b></p> <p>(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).</p> | <p><b>Briefly comment on the location of the development, having regard to the criteria listed</b></p> <p>The main environmental sensitivities arising in relation to the site concerns the removal of hedgerows and its proximity to a LHB roost associated with the Lough Fingall Complex SAC (000606).</p> <p>The Appropriate Assessment Determination (Appendix 4) to this report, found that the proposed development, by itself or in combination with other plans or projects, would not adversely affect the integrity of a European Site including the QI species LHB. This is based on the distance of the development site from the LHB roost, the very limited loss of foraging and commuting habitat and the abundance of such habitat in the wider environment.</p> <p>Otherwise, the development is not located within a sensitive landscape. In this regard there are no other built or cultural assets, there are no designated views, prospects or scenic roads and the landscape has a 'low' sensitivity rating in the GCDP LCA which means it is unlikely to be affected by change. The landscape of the site consists of agricultural grassland, hedgerows, stonewalls and treelines which are abundant in the wider environment. It is located in a rural area, which is not densely populated and where agriculture type activities are the main land use(s) and where there is significant road (M18) and electricity infrastructure present. The site has no hydrological connectivity with surface water bodies and there are no watercourses or permanent surface water features within the site.</p> |
| <p><b>Types and characteristics of potential impacts</b></p> <p>(Likely significant effects on environmental parameters,</p>                                                                                                                                                                                                                                                                                                                 | <p><b>Having regard to the characteristics of the development and the sensitivity of its location, consider the potential for SIGNIFICANT effects, not just effects.</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

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| magnitude and spatial extent, nature of impact, transboundary, intensity and complexity, duration, cumulative effects and opportunities for mitigation). | Having regard to the limited characteristics of the proposed development, which requires minor loss of hedgerow (42m), to the biodiversity enhancement measures set out in the BMP and the conclusions of the AA process of the Inspectors Report, it is considered that the project has no potential for effects including significant effects. |
| <b>Conclusion</b>                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                  |
| <b>Likelihood of Significant Effects</b>                                                                                                                 | <b>Conclusion in respect of EIA</b>                                                                                                                                                                                                                                                                                                              |
| There is no real likelihood of significant effects on the environment.                                                                                   | EIA is not required.                                                                                                                                                                                                                                                                                                                             |

Inspector: \_\_\_\_\_ Date: \_\_\_\_\_

## Appendix 3: AA Screening Determination Template

### Test for likely significant effects (ABP 320662-24)

| Screening for Appropriate Assessment<br>Test for likely significant effects                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| <b>Step 1: Description of the project and local site characteristics</b>                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Case File: ABP 320662-24</b>                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Brief description of project</b>                                                           | <p>Normal Planning Appeal</p> <p>Planning permission is sought for a period of 10 years for the development of a solar farm on a site of 125ha and consisting of:</p> <ul style="list-style-type: none"> <li>• 570,952 sq.m of solar photovoltaic panels on ground mounted steel frames (panel arrays will be 3.2m high);</li> <li>• 18 no. hardstanding locations, with each containing 3 no. electrical skids surrounded by a palisade fence with gates;</li> <li>• Underground power and communications cables and ducts, including cabling along the L-8560, L-4505, L-4506 and R347 public roads;</li> <li>• 4 no. joint bays, new internal access tracks (approx. 7km), a new access from the R347 public road;</li> <li>• Upgrade to existing access points along the L-4505 and R347 public roads;</li> <li>• Access gates, security gates, landscaping and biodiversity enhancement measures, boundary fencing (approx. 16km), and</li> <li>• all associated ancillary development, site works and services including infrared closed-circuit television (CCTV) cameras.</li> </ul> <p>See Section 3.0 of Inspectors Report.</p> |
| <b>Brief description of development site characteristics and potential impact mechanisms.</b> | <p>The site is located within a karst landscape and there are a number of mapped turloughs (temporary lakes) within and adjoining the subject site. The site is otherwise characterized by agricultural grasslands with gentle elevations bounded by stone walls, hedgerows and treelines. The main impact mechanisms consist of loss of foraging habitat for bats and birds as a result of hedgerow removal and loss of grassland habitat. The loss of hedgerow may also have impacts on commuting bats. The change from cattle/horse grazing to low intensity sheep grazing may impact predator-prey indicators and insect abundance. The installation of solar panels may also have injury and mortality effects on bats and birds associated with solar reflections. There may be impacts on groundwaters and surface waters, including Turloughs associated with potential contamination (sediment/hydrocarbons) at all stages of the</p>                                                                                                                                                                                            |

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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | project. Potential disturbance (noise and light) and dewatering impacts (construction excavation) are also possible.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Screening report</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Yes. Prepared by AECOM.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Natura Impact Statement</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Yes. Prepared by AECOM.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Relevant submissions</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <p>Statutory submissions from the DHLGH at planning application stage raised concerns in relation to:</p> <ul style="list-style-type: none"> <li>potential disturbance impacts on LHB (QI species of Lough Fingal Complex SAC) and the severing of commuting routes. Additional summer surveys were recommended,</li> <li>the impact and timing of works within 30m of a Turlough relative to potential disturbance and displacement effects on Wigeon (QI species of Galway Bay SPA),</li> <li>Impact of reflected polarized light on QI bird species of Galway Bay SPA.</li> </ul> <p>The DHLGH otherwise made recommendations in relation to pre-commencement surveys, management of grasslands, quantification of hedgerow removal, restriction on vegetation clearance, decommissioning plan and panel wash waters. These matters were largely addressed at F.I. (planning application) stage and in its statutory report to this appeal the DHLGH commented that it was satisfied with the LHB mitigation and enhancement measures provided.</p> <p>Third party observations to the appeal generally raise concerns in relation to the survey effort concerning bats and impacts on flora and fauna generally.</p> |
| <b>Additional information:</b><br><br>N/A.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Step 2. Identification of relevant European sites using the Source-pathway-receptor model</b><br><br><p>The applicants Stage 1 AA Screening Report identified European Sites on the basis of the source-pathway-receptor approach (rather than a solely distance-based approach) and by establishing a likely Zone of Influence (ZOI) for the project. Several sources of potential impact were considered including: Loss of habitat outside a European Site which supports QI species, disturbance of QI species, injury or mortality of QI species, prevention of migratory movements of QI species, changes to surface water or groundwater hydrology, waterborne pollution, airborne pollution and spread of invasive non-native species. Direct loss of and/or direct damage to habitat within a European site was not considered as the proposed development is not situated within or adjacent to a European site. The proposed development has no direct hydrological connection to a European Site. The nearest River is the Kilchreest River 3.5km to the south at its closest point. There is no hydrological link between the site and this river.</p> <p>The ZOI was also informed, inter alia, by the following ranges for mobile species: Otter - a home range of 15km (<i>informed by Reid et al. (2013)</i>); Lesser horseshoe bat - a 'core sustenance zone' and commuting and foraging range of 2.5km (<i>informed by Bat Conservation Trust (2020) and NPWS LHB Action Plan 2022-2026</i>) and Marsh Fritillary - a dispersal distance of 1.5km (<i>informed by Wahlberg et al.</i></p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

(2002)). There are no SAC's designated for fish or freshwater pearl mussel which are hydrologically connected to the proposed development. It was determined that all European sites were outside the distance at which airborne pollution could have significant effects (50m for dust (IAQM, 2014) and 200m for gaseous emission (IAQM, 2020)) and that habitats within and surrounding the site which could support QI/SCI species are not vulnerable to air quality impacts of the type which can be generated by the proposed development. No non-native invasive species were identified during field survey.

This process identified 27 no. European sites within the potential ZOI of the proposed development. These sites range from 270m to 14.6km from the subject site and there are no other designated European sites in closer proximity to the subject site. It is considered that this is a judicious approach which is clearly evidence based but which is particularly conservative in respect of some sites. In my opinion there are a number of these European sites which, having regard to their Conservation Objectives, clearly have no ecological connection with the proposed development site and therefore no pathway way for effects. These are: Cahermore Turlough SAC (002294) (2.1km to the south), Castletaylor Complex SAC (000242) (2.1km to the northeast), Galway Bay Complex SAC (0002680) (3.3km to the west), Ballinduff Turlough SAC (002295) (4.1km to the southeast), Rahasane Turlough SAC (000322) (5.1km to the northeast), Carrowbaun, Newhall and Ballylee Turloughs SAC (002293) (6.1km to the southeast), Lough Coy SAC (002117) (6.8km to the southeast), Peterswell Turlough SAC (000318) (7.2km to the southeast), Termon Lough SAC (001321) (10.8km to the south), Sonnagh Bog SAC (001913) (13km to the east), Drummin Wood SAC (002181) (14km to the southeast), and Gortacarnaun Wood SAC (002180) (14.6km to the southeast). This assessment is informed by distance, the absence of a hydrological or hydrogeological connection and/or the absence of groundwater dependent habitats. I have therefore excluded these sites from further screening consideration and carried 15 no. European sites forward for further screening consideration as follows.

| European Site (code)               | Qualifying interests                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Distance from proposed development (km) | Ecological connections                                                                                                                                           | Consider further in screening Y/N |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| Kiltiernan Turlough SAC (001285)   | <ul style="list-style-type: none"> <li>Turloughs [3180]</li> </ul> <a href="https://www.npws.ie/protected-sites/sac/001285">https://www.npws.ie/protected-sites/sac/001285</a> - NPWS January 2021                                                                                                                                                                                                                                                                                      | 200m to the north.                      | <b>Yes.</b> Hydrogeological connection.<br><br>The site is within a karst landscape, with likely connectivity to ground water dependent QI habitats 'Turloughs'. | <b>Yes.</b>                       |
| Ardrahan Grassland SAC (002244)    | <ul style="list-style-type: none"> <li>Alpine and boreal heaths [4060]</li> <li><i>Juniperus communis</i> formations on heaths or calcareous grasslands [5130]</li> <li>Semi-natural dry grasslands and scrubland facies on calcerous substrates <i>Festuco-Brometalia</i> (*important orchid sites) [6210]</li> <li>Limestone pavements [8240]</li> </ul> <a href="https://www.npws.ie/protected-sites/sac/002244">https://www.npws.ie/protected-sites/sac/002244</a> - NPWS June 2024 | 270m to the northeast.                  | <b>None.</b><br><br><i>Notwithstanding proximity, it is specifically noted that this SAC is not designated for any groundwater dependent habitats.</i>           | <b>No.</b>                        |
| Lough Fingall Complex SAC (000606) | <ul style="list-style-type: none"> <li>Turloughs [3180]</li> <li>Alpine and boreal heaths [4060]</li> <li><i>Juniperus communis</i> formations on heaths or calcareous grasslands [5130]</li> <li>Semi-natural dry grasslands and scrubland facies on calcerous</li> </ul>                                                                                                                                                                                                              | 290m to the northwest.                  | <b>Yes.</b> Ecological and hydrogeological connections.<br><br>The LHB roost for which this site is designated lies approx. 2.3km to the                         | <b>Yes.</b>                       |

|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                         |                                                                                                                                                                                                                                                                                                                                          |             |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|                               | <p>substrates <i>Festuco-Brometalia</i> (*important orchid sites) [6210]</p> <ul style="list-style-type: none"> <li>▪ Calcareous fens with <i>Claudium mariscus</i> and species of the <i>Caricion davallianae</i> [7210]</li> <li>▪ Limestone Pavements [8240]</li> <li>▪ Lesser horseshoe bat <i>Rhiolophus hipposideros</i> [1303]</li> </ul> <p><a href="https://www.npws.ie/protected-sites/sac/000606">https://www.npws.ie/protected-sites/sac/000606</a> - NPWS January 2019.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                         | <p>NW of the proposed development. The site is within the foraging/commuting range for this QI species.</p> <p>The site is within a karst landscape, with likely connectivity to ground water dependent QI habitats 'Turloughs'.</p>                                                                                                     |             |
| Coole-Garryland SAC (000252)  | <ul style="list-style-type: none"> <li>▪ Natural eutrophic lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i> - type vegetation [3150]</li> <li>▪ Turloughs [3180]</li> <li>▪ Rivers with muddy banks with <i>Chenopodion rubri p.p.</i> and <i>Bidenton p.p.</i> vegetation [3270]</li> <li>▪ <i>Juniperus communis</i> formations on heaths or calcareous grasslands [5130]</li> <li>▪ Semi-natural dry grasslands and scrubland facies on calcareous substrates <i>Festuco-Brometalia</i> (*important orchid sites) [6210]</li> <li>▪ Limestone pavements [8240]</li> <li>▪ <i>Taxus baccata</i> woods of the British Isles [91J0]</li> <li>▪ Lesser horseshoe bat <i>Rhiolophus hipposideros</i> [1303]</li> </ul> <p><a href="https://www.npws.ie/protected-sites/sac/000252">https://www.npws.ie/protected-sites/sac/000252</a> - NPWS July 2024</p>                                                                                                                                                                                                                                                                                                                           | 2.7km to the southeast. | <p><b>None.</b></p> <p><i>Given the distance (6.5km) to the roost for which this European site is designated, to suitable intervening habitats and suitable foraging habitat within this SAC, the proposed development site is not considered to provide functionally linked ex-situ habitat for the LHB QI species of this SAC.</i></p> | <b>No.</b>  |
| Inner Galway Bay SPA (004031) | <ul style="list-style-type: none"> <li>▪ Black-throated diver <i>Gavia arctica</i> [A002]</li> <li>▪ Great northern diver <i>Gavia immer</i> [A003]</li> <li>▪ Cormorant <i>Phalacrocorax carbo</i> [A017]</li> <li>▪ Grey heron <i>Ardea cinerea</i> [A028]</li> <li>▪ Light-bellied brent goose <i>Branta bernicla hrota</i> [A046]</li> <li>▪ Wigeon <i>Anas Penelope</i> [A050]</li> <li>▪ Teal <i>Anas creca</i> [A052]</li> <li>▪ Red-breasted merganser <i>Mergus serrator</i> [A069]</li> <li>▪ Ringed Plover <i>Charadius hiaticula</i> [A137]</li> <li>▪ Golden plover <i>Pluvialis apricaria</i> [A140]</li> <li>▪ Lapwing <i>Vanellus Vanellus</i> [A142]</li> <li>▪ Dunlin <i>Calidris aplina</i> [A149]</li> <li>▪ Bar-tailed godwit <i>Limosa lapponica</i> [A157]</li> <li>▪ Curlew <i>Numenius arquata</i> [A160]</li> <li>▪ Redshank <i>Tringa tetanus</i> [A162]</li> <li>▪ Turnstone <i>Arenaria interpres</i> [A169]</li> <li>▪ Black-headed gull <i>Chroicocephalus ridibundus</i> [A179]</li> <li>▪ Common gull <i>Larus canus</i> [A182]</li> <li>▪ Sandwich tern <i>Sterna sandvicensis</i> [A191]</li> <li>▪ Common tern <i>Sterna hirundo</i> [A193]</li> </ul> | 3.3k to the west.       | <p><b>Yes.</b> Ornithological connection.</p> <p><i>Non-breeding birds, including 55 Wigeon, identified within and adjacent to turloughs during field surveys.</i></p>                                                                                                                                                                   | <b>Yes.</b> |

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|                                     | <ul style="list-style-type: none"> <li>Wetland and waterbirds [A999]</li> </ul> <a href="https://www.npws.ie/protected-sites/spa/004031">https://www.npws.ie/protected-sites/spa/004031</a> - NPWS May 2013.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                         |                                                                                                                                                                                                                                                                                                                                                                                                |             |
| Caherglassaun Turlough SAC (000238) | <ul style="list-style-type: none"> <li>Turloughs [3180]</li> <li>Rivers with muddy banks with <i>Chenopodium rubric p.p.</i> and <i>Bidenton p.p.</i> vegetation [3270]</li> <li>Lesser horseshoe bat <i>Rhiolophus hipposideros</i> [1303]</li> </ul> <a href="https://www.npws.ie/protected-sites/sac/000238">https://www.npws.ie/protected-sites/sac/000238</a> - NPWS October 2018                                                                                                                                                                                                                                                                                                                                                                                    | 3.5km to the south      | <b>None.</b><br><br><i>Given distance (4.7km) to the roost for which this European site is designated, to suitable intervening habitats and suitable foraging habitat within this SAC, the proposed development site is not considered to provide functionally linked ex-situ habitat for the LHB QI species of this SAC.</i>                                                                  | <b>No.</b>  |
| Coole-Garryland SPA (004107)        | <ul style="list-style-type: none"> <li>Whooper swan <i>Cygnus cygnus</i> [A038]</li> </ul> <a href="https://www.npws.ie/protected-sites/spa/004107">https://www.npws.ie/protected-sites/spa/004107</a> - NPWS February 2025                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 4.5km to the south.     | <b>Yes.</b> Ornithological connection.<br><br><i>Non-breeding birds identified within and adjacent to turloughs during field surveys.</i>                                                                                                                                                                                                                                                      | <b>Yes.</b> |
| Rahasane Turlough SPA (004089)      | <ul style="list-style-type: none"> <li>Whooper Swan <i>Cygnus cygnus</i> [A038]</li> <li>Wigeon <i>Anas Penelope</i> [A050]</li> <li>Golden Plover <i>Pluvias apricaria</i> [A140]</li> <li>Black-tailed godwit <i>Limosa limosa</i> [A156]</li> <li>Greenland white-fronted goose <i>Anser albifrons flavirostris</i> [A395]</li> <li>Wetland and waterbirds [A999]</li> </ul> <a href="https://www.npws.ie/protected-sites/spa/004089">https://www.npws.ie/protected-sites/spa/004089</a> - NPWS January 2023                                                                                                                                                                                                                                                           | 5km to the northeast.   | <b>Yes.</b> Ornithological connection.<br><br><i>Non-breeding birds, including 55 Wigeon, identified within and adjacent to turloughs during field surveys.</i>                                                                                                                                                                                                                                | <b>Yes.</b> |
| East Burren Complex SAC (001926)    | <ul style="list-style-type: none"> <li>Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara spp.</i> [3140]</li> <li>Turloughs [3180]</li> <li>Water courses of plain to montane levels with the <i>Ranunculon fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation [3260]</li> <li>Alpine and boreal heaths [4060]</li> <li><i>Juniperus communis</i> formations on heaths or calcareous grasslands [5130]</li> <li><i>Calaminarian grasslands of the Violetalla calaminariae</i> [6130]</li> <li>Semi-natural dry grasslands and scrubland facies on calcareous substrates <i>Festuco-Bromoetalia</i> (*important orchid sites) [6120]</li> <li>Lowland hay meadows (<i>Alopecurus pratensis</i>, <i>Sanguisorba officinalis</i>) [6510]</li> </ul> | 5.7km to the southwest. | <b>None.</b><br><br><i>Given distance, suitable intervening habitats and suitable foraging habitat within this SAC, the proposed development site is not considered to provide functionally linked ex-situ habitat for the LHB QI species of this SAC.</i><br><br><i>No hydrological connection (otter).</i><br><br><i>The proposed development is significantly outside the precautionary</i> | <b>No.</b>  |

