



An
Bord
Pleanála

Inspector's Report ABP-318785-24

Development

Solar farm & ancillary works

Location

Brannockstown, Brownstown,
Carnalway, Coghlanstown W,
Corbally, Delamain, Dunnestown,
Gaganstown, Greenhills, Harristown,
Hillsborough, Moorhill & Rochestown,
Co. Kildare.

Planning Authority

Kildare County Council

Planning Authority Reg. Ref.

23567

Applicant(s)

Delamain Solar Farm Ltd.

Type of Application

Permission

Planning Authority Decision

Grant

Type of Appeal

Third Party

Appellant(s)

1. Harristown Coughlanstown
Community Group
2. Rani Grennell & others

Observer(s)

Michael Hanly

Date of Site Inspection

27th May 2024

Inspector

Karla McBride

1.0 Site Location and Description

- 1.1. The appeal site comprises 6 land parcels which are located within a rural area to the SW of Naas and SE of Newbridge in County Kildare, and to the E of the M9 motorway. The land parcels lie to the E of Kilcullen, W of Ballymore Eustace, and N and S of the River Liffey.
- 1.2. The lands are in agricultural use (arable & tillage) and there are several farm buildings, equine facilities and houses in the vicinity. The site boundaries are mainly defined by mature hedges and trees and drainage ditches. Three of the land parcels (2, 3 & 4) are traversed by overhead power cables from N to S, and one is traversed by a gas pipeline (2).
- 1.3. The surrounding area has a rich archaeological, cultural, and natural heritage which includes the Dun Aillinne c.5km to the W, Harristown House and Demesne, the River Liffey to the S, and Poulaphouca Reservoir SPA and pNHA to the E.
- 1.4. The site-specific description for each of the 6 land parcels is as follows:

Parcel 1: is in the S section of the overall lands and within the demesne of Harristown House (PS). The House is located to the N of the River Liffey and Parcel 1, which comprises most of one large rectangular field, is located to the S of the Liffey. The c.470m separation between the site and the house is characterised by mature woodland, and the site is bound to the W by one of the private approach roads to the House. There are several other cultural heritage features in the vicinity including National Monuments and Protected Structures (Church & Graveyard).

Parcel 2: is in the SE section of the overall lands and partly within the demesne of Annfield House which is a Designed Landscape. The irregular shaped site is bound to the S by the public road and a low stone wall, and this road is a designated Scenic Route (No.13). There is a National Monument in the S section of the site. The site is transversed by an overhead powerline and underground gas pipeline.

Parcel 3: is in the SE section of the overall lands to the immediate N of the River Liffey and the small rectangular site is traversed by an overhead powerline.

Parcel 4: is in the NE section of the overall lands and it is bound to the S and W by the public road. The “T” shaped site comprised 5 x fields that surround a farmhouse. The lands are traversed by a section of the track bed of the former Naas-Baltinglass (Tullow to Harristown) railway and 2 x overhead powerlines. Access is off the local road (L6047).

Parcel 5: is in the NW section of the overall lands and it is bound to the S and W by the public road (R412). The irregular shaped site comprises 7 x fields and it is bound by a woodland to the N and several dwelling houses to the SE and SW.

Parcel 6: is in the far NW section of the overall lands, at a remove from Parcels 1 to 5, and to the S of Corbally Harbour. The irregular shaped site is well setback from the public road (L6063), and it is bound to the W by a quarry with the M9 beyond.

1.5. Photographs and maps in Appendix 1 describe the site and environs in more detail.

2.0 Proposed Development

2.1. Install a 210MW solar farm with a c.40-year lifespan on a combined 246ha site:

- Solar photovoltaic panels on ground mounted frames (unspecified number).
- 40 x single storey electrical inverter / transformer stations.
- 4 x single storey spare parts containers.
- 10 x Ring Main Units.
- 9 x weather stations.
- Underground electrical ducting & cabling within the development site, private lands & within the road network to connect solar farm field parcels.
- Perimeter fencing & CCTV cameras.

- Upgrade existing vehicular entrances, new gates & internal access tracks.
- 5 x stream & drain deck crossings.
- Temporary construction compounds & landscaping.
- Associated site works, services & drainage.
- Access off the R412, R413, L6044, L6047 & L6063.
- Part of the site is located within the demesne land of Harristown House (PS).
- 10-year permission requested.

Accompanying documents:

- Planning Statement & Drawings
- AA Screening report
- Ecological Impact Assessment reports (terrestrial & aquatic)
- Biodiversity Management Plan
- EIA Screening Statement
- Landscape & Visual Impact Assessment & Photomontages
- Site Access Report & Noise Impact Analysis
- EMF/EMC Impact Assessment & Electrical Fire Risk
- Decommissioning & Restoration Plan
- CEMP & Glint & Glare report
- Archaeological & Architectural Heritage Impact Assessment
- Site Specific Flood Risk Assessment

3.0 Planning Authority Decision

3.1. Decision

Planning permission was granted subject to 22 x conditions:

Condition no. 2 required the omission of the parcel of land located within Harristown Demesne, and a 15m wide route along the track bed of the former Tullow-Harristown Railway to be kept free of development (Architectural heritage & future Greenway).

Condition no.8 required the retention of existing field boundaries in accordance with the submitted Landscape Plan.

Condition no. 11 required a Surface Water Management Plan.

Condition no.12 set out the transportation requirements.

Condition nos.15 & 16 set out noise requirements (construction & operational).

Condition 18 dealt with archaeology & the preparation of an updated AIA.

3.2. Planning Authority Reports

3.2.1. Planning Reports

Report No.1:

Further Information was requested and received in relation to the following items:

1. Undertake a revised Architectural & Archaeological Heritage Impact Assessment & revise project accordingly – *Layout of Parcel 1 amended to provide an 80m Buffer from the avenue at Brannockstown Gate & additional hedgerow planting; revised AAHIA, “reverse Zone of Theoretical Visibility map” from the summit of Dun Ailinne & extra mitigation measures provided.*
2. Submit revised documentation which omits the section of Parcel 2 which bounds the R413 Scenic Route - *90m set back from Scenic Route provided.*
3. Assess compatibility of project with Obj. TMO25 (future Greenway) – *no change to layout but willing to remove PV panels in the future within a 15m corridor along the rail line / track bed.*
4. Investigate how the construction of Entrance nos. 1 & 4 in Parcels 4 & 2 can occur with the removal of less hedgerow (c.222m proposed) – *removal required to achieve 90m sightlines, will engage with KCC Engineers to agree the exact amount & will plant additional hedgerows throughout the project.*
5. Submit details of electrical inverter / transformer stations (40), spare parts containers (4), Ring Main Units (19) & weather stations (9) – *details provided.*

6. Provide scaled drawings of perimeter fencing & details of mammal passes and omit weather station between Harristown estate road & solar panels in Parcel 1 – *details provided; retain a minimum gap of 200mm along the bottom of the fences & deer can walk around the Parcels; weather station relocated to the SE corner as it is not possible to omit it entirely.*
7. Assess impact on stud farms in the vicinity & submit updated Noise Impact Assessment (construction & operational phases) – *Addendum Statement submitted along with a precedent study of noise impacts from the Melbourne Cup & a music festival on stabled thoroughbred horses at Flemington Racecourse in Australia, and noise modelling locations for locations close to the site; and ABP precedent cases which conform that solar farms are not incompatible with surrounding agricultural activity.*
8. Submit a revised CEMP which includes details of haul routes from the M7/N7 to the site via the R411, R412 & R413 – *provided subject to KCC agreement.*
9. Comment on the need for EIA Screening / EIAR in accordance with Agricultural legislation (with particular regard to the Restructuring of Rural Landholdings & affected field boundaries / areas of land) - *EIA Screening submitted with reference to Ministerial Circular EUIPR 01/2023 & Stage 3 Screening Determination for EIA concludes that an EIAR is not required.*

Report No.2:

Following the receipt of FI the Planning Officer recommended that planning permission be granted subject to 22 x conditions (refer above).