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|                                      | <ul style="list-style-type: none"> <li>▪ Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> [7210]</li> <li>▪ Petrifying springs with tufa formation <i>Cratoneurion</i> [7220]</li> <li>▪ Alkaline Fens [7230]</li> <li>▪ Limestone pavements [8240]</li> <li>▪ Caves not open to the public [8310]</li> <li>▪ Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) [91E0]</li> <li>▪ Marsh Fritillary <i>Euphydryas aurinia</i> [1065]</li> <li>▪ Lesser horseshoe bat <i>Rhinolophus hipposideros</i> [1303]</li> <li>▪ Otter <i>Lutra lutra</i> [1355]</li> </ul> <p><a href="https://www.npws.ie/protected-sites/sac/001926">https://www.npws.ie/protected-sites/sac/001926</a> - NPWS January 2022</p> |                          | <i>dispersal distance for Marsh Fritillary.</i>                                                                                                                                                                                                                      |             |
| Cregganna Marsh SPA (004142)         | <ul style="list-style-type: none"> <li>▪ Greenland white-fronted goose [A395]</li> </ul> <p><a href="https://www.npws.ie/protected-sites/spa/004142">https://www.npws.ie/protected-sites/spa/004142</a> - NPWS January 2023</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 9.2km to the northwest.  | <p><b>Yes.</b> Ornithological connections.</p> <p><i>Non-breeding birds identified within and adjacent to turloughs during field surveys.</i></p>                                                                                                                    | <b>Yes.</b> |
| Slieve Aughty Mountains SPA (004168) | <ul style="list-style-type: none"> <li>▪ Hen harrier <i>Circus cyaneus</i> [A082]</li> <li>▪ Merlin <i>Falco columbarius</i> [A098]</li> </ul> <p><a href="https://www.npws.ie/protected-sites/spa/004168">https://www.npws.ie/protected-sites/spa/004168</a> - NPWS December 2022</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 10.2km to the southeast. | <p><b>None.</b></p> <p><i>The proposed development site is outside of the core foraging range for the SCI species Hen harrier and Merlin of 2km and 5km respectively.</i></p>                                                                                        | <b>No.</b>  |
| Lough Cutra SAC (000299)             | <ul style="list-style-type: none"> <li>▪ Lesser horseshoe bat <i>Rhinolophus hipposideros</i> [1303]</li> </ul> <p><a href="https://www.npws.ie/protected-sites/sac/000299">https://www.npws.ie/protected-sites/sac/000299</a> - NPWS July 2018</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 12.2km to the southeast. | <p><b>None.</b></p> <p><i>Given distance, suitable intervening habitats and to suitable foraging habitat within this SAC, the proposed development site is not considered to provide functionally linked ex-situ habitat for the LHB QI species of this SAC.</i></p> | <b>No.</b>  |
| Lough Cutra SPA (004056)             | <ul style="list-style-type: none"> <li>▪ Cormorant [A017]</li> </ul> <p><a href="https://www.npws.ie/protected-sites/spa/004056">https://www.npws.ie/protected-sites/spa/004056</a> - NPWS March 2025</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 12.2km to the southeast. | <p><b>Yes.</b> Ornithological connection.</p> <p><i>Non-breeding birds identified within and adjacent to turloughs during field surveys.</i></p>                                                                                                                     | <b>Yes.</b> |
| Moneen Mountain SAC (000054)         | <ul style="list-style-type: none"> <li>▪ Turloughs [3180]</li> <li>▪ Alpine and boreal heaths [4060]</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 13.5km to the west.      | <p><b>None.</b></p> <p><i>Given distance, suitable intervening</i></p>                                                                                                                                                                                               | <b>No.</b>  |

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|                        | <ul style="list-style-type: none"> <li>▪ <i>Juniperus communis</i> formations on heaths or calcareous grasslands [5130]</li> <li>▪ Semi-natural dry grasslands and scrubland facies on calcareous substrates <i>Festuco-Brometalia</i> (*important orchid sites) [6210]</li> <li>▪ Petrifying springs with tufa formation <i>Cratoneurion</i> [7220]</li> <li>▪ Limestone pavements [8240]</li> <li>▪ Marsh Fritillary <i>Euphydryas aurinia</i> [1065]</li> <li>▪ Lesser horseshoe bat <i>Rhinolophus hipposideros</i> [1303]</li> </ul> <p><a href="https://www.npws.ie/protected-sites/sac/000054">https://www.npws.ie/protected-sites/sac/000054</a> - NPWS December 2021</p> |                    | <p><i>habitats and suitable foraging habitat within this SAC, the proposed development site is not considered to provide functionally linked ex-situ habitat for the LHB QI species of this SAC.</i></p> <p><i>The proposed development is significantly outside the precautionary dispersal distance for Marsh Fritillary</i></p> |             |
| Lough Rea SPA (004134) | <ul style="list-style-type: none"> <li>▪ Coot (<i>Fulica atra</i>) [A125]</li> <li>▪ Shoveler (<i>Spatula clypeata</i>) [A857]</li> <li>▪ Wetland and Waterbirds [A999]</li> </ul> <p><a href="https://www.npws.ie/protected-sites/spa/004134">https://www.npws.ie/protected-sites/spa/004134</a> - NPWS January 2025</p>                                                                                                                                                                                                                                                                                                                                                         | 16.7km to the East | <p><b>Yes.</b> Ornithological connections.</p> <p><i>Non-breeding birds identified within and adjacent to turloughs during field surveys.</i></p>                                                                                                                                                                                  | <b>Yes.</b> |

### Step 3. Describe the likely effects of the project (if any, alone or in combination) on European Sites

The Solar Farm site is not located within or adjacent to a designated European Site. However, there are a number of European sites in very close proximity ranging from 200m (Kiltiernan Turlough SAC (001285)) to 270m (Ardrahan Grassland SAC (002244)), to 290m (Lough Fingall Complex SAC (000606)) as identified in Step 2 above. Notwithstanding the proximity of the Ardrahan Grassland SAC (002244), the applicant's Stage 1 AA Screening report establishes that there is no direct hydrological connectivity between the Solar Farm site and this site, and this SAC is not otherwise designated for any groundwater dependent habitats. EPA mapping and an inspection of the site supports this position. The applicant's Stage 1 AA Screening Report therefore concludes that there is no potential for impacts on the QI habitats of the Ardrahan Grassland SAC (002244) as there is no pathway for connectivity. Turloughs are a water dependent QI habitat of both Kiltiernan Turlough SAC (001285) and Lough Fingall Complex SAC (000606) and the Solar Farm site is within a karst landscape with likely hydrogeological connectivity with Kiltiernan Turlough and Lough Fingall Complex SAC. Also, the Lesser Horseshoe Bat (LHB) roost for which the Lough Fingall Complex SAC is designated, lies approx. 2.3km to the northwest of the proposed solar farm which is within the foraging/commuting range for this QI species. The applicants Stage 1 AA Screening report establishes that there is potential for hydrogeological connectivity with the Kiltiernan Turlough SAC and both hydrogeological and ecological connectivity with Lough Fingall Complex SAC.

Otherwise, the remaining sites identified in Step 2 range from 2.7km to 16.7km from the proposed Solar Farm site.

LHB is a QI species of the Coole-Garryland SAC (000252), the Caherglassaun Turlough SAC (000238), the East Burren Complex SAC (001926), the Lough Cutra SAC (000299) and the Moneen Mountain SAC (000054). The applicants Stage 1 AA Screening report establishes that the LHB roosts for which these European sites are designated lie outside the core foraging/commuting range of this QI species, and given distance, presence of suitable intervening habitats and suitable foraging habitat within the SAC's, the proposed solar farm site does not provide functionally linked ex-situ habitat for this QI species of the SAC's and there is no ecological connectivity. Additionally, Otter (*Lutra Lutra*) and Marsh

Fritillary (*Euphydryas aurinia*) are QI species of the East Burren Complex SAC. Marsh Fritillary is also a QI species of Moneen Mountain SAC. However, as there is no hydrological connection between the proposed solar farm site and the East Burren Complex SAC, and the proposed solar farm is otherwise significantly outside the precautionary dispersal distance for Marsh Fritillary, the applicants Stage 1 AA Screening report establishes that there is no ecological connection between the proposed development and the East Burren Complex SAC or Moneen Mountain SAC.

Hen Harrier (*Circus cyaneus*) and Merlin (*Falco columbarius*) are SCI of the Slieve Aughty Mountains SPA. However, the applicants Stage 1 AA Screening report establishes that the proposed solar farm site is outside the core foraging range for these species and therefore there is no ornithological connectivity between the proposed development and this SPA.

Non-breeding birds were identified at or near Turloughs within and adjoining the proposed solar farm development site during field surveys. The applicants Stage 1 AA Screening report therefore establishes that there is potential ornithological connectivity between the Inner Galway Bay SPA, the Coole-Garryland SPA, the Rashane Turlough SPA, the Cregganna Marsh SPA, the Lough Cutra SPA and Lough Rea SPA having regard to the SCI bird species of these SPA's.

Potential impacts generated by construction, operation and decommissioning of the Solar Farm include Loss of ex-situ qualifying, supporting or functionally linked habitat (LHB), Disturbance, injury or mortality of LHB, Change in predator-prey interaction (LHB), Pollution/contamination of QI habitat (Turlough), Change to groundwater regime (flow/volume) of water dependent QI habitat (Turlough), Loss of ex-situ supporting or functionally linked habitat of SCI bird species, Disturbance of SCI bird species, and Injury/Mortality of SCI bird species.

Sources of impact and likely significant effects are detailed in the Table below.

#### AA Screening matrix

| Site name<br>Qualifying interests                        | Possibility of significant effects (alone) in view of the conservation objectives of the site*                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                 |
|----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                          | Impacts                                                                                                                                                                                                                                                                                                                                                                                                                          | Effects                                                                                                                                                                                                                                                                                         |
| Kiltiernan Turlough SAC (001285)<br><br>Turloughs [3180] | <b>Direct:</b><br><br>None.<br><br><b>Indirect:</b><br><br>The site is within a karst landscape with sensitivity to rapid transport of pollutants. There is the possibility that the ground water dependent QI habitat 'Turloughs' could be impacted by ground works at construction stage and changes to ground water hydrology or waterborne pollution (accidental spills). The latter also being a risk at operational stage. | Waterborne pollution/contamination of QI habitat (Turlough).<br><br>Change to groundwater regime (disruption of flow/reduction in volume) of water dependent QI habitat (Turlough).<br><br>Effects could undermine the hydrological regime and water quality targets of the SSCO for this site. |
|                                                          | Likelihood of significant effects from proposed development (alone):<br><b>Yes.</b>                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                 |
|                                                          | If No, is there likelihood of significant effects occurring in combination with other plans or projects?<br><br><b>N/a.</b>                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                 |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Impacts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Effects                                                                                                                                                                                                                                                                                                                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Lough Fingall Complex SAC (000606)</b></p> <p>Turloughs [3180], Alpine and boreal heaths [4060], Juniperus communis formations on heaths or calcareous grasslands [5130], Semi-natural dry grasslands and scrubland facies on calcareous substrates Festuco-Brometalia (*important orchid sites) [6210], Calcareous fens with Cladium mariscus and species of the Caricion davallianae [7210], Limestone Pavements [8240], Lesser horseshoe bat Rhiolophus hipposideros [1303]</p> | <p><b>Direct:</b></p> <p>None.</p> <p><b>Indirect:</b></p> <p>An LHB roost for which this European site is designated lies approx. 2.3km NW of the proposed development. There is the possibility that the removal of grassland and linear features at construction stage, and grassland (under solar panels) at operational stage, could result in a loss of qualifying and/or supporting/functionally linked ex-situ habitat(s) for this QI species.</p> <p>Construction activities could result in disturbance, injury or mortality to LHB QI species.</p> <p>The reflection of polarised light at operational stage could result in injury or mortality to LHB QI species. (Solar panels being mistaken for water). Similarly, this could result in a change in predator-prey interactions between aquatic invertebrates and QI LHB.</p> <p>The site is within a karst landscape with sensitivity to rapid transport of pollutants. There is the possibility that the ground water dependent QI habitat 'Turloughs' could be impacted by ground works at construction stage and changes to ground water hydrology or waterborne pollution (accidental spills). The latter also being a risk at operational stage.</p> | <p>Loss of ex-situ qualifying, supporting or functionally linked habitat (LHB).</p> <p>Disturbance of LHB.</p> <p>Injury, mortality or change in predator-prey interaction (LHB).</p> <p>Waterborne pollution/contamination of QI habitat (Turlough)</p> <p>Change to groundwater regime (disruption of flow/reduction in volume) of water dependent QI habitat (Turlough).</p> |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Likelihood of significant effects from proposed development (alone):<br><b>Yes.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | If No, is there likelihood of significant effects occurring in combination with other plans or projects?<br><b>N/a</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Impacts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Effects                                                                                                                                                                                                                                                                                                                                                                         |
| <p><b>Inner Galway Bay SPA (004031)</b></p> <p>Black-throated diver Gavia arctica [A002], Great northern diver Gavia immer [A003], Cormorant Phalacrocorax carbo [A017], Grey heron Ardea cinerea [A028], Light-bellied brent goose Branta bernicla hrota [A046], Wigeon Anas Penelope [A050], Teal Anas creca [A052],</p>                                                                                                                                                               | <p><b>Direct:</b></p> <p>None.</p> <p><b>Indirect:</b></p> <p>Non-breeding birds including 55 Wigeon identified within and adjacent to turloughs during field surveys. Potential ex-situ disturbance to SCI species at construction stage.</p> <p>Potential ex-situ disturbance of SCI birds through injury or mortality at operational stage if the solar farm is mistaken as water due to the reflection on polarized light.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <p>Loss of ex-situ supporting or functionally linked habitat.</p> <p>Disturbance of SCI species.</p> <p>Injury/Mortality of SCI species.</p> <p><i>* As there is no hydrological connection between the proposed development site and this SPA, there is no pathway for effects on the QI wetland habitat.</i></p>                                                              |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Red-breasted merganser<br/>Mergus serrator [A069],<br/>Ringed Plover Charadrius<br/>hiaticula [A137],<br/>Golden plover Pluvialis<br/>apricaria [A140],<br/>Lapwing Vanellus Vanellus<br/>[A142],<br/>Dunlin Calidris alpina [A149],<br/>Bar-tailed godwit Limosa<br/>lapponica [A157],<br/>Curlew Numenius arquata<br/>[A160], Redshank Tringa<br/>tetanus [A162],<br/>Turnstone Arenaria interpres<br/>[A169],<br/>Black-headed gull<br/>Chroicocephalus ridibundus<br/>[A179],<br/>Common gull Larus canus<br/>[A182],<br/>Sandwich tern Sterna<br/>sandvicensis [A191],<br/>Common tern Sterna hirundo<br/>[A193],<br/>Wetland and waterbirds<br/>[A999]</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Likelihood of significant effects from proposed development (alone):<br><b>Yes.</b>                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | If No, is there likelihood of significant effects occurring in combination<br>with other plans or projects?<br><b>N/a.</b>                                                                                                                                                                                                                                                                                                         |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Impacts</b>                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Effects</b>                                                                                                                                   |
| <p>Coole-Garryland SPA<br/>(004107)</p> <p>Whooper swan Cygnus<br/>cygnus [A038]</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <p><b>Direct:</b></p> <p>None.</p> <p><b>Indirect:</b></p> <p>Non-breeding birds identified within and adjacent to<br/>turloughs during field surveys. Potential ex-situ<br/>disturbance to SCI species at construction stage.</p> <p>Potential ex-situ disturbance of SCI birds through<br/>injury or mortality at operational stage if the solar<br/>farm is mistaken as water due to the reflection on<br/>polarized light.</p> | <p>Loss of ex-situ supporting or<br/>functionally linked habitat.</p> <p>Disturbance of SCI species.</p> <p>Injury/Mortality of SCI species.</p> |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Likelihood of significant effects from proposed development (alone):<br><b>Yes.</b>                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | If No, is there likelihood of significant effects occurring in combination<br>with other plans or projects?<br><b>N/a.</b>                                                                                                                                                                                                                                                                                                         |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Impacts</b>                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Effects</b>                                                                                                                                   |
| <p>Rahasane Turlough<br/>SPA (004089)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <p><b>Direct:</b></p> <p>None.</p>                                                                                                                                                                                                                                                                                                                                                                                                 | <p>Loss of ex-situ supporting or<br/>functionally linked habitat.</p>                                                                            |

|                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Whooper Swan <i>Cygnus cygnus</i> [A038],<br>Wigeon <i>Anas Penelope</i> [A050],<br>Golden Plover <i>Pluvias apricaria</i> [A140],<br>Black-tailed godwit <i>Limosa limosa</i> [A156],<br>Greenland white-fronted goose <i>Anser albifrons flavirostris</i> [A395],<br>Wetland and waterbirds [A999] | <p><b>Indirect:</b></p> <p>Non-breeding birds including 55 Wigeon identified within and adjacent to turloughs during field surveys. Potential ex-situ disturbance to SCI species at construction stage.</p> <p>Potential ex-situ disturbance of SCI birds through injury or mortality at operational stage if the solar farm is mistaken as water due to the reflection on polarized light.</p>                | <p>Disturbance of SCI species.</p> <p>Injury/Mortality of SCI species.</p> <p><i>*As there is no hydrological connection between the proposed development site and this SPA, there is no pathway for effects on the QI wetland habitat.</i></p> |
|                                                                                                                                                                                                                                                                                                      | Likelihood of significant effects from proposed development (alone):<br><b>Yes.</b>                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                 |
|                                                                                                                                                                                                                                                                                                      | If No, is there likelihood of significant effects occurring in combination with other plans or projects?<br><b>N/a.</b>                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                 |
|                                                                                                                                                                                                                                                                                                      | <b>Impacts</b>                                                                                                                                                                                                                                                                                                                                                                                                 | <b>Effects</b>                                                                                                                                                                                                                                  |
| <p>Cregganna Marsh SPA (004142)</p> <p>Greenland white-fronted goose [A395]</p>                                                                                                                                                                                                                      | <p><b>Direct:</b></p> <p>None.</p> <p><b>Indirect:</b></p> <p>Non-breeding birds identified within and adjacent to turloughs during field surveys. Potential ex-situ disturbance to SCI species at construction stage.</p> <p>Potential ex-situ disturbance of SCI birds through injury or mortality at operational stage if the solar farm is mistaken as water due to the reflection on polarized light.</p> | <p>Loss of ex-situ supporting or functionally linked habitat.</p> <p>Disturbance of SCI species.</p> <p>Injury/Mortality of SCI species.</p>                                                                                                    |
|                                                                                                                                                                                                                                                                                                      | Likelihood of significant effects from proposed development (alone):<br><b>Yes.</b>                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                 |
|                                                                                                                                                                                                                                                                                                      | If No, is there likelihood of significant effects occurring in combination with other plan s or projects?<br><b>N/a.</b>                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                 |
|                                                                                                                                                                                                                                                                                                      | <b>Impacts</b>                                                                                                                                                                                                                                                                                                                                                                                                 | <b>Effects</b>                                                                                                                                                                                                                                  |
| <p>Lough Cutra SPA (004056)</p> <p>Cormorant [A017]</p>                                                                                                                                                                                                                                              | <p><b>Direct:</b></p> <p>None.</p> <p><b>Indirect:</b></p> <p>Non-breeding birds identified within and adjacent to turloughs during field surveys. Potential ex-situ disturbance to SCI species at construction stage.</p> <p>Potential ex-situ disturbance of SCI birds through injury or mortality at operational stage if the solar farm is mistaken as water due to the reflection on polarized light.</p> | <p>Loss of ex-situ supporting or functionally linked habitat.</p> <p>Disturbance of SCI species.</p> <p>Injury/Mortality of SCI species.</p>                                                                                                    |
|                                                                                                                                                                                                                                                                                                      | Likelihood of significant effects from proposed development (alone):<br><b>Yes.</b>                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                 |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | If No, is there likelihood of significant effects occurring in combination with other plans or projects?<br><b>N/a.</b>                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>Impacts</b>                                                                                                                                                                                                                                                                                                                                                                                          | <b>Effects</b>                                                                                                                                                                                                                                                                                             |
| Lough Rea SPA (004134)<br><br>Coot (Fulica atra) [A125]<br>Shoveler (Spatula clypeata) [A857]<br>Wetland and Waterbirds [A999]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Direct:</b><br><br>None.<br><br><b>Indirect:</b><br><br>Non-breeding birds identified within and adjacent to turloughs during field surveys. Potential ex-situ disturbance to SCI species at construction stage.<br><br>Potential ex-situ disturbance of SCI birds through injury or mortality at operational stage if the solar farm is mistaken as water due to the reflection on polarized light. | Loss of ex-situ supporting or functionally linked habitat.<br><br>Disturbance of SCI species.<br><br>Injury/Mortality of SCI species.<br><br><i>*As there is no hydrological connection between the proposed development site and this SPA, there is no pathway for effects on the QI wetland habitat.</i> |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Likelihood of significant effects from proposed development (alone):<br><b>Yes.</b>                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | If No, is there likelihood of significant effects occurring in combination with other plans or projects?<br><b>N/a.</b>                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                            |
| <b>Step 4 Conclude if the proposed development could result in likely significant effects on a European site</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                            |
| <p>Based on the information provided in the screening report, site visit, review of conservation objectives and supporting documents, I consider that in the absence of mitigation measures beyond best practice construction methods, the proposed development has the potential to result in significant effects on the Kiltiernan Turlough SAC (001285), Lough Fingall Complex SAC (000606), Inner Galway Bay SPA (004031), Coole-Garryland SPA (004107), Rahasane Turlough SPA (004089), Cregganna Marsh SPA (004142), Lough Cutra SPA (004056) and Lough Rea SPA (004134).</p> <p>I concur with the applicants' findings that such impacts could be significant in terms of the stated conservation objectives of the SAC's and SPA's, specifically having regard to the stated attributes and targets, when considered on their own in relation to loss of ex-situ qualifying, supporting or functionally linked habitat (QI species LHB &amp; SCI bird species), disturbance (QI species LHB &amp; SCI bird species), injury, mortality or change in predator-prey interaction (QI species LHB), injury or mortality (QI Bird species), waterborne pollution or contamination of QI habitat (Turlough), and change to groundwater regime (disruption of flow/reduction of volume) of QI habitat (Turlough).</p> <p><i>I am satisfied that as there is no hydrological connection between the proposed development site and the Inner Galway Bay SPA (004031), Rashane Turlough SPA (004089) and Lough Rea SPA (004134), there is no pathway for effects on the QI wetland habitat of these SPA's. I am satisfied therefore that the QI habitat 'wetland and waterbirds' [A999] can be excluded from appropriate assessment.</i></p> <p>An appropriate assessment is required on the basis of the possible effects of the project alone.</p> |                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                            |
| <b>Screening Determination</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                            |
| <b>Finding of likely significant effects</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                            |
| In accordance with Section 177U of the Planning and Development Act 2000 (as amended) and on the basis of the objective information provided by the applicant and considered in this AA screening, I conclude that it is not possible to exclude that the proposed development alone will give rise to significant effects on the Kiltiernan Turlough SAC (001285), Lough Fingall Complex SAC (000606), Inner Galway Bay SPA (004031), Coole-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                            |

Garryland SPA (004107), Rahasane Turlough SPA (004089), Cregganna Marsh SPA (004142), Lough Cutra SPA (004056) and Lough Rea SPA (004134) in view of the sites conservation objectives and a number of qualifying interests of those sites (habitats and species).

It is therefore determined that Appropriate Assessment (Stage 2) [under Section 177V of the Planning and Development Act, 2000, as amended] of the proposed development is required.

**Inspector:** \_\_\_\_\_ **Date:** \_\_\_\_\_

## Appendix 4: Appropriate Assessment (AA) and AA Determination

### ABP 320662-24

#### Appropriate Assessment (ABP 320662-24)

The requirements of Article 6(3) as related to appropriate assessment of a project under part XAB, section 177V of the Planning and Development Act 2000 (as amended) are considered fully in this section.

Taking account of the preceding screening determination, the following is an appropriate assessment of the implications of the proposed solar farm development in view of the relevant conservation objectives of the Kiltiernan Turlough SAC (001285), Lough Fingall Complex SAC (000606), Inner Galway Bay SPA (004031), Coole-Garryland SPA (004107), Rahasane Turlough SPA (004089), Cregganna Marsh SPA (004142), Lough Cutra SPA (004056) and Lough Rea SPA (004134) based on scientific information provided by the applicant.

The information relied upon includes the following:

- Natura Impact Statement prepared by AECOM (May 2024)
- Construction Noise Assessment prepared by AWN Consulting Ltd (May 2024)
- Technical Note - Aquatic insects and Solar Farms prepared by Fehily Timoney (January 2024)
- Lesser Horseshoe Bat Survey (August/September 2024) prepared by RPS
- Construction and Environmental Management Plan prepared by AECOM (05 June 2025)
- Environmental (Considerations) Report prepared by AECOM (June 2025)

I am satisfied that the information provided is adequate to allow for Appropriate Assessment. I am satisfied that all aspects of the project which could result in significant effects are considered and assessed in the NIS and mitigation measures designed to avoid or reduce any adverse effects on site integrity are included and assessed for effectiveness.

#### Submissions/observations

See Step 1 of Appendix 3 of the preceding screening determination.

Department of Housing, Heritage and Local Government

- In its statutory report to this appeal the DHLGH commented that it was satisfied with the LHB mitigation and enhancement measures provided. No other nature conservation comments were made.

#### Public Observations

- Issues raised in the course of the appeal by third parties concern the survey effort in relation to bats and impacts on flora and fauna generally.

## Decision of Planning Authority

- In its decision to refuse planning permission the Planning Authority was not satisfied, based on the information available and included in the planning application, that the proposed development would not have an adverse effect individually, or in combination with other plans or projects on the integrity and qualifying interests or conservation objectives of nearby European Sites. Furthermore, the PA was not satisfied that the NIS in the absence of summer bat surveys, satisfactorily considered the impacts on LHB which is a QI of the Lough Fingall Complex SAC. Refusal Reason No.4 refers.

## Kiltiernan Turlough SAC (001285)

### Summary of Key issues that could give rise to adverse effects (from screening stage):

- (i) Waterborne pollution or contamination of QI Habitat (Turlough)
- (ii) Change to groundwater regime (disruption of flow/reduction in volume) of water dependent QI Habitat (Turlough)

See Sections 6.1.3.5, 6.1.3.6, 6.2.4 & 6.2.5 of the NIS

| Qualifying Interest features likely to be affected | Conservation Objectives                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Potential adverse effects                                                                                                                                                                                                                                                                          | Mitigation measures (summary)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Turloughs [3180]                                   | <p>Targets and attributes (summary)</p> <p>To restore the favourable conservation condition of Turloughs in Kiltiernan Turlough SAC.</p> <p><i>Habitat area stable or increasing with no decline in distribution, maintain natural hydrological regime necessary to support the natural structure and functioning of the habitat, maintain variety, area and extent of soil types, nutrient status, wet bare ground, calcium carbonate deposition rate, and active peat formation, restore appropriate water quality, maintain area of sensitive and high conservation value vegetation and communities, maintain/restore vegetation zonation/mosaic characteristic, sward heights &amp; variety, typical species, marginal fringing habitats and turlough woodland diversity.</i></p> | <p>Waterborne pollution or contamination of QI habitat (Turlough). Change to groundwater regime (disruption of flow/reduction in volume) of water dependent QI habitat (Turlough).</p> <p>Effects could undermine the habitat area, hydrological regime and water quality targets of the SSCO.</p> | <p>Embedded design measures include: a CEMP, oversight by ECoW, and a 30m set back from turloughs and their flood plains. Standard best practice measures include: Controls and contingency measures to manage run-off, control of hydrocarbons and refuelling processes, use of concrete outside of 30m set back from turloughs and floodplains, no on-site batching and control of concrete wash waters. Limited soil exposure with soil storage at least 100m from turloughs and flood plains. Control of dewatering and a Pollution Prevention Plan.</p> <p>Prescribed mitigation measures include: no construction or decommissioning works if standing water or vegetative indicators is observed in buffer zones, sediment control and measures to mimic existing surface water flows post development.</p> |

The above table is based on the documentation and information provided on the file and I am satisfied that the submitted NIS has identified the relevant attributes and targets of the Qualifying Interests. In particular, I note those relating to habitat area (stable or increasing), maintenance of the natural hydrological regime necessary to support the natural structure and functioning of turlough habitat and restoration of appropriate water quality.

No other QIs were excluded. Step 3 of Stage 1 AA Screening (Appendix 3 refers).

## **Assessment of issues that could give rise to adverse effects in view of conservation objectives**

### **(i) Waterborne pollution or contamination of QI habitat (Turlough).**

The proposed solar farm development site is located within a karst landscape which is inherently sensitive to rapid transport of pollutants from the surface down into the karst network underground. The Kiltiernan Turlough is located approx. 0.7km north of the proposed substation site and 200m of the underground cabling route associated with the solar farm development. It is described as lying in a linear depression running south-westwards from the main Galway-Limerick Road M18, and as being dry but flooding regularly in winter. There are two turloughs located partially within the proposed solar farm site, one adjacent and one approx. 30m northeast of the central parcel. Surrounding turloughs are located at distances of 500 – 700m from the site and these are all described in Section 4.2 (FL6) of the NIS. Construction, decommissioning and maintenance works have potential to result in the runoff of silt, nutrients and other pollutants into the karst landscape which could negatively impact the water quality of turloughs, including the Kiltiernan Turlough which is a water dependent QI habitat of the Kiltiernan Turlough SAC. This has the potential to undermine the respective SSCO and the attribute and target in relation to habitat area (stable or increasing) and restoration of water quality.

### **Mitigation Measures and Conditions**

Environmental control and mitigation measures are set out in a Construction and Environmental Management Plan (CEMP). A final CEMP will be prepared by the Project Supervisor Construction Stage (PSCP) which will be agreed with the Project Supervisor Design Stage (PSDP) before construction works. This will include all Risk Assessments and Method Statements (RAMS) prepared as a part of the construction stage Safety and Health Plan. The RAMS will be agreed with relevant stakeholders and GCC. A CEMP co-ordinator (CEMPC) will be employed to oversee the implementation of the CEMP and will be supported by a suitably qualified project archaeologist and an ecological clerk of works (ECOW). In addition to the embedded design measures in the project, the CEMP includes standard best practice measures which include (inter alia): clearly defined roles and responsibilities, an Emergency Response Plan, Site induction, Toolbox talks and training, general site management and housekeeping, working hours/periods, complaints procedures, monitoring and inspections, environmental auditing, consents and licences.

The measures embedded in the design of the project and in the proposed mitigation measures are focused on the control and prevention of potential contamination and pollution and the protection of the local environment, terrestrial and aquatic habitats. In relation to waterborne pollution risks measures include:

- Only using ready mixed concrete. No on-site batching. A risk assessment for wet concreting to prevent discharge of alkaline wastewaters or contaminated water to underlying soil and ground water.
- Pouring of concrete within designated protected areas (for e.g using geosynthetic material) to prevent run-off to soil/groundwater media. Washwater will be directed to a concrete washout container lined with an impermeable membrane. Prohibition of wash water discharge to ground or surface waters.
- A set back of 30m from Turloughs and their floodplains (defined by vegetative indicators). Exclusions zones will be fenced off.
- A site drainage plan to include interceptor drains, check dams and settlement ponds. The drains will divert upslope run off away from works areas for redistribution to prevent silt, sediment or other contaminants being picked up. Check dams will restrict flow velocity, reduce erosion and allow sediment to settle. Settlement ponds will attenuate runoff during construction, intercepting silt laden run off.
- Soil management associated with cable trench works (in road) will remove all surplus excavated material off site for disposal to prevent contaminated run-off to roadside drains. Material retained for reinstatement will be stockpiled at a height not

exceeding 2m on level ground with a silt fence at least 30m from a turlough, 10m from hedgerows, 20m from streams and 15m from drains.

- All oils, fuels, lubricants or other chemicals will be securely stored in a suitable bunded storage area with spill kits. This will be away from open ground, surface water gullies, drains, areas of karstified outcrop and subcrop. There will be no storage of hydrocarbons or other contaminants within 30m of turloughs and their floodplains, waterbodies or any active/inactive drains.
- All refuelling and servicing will be carried out in a designated area isolated from surface water drains and karstified outcrop/subcrop and which is bunded, impermeable and at least 30m from a turlough, 10m from hedgerows, 20m from streams and 15m from drains. Diesel or oil fuels will be bunded to 110% capacity of storage tanks. Drip trays and spill kits will be kept on site. All stationary plant will be placed on drip trays.
- Drainage from bunded areas will be diverted for collection and safe disposal. Spill pallets will be used for moving drums during transit. If mobile fuel bowsters are used, they will have a double-skinned tank.
- The use of materials that would cause heavy metal, sulphide or strong acid pollution of runoff or use of excessive fines/clays will not be permitted.
- Staff will be trained in the emergency response and control plan. Materials and equipment necessary for response will be in clearly marked and accessible response points adjacent to waterbodies and will be checked on a daily basis.
- Excavations will remain open for limited time periods to reduce ground water and surface water ingress. Spoil and temporary stockpiles will be positioned in suitably flat areas, distant from drainage systems and retained drainage channels, away from flooding, drains, dewatering points and at least 100m from turloughs.
- Silt traps will be placed across the works boundary in any areas adjacent to waterbodies to avoid siltation.
- De-watering of ground and surface water accumulating in trenches or excavations will not be pumped to roadside drains or streams but will be discharged to designated percolation areas. The CEMPC will monitor to prevent excessive dewatering. In case of contamination or heavy sedimentation, soiled water will be tankered for offsite disposal or pumped to a settlement tank for treatment and testing of disposal options.
- A site-specific construction Resource and Waste Management Plan (RWMP) will be prepared which will provide for the storage, identification and classification, documentation, management, disposal and audit of all waste. The RWMP will be based on a waste management hierarchy of prevention, minimisation, reuse, recycling and disposal. Waste materials will be stored and segregated in a secure area within construction compounds.

As previously stated, the proposed solar farm is located within a karst landscape with water body features consisting of turloughs and underlying ground water. The turloughs are a surface feature consisting of topographic basins with a hydraulic connection to groundwater. The impact of pollution entering turlough features could impact both water quality and habitat and entering groundwater, could impact groundwater quality. Impacts could occur as a result of vegetation removal, site stripping, stockpiling, vehicle movements, bulky earthworks, spillage or leakage of hydrocarbons, chemicals or other pollutants including concrete or cement and could occur through direct entry to waterbodies or migration through subsoils and ground waters. The extent of excavation works planned in the construction of the project is however limited and consists of cable trenches, joint bays, internal tracks and interceptor drains with excavation depths ranging from <0.5 to 2.4m and widths ranging from <0.5m to 3.4m. The solar panels will also require steel pile construction, earth screw mounts or above ground ballast foundations (as described in Chapter 2 of the ECR) and will have a relatively small footprint. It is not considered that these limited excavation works to shallow depths are likely to generate significant bulk earth movements or superficial deposits/stockpiles, and it is considered that this issue can be safely managed across the extent of the site. In this regard the embedded design and mitigation measures which include for buffer zones from waterbodies and drains (including a minimum of 30m from turloughs and associated floodplains), standard and best practice drainage and control of run-off arrangements, pollution prevention, control and response measures as set out in the CEMP I am satisfied that waterborne pollution or contamination of the QI habitat turlough will not occur, that the attributes and targets required to restore the favourable conservation condition of Turloughs within the SAC will not be adversely affected or undermined.

**(ii) Change to groundwater regime (disruption of flow/reduction in volume) of water dependent QI habitat (Turlough).**

As stated above, the proposed solar farm development site is located within a karst landscape. GSI groundwater vulnerability mapping indicates that bedrock is at or very close to the surface at less than 3m across much of the site (ECR, Appendix A, Fig. A7-1 also refers). Accordingly, excavations at the site (as described above, Chapter 2 and Table 6-8 of the ECR) are likely to meet bedrock.

### **Mitigation measures and conditions**

As above.

Given the proposed setback distance of 30m from turloughs and their flood plains (as defined by vegetative indicators) and the limited depth of excavations (ranging from <0.5m to 2.4m) it is considered unlikely that significant volumes of ground water will be encountered or that dewatering or ground water control will be required such that would impact the groundwater regime. It is recognised that the proposed site development works (within an undeveloped site) could result in increased uncontrolled run-off leaving the site. However, it is considered that the embedded design and mitigation measures for pollution prevention and control, which include measures to reduce velocity, attenuate and settle waters will also mitigate any limited risk of uncontrolled run-off from the site. When the limited footprint of the development and scale of excavations are considered together with buffer zones, separation distances, drainage and pollution control measures I am satisfied that changes to the groundwater regime of the QI habitat turlough will not occur, that the attributes and targets required to restore the favourable conservation condition of Turloughs within the SAC will not be adversely affected or undermined.

Mitigation Measures related to water quality are captured in condition No's 4, 5 and 16 of the Inspectors Report.