3.2.2. Other Technical Reports

Area Engineer:	No objections subject to conditions.
Environment:	No objections subject to conditions.
Transportation:	No objections subject to conditions.
Water Services:	No objections subject to conditions.
Conservation Officer:	Recommended refusal – impact on historical sites.
Heritage Officer:	No objections subject to conditions (after FI).

Parks: No objections subject to conditions.

Fire Officer: No objections subject to conditions.

3.3. Prescribed Bodies

National Roads Office: Request FI in relation to traffic management (no further report after submission of FI).

An Taisce: Request FI in relation to Harristown House demesne (no further report after submission of FI).

DHLG&H: No objection subject to archaeological conditions.

IFI: No objection subject to standard conditions.

Gas Networks Ireland: No objections.

HSA: No observations.

3.4. Third Party Observations

Some 85 letters of objection received (incl. 8 from local groups) which raised the following collective concerns: -

- Inappropriate use of agricultural land & impact on equine industry.
- Traffic impacts, capacity constraints during construction & road safety.
- Visual impacts (incl. landscape, scenic areas & hedgerow removal).
- Residential amenity impacts (incl. disturbance, noise, traffic, glint & glare).
- Environmental impacts (incl. biodiversity, hedgerow removal, drainage & soils)
- Cultural heritage impacts (incl. archaeology & protected structures).
- Noise impacts (incl. on human health & equine industry).
- Adverse impact on Naas-Blessington greenway, tourism & as a film location.
- Miscellaneous impacts (radiation, EM waves, hazardous materials, fire hazard, origin & disposal of materials, and inappropriate for Irish climate).
- Excessive scale & cumulative impacts.

- Property devaluation & no community benefit.
- Inadequate public consultation
- Lack of National policy & EIAR required.

4.0 Planning History

None for the project site.

ABP- 319518-24: Permission is being sought for a battery storage facility and associated works on a c.4ha site c.850m to the N of Parcel 5, following a First Party appeal. The original ABP decision under ABP- 310841-21 was quashed.

ABP-310033-21: Pre-app for a 220kV substation and grid connection at existing Dunnstown 400kV substation. The Board decided that it constituted SID.

ABP-319252-24: Permission is currently being sought from ABP for a 220kV substation and grid connection at existing Dunnstown 400kV substation (310033).

ABP-314320-22: Permission granted for a solar PV development on a c.129ha site at Swordlestown c.5km to the NE of the site, following a Third-Party appeal.

5.0 Policy Context

5.1. National energy policy

Climate Action Plan, 2024:

This Plan seeks to tackle climate breakdown and it commits Ireland to a legally binding target of net-zero greenhouse gas emissions by 2050, an emissions reduction of 75% and to meet up to 80% of electricity demand from renewables by 2030. Section 5.2 identifies the requirement for in the region of 22GW of renewable generation capacity by 2030. Section 5.3 Sector Abatement Ambition, notes that the proposed pathway includes a massive and rapid build-out of renewable generation capacity (wind & solar power generation technologies).

Key targets for electricity in Chapter 12 include up to 5GW of solar by 2025 and 8GW by 2030. Transformational policies, measures and actions, and societal change are required to meet the electricity sector's carbon budget programme and sectoral

emissions ceilings. During the second carbon budget, Ireland's enormous potential for offshore wind will start to be realised. In the meantime, a major acceleration and increase in onshore wind turbines and transformation of land use from other activities such as agriculture to solar PV will be required.

A new drive for solar energy with ambitious targets will have impacts for land-use and allow farmers and communities to participate in the energy transition, through diversification of income to self-supply, and sell their own power to the grid.

Measures to meet the Challenge, include: -

- Accelerating Renewable Electricity Generation:
- Accelerate the delivery of onshore wind, offshore wind, and solar through a competitive framework to reach 80% of electricity demand by 2030.
- Target up to 5GW of solar by 2025 and 8 GW solar by 2030.
- In line with the emerging EU frameworks, ensure that renewable energy generation projects, and associated infrastructure, will be considered to be in the overriding public interest.
- All relevant public bodies to carry out their functions to support the achievement of the 80% renewable electricity target.

Climate Action and Low Carbon Development (Amendment) Act, 2021:

This Act establishes a framework to develop the transition towards a low carbon economy. It 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 amends the principal act such that Section 15(1) requires consistency with the most recent approved climate action plan, national long term climate action strategy & national adaptation framework and approved sectoral adaptation plans.

National Planning Framework, 2018: seeks to shape future growth and development up to 2040. It aims to harness renewable energy potential, achieve a transition to a competitive, low carbon, climate-resilient and environmentally sustainable economy by 2050, and promote new energy systems & transmission grids based on renewables-focused generation systems (incl. solar energy).

National Energy Security Framework, 2022, addresses Ireland's energy security needs in the context of the war in Ukraine. It coordinates energy security work across the electricity, gas & oil sectors, and takes account of the need to decarbonise society & the economy, and of CAP targets to reduce emissions.

National Energy & Climate Action Plan 2021-2030: outlines Ireland's energy and climate policies in detail for the period from 2021 to 2030 and looks onwards to 2050.

Under the dimension Decarbonisation - Renewable energy, key objectives include:

- Achieve a 34% share of renewable energy in energy consumption by 2030.
- Increase electricity generated from renewable sources to 70%.
- Up to 1.5 GW of grid scale solar energy. Policies and measures include increased renewable electricity generated to 70%.

Under dimension Energy Security, the key objective is maintaining security of our energy system in the most cost-effective manner. This includes efforts to increase indigenous renewable sources in the energy mix (wind, solar and bioenergy).

Circular P01/2021 - P&D (Amendment) Regulations 2021 (S.I 9 of 2021)

This Circular removed the requirements for landowner consent to be submitted with planning applications for services in, on over or under a public road. The amending regulations seek to provide legal certainty so that wind farm operators, as well as other statutorily approved utility service providers (electricity, broadband, telecommunications etc.), who lay cables or pipes along public roads for the purposes of providing such utility services can proceed with making planning applications without the need to submit the consent of adjoining landowners.

Food Wise 2025 (Department of Agriculture, Food and the Marine, 2015)

This document sets out a 10-year vision for the Irish agri-food industry up to 2025. Subject to following actions identified in the strategy, the sector projections are to increase value of agri-food exports by 85%, increase value added in the agri-food, fisheries and wood products sector by 70%, increase the value of Primary Production by 65% and create an additional 23,000 direct jobs in the agri-food sector. To achieve the projections set out above, Food Wise 2025 identifies c.400 recommendations and actions to achieve sustainable growth.

5.2. Other National Policy

Architectural Heritage Protection Guidelines for Planning Authorities

The guidelines define demesne as that part of the historic estate associated with a country house which was reserved for the personal use and enjoyment of the owner.

Section 13.2, in determining the Attendant Grounds of a Protected Structure, notes that the attendant grounds are lands outside the curtilage of the structure but associated therewith and are intrinsic to its function, setting and/or appreciation. In many cases, the attendant grounds will incorporate a designed landscape deliberately laid out to complement the design of the building or to assist in its function. The attendant grounds of a country house could include the entire demesne, or pleasure grounds, and any structures or features within it such as follies, plantations, earthworks, lakes and the like.