### **In combination effects**

I am satisfied that in-combination effects have been assessed adequately in the NIS. The plans and projects considered in the assessment of in-combination effects are listed in Section 7 including the projects within 2km of the proposed development site and listed in Table 5. This includes relatively small residential, agricultural and educational developments (Planning Ref. No's 20/1864, 22/60761, 21/293, 20/2001, 20/115 and 19/679). I am satisfied that these developments were considered and that they are not at a location, of a type and do not have a relationship with the proposed development which would give rise to significant in-combination effects. The proposed substation and grid connection has been assessed as part of the overall project and this provides that with the embedded design, best practice measures and mitigation measures to be implemented for both developments particularly in relation to lighting design, pollution prevention measures, grassland management, biodiversity enhancement, anti-reflective surfaces (all as described and discussed in this AA), that there will be no significant in-combination effects. I am satisfied that no other plans or projects could combine to generate significant effects when mitigation measures are considered. I am satisfied that the applicant has demonstrated that no significant residual effects will remain post the application of mitigation measures and that there is no potential for in-combination effects.

### **Findings and conclusions**

The applicant determined that following the implementation of mitigation measures the construction, operation and decommissioning of the proposed development alone, or in combination with other plans and projects will not adversely affect the integrity of this European Site.

Based on the information provided, and my assessment set out in the preceding section, I am satisfied that adverse effects arising from the proposed development can be excluded for the Kiltiernan Turlough SAC (001285). I am satisfied that the mitigation measures proposed to prevent such effects have been assessed as effective and can be implemented and conditioned if permission is granted.

#### **Reasonable scientific doubt**

I am satisfied that no reasonable scientific doubt remains as to the absence of adverse effects.

#### **Site Integrity**

The proposed development will not affect the attainment of conservation objectives of the Kiltiernan Turlough SAC (001285). Adverse effects on site integrity can be excluded, and no reasonable scientific doubt remains as to the absence of such effects.

## Lough Fingall Complex SAC (000606)

### Summary of Key issues that could give rise to adverse effects (from screening stage):

- (i) Loss of ex-situ qualifying, supporting or functionally linked habitat (LHB)
- (ii) Disturbance of LHB
- (iii) Injury, mortality or change in predator-prey interaction (LHB)
- (iv) Waterborne pollution or contamination of QI Habitat (Turlough)
- (v) Change to groundwater regime (disruption of flow/reduction in volume) of water dependent QI Habitat (Turlough)

See Sections 6.1.3.1 - 6.1.3.6 (inc), 6.2.1.1, 6.2.2.1 and 6.2.3 - 6.2.5 (inc) of the NIS

| Qualifying Interest features likely to be affected                                         | Conservation Objectives<br><br>Targets and attributes (summary)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Potential adverse effects                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Mitigation measures (summary)<br><br>NIS Section 6.1.2, 6.1.3, and 6.1.3.1 - 6.1.3.6 (inc)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Turloughs [3180]</p> <p>Lesser horseshoe bat <i>Rhinolophus hipposideros</i> [1303]</p> | <p>To restore the favourable conservation condition of Turloughs* in Lough Fingall Complex SAC.</p> <p><i>Habitat area stable or increasing with no decline in distribution, restore natural hydrological regime necessary to support the natural structure and functioning of the habitat, maintain variety, area and extent of soil types, nutrient status, wet bare ground, calcium carbonate deposition rate, and active peat formation, restore appropriate water quality, maintain area of sensitive and high conservation value vegetation and communities, maintain/restore vegetation zonation/mosaic characteristic, sward heights &amp; variety, typical species, marginal fringing habitats and turlough woodland diversity.</i></p> <p>To maintain the favourable conservation condition of the LHB in</p> | <p>Loss of ex-situ qualifying, supporting or functionally linked habitat (LHB) could undermine the population, roosts, foraging habitat and linear features targets of the SSCO.</p> <p>Disturbance, of LHB could undermine the population targets of the SSCO.</p> <p>Injury, mortality or change in predator-prey interaction (LHB) could undermine the population, light pollution and roosts targets of the SSCO.</p> <p>Waterborne pollution or contamination of QI habitat (Turlough) and change to groundwater regime (disruption of flow/reduction in volume) of water dependent QI habitat (Turlough) could undermine water quality and natural hydrological regime targets of the SSCO.</p> | <p>Embedded design measures are as above for Kiltiernan Lough SAC.</p> <p>Prescribed mitigation measures include:</p> <p><u>(qualifying/supporting habitat):</u></p> <p>Retention of natural grassland, no herbicides or fertilisers, natural regeneration, monitoring to ensure floral species diversity and abundance, limited removal of hedgerow, treeline or stone wall, temporary fencing to bridge gaps, 3192m of new hedgerow and 594m of supplemental hedgerow enhancement measures, management of grasslands with sheep grazing, control of stock rates, field margin management, or with mechanical cutting.</p> <p><u>(Disturbance):</u></p> <p>Buffer zones (30m &amp; 100m), noise control, limits and monitoring. Works restricted to daylight hours, no artificial lighting, no machinery or vehicular headlights and no operational lighting.</p> <p><u>(Injury/mortality etc)</u></p> |

|  |                                                                                                                                                                                                                                                                                                                                                                                                                              |  |                                                                                                                                                                                                                  |
|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>Lough Fingall Complex SAC.</p> <p>Minimum number of 180 bats for the summer roost, no decline in summer roosts, auxiliary roosts, no significant decline in potential foraging habitat within 2.5km of Q. roost, no significant loss of linear features within 2.5km of Q. roost and no significant increase in artificial light intensity adjacent to a named roost or along community routes within 2.5km of roost.</p> |  | <p>Buffer zones form waterbodies. Use of anti-reflective coating. Removal of all lighting. Fatality Monitoring Plan.</p> <p><u>(Pollution/change to GW regime)</u></p> <p>As above for Kiltiernan Lough SAC.</p> |
|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

The above table is based on the documentation and information provided on the file and I am satisfied that the submitted NIS has identified the relevant attributes and targets of the Qualifying Interests. In particular, I note those relating to minimum number of bats, summer and auxiliary roosts, foraging habitat and linear features and light pollution (LHB), maintenance of the natural hydrological regime and restoration of appropriate water quality (Turloughs).

No other QIs were excluded. Step 3 of Stage 1 AA Screening (Appendix 3 refers).

## Assessment of issues that could give rise to adverse effects view of conservation objectives

The LHB roost for which this SAC is designated is located approx. 2.3km to the northwest of the proposed solar farm development site. The habitats of the development site have been assessed to have high suitability for foraging and commuting bats<sup>25</sup>, in particular the hedgerow, treelines, stonewalls, woodland and scrub habitats. The grassland, cattle and horse grazed pastures within the development site were also assessed as providing important foraging resources for bats including dung-associated insects<sup>26</sup>. Relatively high levels of bat activity were recorded during bat activity surveys, including LHB species. LHB are particularly dependent on linear and woodland habitats to navigate and generally fly close to and within physically cluttered habitats and generally within 5m of a feature<sup>27</sup>.

### (i) Loss of ex-situ qualifying, supporting or functionally linked habitat (LHB)

Any loss of, or large gaps in, hedgerows, treelines and stonewalls will reduce the suitability of the habitat for commuting LHB and any loss in grassland habitat could result in a loss of suitable foraging habitat for LHB. This has the potential to undermine the respective SCCO attribute and target in relation to population, roosts, foraging habitat and linear features.

### Mitigation Measures and Conditions

Environmental control and mitigation measures are set out in a Construction and Environmental Management Plan (CEMP) as described above for Kiltiernan Lough SAC. The measures embedded in the design of the project and in the proposed mitigation measures are focused on the control and prevention of potential contamination and pollution

<sup>25</sup> Lundy et al, 2011

<sup>26</sup> Williams et al, 2011

<sup>27</sup> NPWS and VWT, 2022; Billington and Rawlinson, 2006

and the protection of the local environment, terrestrial and aquatic habitats. In relation to the loss of qualifying, supporting or functionally linked habitat measures include:

- Retention of as much natural existing grassland as possible beneath and in between solar panels
- No herbicides or fertilisers used on grasslands
- Retained grassland habitat left in situ to allow for best practice natural regeneration
- Hedgerow loss minimised to 14 no. gaps, none exceeding 3.5m. Total loss in solar farm site of 42m. Enhancement planting of 3192m of new hedgerow consisting of native species.
- Temporary fencing to bridge gaps for night-time use to maintain connectivity.
- Management of grassland by a landowner grazing regime (sheep) with stock rates in line with the Eco-scheme of the CAP Strategic Plan 2023-2027 of a minimum of one sheep, and a maximum of 12 sheep, per hectare. Field margins will be fenced a min of 2m from hedgerows/stonewalls and flailed between 15<sup>th</sup> September and 28 February to encourage germination.
- In the alternative to a landowner grazing regime, the solar farm operator will maintain a mechanical mowing regime that follows best practice measures to maintain biodiversity. Grassland will be cut twice a year in early March and late September to allow meadow growth.
- 5-year post-construction monitoring by ecologist to ensure floral species diversity and abundance is maintained.

It is noted from the applicants NIS that LHB normally forage within 2.5km of their roosts<sup>28</sup> and that the SSCO for this species seeks to ensure no significant loss of foraging habitat or linear features within 2.5km of a roost. The applicants NIS quantifies the extent of the site which falls within the 2.5km radius of the qualifying LHB roost to be 25,200m<sup>2</sup> or 3.3% of the total development site, and of which only 756m<sup>2</sup> is grassland habitat. I am satisfied that the vast majority of the solar farm site lies outside the core sustenance zone of LHB and outside the area/radius from the qualifying roost defined by the SSCO. Notwithstanding the abundance of grassland habitat within the core sustenance zone and the wider landscape, this loss is not considered to be significant. When mitigation measures are taken into account providing for best practice grazing and/or mowing of the development site and natural regeneration I am satisfied that the loss or decline of qualifying, supporting or functionally linked foraging habitat will not be significant and that the attributes and targets required to maintain the favourable conservation condition of LHB within the SAC will not be adversely affected or undermined.

I am also satisfied that the majority of linear habitat will be retained. New gaps in stonewalls and hedgerows will be minimised to 14 no. (for access) only, none of which will exceed 3.5m in width (I note the reduction from the initial proposed width of 5m). These gaps will be bridged by temporary fencing for nighttime use, and none will occur within 2.5km of the qualifying LHB roost. I am satisfied that this is not a significant or material loss of linear habitat. When these measures are considered together with enhancement planting along stonewalls and patchy hedgerow and treelines, I am satisfied that connectivity will be maintained for commuting LHB, that there will not be a significant loss of linear habitat and that the attributes and targets required to maintain the favourable conservation condition of LHB within the SAC will not be adversely affected or undermined.

## **(ii) Disturbance of LHB**

Physical disturbance by plant, machinery, contractors, noise emanating from site works and artificial light could result in displacement and/or disturbance effects on LHB. In particular lighting could disturb bats and their commuting/foraging routes, impacting the movement of LHB species. This has the potential to undermine the respective SSCO attribute and target in relation to population and light pollution.

## **Mitigation Measures and Conditions**

Environmental control and mitigation measures are set out in a Construction and Environmental Management Plan (CEMP) as described above for Kiltiernan Lough SAC. The measures embedded in the design of the project and in the proposed mitigation measures are focused on the control and prevention of potential contamination and pollution

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<sup>28</sup> Bontadina *et al*, 2002

and the protection of the local environment, terrestrial and aquatic habitats. In relation to disturbance measures include:

- Construction and decommissioning works will be restricted to daylight hours, with no artificial light.
- Best practice and standard noise control measures including monitoring and community liaison arrangements as comprehensively set out in Section 5.7.1.2 of the CEMP.
- No construction activity within a 100m buffer of turloughs at all times when there is water within the turlough and for one month following the last day for which water is recorded. Noise will be monitored to ensure it remains under 55 weighted dBA.

On the basis that works will be restricted to daylight hours, will not involve any artificial lighting, will maintain a 100m buffer from turloughs at the appropriate times (30m other times) and that standard and best practice measures will provide for the regulation of noise and vibration, I am satisfied that the proposed development will not result in disturbance effects on LHB or a significant increase in artificial light intensity adjacent to a named roost or along commuting routes. I am satisfied that the population and light pollution attributes and targets required to maintain the favourable conservation condition of LHB within the SAC will not be adversely affected or undermined.

### **(iii) Injury, mortality or change in predator-prey interaction (LHB)**

LHB could mistake the solar farm as water due to the reflection of polarised light resulting in mortality or injury from collision with panels. Aquatic invertebrates could also mistake the solar panels for water for the same reasons, laying their eggs on the panels which could reduce their reproductive success and potentially the availability of food for LHB. Although studies are limited, there is potential for the change from cattle/horse grazing to sheep grazing or managed grassland to result in reduced dung insect diversity and abundance. It is noted that the applicants NIS considers that this risk arises as cattle dung has more diverse dung fauna than sheep<sup>29</sup> and if livestock (sheep) are treated with endectocides or anthelmintic drugs<sup>30</sup>. In the absence of mitigation this has the potential to undermine the respective SCCO attribute and target in relation to LHB population.

### **Mitigation Measures and Conditions**

Environmental control and mitigation measures are set out in a Construction and Environmental Management Plan (CEMP) as described above for Kiltiernan Lough SAC. In relation to Injury, mortality and predator-prey interaction measures include:

- Solar panels are excluded from a 30m buffer zone around all turloughs and are therefore physically separated from water bodies.
- Solar panels will be installed with anti-reflective coating.
- There will be no artificial lighting at the site.
- Livestock grazing and/or grassland management measures as described for (i) loss of qualifying, supporting or functionally linked ex-situ habitat above.
- A Bird and Bat Fatality Monitoring Plan (BBFMP) will be carried out for 3 years post construction, with the data presented in a survey report for review with GCC.

I am satisfied that the measures which remove solar panels from proximity to waterbodies, restrict works to daylight hours, omit artificial lighting and provide for solar panels with anti-reflective coating directly addresses the potential injury, mortality and predator-prey impacts and effects associated with the reflection of polarised light. In relation to potential adverse predator-prey changes associated with the diversity and abundance insects available for bats arising from the absence of cattle dung, I note the evidence to the contrary that lower intensity grazing by sheep or an appropriate mowing regime can improve insect diversity and support biodiversity<sup>31</sup> and the recent National

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<sup>29</sup> Williams *et al*, 2011

<sup>30</sup> Finch *et al*, 2019

<sup>31</sup> Montag *et al*, 2016 and RSPB and Cambridge University research (recently published in Bird Study Journal, 2025)

Biodiversity Data Centre (NBDC) guidelines (2023) which support this approach. I am satisfied that the limited extent of grassland habitat within the core sustenance range of LHB (from the qualifying roost), together with the absence of solar panels from waterbodies and aquatic invertebrates together with the specific mitigation measures for controlled grazing, mowing and monitoring of grassland habitat and the diversity and abundance of biodiversity, will ensure that there will be no significant impact on predator-prey indicators affecting LHB. I am satisfied that the proposed development will not result in injury, mortality, or changes in predator-prey interaction effects on LHB and that the population attributes and targets required to maintain the favourable conservation condition of LHB within the SAC will not be adversely affected or undermined.

**(iv) Waterborne pollution or contamination of QI Habitat (Turlough)**

As above for Kiltiernan Lough SAC.

I am satisfied that waterborne pollution or contamination of the QI habitat turlough will not occur, that the attributes and targets required to restore the favourable conservation condition of Turloughs within the SAC will not be adversely affected or undermined.

**(v) Change to groundwater regime (disruption of flow/reduction in volume) of water dependent QI Habitat (Turlough)**

As above for Kiltiernan Lough SAC.

I am satisfied that changes to the groundwater regime of the QI habitat turlough will not occur, that the attributes and targets required to restore the favourable conservation condition of Turloughs within the SAC will not be adversely affected or undermined.

Mitigation Measures related to biodiversity (inc bats) and water quality are captured in condition No's 4, 5, 7, 10 and 16 of the Inspectors Report.

**In combination effects**

As above (for Kiltiernan Turlough SAC) - I am satisfied that no other plans or projects could combine to generate significant effects when mitigation measures are considered. I am satisfied that the applicant has demonstrated that no significant residual effects will remain post the application of mitigation measures and that there is no potential for in-combination effects.

**Findings and conclusions**

The applicant determined that following the implementation of mitigation measures the construction, operation and decommissioning of the proposed development alone, or in combination with other plans and projects will not adversely affect the integrity of this European Site.

Based on the information provided, and my assessment set out in the preceding section, I am satisfied that adverse effects arising from the proposed development can be excluded for the Lough Fingall Complex SAC (000606). I am satisfied that the mitigation measures proposed to prevent such effects have been assessed as effective and can be implemented and conditioned if permission is granted.

**Reasonable scientific doubt**

I am satisfied that no reasonable scientific doubt remains as to the absence of adverse effects.

**Site Integrity**

The proposed development will not affect the attainment of conservation objectives of the Lough Fingall Complex SAC (000606). Adverse effects on site integrity can be excluded, and no reasonable scientific doubt remains as to the absence of such effects.

### Inner Galway Bay SPA (004031)

#### Summary of Key issues that could give rise to adverse effects (from screening stage):

- (i) Loss of ex-situ supporting or functionally linked habitat (SCI bird species)
- (ii) Disturbance of SCI bird species
- (iii) Injury or mortality of SCI bird species

See Sections 6.1.3.1, 6.1.3.2, 6.1.3.4, 6.1.3.8, 6.2.1.2, 6.2.2.2 and 6.2.3 of the NIS

| Qualifying Interest features likely to be affected                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Conservation Objectives                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Potential adverse effects                                                                                                                                                                                                                                                                                                                                                          | Mitigation measures (summary)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Black-throated diver <i>Gavia arctica</i> [A002],<br>Great northern diver <i>Gavia immer</i> [A003],<br>Cormorant <i>Phalacrocorax carbo</i> [A017],<br>Grey heron <i>Ardea cinerea</i> [A028],<br>Light-bellied brent goose <i>Branta bernicla hrota</i> [A046],<br>Wigeon <i>Anas penelope</i> [A050],<br>Teal <i>Anas creca</i> [A052],<br>Red-breasted merganser <i>Mergus serrator</i> [A069],<br>Ringed Plover <i>Charadrius hiaticula</i> [A137],<br>Golden plover <i>Pluvialis apricaria</i> [A140],<br>Lapwing <i>Vanellus vanellus</i> [A142],<br>Dunlin <i>Calidris alpina</i> [A149],<br>Bar-tailed godwit <i>Limosa lapponica</i> [A157],<br>Curlew <i>Numenius arquata</i> [A160],<br>Redshank <i>Tringa tetanus</i> [A162],<br>Turnstone | <p>To maintain the favourable conservation condition of: Great Northern Diver, Cormorant, Grey Heron, Light-bellied Brent Goose, Wigeon, Teal, Shoveler, Red-breasted Merganser, Ringed Plover, Golden Plover, Lapwing, Dunlin, Bar-tailed Godwit, Curlew, Redshank, Turnstone, Black-headed Gull and Common Gull, Sandwich Tern, and Common Tern in Inner Galway Bay SPA.</p> <p><i>Long term population trend stable or increasing and no significant decrease in the range, timing or intensity of use of areas by the abovesaid species, other than that occurring from natural patterns of variation (with the exception of Cormorant, Sandwich Tern and Common Tern).</i></p> <p><i>No significant decline in breeding population (cormorant), productivity</i></p> | <p>Loss of ex-situ supporting or functionally linked habitat could undermine the population and distribution targets of the SSCO's for non-breeding waterbirds including SCI species of this SPA.</p> <p>Disturbance, injury or mortality could undermine the population and distribution targets of the SSCO's for non-breeding waterbirds including SCI species of this SPA.</p> | <p>NIS Section 6.1.2, 6.13 and 6.1.3.1 - 6.1.3.4 (inc) and 6.1.3.8.</p> <p>Embedded design measures are as above for Kiltiernan Lough SAC.</p> <p>Prescribed mitigation measures include:</p> <p><u>(qualifying/supporting habitat):</u></p> <p>Retention of natural grassland, no herbicides or fertilisers, natural regeneration, monitoring to ensure floral species diversity and abundance, management of grasslands with sheep grazing, control of stock rates, field margin management, or with mechanical cutting, Buffer zones from turloughs (30m &amp; 100m).</p> <p><u>(Disturbance):</u></p> <p>Buffer zones (30m &amp; 100m), noise control, limits and monitoring.</p> <p><u>(Injury/mortality etc)</u></p> <p>Buffer zones form waterbodies. Use of anti-reflective coating. Removal of artificial lighting. Fatality Monitoring Plan.</p> |

|                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                    |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--|
| Arenaria interpres [A169],<br>Black-headed gull<br>Chroicocephalus<br>ridibundus [A179],<br>Common gull Larus<br>canus [A182],<br>Sandwich tern Sterna<br>sandvicensis [A191],<br>Common tern Sterna<br>hirundo [A193], | <i>rate, distribution (breeding colonies), prey biomass, no significant increase in barriers to connectivity, human activity should not occur at levels causing disturbance to breeding sites, long term population tend stable or increasing and no significant decrease in the numbers or range of areas used by cormorant.</i><br><br><i>No significant decline in breeding population (Sandwich Tern &amp; Common Tern), productivity rate, distribution (breeding colonies), prey biomass, no significant increase in barriers to connectivity, human activity should not occur at levels causing disturbance to breeding sites.</i> |                                                                                    |  |
| <b>Other QI's</b>                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                    |  |
| Wetland and waterbirds [A999]                                                                                                                                                                                           | <i>Not at risk.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Rationale for exclusion:<br>No hydrological connection and no pathway for effects. |  |

The above table is based on the documentation and information provided on the file and I am satisfied that the submitted NIS has identified the relevant attributes and targets of the Qualifying Interests. In particular I note those relating to population trend and distribution.

No other QIs were excluded other than 'Wetland and waterbirds' [A999] screened out at Step 3 of Stage 1 AA Screening (Appendix 3 refers).

## **Assessment of issues that could give rise to adverse effects view of conservation objectives**

### **(i) Loss of ex-situ qualifying, supporting or functionally linked habitat (SCI bird species)**

It is noted that during field surveys 5 non-breeding SCI waterbird species of this SPA were noted. Table 4, Section 4.3.2. of the applicants AA Screening Report refers. These consisted of Black-head gull, Common gull, Lapwing, Teal and Wigeon with peak counts of 25, 6, 19, 8 and 55 respectfully. It is noted that the surveys found bird numbers to be low, inconsistent and scattered across the proposed development site. The proposed development site does however contain habitats suitable for supporting a range of non-breeding waterbirds which are SCI species of this SPA including grassland habitats and turloughs and the proposed development could result in a loss of these habitats. This has the potential to undermine the respective SCCO attribute and target in relation to population and distribution of SCI bird species.

### **Mitigation Measures and Conditions**

Environmental control and mitigation measures are set out in a Construction and Environmental Management Plan (CEMP) as described above for Kiltiernan Lough SAC. The measures embedded in the design of the project and in

the proposed mitigation measures are focused on the control and prevention of potential contamination and pollution and the protection of the local environment, terrestrial and aquatic habitats. In relation to the loss of qualifying, supporting or functionally linked habitat measures include:

- Retention of as much natural existing grassland as possible beneath and in between solar panels
- No herbicides or fertilisers used on grasslands
- Retained grassland habitat left in situ to allow for best practice natural regeneration.
- Non construction works within 30m of turloughs during the non-breeding season (September to March), which will also avoid the flooding period for turloughs.
- Construction activity will be avoided at all times within a 100m buffer of the turloughs while there is water within the turlough and for one month following the last day for which water is recorded.
- Management of grassland by a landowner grazing regime (sheep) with stock rates in line with the Eco-scheme of the CAP Strategic Plan 2023-2027 of a minimum of one sheep, and a maximum of 12 sheep, per hectare. Field margins will be fenced of a min of 2m from hedgerows/stonewalls and flailed between 15<sup>th</sup> September and 28 February to encourage germination.
- In the alternative to a landowner grazing regime, the solar farm operator will maintain a mechanical mowing regime that follows best practice measures to maintain biodiversity. Grassland will be cut twice a year in early March and late September to allow meadow growth.
- 5-year post-construction monitoring by ecologist to ensure floral species diversity and abundance is maintained.

It is noted from the applicant's environmental information that the overall bird numbers using the site were quite low, with two survey visits recording either a single bird or no birds. It is also noted that birds were mainly found occurring within and adjacent to areas of standing water, with birds using grassland habitats outside the site. Only thirteen individual bird records were noted within the proposed development site during surveys. Of the SCI bird species for this SPA recorded within the development site, numbers were low and ranged from 0.02% to 0.09% of the national population or 0.33% to 2.68% of the SPA population with Wigeon being the most abundant SCI species.

The applicants NIS quantifies the total loss of grassland habitat within the proposed development site to be 3% of that available but acknowledges that the presence of PV solar panels may limit the use of the remaining grassland habitat within the site. Having regard to the limited loss of grassland habitat within the proposed development site which will occur as a result of the development, to the abundance of such typical grassland habitat within the wider landscape, to the limited evidence of SCI birds using grassland habitat outside the proposed development site (and not within) and to the limited numbers of birds recorded in surveys, I am satisfied that any impact or effect on SCI bird species as a result of the proposed development will not be significant or material. I note that the majority of birds were found occurring within and adjacent to turloughs, however there will be no installation of solar panels within these habitats with a minimum buffer zone of 30m from turlough habitat (defined by vegetative indicators) maintained. Accordingly, this habitat will not be impacted by the proposed development and there will be no habitat loss or damage. When mitigation measures are taken into account providing for best practice grazing and/or mowing of the development site, natural regeneration and buffer zones I am satisfied that the loss of qualifying, supporting or functionally linked grassland habitat will not be significant, that there will be no loss of turlough habitat, and that the population and distribution attributes and targets required to maintain the favourable conservation condition of SCI bird species within the SPA will not be adversely affected or undermined.

## **(ii) Disturbance of SCI Bird species**

Physical disturbance by plant, machinery, contractors, noise emanating from site works and artificial light could result in displacement and/or disturbance effects on SCI bird species. It is noted that the applicants NIS assesses that human activity can have disturbance effects on roost sites ranging from 55m (black-headed gull) to 96m (redshank) and may extend as far as 500m (waterfowl)<sup>32</sup>. Displacement from feeding opportunities can lead to an increase in energy expenditure as birds fly to alternative foraging areas, increased competition for the same food source and knock on effects on species fitness, reproductive success and survival rates. This has the potential to undermine the respective SCCO attribute and target in relation to population and distribution.

## **Mitigation Measures and Conditions**

<sup>32</sup> Cutts *et al* (2013), Masden (1985), Smit and Visser (1993) and Rees *et al* (2005).

Environmental control and mitigation measures are set out in a Construction and Environmental Management Plan (CEMP) as described above for Kiltiernan Lough SAC. The measures embedded in the design of the project and in the proposed mitigation measures are focused on the control and prevention of potential contamination and pollution and the protection of the local environment, terrestrial and aquatic habitats. In relation to disturbance measures include:

- Best practice and standard noise control measures including monitoring and community liaison arrangements as comprehensively set out in Section 5.7.1.2 of the CEMP.
- No construction/decommissioning works within 30m of turloughs during the non-breeding seas (September to March) inclusive.
- No construction activity within a 100m buffer of turloughs at all times when there is water within the turlough and for one month following the last day for which water is recorded. Noise will be monitored to ensure it remains under 55 weighted dBA.

Having regard to the distance of the proposed development site from this SPA (3.3km) and the relatively short distances over which disturbance effects occur, I am satisfied that there will be no disturbance effects on SCI bird species within this SPA associated with the proposed development. Given the low densities of birds recorded within the site and the abundance of grassland habitat in the wider landscape, I am satisfied that there will be no significant or material displacement effect on foraging or roosting SCI birds. In relation to turlough habitat the proposed development will maintain a 100m buffer from turloughs at the appropriate times (30m other times) and standard and best practice measures will provide for the regulation of noise and vibration. In this regard I am satisfied that the proposed development will not result in disturbance effects on SCI bird species using turloughs.

I am satisfied that the population distribution attributes and targets required to maintain the favourable conservation condition of SCI bird species within the SPA will not be adversely affected or undermined.

### **(iii) Injury or mortality (SCI bird species)**

SCI birds could mistake the solar farm as water due to the reflection of polarised light resulting in mortality or injury from collision with panels. In the absence of mitigation this has the potential to undermine the respective SCCO population and distribution attribute and target in relation to SCI bird species.

### **Mitigation Measures and Conditions**

Environmental control and mitigation measures are set out in a Construction and Environmental Management Plan (CEMP) as described above for Kiltiernan Lough SAC. In relation to Injury and mortality measures include:

- Solar panels are excluded from a 30m buffer zone around all turloughs and are therefore physically separated from water bodies.
- Solar panels will be installed with anti-reflective coating.
- There will be no artificial lighting at the site.
- A Bird and Bat Fatality Monitoring Plan (BBFMP) will be carried out for 3 years post construction, with the data presented in a survey report for review with GCC.

Notwithstanding the limited use of the site by SCI birds, I am satisfied that the measures which remove solar panels from proximity to waterbodies, omit artificial lighting and provide for solar panels with anti-reflective coating directly addresses the potential injury and mortality impacts and effects associated with the reflection of polarised light. I am satisfied therefore that the proposed development will not result in significant or material injury or mortality effects on SCI bird species and that the population and distribution attributes and targets required to maintain the favourable conservation condition of SCI bird species within the SPA will not be adversely affected or undermined.

Mitigation Measures related to birds are captured in condition No's 4, 5, 7, 10, 12, and 16 of the Inspectors Report.

### **In combination effects**

As above (for Kiltiernan Turlough SAC) - I am satisfied that no other plans or projects could combine to generate significant effects when mitigation measures are considered. I am satisfied that the applicant has demonstrated that no significant residual effects will remain post the application of mitigation measures and that there is no potential for in-combination effects.

## Findings and conclusions

The applicant determined that following the implementation of mitigation measures the construction, operation and decommissioning of the proposed development alone, or in combination with other plans and projects will not adversely affect the integrity of this European Site.

Based on the information provided, and my assessment set out in the preceding section, I am satisfied that adverse effects arising from the proposed development can be excluded for the Inner Galway Bay SPA (004031). I am satisfied that the mitigation measures proposed to prevent such effects have been assessed as effective and can be implemented and conditioned if permission is granted.

### Reasonable scientific doubt

I am satisfied that no reasonable scientific doubt remains as to the absence of adverse effects.

### Site Integrity

The proposed development will not affect the attainment of conservation objectives of the Inner Galway Bay SPA (004031). Adverse effects on site integrity can be excluded, and no reasonable scientific doubt remains as to the absence of such effects.

## Coole-Garryland SPA (004107)

### Summary of Key issues that could give rise to adverse effects (from screening stage):

- (i) Loss of ex-situ supporting or functionally linked habitat (SCI bird species)
- (ii) Disturbance of SCI bird species
- (iii) Injury or mortality of SCI bird species

See Sections 6.1.3.1, 6.1.3.2, 6.1.3.4, 6.1.3.8, 6.2.1.2, 6.2.2.2 and 6.2.3 of the NIS

| Qualifying Interest features likely to be affected | Conservation Objectives<br><br>Targets and attributes (summary)                                                                                                                                                  | Potential adverse effects                                                                                                                                                                         | Mitigation measures (summary)                                                                                                                                 |
|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Whooper swan (Cygnus cygnus) [A038]                | To restore the favourable conservation condition of Whooper Swan at Coole-Garryland SPA.<br><br><i>Winter population stable or increasing, sufficient number of locations, area and availability of suitable</i> | Loss of ex-situ supporting or functionally linked habitat could undermine the population, distribution, connectivity, roost, forage and supporting habitats targets of the SSCO for this species. | Embedded design measures are as above for Kiltiernan Lough SAC.<br><br>Prescribed mitigation measures include:<br><br><u>(qualifying/supporting habitat):</u> |

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <i>habitat to support winter pop. target, disturbance does not significantly impact pop. trend and spatial distribution targets, barriers to connectivity do not significantly impact access to SPA or ex-situ ecologically important sites, sufficient number of locations, area and availability of suitable habitat forage biomass and roosting habitat to support pop. target, sufficient area of utilisable habitat available in ex-situ ecologically important sites.</i> | Disturbance, injury or mortality could undermine the population, distribution and disturbance targets of the SSCO for this species. | Retention of natural grassland, no herbicides or fertilisers, natural regeneration, monitoring to ensure floral species diversity and abundance, management of grasslands with sheep grazing, control of stock rates, field margin management, or with mechanical cutting, Buffer zones from turloughs (30m & 100m).<br><br><u>(Disturbance):</u><br><br>Buffer zones (30m & 100m), noise control, limits and monitoring.<br><br><u>(Injury/mortality etc)</u><br><br>Buffer zones form waterbodies. Use of anti-reflective coating. Removal of artificial lighting. Fatality Monitoring Plan. |
|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

The above table is based on the documentation and information provided on the file and I am satisfied that the submitted NIS has identified the relevant attributes and targets of the Qualifying Interests. In particular, I note those relating to population, distribution, connectivity, disturbance and roost, foraging and supporting habitat.

No other QIs were excluded. Step 3 of Stage 1 AA Screening (Appendix 3 refers).

## Assessment of issues that could give rise to adverse effects view of conservation objectives

### (i) Loss of ex-situ qualifying, supporting or functionally linked habitat (SCI bird species)

It is noted during field surveys that Whooper swan was not recorded within or adjacent to the subject site and that overall the surveys found bird numbers to be low, inconsistent and scattered across the proposed development site. NBDC and NPWS did provide a record of this SCI bird species within 2km of the proposed development site, and the site does contain habitats suitable for supporting a range of non-breeding waterbirds including grassland habitats and turloughs. The proposed development could result in a loss of these habitats which has the potential to undermine the respective SSCO attribute and target in relation to population, distribution, connectivity, roost, forage and supporting habitats of this SCI bird species.

### Mitigation Measures and Conditions - As above for Inner Galway Bay SPA.

It is noted from the applicant's environmental information that the overall bird numbers using the site were quite low, with two survey visits recording either a single bird or no birds. It is also noted that birds were mainly found occurring within and adjacent to areas of standing water, with birds using grassland habitats outside the site. Only thirteen individual bird records were noted within the proposed development site during surveys. The SCI bird species for this SPA was not recorded.

The applicants NIS quantifies the total loss of grassland habitat within the proposed development site to be 3% of that available but acknowledges that the presence of PV solar panels may limit the use of the remaining grassland habitat within the site. Having regard to the limited loss of grassland habitat within the proposed development site which will occur as a result of the development, to the abundance of such typical grassland habitat within the wider

landscape and to the absence of this SCI bird species in field surveys I am satisfied that there will be no impact on Whooper Swan as a result of the proposed development. I note that the majority of other birds were found occurring within and adjacent to turloughs, however there will be no installation of solar panels within these habitats with a minimum buffer zone of 30m from turlough habitat (defined by vegetative indicators) maintained. Accordingly, this habitat will not be impacted by the proposed development and there will be no habitat loss or damage. When mitigation measures are taken into account providing for best practice grazing and/or mowing of the development site, natural regeneration and buffer zones together with the absence of this SCI bird species in surveys, I am satisfied that the limited loss of qualifying, supporting or functionally linked grassland habitat will not be significant, that there will be no loss of turlough habitat, and that the population, distribution, connectivity, roost, forage and supporting habitats attributes and targets required to maintain the favourable conservation condition of the SCI bird species of this SPA will not be adversely affected or undermined.

## **(ii) Disturbance of SCI Bird species**

Physical disturbance by plant, machinery, contractors, noise emanating from site works and artificial light could result in displacement and/or disturbance effects on SCI bird species. It is noted that the applicants NIS assesses that human activity can have disturbance effects on roost sites ranging from 55m (black-headed gull) to 96m (redshank) and may extend as far as 500m (waterfowl)<sup>33</sup>. Displacement from feeding opportunities can lead to an increase in energy expenditure as birds fly to alternative foraging areas, increased competition for the same food source and knock on effects on species fitness, reproductive success and survival rates. This has the potential to undermine the respective SCCO attribute and target in relation to population, disturbance and distribution.

**Mitigation Measures and Conditions** - As above for Inner Galway Bay SPA.

Having regard to the distance of the proposed development site from this SPA (4.5km) and the relatively short distances over which disturbance effects occur, I am satisfied that there will be no disturbance effects on the SCI bird species within this SPA associated with the proposed development. Given the absence of this SCI bird species recorded within the site and the abundance of grassland habitat in the wider landscape, I am satisfied that there will be no displacement effect on foraging or roosting SCI birds. In relation to turlough habitat the proposed development will maintain a 100m buffer from turloughs at the appropriate times (30m other times) and standard and best practice measures will provide for the regulation of noise and vibration. In this regard I am satisfied that the proposed development will not result in disturbance effects on this SCI bird species using turloughs.

I am satisfied that the population, disturbance and distribution attributes and targets required to maintain the favourable conservation condition of this SCI bird species of the Coole-Garryland SPA will not be adversely affected or undermined.

## **(iii) Injury or mortality (SCI bird species)**

SCI birds could mistake the solar farm as water due to the reflection of polarised light resulting in mortality or injury from collision with panels. In the absence of mitigation this has the potential to undermine the respective SCCO population, disturbance and distribution attribute and target in relation to this SCI bird species.