Section 3.4.2 notes that the contribution of setting to the character of the architectural heritage should not be underestimated. The location of a structure may have been designed to relate to a particular landscape feature. The attendant grounds around a country house were often moulded into a coherent landscaped entity in accordance with current aesthetic and economic ideas.

Section 13.7 notes that developments proposed for demesnes should respect the established planting pattern where this is part of the designed landscape.

Planning System and Flood Risk Management, 2009: seek to avoid inappropriate development in areas at risk of flooding and avoid new developments increasing flood risk elsewhere. It advocates a Sequential Approach and a Justification Test.

National Biodiversity Action Plan, 2022: sets out actions that a range of government, civil & private sectors will undertake to achieve Ireland's 'Vision for Biodiversity'.

National Landscape Strategy for Ireland, 2015-2025: seeks to integrate landscape into sustainable development, carry out an evidence-based identification and description of landscape character, provide for an integrated policy framework to protect & manage the landscape and to avoid conflicting policy objectives.

5.3. Regional Policy

Eastern & Midland Regional Spatial & Economic Strategy 2019-2031

The identified Regional Strategic Outcomes (RSOs) include:

9. Support the Transition to Low Carbon and Clean Energy.

Pursue climate mitigation in line with global and national targets and harness the potential for a more distributed renewables-focussed energy system to support the transition to a low carbon economy by 2050. (NSO 8 & 9).

Key Growth Enablers for the region include supporting rural areas by harnessing natural resources to develop renewables, recreation and tourism opportunities.

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

7.9 Climate Change

NSO 8 is dedicated to achieving transition to a Low Carbon and Climate Resilient Society. The Strategy supports an increase in the amount of new renewable energy sources in the Region. This includes the use of wind energy, biomass, and solar photovoltaics and solar thermal, both on buildings and at a larger scale on appropriate sites in accordance with National policy and the Regional Policy Objectives outlined in this Strategy.

5.4. UK Solar Energy Development Guidance

PPG for Renewables and Low Carbon Energy (DCLG 2015)

This guidance includes advice on planning considerations relating to specific renewable technologies (including solar power) and it includes the following points:

- Encourage use of brownfield land.
- Where agricultural land is used, allow for continued agricultural use.
- Use poorer quality greenfield land in preference to higher quality.
- Consider visual impacts, the impacts of glint & glare on the landscape, local residents and aircraft safety, and the potential to mitigate these impacts for example through screening with native hedges.

Renewable Energy PG Note 2 – The Development of Large Scale (>50 kW solar PV arrays) – Cornwall (UK) 2012

This document recognises landscape and visual amenity as one of the most significant impacts and it provides specific guidance on planning considerations.

Devon Landscape Policy Group Advice Note No.2 – Accommodating Wind and Solar PV Developments in Devon’s Landscape, 2013

This document recommends siting solar developments on lower slopes or within folds in gentle undulating landscapes or on flat plateau sites rather than upper slopes or coastal headlands, and in landscapes with a sense of enclosure. Appendix 2 provides a classification of scale from Very small (< 1ha), Small (>1-5ha), Medium (5-10ha); Large (> 10 to 15ha) to Very Large (>15 ha).

5.5. Kildare County Development Plan 2023-2029

Chapter 7: Energy and Communications:

Aim: Encourage & support energy & communications efficiency and achieve a reasonable balance between responding to EU & National Policies on climate change, renewable energy & communications and enabling resources to be harnessed in a manner consistent with proper planning & sustainable development.

EC P2: Promote renewable energy generation & associated grid infrastructure at appropriate locations to meet national objectives toward a net zero economy.

EC O2: Adopt an informed and positive approach to renewable energy proposals, having regard to the proper planning and sustainable development of the area, including community, environmental and landscape impacts and impacts on protected or designated heritage areas / structures.

EC O3: Support initiatives for limiting greenhouse gas emissions through energy efficiency and development of renewable energy sources which make use of the natural resources in an environmentally and socially acceptable manner.

Solar Energy: The Council is required to achieve a balance between responding to the Climate Emergency and adhering to Government policy on renewable energy, while enabling solar energy resources to be harnessed in a manner that is consistent with proper planning and sustainable development. In the absence of national planning guidelines for the future development of solar farms, the Council will assess the appropriateness of individual applications considering the following:

- Site aspect, suitability, and topography: favour reuse of previously developed / brownfield land, contaminated land or industrial land and non-productive agricultural land in preference to productive land.
- Biodiversity.
- Landscape character.
- Residential amenity (noise & traffic).
- Flooding.
- Architectural / Archaeological Heritage.
- Traffic impacts (glint & glare).
- Road access, Grid Access, Operations & Lifespan.

Section 15.11.2 Solar Energy Proposals, states that all solar farm applications shall have due regard to the considerations listed in above.

EC P5: Promote the development of solar energy infrastructure.

EC 017 & 021: support solar energy development in appropriate locations, in line with the siting criteria and subject to environmental considerations

EC 024: requires a Glint and Glare Assessment for solar energy proposals.

EC 025: requires decommissioning and site rehabilitation plans.

EC 026: seeks to only permit hedgerow removal where it is necessary for the development of a solar farm.

Chapter 9 Our Rural Economy Policy

RD P1: supports and promotes rural enterprises and appropriate expansion and diversification, including sustainable agriculture and renewable energy, at suitable locations, where they contribute to a low carbon and resilient economy.

RD O7: Supports the development of renewable energy production.

RD P4: supports & encourages continued development of the bloodstock & equine industry, seek to ensure appropriate environmental conditions for equine operations.

RD O15: encourages the expansion of the bloodstock industry by appropriately protecting the environment and amenity value of rural areas from encroachment by urban sprawl and incompatible development.

Chapter 11 Built and Cultural Heritage

AH P2 & AH P6: seek to protect & enhance archaeological sites, monuments and to protect, conserve and manage archaeological & architectural heritage.

AH P7: promotes appreciation of the landscape and historical importance of traditional and historic gardens, demesnes, and parks.

AH P8: seeks to preserve and protect historic gardens and designed landscapes identified in the NIAH Survey of Historic Gardens.

AH O21: seeks to protect the curtilage of protected structures and to refuse permission for inappropriate development that would adversely impact on the setting, curtilage, or attendant grounds of a protected structure, cause loss of or damage to the special character of the protected structure and/or any structures of architectural heritage value within its curtilage. Any proposal within the curtilage and/or attendant grounds must demonstrate that it is part of an overall strategy for the future conservation of the entire built heritage complex & contributes positively to that aim.

AH O23: requires an Architectural Heritage Assessment Report to accompany all applications with potential for visual or physical impacts on a Protected Structure, its curtilage, demesne and setting.

AH O26: requires that planning applications in proximity to 'Views to be Preserved' are accompanied by a Visual Impact Assessment.

AH O31: seeks to protect the designed landscapes associated with protected structures and retain important elements of the built heritage including historic gardens, stone walls, pathways, and avenues within the curtilage and attendant grounds of protected structures.

AH O32: seeks to ensure that proposals will not adversely impact on the setting of a protected structure or obscure established views of its principal elevations.

AH P7: seeks to promote appreciation of the landscape & historical importance of traditional & historic gardens, demesnes and parks, and particularly where they constitute an important and intrinsic value to the setting of a protected structure.

AH P8: seeks to preserve and protect the historic gardens & designed landscapes identified in the NIAH Survey of Historic Gardens and Designed Landscapes.

AH O47: seeks to assess demesnes and historic designed landscapes and promote conservation of their essential character, allowing appropriate re-use.

AH O51: requires that applications consider landscape impacts & demonstrate that development has been designed to take account of landscape heritage resource.

Chapter 12 Biodiversity & Green Infrastructure

BI P1: seeks to protect & enhance of biodiversity and landscape features.

BI O1: seeks the preparation of Ecological Impact Assessments.

BI O2-7: seek to protect & enhance biodiversity (incl. green corridors, implementation of national biodiversity initiatives, & no net loss of biodiversity).

BI P2: contribute to maintaining or restoring the conservation status of all sites designated for nature conservation.

BI O9: avoid development that would adversely affect the integrity of any Natura site.

BI O10: requires AA Screening.

BI P4: seeks to protect plants, animals & bird species which are protected by law.

BI P5: identify & conserve locally important biodiversity sites.

BI P6: recognise the important contribution trees and hedgerows make to the county biodiversity resource climate mitigation, resilience and adaptation.

BI O26: seeks to prevent the removal of hedgerows.

BI O27: require the retention & appropriate management of hedgerows.

BI P7: recognise & promote inland waters, protect rivers, streams & watercourses.

BI O58: seeks to require the preparation of an Invasive Species Management Plan.

Chapter 13 Landscape, Recreation and Amenity

The site is covered by 3 x Landscape Character Areas.

Eastern Transition LCA is of Medium sensitivity and has capacity to accommodate a range of uses without significant adverse effects on the appearance or character of the landscape. Table 13.3 identifies solar energy as being of high compatibility.

Eastern Uplands LCA is of High sensitivity, which has reduced capacity to accommodate uses without significant adverse effects on the appearance or character of the landscape having regard to prevalent sensitivity factors. Table 13.3 identifies solar energy as likely to be compatible with this LCA, but with great care.

Northern Lowlands LCA is of Low sensitivity and has capacity to accommodate a range of uses without significant adverse effects on the appearance or character of the landscape. Table 13.3 identifies solar energy as being of high compatibility.

River Liffey Subordinate LA is of Special sensitivity, significant adverse effects on the appearance or character of the landscape could arise having regard to prevalent sensitivity factors. Table 13.3 identifies solar energy as being of Low compatibility.

LR P1: seeks to protect & enhance the landscape, ensuring development retains, protects & enhances the appearance and character of the local landscape.

LR O1: seeks to ensure that consideration of landscape sensitivity is an important factor in determining development uses.

LR O2: requires a Landscape/Visual IA accompany proposals that are likely to significantly affect: Landscape Sensitivity Factors; a Class 4 or 5 Sensitivity Landscape; a route or view identified in Map V1 - 13.3; and all Wind Farms.

LR O4: refers to local landscape features, including historic features and buildings, hedgerows, shelter belts and stone walls.

LR O10: recognises that the lowlands and transitional areas are made up of a variety of working landscapes, which are critical resources for sustaining the economic and social well-being of the county and include areas of significant landscape and ecological value, which are worthy of protection.

LR O14: seeks to maintain the visual integrity of Eastern Transition Lands which have retained an upland character.

LR O15: seeks to facilitate appropriate development in the Eastern Transition Lands, that respects the scale, character & sensitivities of the local landscape.

LR O30: seeks to sensitively consider developments in the Upland Character Areas that have a functional & locational requirement to be situated on steep or elevated sites where it can be explicitly demonstrated that residual adverse visual impacts are minimised or mitigated.

LR O31: seeks to have regard to the potential for screening vegetation when evaluating proposals for development within the Upland Character Areas.

Scenic Route 13: Views to the River Liffey on the R413 from Brannockstown crossroads to Ballymore Eustace (S of site).

Views of the River Liffey from Bridges:

RL11: Kilcullen Bridge, Kilcullen (SW of site).

RL12: New Bridge, Cramersvalley/Carnalway (S of site)

LR O71: seeks to take the potential impact of projects into account when considering applications in the vicinity of established walking routes.

LR A11: seeks to investigate the feasibility of developing long distance walking and cycling routes along disused sections of railway lines.

Chapter 5: Sustainable Mobility & Transport

TM O25: seeks to investigate the feasibility of connecting the Naas to Corbally Harbour Greenway with the proposed Greenway along the former Tullow/Harristown railway line/ Naas-Baltinglass Greenway and, where considered feasible.

5.6. Heritage Designations

Protected structures: Harristown House & Demense (RPS. B29-49).

Designed Landscape: Annfield House (HGDL190)

National Monuments: Excavation – miscellaneous (KD01106).

Dun Aillinne –Royal site (c.5km to W)

Natural heritage: Poulaphouca Reservoir SPA (c.4.5km to E)

Pollardstown Fen SAC (c.5.2km to SW)

Mouds Bog SAC (c.5.6km SW)

6.0 The Appeal

6.1. Grounds of first Third Party Appeal (Rani Grennell, Cian Grennell & Aine Harty)

Context:

- Family home since 1983 located within Parcel 5 (Harristown/Carnalway area).
- Adverse impact on natural & cultural heritage (which is used for film sets).
- Project will encircle family home & cause construction phase disturbance.

Concerns:

- Impact on rural landscape character & visual amenity.
- Impact on residential amenity (noise & traffic disturbance).
- Impacts on biodiversity, agricultural land, water quality & future Greenway.
- Impacts on walking routes & recreational activities.
- Loss of hedgerows & biodiversity (habits & species).

6.2. Grounds of second Third Party Appeal (Stephen Bourke & Harristown Coughlanstown Community Group CLG)

Context:

- The appeal & planning submissions were accompanied by the following documents which are dated June 2023 & December 2023 (updated with additional data & road safety calculations and in a slightly different format):

- Engineering report
 - Equine Industry report
 - Cultural heritage report
 - Noise report
 - EIA Screening report
 - Landscape & visual Impact Assessment report
 - Kildare County Development Plan
 - Biodiversity report
- The concerns are set out in the planning application & FI submissions which are summarised above, and the main points are reiterated below:

Engineering:

- Failure to submit a Traffic Impact Assessment.
- Undercounting of construction vehicle movements & underestimation of impacts on rural road network.
- The 22km of 2.4m high security fencing will not be sympathetic to the agricultural character of the area.

Biodiversity:

- Recordings indicate the presence of 9 x Red Conservation List birds.
- Proximity to several crucial ecological resources (SACs, SPAs & p/NHAs).
- Material contravention of KCC CDP 12.7.1 (Protected Habitats & Species).

Cultural Heritage:

- Impact on nomination of Dun Ailinne as a UNESCO World Heritage site.
- Impact on delivery of future K17 Greenway.
- Impacts on cultural heritage (incl. archaeology of Pale Boundary, close to Harristown Castle in Parcel 4).

Fire Risk:

- Report assesses out-of-date UK data (2027/18) & misquotes conclusions.
- Deals only with localised fire risk & excludes other aspects of the environment (incl. wildlife, hedgerow, woodlands, dwellings & protected structures).

- Inadequate mitigation measures with no consideration of fire repression measures, Emergency Response Plan or Fire Brigade access.

Noise:

- Inadequate noise impact analysis report which omits other relevant developments which should be assessed for in-combination effects.
- Calculation used to determine noise from plant & equipment should have applied the calculation used for hemispherical emissions, and thus underestimates the sound.
- Possible inadequate mitigation measures.
- Lack of assessment of tonal noise.
- Lack of detail in report to allow an external party to analysis/ critique.
- Lack of detailed assessment of vibrational noise.
- The reduction of noise levels within dwellings if windows & doors are kept closed is an inappropriate means to reduce noise nuisance.
- No consideration of the local area as an amenity with vulnerabilities to noise.
- Refers to out of date legislation & doesn't reference relevant local research.

Oral Hearing:

- Request an Oral Hearing having regard to the scale & magnitude of the development and far-reaching consequences for the local community, and the inadequacy of KCC & the developer's public consultations.