**Mitigation Measures and Conditions** - As above for Inner Galway Bay SPA.

Notwithstanding the limited use of the proposed development site by SCI birds and the absence of Whooper Swan in field surveys, I am satisfied that the measures which remove solar panels from proximity to waterbodies, omit artificial lighting and provide for anti-reflective coating directly addresses the potential injury and mortality impacts and effects associated with the reflection of polarised light. I am satisfied therefore that the proposed development will not result in significant or material injury or mortality effects on Whooper Swan and that the population, disturbance and distribution attributes and targets required to maintain the favourable conservation condition of this SCI bird species of the SPA will not be adversely affected or undermined.

<sup>33</sup> Cutts *et al* (2013), Masden (1985), Smit and Visser (1993) and Rees *et al* (2005).

Mitigation Measures related to birds are captured in condition No's 4, 5, 7, 10, 12, and 16 of the Inspectors Report.

### In combination effects

As above (for Kiltiernan Turlough SAC) - I am satisfied that no other plans or projects could combine to generate significant effects when mitigation measures are considered. I am satisfied that the applicant has demonstrated that no significant residual effects will remain post the application of mitigation measures and that there is no potential for in-combination effects.

### Findings and conclusions

The applicant determined that following the implementation of mitigation measures the construction, operation and decommissioning of the proposed development alone, or in combination with other plans and projects will not adversely affect the integrity of this European Site.

Based on the information provided, and my assessment set out in the preceding section, I am satisfied that adverse effects arising from the proposed development can be excluded for the Coole-Garryland SPA (004107). I am satisfied that the mitigation measures proposed to prevent such effects have been assessed as effective and can be implemented and conditioned if permission is granted.

### Reasonable scientific doubt

I am satisfied that no reasonable scientific doubt remains as to the absence of adverse effects.

### Site Integrity

The proposed development will not affect the attainment of conservation objectives of the Coole-Garryland SPA (004107). Adverse effects on site integrity can be excluded, and no reasonable scientific doubt remains as to the absence of such effects.

### Rahasane Turlough SPA (004089)

#### Summary of Key issues that could give rise to adverse effects (from screening stage):

- (i) Loss of ex-situ supporting or functionally linked habitat (SCI bird species)
- (ii) Disturbance of SCI bird species
- (iii) Injury or mortality of SCI bird species

See Sections 6.1.3.1, 6.1.3.2, 6.1.3.4, 6.1.3.8, 6.2.1.2, 6.2.2.2 and 6.2.3 of the NIS

| Qualifying Interest features likely to be affected                                                                  | Conservation Objectives                                                                                                                     | Potential adverse effects                                                                                                                                                                                    | Mitigation measures (summary)                                                                                                                                   |
|---------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                     | Targets and attributes (summary)                                                                                                            |                                                                                                                                                                                                              | NIS Section 6.1.2, 6.13 and 6.1.3.1 - 6.1.3.4 (inc) and 6.1.3.8.                                                                                                |
| Whooper Swan (Cygnus cygnus) [A038],<br>Wigeon (Anas Penelope) [A050],<br>Golden Plover (Pluvias apricaria) [A140], | To restore the favourable conservation condition of whooper swan, golden plover and Greenland White-fronted goose in Rahasane Turlough SPA. | Loss of ex-situ supporting or functionally linked habitat could undermine the population, distribution, connectivity, roost, forage and supporting habitats targets of the SSCO's for the SCI birds species. | Embedded design measures are as above for Kiltiernan Lough SAC.<br><br>Prescribed mitigation measures include:<br><br>( <i>qualifying/supporting habitat</i> ): |

|                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Black-tailed godwit ( <i>Limosa limosa</i> ) [A156],<br>Greenland white-fronted goose ( <i>Anser albifrons flavirostris</i> ) [A395], | To maintain the favourable conservation condition of Wigeon, black-tailed godwit and wetlands in Rahasane Turlough SPA.<br><br><i>Long term winter pop stable or increasing, sufficient number, locations, area and availability of suitable habitat, available forage biomass and roosting habitat to support pop target, disturbance is not at a level that would sig. impact pop. trend and spatial distribution targets, barriers do not sig. impact winter pop access to SPA or other ex-situ ecologically important sites, and sufficient area of utilisable ex-situ habitat available in ecologically important sites (All SCI birds).</i> | Disturbance, injury or mortality could undermine the population, distribution and disturbance targets of the SSCO's for these SCI bird species. | Retention of natural grassland, no herbicides or fertilisers, natural regeneration, monitoring to ensure floral species diversity and abundance, management of grasslands with sheep grazing, control of stock rates, field margin management, or with mechanical cutting, Buffer zones from turloughs (30m & 100m).<br><br><u>(Disturbance):</u><br><br>Buffer zones (30m & 100m), noise control, limits and monitoring.<br><br><u>(Injury/mortality etc)</u><br><br>Buffer zones form waterbodies. Use of anti-reflective coating. Removal of artificial lighting. Fatality Monitoring Plan. |
| <b>Other QI's</b>                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Wetland and waterbirds [A999]                                                                                                         | <i>Not at risk.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Rationale for exclusion:<br>No hydrological connection and no pathway for effects.                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

The above table is based on the documentation and information provided on the file and I am satisfied that the submitted NIS has identified the relevant attributes and targets of the Qualifying Interests. In particular, I note those relating to population, distribution, connectivity, disturbance and roost, foraging and supporting habitat.

No other QIs were excluded other than 'Wetland and waterbirds' [A999] which was screened out at Step 3 of Stage 1 AA Screening (Appendix 3 refers).

## Assessment of issues that could give rise to adverse effects view of conservation objectives

### (i) Loss of ex-situ qualifying, supporting or functionally linked habitat (SCI bird species)

It is noted that during field surveys a single non-breeding SCI waterbird species of this SPA was noted. Table 4, Section 4.3.2. of the applicants AA Screening Report refers. This consisted of Wigeon with a peak count of 55. NBDC and NPWS also provided a record of Whooper Swan within 2km of the proposed development site. It is noted that the field surveys found bird numbers to be low, inconsistent and scattered across the proposed development site. The proposed development site does however contain habitats suitable for supporting a range of non-breeding waterbirds which are SCI species of this SPA including grassland habitats and turloughs and the proposed development could result in a loss of these habitats. This has the potential to undermine the respective SCCO attribute and target in relation to population, distribution, connectivity, roost, forage and supporting habitats of SCI bird species.

**Mitigation Measures and Conditions - As above for Inner Galway Bay SPA.**

It is noted from the applicant's environmental information that the overall bird numbers using the site were quite low, with two survey visits recording either a single bird or no birds. It is also noted that birds were mainly found occurring within and adjacent to areas of standing water, with birds using grassland habitats outside the site. Only thirteen individual bird records were noted within the proposed development site during surveys. Of the SCI bird species for this SPA recorded within the development site, numbers were low for Wigeon and represented 0.09% of the national population or 2.68% of the SPA population. Whooper swan was not recorded within or adjacent to the proposed development site.

The applicants NIS quantifies the total loss of grassland habitat within the proposed development site to be 3% of that available but acknowledges that the presence of PV solar panels may limit the use of the remaining grassland habitat within the site. Having regard to the limited loss of grassland habitat within the proposed development site which will occur as a result of the development, to the abundance of such typical grassland habitat within the wider landscape, to the limited evidence of SCI birds using grassland habitat outside the proposed development site (and not within) and to the limited numbers of birds recorded in surveys, I am satisfied that any impact or effect on SCI bird species as a result of the proposed development will not be significant or material. I note that the majority of birds were found occurring within and adjacent to turloughs, however there will be no installation of solar panels within these habitats with a minimum buffer zone of 30m from turlough habitat (defined by vegetative indicators) maintained. Accordingly, this habitat will not be impacted by the proposed development and there will be no habitat loss or damage. When mitigation measures are taken into account providing for best practice grazing and/or mowing of the development site, natural regeneration and buffer zones I am satisfied that the loss of qualifying, supporting or functionally linked grassland habitat will not be significant, that there will be no loss of turlough habitat, and that the population, distribution, connectivity, roost, forage and supporting habitats attributes and targets required to maintain the favourable conservation condition of SCI bird species within the SPA will not be adversely affected or undermined.

**(ii) Disturbance of SCI Bird species**

Physical disturbance by plant, machinery, contractors, noise emanating from site works and artificial light could result in displacement and/or disturbance effects on SCI bird species. It is noted that the applicants NIS assesses that human activity can have disturbance effects on roost sites ranging from 55m (black-headed gull) to 96m (redshank) and may extend as far as 500m (waterfowl)<sup>34</sup>. Displacement from feeding opportunities can lead to an increase in energy expenditure as birds fly to alternative foraging areas, increased competition for the same food source and knock on effects on species fitness, reproductive success and survival rates. This has the potential to undermine the respective SCCO attribute and target in relation to population, disturbance and distribution.

**Mitigation Measures and Conditions - As above for Inner Galway Bay SPA.**

Having regard to the distance of the proposed development site from this SPA (5.1km) and the relatively short distances over which disturbance effects occur, I am satisfied that there will be no disturbance effects on SCI bird species within this SPA associated with the proposed development. Given the low densities of birds recorded within the site and the abundance of grassland habitat in the wider landscape, I am satisfied that there will be no significant or material displacement effect on foraging or roosting SCI birds. In relation to turlough habitat the proposed development will maintain a 100m buffer from turloughs at the appropriate times (30m other times) and standard and best practice measures will provide for the regulation of noise and vibration. In this regard I am satisfied that the proposed development will not result in disturbance effects on SCI bird species using turloughs.

I am satisfied that the population, disturbance and distribution attributes and targets required to maintain the favourable conservation condition of SCI bird species of the SPA will not be adversely affected or undermined.

**(iii) Injury or mortality (SCI bird species)**

<sup>34</sup> Cutts *et al* (2013), Masden (1985), Smit and Visser (1993) and Rees *et al* (2005).

SCI birds could mistake the solar farm as water due to the reflection of polarised light resulting in mortality or injury from collision with panels. In the absence of mitigation this has the potential to undermine the respective SCCO population, disturbance and distribution attribute and target in relation to SCI bird species.

**Mitigation Measures and Conditions** - As above for Inner Galway Bay SPA.

Notwithstanding the limited use of the site by SCI birds, I am satisfied that the measures which remove solar panels from proximity to waterbodies, omit artificial lighting and provide for solar panels with anti-reflective coating directly addresses the potential injury and mortality impacts and effects associated with the reflection of polarised light. I am satisfied therefore that the proposed development will not result in significant or material injury or mortality effects on SCI bird species and that the population, disturbance and distribution attributes and targets required to maintain the favourable conservation condition of SCI bird species of the SPA will not be adversely affected or undermined.

Mitigation Measures related to birds are captured in condition No's 4, 5, 7, 10, 12, and 16 of the Inspectors Report.

### **In combination effects**

As above (for Kiltiernan Turlough SAC) - I am satisfied that no other plans or projects could combine to generate significant effects when mitigation measures are considered. I am satisfied that the applicant has demonstrated that no significant residual effects will remain post the application of mitigation measures and that there is no potential for in-combination effects.

### **Findings and conclusions**

The applicant determined that following the implementation of mitigation measures the construction, operation and decommissioning of the proposed development alone, or in combination with other plans and projects will not adversely affect the integrity of this European Site.

Based on the information provided, and my assessment set out in the preceding section, I am satisfied that adverse effects arising from the proposed development can be excluded for the Rahasane Turlough SPA (004089). I am satisfied that the mitigation measures proposed to prevent such effects have been assessed as effective and can be implemented and conditioned if permission is granted.

### **Reasonable scientific doubt**

I am satisfied that no reasonable scientific doubt remains as to the absence of adverse effects.

### **Site Integrity**

The proposed development will not affect the attainment of conservation objectives of the Rahasane Turlough SPA (004089). Adverse effects on site integrity can be excluded, and no reasonable scientific doubt remains as to the absence of such effects.

### **Cregganna Marsh SPA (004142)**

#### **Summary of Key issues that could give rise to adverse effects (from screening stage):**

- (i) Loss of ex-situ supporting or functionally linked habitat (SCI bird species)
- (ii) Disturbance of SCI bird species
- (iii) Injury or mortality of SCI bird species

**See Sections 6.1.3.1, 6.1.3.2, 6.1.3.4, 6.1.3.8, 6.2.1.2, 6.2.2.2 and 6.2.3 of the NIS**

| Qualifying Interest features likely to be affected | Conservation Objectives                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Potential adverse effects                                                                                                                                                                                                                                                                                                                           | Mitigation measures (summary)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Greenland white-fronted goose [A395]               | <p>Targets and attributes (summary)</p> <p>To restore the favourable conservation condition of Greenland white-fronted goose in Cregganna Marsh SPA.</p> <p><i>Winter population stable or increasing, sufficient number of locations, area and availability of suitable habitat to support winter pop. target, disturbance does not significantly impact pop. trend and spatial distribution targets, barriers to connectivity do not significantly impact access to SPA or ex-situ ecologically important sites, sufficient number of locations, area and availability of suitable habitat forage biomass and roosting habitat to support pop. target, sufficient area of utilisable habitat available in ex-situ ecologically important sites.</i></p> | <p>Loss of ex-situ supporting or functionally linked habitat could undermine the population, distribution, connectivity, roost, forage and supporting habitats targets of the SSCO for this species.</p> <p>Disturbance, injury or mortality could undermine the population, distribution and disturbance targets of the SSCO for this species.</p> | <p>NIS Section 6.1.2, 6.13 and 6.1.3.1 - 6.1.3.4 (inc) and 6.1.3.8.</p> <p>Embedded design measures are as above for Kiltiernan Lough SAC.</p> <p>Prescribed mitigation measures include:</p> <p><u>(qualifying/supporting habitat):</u></p> <p>Retention of natural grassland, no herbicides or fertilisers, natural regeneration, monitoring to ensure floral species diversity and abundance, management of grasslands with sheep grazing, control of stock rates, field margin management, or with mechanical cutting, Buffer zones from turloughs (30m &amp; 100m).</p> <p><u>(Disturbance):</u></p> <p>Buffer zones (30m &amp; 100m), noise control, limits and monitoring.</p> <p><u>(Injury/mortality etc)</u></p> <p>Buffer zones form waterbodies. Use of anti-reflective coating. Removal of artificial lighting. Fatality Monitoring Plan.</p> |

The above table is based on the documentation and information provided on the file and I am satisfied that the submitted NIS has identified the relevant attributes and targets of the Qualifying Interests. In particular, I note those relating to population, distribution, connectivity, disturbance and roost, foraging and supporting habitat.

No other QIs were excluded. Step 3 of Stage 1 AA Screening (Appendix 3 refers).

### Assessment of issues that could give rise to adverse effects view of conservation objectives

#### (i) Loss of ex-situ qualifying, supporting or functionally linked habitat (SCI bird species)

It is noted during field surveys that Greenland white-fronted goose was not recorded within or adjacent to the subject site and that overall the surveys found other bird numbers to be low, inconsistent and scattered across the proposed development site. NBDC and NPWS also did not provide a record of this SCI bird species within 2km of the proposed development site. The site does however contain habitats suitable for supporting a range of non-breeding waterbirds including grassland habitats and turloughs. The proposed development could result in a loss of these habitats which

has the potential to undermine the respective SCCO attribute and target in relation to population, distribution, connectivity, roost, forage and supporting habitats of this SCI bird species.

**Mitigation Measures and Conditions - As above for Inner Galway Bay SPA.**

It is noted from the applicant's environmental information that overall bird numbers using the site were quite low, with two survey visits recording either a single bird or no birds. It is also noted that birds were mainly found occurring within and adjacent to areas of standing water, with birds using grassland habitats outside the site. Only thirteen individual bird records were noted within the proposed development site during surveys. The SCI bird species for this SPA was not recorded.

The applicants NIS quantifies the total loss of grassland habitat within the proposed development site to be 3% of that available but acknowledges that the presence of PV solar panels may limit the use of the remaining grassland habitat within the site. Having regard to the limited loss of grassland habitat within the proposed development site which will occur as a result of the development, to the abundance of such typical grassland habitat within the wider landscape and to the absence of this SCI bird species in field surveys I am satisfied that there will be no impact on Greenland white-fronted goose as a result of the proposed development. I note that the majority of other birds were found occurring within and adjacent to turloughs, however there will be no installation of solar panels within these habitats with a minimum buffer zone of 30m from turlough habitat (defined by vegetative indicators) maintained. Accordingly, this habitat will not be impacted by the proposed development and there will be no habitat loss or damage. When mitigation measures are taken into account providing for best practice grazing and/or mowing of the development site, natural regeneration and buffer zones together with the absence of this SCI bird species in surveys, I am satisfied that the limited loss of qualifying, supporting or functionally linked grassland habitat will not be significant, that there will be no loss of turlough habitat, and that the population, distribution, connectivity, roost, forage and supporting habitats attributes and targets required to maintain the favourable conservation condition of the SCI bird species of this SPA will not be adversely affected or undermined.

**(ii) Disturbance of SCI Bird species**

Physical disturbance by plant, machinery, contractors, noise emanating from site works and artificial light could result in displacement and/or disturbance effects on SCI bird species. It is noted that the applicants NIS assesses that human activity can have disturbance effects on roost sites ranging from 55m (black-headed gull) to 96m (redshank) and may extend as far as 500m (waterfowl)<sup>35</sup>. Displacement from feeding opportunities can lead to an increase in energy expenditure as birds fly to alternative foraging areas, increased competition for the same food source and knock on effects on species fitness, reproductive success and survival rates. This has the potential to undermine the respective SCCO attribute and target in relation to population, disturbance and distribution.

**Mitigation Measures and Conditions - As above for Inner Galway Bay SPA.**

Having regard to the distance of the proposed development site from this SPA (9.2km) and the relatively short distances over which disturbance effects occur, I am satisfied that there will be no disturbance effects on the SCI bird species within this SPA associated with the proposed development. Given the absence of this SCI bird species recorded within the site and the abundance of grassland habitat in the wider landscape, I am satisfied that there will be no displacement effect on foraging or roosting SCI birds. In relation to turlough habitat the proposed development will maintain a 100m buffer from turloughs at the appropriate times (30m other times) and standard and best practice measures will provide for the regulation of noise and vibration. In this regard I am satisfied that the proposed development will not result in disturbance effects on this SCI bird species using turloughs.

I am satisfied that the population, disturbance and distribution attributes and targets required to maintain the favourable conservation condition of this SCI bird species of the Cregganna Marsh SPA will not be adversely affected or undermined.

**(iii) Injury or mortality (SCI bird species)**

<sup>35</sup> Cutts *et al* (2013), Masden (1985), Smit and Visser (1993) and Rees *et al* (2005).

SCI birds could mistake the solar farm as water due to the reflection of polarised light resulting in mortality or injury from collision with panels. In the absence of mitigation this has the potential to undermine the respective SCCO population, disturbance and distribution attribute and target in relation to this SCI bird species.