EIAR:

- EIAR & EIA required for project and cumulative impacts with other aspects of overall energy project (incl. grid connection cabling, substation & end user).

6.3. Applicant's response

- The response submission was accompanied by the following documents:
 - Archaeological & Architectural Heritage Response Statement
 - Landscape & Visual Impact / Glint & Glare Response Statement
 - Addendum to Site Access Report
 - Ecology Response Statement

- Noise Technical Note
- Updated EIA Screening Statement & Cumulative Impacts Table/ Map
- Updated site layout plan for Parcel 4

Compliance with planning policy:

- Complies with national, regional and local planning policies.
- Will contribute to the delivery on EU & national climate & energy targets.
- Good annual radiance levels with high output of green energy to the grid.
- Proximate to nearby existing Dunnstown 400kV/220kV substation.
- Viable grid connection & route to market via RESS Future Auction Schedule.
- Complies with Development Plan policies (incl. heritage & visual amenity).
- Ch. 7 reference to the reuse of previously developed land, industrial land & non-productive agricultural land for solar farms is only one of several criteria to be considered, and it does not preclude use of greenfield agricultural lands.
- Need to transition to a low carbon climate resilient environment is a key part of the Strategic Vision which seeks to support & promote renewable energy.
- Contributes to rural diversification in line with Policy RDP1.
- KCC is satisfied that no material contravention issues arise.

Archaeological & architectural heritage:

- Complies with all relevant policies, objectives and designations.
- Condition no.2 required the omission of Parcel 1 within Harristown Demesne.
- No adverse impact on any other demesnes in the vicinity.
- Dun Ailinne is located over 5km away and to the W of the M9 Motorway, with only slight intermittent views from its summit of the solar farm with imperceptible impacts on visual amenity.
- Claim that parts of the Pale Ditch lie nearby are unsubstantiated.
- Condition for pre-commencement geophysical survey and/or testing is standard for solar farm applications as per DHLG&H recommendations.

Landscape & visual impacts:

- LVIA provides a robust assessment of the rural landscape.
- Mainly located in LCAs Eastern Transition, Eastern Uplands & River Liffey.
- Parcel 6 to the W is in LCA Northern Lowlands.
- Compatibility ranges from High to Low and is acceptable in most LCAs.
- Layout has been tailored to take account of the sensitive River Liffey Valley.
- Layout followed an iterative process to reflect the character of the LCAs.
- Although large scale the visual impacts will be low, the study are does not contain any key tourism features & impacts will be mitigated by landscaping.

Traffic, access & road safety:

- No formal requirement for a TIA as project falls well below thresholds, however a Site Access report was provided.
- Approach to sightlines informed by TII's Rural Road Link Design (DN-GEO-03031) & complies with national standards.
- Sightlines more than 90m at 4 of the 5 entrances, Entrance no. 2 has 70m & 90m sightlines to the N & S, and most are existing agricultural entrances.
- No formal requirement for a RSA as no new roads of improvements proposed.
- Works are internal to site (incl. widening, hedgerow removal & drainage).
- No underestimation of hedgerow removal and limiting the total number of entrances was a key design intention.
- Less than 300m of hedgerow will be removed which will be offset by an additional 18,106m with a net biodiversity gain. along with native woodland planting (0.0546ha), riparian enhancement zones & biodiversity ponds.
- Site Report Access surveyed access routes, all are local & regional roads which have unrestricted access to all vehicles (incl. articulated trucks), Auto-track assessment undertaken; and TMP will be protect road users & tourists.
- Construction traffic distributed across the 5 land parcels & not concentrated in one specific area; traffic volumes updated to provide a detailed breakdown of calculation methodologies, and Parcel 1 omitted & HGV error corrected;

resultant reduction in HGVs with a peak daily number of 23 & peak hourly traffic at 2.6, and average daily number of vehicles is 8 with 1 per hour.

- CEMP deals with construction phase dust, vibration & road damage along with adherence to best construction practices & relevant guidance.
- Glint & glare assessment concludes that any adverse impacts on the road & rail network will be reduced by the landscaping mitigation measures.

Ecology & biodiversity:

- Proposals in Biodiversity Management Plan will enhance local biodiversity & ensure improved habitat connectivity; variable condition, structure & species richness in existing hedgerows, and c.18,106m will be enhanced & c. 4,393m will be planted, along with a small native woodland & 2 x ponds.
- No NBDA records for deer at site & environs, and no evidence of deer (inc. trails), therefore project will not introduce barriers to movement.
- Unlikely that SCI species (Greylag goose & Lesser Back-backed gull) from the Poulaphouca Reservoir SPA forage the lands given the separation distance & documented foraging / breeding areas, project will not form a barrier to migratory birds, and Stage 2 AA not required.

Noise in local environment:

- NIA report complies with all relevant standards & regulations.
- Project site does not meet the “Quiet Area” EPA assessment criteria (NG4).
- Internal ambient calculated noise levels conducted with all windows & doors closed as per guidelines & noise levels are well below EPA/WHO Guidelines.
- Operational noise characteristics does not contain tonal / impulsive elements.
- Project will not give rise to any significant cumulative noise impacts.
- Mitigation design approach ensured that all noise generating plant is placed away from sensitive noise receptors.

Equine industry:

- Deloitte and other reports make no reference to solar farms or any perceived or substantiated direct impacts on stud farms.
- Adverse impacts on the equine industry have not been demonstrated.
- The project represents a sustainable form of rural diversification.
- Notable absence of published research on impact of solar farms on horses.
- RFI referenced journal paper sourced from the 9th International Congress on Noise as a Public Health Problem was commissioned by the equine industry in Australia, it concluded that general LAeq noise levels in stables should not exceed 65dBA, and this has been used as a benchmark for assessment.
- No appeals from Irish Thoroughbred Breeders Association or nearby studs.
- Appellants general references to noise impacts have not been substantiated, and several local stud farms are proximate to quarries & recycling centres.
- Extent of impacts confined to construction phase & restricted to Parcel 2 where the stables are c.250m from the site boundary (noise will be c.68dBA reducing to under 65dBA at 80m), and the works will last 2-3 weeks.
- KCC & ABP (precedent) satisfied that adverse noise impacts will not arise.

EIA Screening:

- Solar farms are not a project type under Part 1 or 2 of the P&D Regs, unless there is another project component under Parts 1 & 2 (confirmed by Circular Letter EUIPR 03/2020 & some HC Judgments).
- RFI EIA Screening Report submitted to KCC in view of Ministerial Circular EUIPR 01/2023 & S.I. 383 (Projects for the restructuring of rural landholdings)
- EIA screening as per relevant thresholds concluded that no EIAR is required.
- Condition no.2 requires omission of Parcel 1 at Harristown Demesne & a 15m buffer along the track bed, thus an updated EIA Screening has been provided.

Other matters:

Agricultural land: note reference to Welsh Government's consultant's report; no formal land classification system in Ireland; represents a form of diversification & allows for continued use of the land (sheep grazing); and future re-instatement.

Future Greenway: a 15m buffer will be provided along the track bed.

Cumulative assessment: already includes existing operational & proposed projects (incl. substation, solar farms, grid connections & grid upgrades).

Fire risk: is not deemed to be a significant issue in the assessment of solar farms projects (confirmed by ABP) & mitigation measures will reduce fire risk.

Community engagement: adequately undertaken as per S.5 of the P& Statement.

Procedural matters: application was subject to statutory notification processes.

6.4. Planning Authority Response

No further comments.