**Mitigation Measures and Conditions** - As above for Inner Galway Bay SPA.

Notwithstanding the limited use of the proposed development site by SCI birds and the absence of Greenland white-fronted goose in field surveys, I am satisfied that the measures which remove solar panels from proximity to waterbodies, omit artificial lighting and provide for anti-reflective coating directly addresses the potential injury and mortality impacts and effects associated with the reflection of polarised light. I am satisfied therefore that the proposed development will not result in significant or material injury or mortality effects on Greenland white-fronted goose and that the population, disturbance and distribution attributes and targets required to maintain the favourable conservation condition of this SCI bird species of the SPA will not be adversely affected or undermined.

Mitigation Measures related to birds are captured in condition No's 4, 5, 7, 10, 12, and 16 of the Inspectors Report.

### **In combination effects**

As above (for Kiltiernan Turlough SAC) - I am satisfied that no other plans or projects could combine to generate significant effects when mitigation measures are considered. I am satisfied that the applicant has demonstrated that no significant residual effects will remain post the application of mitigation measures and that there is no potential for in-combination effects.

### **Findings and conclusions**

The applicant determined that following the implementation of mitigation measures the construction, operation and decommissioning of the proposed development alone, or in combination with other plans and projects will not adversely affect the integrity of this European Site.

Based on the information provided, and my assessment set out in the preceding section, I am satisfied that adverse effects arising from the proposed development can be excluded for the Cregganna Marsh SPA (004142). I am satisfied that the mitigation measures proposed to prevent such effects have been assessed as effective and can be implemented and conditioned if permission is granted.

### **Reasonable scientific doubt**

I am satisfied that no reasonable scientific doubt remains as to the absence of adverse effects.

### **Site Integrity**

The proposed development will not affect the attainment of conservation objectives of the Cregganna Marsh SPA (004142). Adverse effects on site integrity can be excluded, and no reasonable scientific doubt remains as to the absence of such effects.

### **Lough Cutra SPA (004056)**

#### **Summary of Key issues that could give rise to adverse effects (from screening stage):**

- (i) Loss of ex-situ supporting or functionally linked habitat (SCI bird species)
- (ii) Disturbance of SCI bird species
- (iii) Injury or mortality of SCI bird species

See Sections 6.1.3.1, 6.1.3.2, 6.1.3.4, 6.1.3.8, 6.2.1.2, 6.2.2.2 and 6.2.3 of the NIS.

| Qualifying Interest features likely to be affected | Conservation Objectives                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Potential adverse effects                                                                                                                                                                                                                                                                                           | Mitigation measures (summary)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cormorant [A017]                                   | <p>Targets and attributes (summary)</p> <p>To restore the favourable conservation condition of Cormorant in Lough Cutra SPA.</p> <p><i>Population trend stable or increasing, productivity rate, distribution (suitable available nesting options), sufficient habitat and forage biomass to support pop target, human activity should not occur at levels causing disturbance to birds at breeding site or breeding pop, barriers do not significantly impact populations access to SPA or other ecologically important ex-situ sites.</i></p> | <p>Loss of ex-situ supporting or functionally linked habitat could undermine the population, forage and supporting habitats and connectivity targets of the SSCO for this species.</p> <p>Disturbance, injury or mortality could undermine the population and disturbance targets of the SSCO for this species.</p> | <p>NIS Section 6.1.2, 6.13 and 6.1.3.1 - 6.1.3.4 (inc) and 6.1.3.8.</p> <p>Embedded design measures are as above for Kiltiernan Lough SAC.</p> <p>Prescribed mitigation measures include:</p> <p><u>(qualifying/supporting habitat):</u></p> <p>Retention of natural grassland, no herbicides or fertilisers, natural regeneration, monitoring to ensure floral species diversity and abundance, management of grasslands with sheep grazing, control of stock rates, field margin management, or with mechanical cutting, Buffer zones from turloughs (30m &amp; 100m).</p> <p><u>(Disturbance):</u></p> <p>Buffer zones (30m &amp; 100m), noise control, limits and monitoring.</p> <p><u>(Injury/mortality etc)</u></p> <p>Buffer zones form waterbodies. Use of anti-reflective coating. Removal of artificial lighting. Fatality Monitoring Plan.</p> |

The above table is based on the documentation and information provided on the file and I am satisfied that the submitted NIS has identified the relevant attributes and targets of the Qualifying Interests. In particular, I note those relating to population, forage biomass and supporting habitats, disturbance and connectivity.

No other QIs were excluded. Step 3 of Stage 1 AA Screening (Appendix 3 refers).

### Assessment of issues that could give rise to adverse effects view of conservation objectives

#### (i) Loss of ex-situ qualifying, supporting or functionally linked habitat (SCI bird species)

It is noted during field surveys that Cormorant was not recorded within or adjacent to the subject site and that overall, the surveys found other bird numbers to be low, inconsistent and scattered across the proposed development site. NBDC and NPWS also did not provide a record of this SCI bird species within 2km of the proposed development site. The site does however contain habitats suitable for supporting a range of non-breeding waterbirds including grassland habitats and turloughs. The proposed development could result in a loss of these habitats which has the

potential to undermine the respective SCCO attribute and target in relation to population, distribution, connectivity, roost, forage and supporting habitats of this SCI bird species.

**Mitigation Measures and Conditions** - As above for Inner Galway Bay SPA.

It is noted from the applicant's environmental information that overall bird numbers using the site were quite low, with two survey visits recording either a single bird or no birds. It is also noted that birds were mainly found occurring within and adjacent to areas of standing water, with birds using grassland habitats outside the site. Only thirteen individual bird records were noted within the proposed development site during surveys. The SCI bird species for this SPA was not recorded.

The applicants NIS quantifies the total loss of grassland habitat within the proposed development site to be 3% of that available but acknowledges that the presence of PV solar panels may limit the use of the remaining grassland habitat within the site. Having regard to the limited loss of grassland habitat within the proposed development site which will occur as a result of the development, to the abundance of such typical grassland habitat within the wider landscape and to the absence of this SCI bird species in field surveys I am satisfied that there will be no impact on Cormorant as a result of the proposed development. I note that the majority of other birds were found occurring within and adjacent to turloughs, however there will be no installation of solar panels within these habitats with a minimum buffer zone of 30m from turlough habitat (defined by vegetative indicators) maintained. Accordingly, this habitat will not be impacted by the proposed development and there will be no habitat loss or damage. When mitigation measures are taken into account providing for best practice grazing and/or mowing of the development site, natural regeneration and buffer zones together with the absence of this SCI bird species in surveys, I am satisfied that the limited loss of qualifying, supporting or functionally linked grassland habitat will not be significant, that there will be no loss of turlough habitat, and that the population, distribution, connectivity, roost, forage and supporting habitats attributes and targets required to maintain the favourable conservation condition of the SCI bird species of this SPA will not be adversely affected or undermined.

**(ii) Disturbance of SCI Bird species**

Physical disturbance by plant, machinery, contractors, noise emanating from site works and artificial light could result in displacement and/or disturbance effects on SCI bird species. It is noted that the applicants NIS assesses that human activity can have disturbance effects on roost sites ranging from 55m (black-headed gull) to 96m (redshank) and may extend as far as 500m (waterfowl)<sup>36</sup>. Displacement from feeding opportunities can lead to an increase in energy expenditure as birds fly to alternative foraging areas, increased competition for the same food source and knock on effects on species fitness, reproductive success and survival rates. This has the potential to undermine the respective SCCO attribute and target in relation to population, disturbance and distribution.

**Mitigation Measures and Conditions** - As above for Inner Galway Bay SPA.

Having regard to the distance of the proposed development site from this SPA (12.2km) and the relatively short distances over which disturbance effects occur, I am satisfied that there will be no disturbance effects on the SCI bird species within this SPA associated with the proposed development. Given the absence of this SCI bird species recorded within the site and the abundance of grassland habitat in the wider landscape, I am satisfied that there will be no displacement effect on foraging or roosting SCI birds. In relation to turlough habitat the proposed development will maintain a 100m buffer from turloughs at the appropriate times (30m other times) and standard and best practice measures will provide for the regulation of noise and vibration. In this regard I am satisfied that the proposed development will not result in disturbance effects on this SCI bird species using turloughs.

I am satisfied that the population, disturbance and distribution attributes and targets required to maintain the favourable conservation condition of this SCI bird species of the Lough Cutra SPA will not be adversely affected or undermined.

**(iii) Injury or mortality (SCI bird species)**

<sup>36</sup> Cutts *et al* (2013), Masden (1985), Smit and Visser (1993) and Rees *et al* (2005).

SCI birds could mistake the solar farm as water due to the reflection of polarised light resulting in mortality or injury from collision with panels. In the absence of mitigation this has the potential to undermine the respective SCCO population, disturbance and distribution attribute and target in relation to this SCI bird species.

**Mitigation Measures and Conditions** - As above for Inner Galway Bay SPA.

Notwithstanding the limited use of the proposed development site by SCI birds and the absence of Cormorant in field surveys, I am satisfied that the measures which remove solar panels from proximity to waterbodies, omit artificial lighting and provide for anti-reflective coating directly addresses the potential injury and mortality impacts and effects associated with the reflection of polarised light. I am satisfied therefore that the proposed development will not result in significant or material injury or mortality effects on Cormorant and that the population, disturbance and distribution attributes and targets required to maintain the favourable conservation condition of this SCI bird species of the SPA will not be adversely affected or undermined.

Mitigation Measures related to birds are captured in condition No's 4, 5, 7, 10, 12, and 16 of the Inspectors Report.

### **In combination effects**

As above (for Kiltiernan Turlough SAC) - I am satisfied that no other plans or projects could combine to generate significant effects when mitigation measures are considered. I am satisfied that the applicant has demonstrated that no significant residual effects will remain post the application of mitigation measures and that there is no potential for in-combination effects.

### **Findings and conclusions**

The applicant determined that following the implementation of mitigation measures the construction, operation and decommissioning of the proposed development alone, or in combination with other plans and projects will not adversely affect the integrity of this European Site.

Based on the information provided, and my assessment set out in the preceding section, I am satisfied that adverse effects arising from the proposed development can be excluded for the Lough Cutra SPA (004056). I am satisfied that the mitigation measures proposed to prevent such effects have been assessed as effective and can be implemented and conditioned if permission is granted.

### **Reasonable scientific doubt**

I am satisfied that no reasonable scientific doubt remains as to the absence of adverse effects.

### **Site Integrity**

The proposed development will not affect the attainment of conservation objectives of the Lough Cutra SPA (004056). Adverse effects on site integrity can be excluded, and no reasonable scientific doubt remains as to the absence of such effects.

### **Lough Rea SPA (004134)**

#### **Summary of Key issues that could give rise to adverse effects (from screening stage):**

- (i) Loss of ex-situ supporting or functionally linked habitat (SCI bird species)
- (ii) Disturbance of SCI bird species
- (iii) Injury or mortality of SCI bird species

See Sections 6.1.3.1, 6.1.3.2, 6.1.3.4, 6.1.3.8, 6.2.1.2, 6.2.2.2 and 6.2.3 of the NIS.

| Qualifying Interest features likely to be affected                                    | Conservation Objectives<br><br>Targets and attributes (summary)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Potential adverse effects                                                                                                                                                                                                                                                                                                                              | Mitigation measures (summary)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Coot ( <i>Fulica atra</i> ) [A125]<br><br>Shoveler ( <i>Spatula clypeata</i> ) [A857] | To restore the favourable conservation condition of Shoveler at Lough Rea SPA.<br><br>To maintain the favourable conservation condition of Coot at Lough Rea SPA.<br><br><i>Long term winter pop stable or increasing, sufficient number, locations, area and availability of suitable habitat, available forage biomass and roosting habitat to support pop target, disturbance is not at a level that would sig. impact pop. trend and spatial distribution targets, barriers do not sig. impact winter pop access to SPA or other ex-situ ecologically important sites (All SCI birds).</i> | Loss of ex-situ supporting or functionally linked habitat could undermine the population, distribution, connectivity, roost and forage habitat targets of the SSCO's for the SCI birds species.<br><br>Disturbance, injury or mortality could undermine the population, distribution and disturbance targets of the SSCO's for these SCI bird species. | NIS Section 6.1.2, 6.13 and 6.1.3.1 - 6.1.3.4 (inc) and 6.1.3.8.<br><br>Embedded design measures are as above for Kiltiernan Lough SAC.<br><br>Prescribed mitigation measures include:<br><br><u>(qualifying/supporting habitat):</u><br><br>Retention of natural grassland, no herbicides or fertilisers, natural regeneration, monitoring to ensure floral species diversity and abundance, management of grasslands with sheep grazing, control of stock rates, field margin management, or with mechanical cutting, Buffer zones from turloughs (30m & 100m).<br><br><u>(Disturbance):</u><br><br>Buffer zones (30m & 100m), noise control, limits and monitoring.<br><br><u>(Injury/mortality etc)</u><br><br>Buffer zones form waterbodies. Use of anti-reflective coating. Removal of artificial lighting. Fatality Monitoring Plan. |
| <b>Other QI's</b>                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Wetland and waterbirds [A999]                                                         | <i>Not at risk.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Rationale for exclusion:<br>No hydrological connection and no pathway for effects.                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

The above table is based on the documentation and information provided on the file and I am satisfied that the submitted NIS has identified the relevant attributes and targets of the Qualifying Interests. In particular, I note those relating to population, distribution, connectivity, disturbance and roost, foraging and supporting habitat. No other QIs were excluded other than 'Wetland and waterbirds' [A999] which was screened out at Step 3 of Stage 1 AA Screening (Appendix 3 refers).

## Assessment of issues that could give rise to adverse effects in view of conservation objectives

### (i) Loss of ex-situ qualifying, supporting or functionally linked habitat (SCI bird species)

It is noted that during field surveys 2 non-breeding SCI waterbird species of this SPA were noted. Table 4, Section 4.3.2. of the applicants AA Screening Report refers. These consisted of Shoveler and Coot with peak counts of 2, and 7 respectfully. It is noted that the surveys found bird numbers to be low, inconsistent and scattered across the

proposed development site. The proposed development site does however contain habitats suitable for supporting a range of non-breeding waterbirds which are SCI species of this SPA including grassland habitats and turloughs and the proposed development could result in a loss of these habitats. This has the potential to undermine the respective SCCO attribute and target in relation to population and distribution of SCI bird species.

**Mitigation Measures and Conditions** - As above for Inner Galway Bay SPA.

It is noted from the applicant's environmental information that the overall bird numbers using the site were quite low, with two survey visits recording either a single bird or no birds. It is also noted that birds were mainly found occurring within and adjacent to areas of standing water, with birds using grassland habitats outside the site. Only thirteen individual bird records were noted within the proposed development site during surveys. Of the SCI bird species for this SPA recorded within the development site, numbers were low and ranged from 0.04% to 0.35% of the national population or 0.07% to 1.89% of the SPA population, with Coot being more abundant.

The applicants NIS quantifies the total loss of grassland habitat within the proposed development site to be 3% of that available but acknowledges that the presence of PV solar panels may limit the use of the remaining grassland habitat within the site. Having regard to the limited loss of grassland habitat within the proposed development site which will occur as a result of the development, to the abundance of such typical grassland habitat within the wider landscape, to the limited evidence of SCI birds using grassland habitat outside the proposed development site (and none within) and to the limited numbers of birds recorded in surveys, I am satisfied that any impact or effect on SCI bird species as a result of the proposed development will not be significant or material. I note that the majority of birds were found occurring within and adjacent to turloughs, however there will be no installation of solar panels within these habitats with a minimum buffer zone of 30m from turlough habitat (defined by vegetative indicators) maintained. Accordingly, this habitat will not be impacted by the proposed development and there will be no habitat loss or damage. When mitigation measures are taken into account providing for best practice grazing and/or mowing of the development site, natural regeneration and buffer zones I am satisfied that the loss of qualifying, supporting or functionally linked grassland habitat will not be significant, that there will be no loss of turlough habitat, and that the population, distribution, connectivity, disturbance, roost, foraging and supporting habitat attributes and targets required to maintain the favourable conservation condition of SCI bird species of the SPA will not be adversely affected or undermined.

**(ii) Disturbance of SCI Bird species**

Physical disturbance by plant, machinery, contractors, noise emanating from site works and artificial light could result in displacement and/or disturbance effects on SCI bird species. It is noted that the applicants NIS assesses that human activity can have disturbance effects on roost sites ranging from 55m (black-headed gull) to 96m (redshank) and may extend as far as 500m (waterfowl)<sup>37</sup>. Displacement from feeding opportunities can lead to an increase in energy expenditure as birds fly to alternative foraging areas, increased competition for the same food source and knock on effects on species fitness, reproductive success and survival rates. This has the potential to undermine the respective SCCO attribute and target in relation to population, disturbance and distribution.

**Mitigation Measures and Conditions** - As above for Inner Galway Bay SPA.

Having regard to the distance of the proposed development site from this SPA (16.7km) and the relatively short distances over which disturbance effects occur, I am satisfied that there will be no disturbance effects on SCI bird species within this SPA associated with the proposed development. Given the low densities of birds recorded within the site and the abundance of grassland habitat in the wider landscape, I am satisfied that there will be no significant or material displacement effect on foraging or roosting SCI birds. In relation to turlough habitat the proposed development will maintain a 100m buffer from turloughs at the appropriate times (30m other times) and standard and best practice measures will provide for the regulation of noise and vibration. In this regard I am satisfied that the proposed development will not result in disturbance effects on SCI bird species using turloughs.

I am satisfied that the population, disturbance and distribution attributes and targets required to maintain the favourable conservation condition of SCI bird species within the SPA will not be adversely affected or undermined.

<sup>37</sup> Cutts *et al* (2013), Masden (1985), Smit and Visser (1993) and Rees *et al* (2005).

### **(iii) Injury or mortality (SCI bird species)**

SCI birds could mistake the solar farm as water due to the reflection of polarised light resulting in mortality or injury from collision with panels. In the absence of mitigation this has the potential to undermine the respective SCCO population and distribution attribute and target in relation to SCI bird species.

**Mitigation Measures and Conditions** - As above for Inner Galway Bay SPA.

Notwithstanding the limited use of the site by SCI birds, I am satisfied that the measures which remove solar panels from proximity to waterbodies, omit artificial lighting and provide for solar panels with anti-reflective coating directly addresses the potential injury and mortality impacts and effects associated with the reflection of polarised light. I am satisfied therefore that the proposed development will not result in significant or material injury or mortality effects on SCI bird species and that the population, disturbance and distribution attributes and targets required to maintain the favourable conservation condition of SCI bird species of the SPA will not be adversely affected or undermined.

Mitigation Measures related to birds are captured in condition No's 4, 5, 7, 10, 12, and 16 of the Inspectors Report.

### **In combination effects**

As above (for Kiltiernan Turlough SAC) - I am satisfied that no other plans or projects could combine to generate significant effects when mitigation measures are considered. I am satisfied that the applicant has demonstrated that no significant residual effects will remain post the application of mitigation measures and that there is no potential for in-combination effects.