6.5. Prescribed Bodies

No further submissions

6.6. Observers

One Observation received from Michael Hanly who raised concerns in relation to:

- Inappropriate scale of development in a sensitive heritage area.
- Loss of high-quality food producing agricultural land.
- Adverse impacts on rural road network.
- Noise disturbance during construction & operational phases.
- Out of character with surrounding cultural landscape & heritage and incompatible with Development Plan policies to protect them.

6.7. Oral Hearing

The Board decided that there was sufficient information on the file to enable an assessment of issues raised and that an Oral Hearing should not be held, as per the Board Direction dated 11th June 2024.

7.0 Assessment

The main issues arising in this case relate to the following:

- Principle of development
- Visual amenity (incl. glint & glare)
- Residential amenity (incl. noise & fire risk)
- Movement & access
- Cultural heritage
- Biodiversity
- Water quality & flood risk
- Other issues
- Screening for Environmental Impact Assessment
- Screening for Appropriate Assessment

7.1. Principle of development

Policy compliance:

The proposed solar farm development would be located within a rural area and the lands are mainly in agricultural use. The solar farm would operate in conjunction with a proposed 220kV substation and energy storage facility at Dunnstown which are currently under consideration by the Board (ABP-319252-24 & ABP-319518-24). The proposed substation would facilitate the export of the electricity generated by the solar farm development to the national grid via the existing Dunnstown 400kV substation. The proposed solar farm would have a 40-year lifespan after which it would be decommissioned, and a 10-year planning permission is sought.

The proposed development would comply with national, regional and local planning and environmental policy which supports a move to a low carbon future and encourages the use of renewable resources to reduce greenhouse gas emissions.

National policy recognises the role of solar power whilst Development Plan policies and objectives support renewable energy subject to normal planning and environmental considerations. The proposed development would contribute to the national targets set for Ireland which seek to substantially increase for the proportion of the country's electricity generated from renewable sources as part of its mandatory obligation under the EU Renewable Energy Directive 2009/28/EC. These targets are required to reduce greenhouse gas emissions and to ensure a secure energy supply. The proposed development, which would contribute to the achievement of these targets, would be acceptable in principle. At local level, the current Development Plan seeks to encourage and promote sustainable energy production. Having regard to the foregoing, I am satisfied that the proposed development would comply with relevant EU, national, regional and local planning and energy policy, would therefore be acceptable in principle.

Use of agricultural land:

The proposed solar farm would be located on agricultural lands that are mainly used for grazing. There is no national guidance in relation to where solar farms should or should not be located and there is no policy which precludes the development of solar farms on agricultural land. It is noted that UK guidance seeks to direct large-scale solar farms to previously developed brownfield sites and it has a grading system for land, ranging from Grade 1 (most productive) to Grade 5 (most marginal) and most agricultural land is mid-range.

At national level, the agricultural strategic vision as set out in Food Wise 2025 supports increasing the value of agri-food, fisheries and wood production sector by 70% and the value of food exports by 85%. The strategy also recommends on-farm diversification along with a suite of recommendations and actions which do not place any restrictions on land use. Having regard to scale and nature of the proposed solar farm on lands upon which sheep grazing could continue, it is unlikely that the proposed development would compromise the grazing value of agri-food or the value of food exports to such an extent that it would outweigh the renewable energy benefits of the proposed development. At local level, the current Development Plan supports farm diversification.

There would be local employment opportunities during the construction phase and the development would contribute to a reduced need for energy imports. The dual agricultural use of the lands for grazing could continue with the PV solar arrays in place and it is noted that sheep growth opportunities are envisaged under Food Wise 2025. The shallow nature of the ground works required to support solar arrays and the temporary c.40-year duration of the use would also ensure that there would be no permanent or irreversible loss of agricultural land.

Notwithstanding the concerns raised by the third parties in relation to soil compaction, I am satisfied that the proposed development would not have any significant adverse or long-lasting impacts on soil quality over and above what would occur from the regular use of agricultural machinery and grazing herds on the lands. I also note that the bulk of the on-site works and use of machinery would be confined to the relatively short construction and decommissioning phases, as opposed to the perennial use of the land by herds and agricultural machinery.

Equine industry:

Concerns were raised by the third parties in relation to the impact of the development on the surrounding equine industries which are present in this part of Co. Kildare. I note the various reports submitted by the third party in relation to potential impacts on horse breeding, and the additional response reports submitted by the applicant during the FI and appeal process, all of which are summarised in sections 3.21, 6.2 and 6.3 above. I also note the absence of any objections from the owners of equine facilities in the vicinity.

Development Plan Policy RD 015 seeks to encourage the bloodstock industry by appropriately protecting the environment and amenity value of rural areas from encroachment by urban sprawl and incompatible development, however it does not define 'incompatible development'. Solar energy development is not specifically precluded in such areas and the proposed development would not result in any loss of lands currently in use for equine activities.

The proposed development has the potential to cause disturbance during the **construction phase**, however I am satisfied that that its impact would be temporary and short term. Any noise disturbance during this phase could be mitigated by the measures contained in the final CEMP in relation to the timing and phasing of construction works, and in the final TMP in relation to the timing and phasing of deliveries to the various land parcels and works along the public road network. The retention and replanting of hedgerows and trees would serve to protect the surrounding lands from any adverse glint and glare effects (refer below for a more detailed assessment). However, the final CEMP should contain a construction phase management plan which provides for prior consultation with any neighbouring equine facilities. This could be addressed by way of a planning condition.

The proposed development has limited potential to cause disturbance during the **operational phase**. The daytime operational nuisance limit for humans is normally identified as 55dB, however I note that the predicted operational emissions would be significantly lower than this limit. Furthermore, night-time noise impacts on equine receptors would be negligible having regard to the characteristics of solar farm emissions between dusk and dawn. Having regard to the nature of the proposed development and predicted negligible increase over baseline levels, and minimal nighttime emission, I am satisfied that there is no likelihood of significant adverse operational noise effects on equine receptors. (Residential noise impacts area assessed in more detail in section 7.3 below.)

7.2. Visual amenity (incl. Glint & Glare)

As previously stated, there is no national guidance in relation to solar farms however various UK guidance documents identify potential impacts on landscape and visual amenity (incl. glint & glare) as two of the main concerns. The guidance recommends that gently undulating landscapes or flat plateau sites are preferable to sensitive locations, and that mitigation of visual impacts could be achieved by way of screening with hedges. It is noted that the overall site would be classified as Very Large under UK guidance on a scale that ranges from Very Small to Very Large, but that the various individual land parcels would be of a smaller scale.

The solar farm would comprise a series of photovoltaic panels (unspecified number & c.2.8m high) on ground mounted frames in a combined 246ha site. It would also comprise 40 x single storey electrical inverter / transformer stations, 4 x single storey spare parts containers, 10 x Ring Main Units and 9 x weather stations, temporary work compounds, perimeter fencing and CCTV cameras. Most ducting and cabling within the site would be underground. Most of this extensive area has been identified as a landscape that has the capacity to absorb renewable energy developments, although some of the areas have a higher sensitivity and lower compatibility rating for solar energy developments.

Landscape & visual amenity:

The application was accompanied by a Landscape and Visual Impact Assessment report (LVIA) which assessed potential visual impacts at various locations around the site boundaries and along the road network, and from 24 x viewpoints that encompass sensitive receptors (incl. scenic routes, public roads, bridges & nearby houses). It concluded that the proposed solar farm and associated infrastructure would be well assimilated within the context of its rural surroundings, and that there would be no cumulative impacts given the separation distance and dense layers of intervening vegetation.

Condition no. 2 (a) of the planning authorities' decision to grant planning permission required the omission of Parcel 1 from the overall development, as the solar panels would have been located within the demesne grounds of Harristown House which is a designated Protected Structure. Condition no.2 (b) required the omission of solar panels within 15m of the former Naas to Kilcullen railway track where it traverses Parcel 4. The omissions were required in the interest of protecting cultural heritage and Development Plan objectives for a future Greenway along the track bed. I concur with the overall objectives of Condition no.2 which should be attached as a planning condition. I also note that it was agreed at the FI stage to provide a more substantial setback from R413 Scenic Route. I am satisfied that the conditioned omissions and agreed setbacks would have a positive impact on the landscape and visual amenities of the area.

The proposed development would be located within a gently undulating rural area which is mainly characterised by agricultural fields that are defined by mature trees and hedgerows. Five of the land parcels (1 to 5) are located between Kilcullen and Ballymore Eustace to the N and S of the River Liffey, while Parcel 6 is located to the N of Kilcullen and E of the M9. Some of the Parcels (1, 2 & 3) slope down gently from towards the River Liffey which is a designated pNHA.

The Development Plan contains a range of policies and objectives which seek to protect and/or manage the landscape, its various components and visual amenity which are summarised in section 5.5 above (incl. LR P1, LR O1, LR O2, LR O4, LR O10, LR O14, LR O15, LR O30 & LR O31). The site and environs are covered by a range of Landscape Character Area (LCA) designations with varying degrees of sensitivity (Low, Medium & High) and varying levels of capacity to absorb solar farm developments. Most of the Parcels would be located within areas of Low to Medium Sensitivity and High compatibility as summarised in the following table. Parcels 1, 2 and 3 to the N and S of the River Liffey would be well set back from the River Liffey Subordinate LA which has a Special Sensitivity and Low compatibility.

LCA / LA	Sensitivity	Compatibility	Land Parcels
Eastern Transition LCA	Medium	High	1, 3, 4 & 5
Eastern Uplands LCA	High	Likely (with care)	2
Northern Lowlands LCA	Low	High	6
River Liffey Subordinate LA	Special	Low	1 & 2 (S); 3 (N)

A section of the R413 from Kilcullen to Ballymore Eustace to the S of the site (Parcels 1 & 2) is designated Scenic Route (No.13) from Brannockstown crossroads to Ballymore Eustace. There are protected views of the River Liffey from 2 bridges at Kilcullen Bridge (RL13) to the SW of site, and New Bridge (RL12) at Carnalway to the S of site. There are several features of archaeological and architectural in the vicinity of some of the land parcels (incl. mounds & demesne houses). The surrounding area is sparsely populated although there are several detached houses, farm buildings and equine facilities located along the surrounding road local network.

The proposed solar arrays would be set back a significant distance from roadside boundaries, bridges, houses, features of cultural heritage and amenity interest, and the River Liffey. Although some existing hedgerows would be removed to accommodate the works during the construction phase, it is proposed to replant substantial additional native species hedgerows within the solar farmland parcels and along the boundaries. Having regard to the relatively Low to Medium sensitivity rating of most of the surrounding landscape and the gently sloping nature of the sites, the low-lying design of the proposed solar farm, the conclusions of the visual impact assessment report, taken in-combination with the boundary setbacks and extensive hedgerow cover, and conditioned removal Parcel 1 at Harristown house and along the former railway track at Parcel 4, I am satisfied that there would be no significant adverse impacts on the landscape or visual amenity arising from visual intrusion at any of the Parcels within the overall site.

Glint and Glare:

The application was accompanied by a Glint and Glare report which identified the potential for reflectance periods on the surrounding area including the road network, dwelling houses and aviation receptors. The Glint and Glare report noted that solar panels by their nature are designed to absorb rather than reflect light, and that they are constructed with high transmission low-iron glass which has a lower transmission and reflective ratio compared to common glass.

The report examined possible impacts on c.491 ***road receptor points*** (incl. M9, M7, R412 & R413) in the surrounding area and it identified that glint and glare is geometrically possible at 360 of these receptor points. This number reduced to 57 when existing vegetative screening was factored into the modelling, and 11 following mitigations (incl. screening). The report identified that glint and glare is geometrically possible at 26 x road receptor points when existing screening by buildings and vegetation was factored into the modelling. The remaining 26 x road receptor points are located along the local and regional roads (R412 & R413) but not the Motorways, and the extent of the potential reflectance would be substantially reduced or eliminated entirely by changing the tilt angles of the panels.

The report also examined possible impacts on c.195 **residential dwellings** in the surrounding area (c.1km) and it identified that glint and glare is geometrically possible at 156 of these houses. This number reduced to 19 when existing vegetative screening was factored into the modelling, and 11 following mitigations (incl. screening). Two of these receptors (H146 & H148) would have a “Medium” magnitude of impact at first floor level during days when the sun shines at full intensity (worst case scenario) which is unlikely based on Met Eireann data, with minimal disturbance or nuisance predicted.

The report also examined possible impacts on **aviation receptors** within a 10km and 15km radius of the site, however there are no IAA registered aerodromes or DAA airports within either radius.

The report concluded that any adverse impacts on visual and residential amenities, passing motorists and aviation receptors would be minimal, seasonal and weather dependent.

Based on my assessment of the site and environs, and having regard to the extensive hedgerow cover and substantial hedgerow planting proposed in the landscaping plans, the low-lying design of the proposed solar farm, the conclusions of the Glint and Glare report, taken in-combination with the boundary setbacks, I am satisfied that the proposed development would not give rise to any significant adverse glint and glare impacts in the vicinity.

7.3. Residential amenity (incl. Noise & Fire risk)

The proposed solar farm development would be located within a quiet rural area that is mainly characterised by agricultural and equine uses. The surrounding area is sparsely populated although there are several detached houses and farm buildings located along the regional and local road network around some of the Land Parcels.

As previously stated, the solar farm would comprise a series of photovoltaic panels (unspecified number & c.2.8m high) on ground mounted frames in a combined 246ha site. It would also comprise 40 x single storey electrical inverter / transformer stations, 4 x single storey spare parts containers, 10 x Ring Main Units and 9 x weather stations, temporary work compounds, perimeter fencing and CCTV cameras. Most ducting and cabling within the site would be underground. Most of

this extensive area has been identified as a landscape that has the capacity to absorb renewable energy developments.

The third parties raised concerns in relation to the proximity of the proposed solar farm to the rear of their houses with respect to visual intrusion, glint and glare, fire risk, noise and traffic disturbance.

Residential amenity:

The applicant's Noise Impact Analysis report identifies c.45 dwelling houses in the surrounding area. The proposed solar arrays would be located between c.150m & 1600m from the nearest houses. The closest houses (c.150-300m) to the various arrays would include NR3, NR4 and NR5 in Parcel 4 and NR41 in Parcel 5. Having regard to the gently sloping nature of the lands, the low-lying design of the proposed solar arrays (c.2.8m high) and the substantial separation distance to arrays and ancillary support structures from dwelling houses, combined with the proposed hedgerow retention and replanting, I am satisfied that these houses which would not be overlooked or overshadowed by the solar farm and its ancillary infrastructure.

The solar farm would not have an adverse impact on the visual amenities of any nearby houses, subject to the implementation of the proposed landscaping plans which include extensive native species hedgerow planting within and around the site. I acknowledge that it will take time for the landscaping to mature. Species and location details be agreed in writing with the planning authority before development commences, and the additional site boundary trees and hedgerows should be in place before the solar farm is operational. No artificial lighting should be installed or operated on site without a prior grant of planning permission and the CCTV cameras should be fixed and angled to face into the site and not directed towards the road or nearby houses. These concerns could be addressed by way of a planning condition.