### **Findings and conclusions**

The applicant determined that following the implementation of mitigation measures the construction, operation and decommissioning of the proposed development alone, or in combination with other plans and projects will not adversely affect the integrity of this European Site.

Based on the information provided, and my assessment set out in the preceding section, I am satisfied that adverse effects arising from the proposed development can be excluded for the Lough Rea SPA (004134). I am satisfied that the mitigation measures proposed to prevent such effects have been assessed as effective and can be implemented and conditioned if permission is granted.

#### **Reasonable scientific doubt**

I am satisfied that no reasonable scientific doubt remains as to the absence of adverse effects.

#### **Site Integrity**

The proposed development will not affect the attainment of conservation objectives of the Lough Rea SPA (004134). Adverse effects on site integrity can be excluded, and no reasonable scientific doubt remains as to the absence of such effects.

### **Appropriate Assessment Conclusion: Integrity Test**

In screening the need for Appropriate Assessment, it was determined that the proposed development could result in significant effects on the Kiltiernan Turlough SAC (001285), Lough Fingal Complex SAC (000606), Inner Galway Bay SPA (004031), Coole-Garryland SPA (004107), Rahasane Turlough SPA (004089), Cregganna Marsh SPA (004142), Lough Cutra SPA (004056) and Lough Rea SPA (004134) in view of the conservation objectives of those sites and that Appropriate Assessment under the provisions of S177U was required.

Following an examination, analysis and evaluation of the NIS and all associated material submitted, I consider that adverse effects on site integrity of the Kiltiernan Turlough SAC (001285), Lough Fingal Complex SAC (000606), Inner Galway Bay SPA (004031), Coole-Garryland SPA (004107), Rahasane Turlough SPA (004089), Cregganna Marsh SPA (004142), Lough Cutra SPA (004056) and Lough Rea SPA (004134) can be excluded in view of the conservation objectives of these sites and that no reasonable scientific doubt remains as to the absence of such effects.

My conclusion is based on the following:

- Detailed assessment of construction, operational and decommissioning impacts.
- The respective site-specific conservation objectives, targets and attributes, QI's and SCI's of the respective European Sites as detailed and assessed in my Stage 2 AA as appended to this report (Appendix 4).
- Effectiveness of the mitigation measures proposed including a 30m works exclusion zone from turloughs and their floodplains, pre-commencement surveys, control of dewatering, an Emergency Response & Control Plan including pollution prevention measures, a Site Drainage Management Plan including measures to restrict flow velocity, reduce erosion and control sediment, a Resource & Waste Management Plan, best practice grassland management measures including retention of natural grassland, natural regeneration, low intensity grazing or controlled mowing, retention of field margins, minimal hedgerow removal and no clearance works during the bird breeding season, daylight construction hours only, no use of artificial light, anti-reflective coating installed to all solar panels, a 100m buffer from turloughs when water is present with noise controls, post-construction biodiversity (floral diversity & bats) & ornithological monitoring all of which are primarily captured in the CEMP and will be under the control of a CEMP co-ordinator (CEMPC) supported by an Ecological Clerk of Works (ECoW).
- Application of planning conditions to ensure these measures.
- The proposed development will not affect the attainment of conservation objectives for the Kiltiernan Turlough SAC (001285), Lough Fingal Complex SAC (000606), Inner Galway Bay SPA (004031), Coole-Garryland SPA (004107), Rahasane Turlough SPA (004089), Cregganna Marsh SPA (004142), Lough Cutra SPA (004056) and Lough Rea SPA (004134).

**Inspector:** \_\_\_\_\_ **Date:** \_\_\_\_\_

## Appendix 5: WFD IMPACT ASSESSMENT STAGE 1: SCREENING

**ABP 320662-24**

| WFD IMPACT ASSESSMENT STAGE 1: SCREENING             |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                               |
|------------------------------------------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| Step 1: Nature of the Project, the Site and Locality |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                               |
| An Bord Pleanála ref. no.                            | ABP-320662-24 | Townland, address                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Cloghboley – Carrowgarraff North, Co. Galway. |
| Description of project                               |               | <p>Planning permission is sought for a period of 10 years for the development of a solar farm on a site of 125ha and consisting of:</p> <ul style="list-style-type: none"><li>• 570,952 sq.m of solar photovoltaic panels on ground mounted steel frames (panel arrays will be 3.2m high);</li><li>• 18 no. hardstanding locations, with each containing 3 no. electrical skids surrounded by a palisade fence with gates;</li><li>• Underground power and communications cables and ducts, including cabling along the L-8560, L-4505, L-4506 and R347 public roads;</li><li>• 4 no. joint bays, new internal access tracks (approx. 7km), a new access from the R347 public road;</li><li>• Upgrade to existing access points along the L-4505 and R347 public roads;</li><li>• Access gates, security gates, landscaping and biodiversity enhancement measures, boundary fencing (approx. 16km), and</li><li>• all associated ancillary development, site works and services including infrared closed-circuit television (CCTV) cameras.</li></ul> |                                               |

|                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Brief site description, relevant to WFD Screening,</b></p>                          | <p>The topography of the site is varied ranging from 20m to 30m above Ordnance Datum (maOD). There are no mapped watercourses within the site or immediate environment, no transitional waterbodies and no mapped permanent surface lakes or ponds. There are several temporary lakes mapped within the wider area which correspond with identified turloughs. The absence of surface water features reflects the karstic nature of the landscape.</p> <p>The predominant land use is agricultural grazing, and the site and wider area is dominated by grassland, stonewall boundaries, hedgerows and treelines. The area is not densely populated and there is a typical sporadic pattern of one-off rural housing. The M18 road infrastructure and electricity infrastructure are present in the wider environment.</p> <p>Soil depth is limited and consists of soft or loose soil and very dense clayey silty sand and gravel or very weathered limestone. The bedrock geology beneath the site is Carboniferous Limestone.</p> |
| <p><b>Proposed surface water details</b></p>                                              | <p>The solar panels will not obstruct the flow for flood water or surface waters or displace flood capacity. A site drainage plan is proposed which will control sediment during construction and include measures to mimic existing surface water flows post development.</p> <p>The site is located within flood zone C for the risk of both fluvial and coastal flooding. The risk from fluvial flooding is negligible and the risk from coastal flooding is low. There are no known historic instances of pluvial flooding on the site however the submitted FRA identifies that the development may be of minimal risk of pluvial flooding and groundwater flooding (turloughs). Mitigation measures include a buffer of 30m from turloughs and their floodplains and a 300mm freeboard for critical infrastructure. The FRA finds that the proposed development will not increase flood risk elsewhere.</p>                                                                                                                    |
| <p><b>Proposed water supply source &amp; available capacity</b></p>                       | <p>No permanent water supply required. The project only has a requirement for water associated with panel washing at operational stage. This will be sourced off site, and tankered to the site. It will be filtered prior to use.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <p><b>Proposed wastewater treatment system &amp; available capacity, other issues</b></p> | <p>Wastewater facilities are not required.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <p><b>Others?</b></p>                                                                     | <p>n/a</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

**Step 2: Identification of relevant water bodies and Step 3: S-P-R connection**

| Identified water body                                                          | Distance to (m)                                                  | Water body name(s) (code)         | WFD Status | Risk of not achieving WFD Objective e.g.at risk, review, not at risk | Identified pressures on that water body                             | Pathway linkage to water feature (e.g. surface run-off, drainage, groundwater)  |
|--------------------------------------------------------------------------------|------------------------------------------------------------------|-----------------------------------|------------|----------------------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------------------|
| WFD River Sub basin: Kilchreest sub-catchment                                  | Site is within this WFD SC.                                      | Kilchreest_010<br>IE_WE_29K022100 | Good       | Review                                                               | n/a                                                                 | Surface run-off.<br>Hydraulic connection between surface water and groundwater. |
| WFD groundwater body: Kinvara-Gort groundwater body                            | Site is within this WFD GB                                       | IE_WE_G_0002                      | Good       | Not at risk                                                          | n/a                                                                 | Surface run-off.<br>Hydraulic connection between surface water and groundwater. |
| WFD groundwater body: Clarinbridge groundwater body                            | Site is within this WFD GB                                       | IE_WE_G_0008                      | Good       | Not at risk                                                          | n/a                                                                 | Surface run-off.<br>Hydraulic connection between surface water and groundwater. |
| GWDTE – Kiltiernan Turlough (SAC001285)                                        | 150m (N)<br>(SAC boundary)                                       | IE_WE_G_0096                      | Good       | Review                                                               | n/a                                                                 | Surface run-off.<br>Hydraulic connection between surface water and groundwater. |
| GWDTE – Tullynafrankagh Turlough (SAC000606)                                   | 300m (NW)<br>(SAC boundary)                                      | IE_WE_G_0104                      | Good       | At risk                                                              | GW Chemical dependent terrestrial ecosystem damage, nutrients. DWTS | Surface run-off.<br>Hydraulic connection between surface water and groundwater. |
| GWDTEs (small features other than those listed above)<br><br>Turloughs (12no.) | Killeenavarra Turlough (adjacent)<br>Loughanwee Turlough 30m (N) | n/a<br>(not a named WFD body)     | n/a        | n/a                                                                  | n/a                                                                 | Surface run-off.<br>Hydraulic connection between surface water and groundwater. |

|                                                                                                                                                                                   |                                                           | Keamsallagh<br>West Turlough<br>490m (NW)<br>Parkatleva<br>Lough Turlough<br>675m (E)<br>Owenbristy<br>Turlough 744m<br>(E)<br>Kiltiernan<br>Turlough 770m<br>(N)<br>Leeragh<br>Turlough 980m<br>(NE)<br>K1-K5 (adjacent) |                                           |                                                         |                                           |                                         |                                                                                                                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|---------------------------------------------------------|-------------------------------------------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Groundwater<br>abstractions/source<br>protection areas:<br>Kiltiernan Turlough Group<br>Water Supply Scheme                                                                       | 510m (N)<br><i>(Abstraction<br/>point -<br/>Turlough)</i> | n/a<br>(not a named<br>WFD body)                                                                                                                                                                                          | n/a                                       | n/a                                                     | n/a                                       | n/a                                     | Surface run-off.<br>Hydraulic connection<br>between surface water<br>and groundwater.                                                                                |
| <b>Step 4: Detailed description of any component of the development or activity that may cause a risk of not achieving the WFD Objectives having regard to the S-P-R linkage.</b> |                                                           |                                                                                                                                                                                                                           |                                           |                                                         |                                           |                                         |                                                                                                                                                                      |
| <b>CONSTRUCTION PHASE</b>                                                                                                                                                         |                                                           |                                                                                                                                                                                                                           |                                           |                                                         |                                           |                                         |                                                                                                                                                                      |
| No.                                                                                                                                                                               | Component                                                 | Water body<br>receptor (EPA<br>Code)                                                                                                                                                                                      | Pathway (existing and<br>new)             | Potential for<br>impact/ what is the<br>possible impact | Screening Stage<br>Mitigation<br>Measure* | Residual Risk<br>(yes/no)<br><br>Detail | <b>Determination** to<br/>proceed to Stage 2. Is<br/>there a risk to the<br/>water environment?<br/>(if 'screened' in or<br/>'uncertain' proceed to<br/>Stage 2.</b> |
| 1.                                                                                                                                                                                | Accidental<br>pollution by                                | Underlying<br>WFD GW                                                                                                                                                                                                      | Existing. Hydraulic<br>connection between | The impact of a<br>high sediment load                   | Embedded design<br>set back distance of   | No.                                     | No risk. Screened out.                                                                                                                                               |

|    |                                                                                                                                                                                     |                                                                                  |                                                                                  |                                                                                                                                                                                      |                                                                                                                                                                                                                                                         |                                                                                    |                        |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------|
|    | uncontrolled runoff – vegetation removal, site stripping, stockpiling, vehicle movements and earthworks could result in uncontrolled site runoff and increases in sediment loading. | bodies, turlough features, GWDTE's and source Protection area.                   | surface water and groundwater.                                                   | entering turlough features could impact water quality and habitat including the source protection area. Entering groundwater this could impact both groundwater quality and GWDTE's. | 30m from all turloughs and floodplains, standard pollution prevention measures (S.5.4.1.2 of the CEMP) and the Environmental mitigation and control measures (sedimentation) (S.5.6.1.2 of the CEMP).                                                   |                                                                                    |                        |
| 2. | Accidental pollution by spillages – hydrocarbons, paints, chemicals, concrete and cement products.                                                                                  | Underlying WFD GW bodies, turlough features, GWDTE's and source protection area. | Existing. Direct entry through turloughs or indirect migration through subsoils. | The impact of pollution could impact water quality and habitat of all receptors.                                                                                                     | Embedded design set back distance of 30m from all turloughs and floodplains, standard pollution prevention measures (S.5.4.1.2 of the CEMP) and the Environmental mitigation and control measures (fuel and chemical handling) (S.5.5.1.2 of the CEMP). | No.                                                                                | No risk. Screened out. |
| 3. | Changes to groundwater and GWDTEs (dewatering) – ground works, excavation                                                                                                           | Turloughs and source protection area.                                            | New. Excavations encountering groundwater.                                       | The impact of dewatering associated with ground and excavation works could lead to                                                                                                   | Embedded design set back distance of 30m from all turloughs and floodplains. Controlled pumping                                                                                                                                                         | No.<br><br><i>Given the setback distance from turloughs and flood plains it is</i> | No risk. Screened out. |

|                   |                                                                                                                                                                                                                                                                                       |            |                    |                                                                                                                                                           |                                                                                                                                                                                                                             |                                                                                                                                                         |                        |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
|                   | works and steel pile construction.                                                                                                                                                                                                                                                    |            |                    | changes in groundwater levels and flows to groundwater contributions to turloughs.                                                                        | from excavations if necessary. General mitigation measures (S.5.4.1.2 of the CEMP) and the Environmental mitigation and control measures (Water -general) (S.5.6.1 of the CEMP).                                            | <i>considered unlikely that significant volumes of groundwater will be encountered in the limited extent and shallow (&lt;3m) excavations required.</i> |                        |
| 4.                | Changes to flood risk by uncontrolled site run off or by construction within areas at risk of flooding - vegetation removal, site stripping, stockpiling, vehicle movements and earthworks could result in uncontrolled site runoff and increases in flood risk from fluvial sources. | Turloughs. | New. Site run-off. | The impact of increased run-off and/or construction within an area at risk of groundwater flooding, could lead to an increase in risk from these sources. | Standard pollution control measures will control site runoff. Site drainage plan controlling velocity, erosion and containment of wash waters. Embedded design set back distances will control construction in floodplains. | No.<br><br>The flood risk at the site is otherwise assessed in the FRA as low and the impact magnitude negligible.                                      | No risk. Screened out. |
| OPERATIONAL PHASE |                                                                                                                                                                                                                                                                                       |            |                    |                                                                                                                                                           |                                                                                                                                                                                                                             |                                                                                                                                                         |                        |

|    |                                                                                                                                    |                                                                                  |                                                                                  |                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                              |     |                        |
|----|------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------------------------|
| 1. | Accidental pollution of water bodies by solar panel washing maintenance.                                                           | Underlying WFD GW bodies, turlough features, GWDTE's and source protection area. | Existing. Hydraulic connection between surface water and groundwater.            | Should wash water contain contaminants or cause excess scouring of soil adjacent to panels, pollution of waterbodies by uncontrolled runoff entering turlough features (inc the source protection area) or underlying WFD GW bodies could occur impacting water quality and habitats. | Embedded design set back distance of 30m from all turloughs and floodplains. Standard pollution control measures will control site runoff (S.5.4.1.2 of the CEMP). Site drainage plan controlling velocity, erosion and containment of wash waters. Sourcing of clean and use of filtered wash water. Environmental mitigation and control measures (sedimentation) (S.5.6.1.2 of the CEMP). | No. | No risk. Screened out. |
| 2. | Accidental pollution by spillages – hydrocarbons, paints, chemicals, concrete and cement products. Used in maintenance activities. | Underlying WFD GW bodies, turlough features, GWDTE's and source protection area. | Existing. Direct entry through turloughs or indirect migration through subsoils. | The impact of pollution could impact water quality and habitat of all receptors.                                                                                                                                                                                                      | Embedded design set back distance of 30m from all turloughs and floodplains, standard pollution prevention measures (S.5.4.1.2 of the CEMP) and the Environmental                                                                                                                                                                                                                            | No. | No risk. Screened out. |

|    |                                                     |                                       |                   |                                                                                                                                                                                                       |                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                 |                        |
|----|-----------------------------------------------------|---------------------------------------|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
|    |                                                     |                                       |                   |                                                                                                                                                                                                       | mitigation and control measures (fuel and chemical handling) (S.5.5.1.2 of the CEMP).                                                                                                                                                           |                                                                                                                                                                                                                                                                 |                        |
| 3. | Changes to surface runoff and groundwater recharge  | Turloughs and source protection area. | New. Site runoff. | Areas of hardstanding could result in changes to surface water drainage and groundwater recharge. This could also result in alteration of natural flow pathways causing scouring and excess sediment. | Pollution control measures, site drainage plan controlling velocity, erosion and containment of wash waters. Environmental mitigation and control measures (sedimentation) (S.5.6.1.2 of the CEMP) and Water – (general) (S.5.6.1 of the CEMP). | No.<br><br>Large amounts of water leaving the site is considered unlikely. The impact of reduced infiltration (recharge) to groundwater is considered to be minimal. The ECR considers Turloughs be supported by regional groundwater and not local topography. | No risk. Screened out. |
| 4. | Changes to flood risk by uncontrolled site run off. | Turloughs                             | New. Site runoff. | Areas of hardstanding could result in changes to natural flow pathways causing changes to flood risk from fluvial sources.                                                                            | Standard pollution control measures will control site runoff. Site drainage plan controlling velocity, erosion and containment of                                                                                                               | No.<br><br>The flood risk at the site is otherwise assessed in the FRA as low and the impact                                                                                                                                                                    | No risk. Screened out. |

|                       |                                       |                                       |                                       |                                       |                                                                                           |                                           |                                                               |
|-----------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------|---------------------------------------------------------------|
|                       |                                       |                                       |                                       |                                       | wash waters. Embedded design set back distances will control construction in floodplains. | magnitude negligible.                     |                                                               |
| DECOMMISSIONING PHASE |                                       |                                       |                                       |                                       |                                                                                           |                                           |                                                               |
| 1-4.                  | As per 1-4 'construction stage above' | As per 1-4 'construction stage above' | As per 1-4 'construction stage above' | As per 1-4 'construction stage above' | As per 1-4 'construction stage above'                                                     | No. As per 1-4 'construction stage above' | No. risk. Screened out. As per 1-4 'construction stage above' |

Inspector: \_\_\_\_\_ Date: \_\_\_\_\_