Noise:

As previously stated, the lands are located in a quite rural area that is mainly characterised by agricultural uses. The third parties have raised concerns in relation to the risk of noise disturbance during the construction and operational phases on nearby residential receptors. The surrounding area is sparsely populated although there are several dispersed houses, farm buildings and equine facilities located around some of the land parcels. The adjoining regional road network is moderately

busy while the local roads are relatively quiet, and agricultural activities comprise the periodic use of heavy farm machinery.

I note the various reports submitted by the third party (Harristown & Coughlanstown Group CLG) in relation to potential noise impacts, and the additional response reports submitted by the applicant during the FI and appeal process, all of which are summarised in sections 3.21, 6.2 and 6.3 above.

The application was accompanied by a Noise Impact Analysis report which included the results of baseline noise monitoring undertaken and calculated day and nighttime noise levels at c.46 x noise sensitive receptors in the surrounding area mainly houses). The proposed solar arrays would be located between c.150m & 1600m from the nearest houses. The closest houses (c.150-300m) to the various arrays would include NR3, NR4 and NR5 in Parcel 4 and NR41 in Parcel 5. The baseline monitoring results identified the key acoustic features of the area as traffic noise and agricultural activity. Although the monitoring results indicate that the area generally experiences relatively low levels of ambient noise, the area was not determined to meet EPA criteria for designation as a “Quiet Area”, for the purposes of noise impact assessment. Furthermore, it is likely that agricultural activity (incl. machinery) will occasionally introduce higher levels of noise to adjoining lands and receptors. The conclusions of this report were reaffirmed and substantiated by the applicant’s response submission to the appeals. Notwithstanding these conclusions, a planning condition should be attached to ensure that construction and operational noise levels do not give rise to a nuisance or disturbance at nearby sensitive receptors.

Solar farms do not generally generate significant noise emissions during the **operational phase**. The primary source of noise was identified as the power hubs (inverters & transformers) in-combination with the further afield battery storage systems & 220kV substation. As solar power generation reduces between dusk and dawn, night-time noise emissions will reduce accordingly during this period. The centrally located power hubs would be well set back from the site boundaries, as would the concurrently proposed 220kV substation and battery storage facility at Dunnstown. The modelling exercise indicates that operational noise from power hubs (and other sources) at the closest noise sensitive locations will be below the recommended EPA/WHO/BS8233 guidelines of 55dB during daytime and well below 45dB at nighttime, and that the change in background noise levels will not exceed

5dBA locally. Based on the modelled predictions, significant operational noise effects on sensitive receptors are not considered likely, having regard to the separation of the power hubs from residential properties. I am satisfied that even allowing for higher operational noise emissions, levels would not be sufficient to negatively impact on the amenities of the surrounding area and would not exceed night-time values. However, I consider that operational noise monitoring would address any outstanding concerns. This could be addressed by way of a planning condition. I am also satisfied that issues related to tonal noise do not arise in solar farm installations.

The proposed development has the potential to cause disturbance during the **construction phase**, however I note that construction by its nature is a temporary activity. The overall works would take c.24 months to complete on a phased basis across the various lands parcels and any local impacts would be of a shorter duration. Any disturbances during the construction phase could be mitigated by the measures contained in the final CEMP in relation to the timing and phasing of construction works, and in the final TMP in relation to the timing and phasing of deliveries to the various land parcels and works along the public road network. Construction works will take place during normal operational hours, construction noise will be controlled in accordance with all relevant guidelines and codes of practice, and the applicant will accept a condition limiting construction phase noise to 70dB. The concerns raised in relation to vibration effects from piling and related activities are noted. However, having regard to the use of rotary piling for solar arrays and the limited duration of piling activity, I am satisfied that significant adverse effects are unlikely.

In **conclusion**, having regard to the limited duration of construction activities on the lands, the absence of nocturnal activity during the operational phase, and subject to the implementation of measures identified in the planning application and further responses, and subject to compliance with a recommended noise condition, the proposed development would not result in undue noise impacts on surrounding residential uses.

Fire safety:

Concerns raised by the third parties in relation to the risk of fire are noted. I have had regard to various reports submitted by the applicant and the third party (Harristown &

Coughlanstown Group CLG) in relation to potential fire safety impacts, along with the additional responses submitted by the applicant during the FI and appeal process, all of which are summarised in sections 3.21, 6.2 and 6.3 above.

Third parties have raised concerns in relation to localised fire safety (incl. fire repression, emergency response plans, fire brigade access) as well as and further afield safety (incl. natural & cultural heritage). I note the absence of any objections from the Chief Fire Officer to the proposed development subject to compliance with standard conditions. I also note that compliance with fire safety regulations is a separate parallel regulatory requirement.

The application was accompanied by an Electrical Fire Risk Assessment report which described the various elements of the solar farm (incl. solar panels, inverters, transformers, ring main units & interconnector cable), the internal and external access arrangements, other infrastructure (incl. fencing), landscaping and biodiversity, along with the separately proposed 220kV substation and battery storage facility at Dunnstown. The report examined the risk and likelihood of a solar farm fire. It referenced investigations into c.64 solar panel fire events in the UK and concluded that most occurred at domestic building (c.37) with few at solar farms (c.6) and noted that the severity of the solar farm fires was very low and mainly related to poor installations practices. It listed several mitigations measures (incl. earthing, insulation & compliance with relevant standards) and concluded that the likelihood and severity of a fire was low, and that the proposed development does not pose a significant risk, including in-combination with the proposed battery storage system.

There is no current guidance on the design and layout of solar energy arrays nationally. With regard to the requirement for internal access roads, I note that the UK, BRE Planning Guidance For The Development Of Large Scale Ground Mounted Solar PV Systems, indicates the following: 11 g) Access Tracks, Solar panel facilities which are developed on agricultural land should: – aim to minimise disturbance to the agricultural land; – be temporary, capable of removal and ‘reversible’; and – minimise their landscape/visual impact and their impact on the rural scene. The installation and use of access tracks should therefore be kept to an absolute minimum. One track linking the inverters may be necessary as a minimum to enable exchange of inverters and replacement of heavy machinery. Agricultural vehicles,

including tractors, quad bikes and 4WD, should be capable of servicing the facilities on a daily basis without the need to construct access tracks through the site.

The proposed development is aligned with such guidance and the Planning and Environmental Report notes that during the operational stage, temporary surfaces may be used for construction or maintenance works. I note the provisions of the Development Management Guidelines for Planning Authorities (2007) in relation to the management of fire risk in the development management process (chapter 7). As stated in the Guidelines, the factors appropriate for consideration are the location of the development in relation to industrial or other hazards, access for fire services and water supplies for potential firefighting.

The applicants submit that fire is an unlikely scenario. I note that there are numerous access points from the surrounding local roads to the various separate land parcels which could, in the event of fire, be used for firefighting access. There are public mains water supplies available along some of the adjoining roads, which already serve existing nearby development. I also note that the power hubs (inverters & transformers) would be centrally located within each land parcel and at a distance from field boundaries and hedgerows. I note the third parties technical report which provides a critique of the applicant's documentation, however it does not establish specific fire risk issues in respect of the proposed development. I also note that separate regulations apply in respect of health, safety and welfare at work and all operational activities in this regard. Any outstanding concerns about the risk of fire could also be addressed in the final CEMP which should contain a contingency / emergency response plan in the unlikely event of a fire.

In conclusion, having regard to above, and in the absence of any guidance or documented level of risk, I am satisfied that the proposed development would not give rise to a fire risk or endanger public safety or the surrounding environment, and that this concern would not constitute a reasonable basis for refusal.

Landscape impacts are assessed in section 7.2 above.

Glint & glare impacts on dwelling houses are assessed in section 7.2 above.

Movement & vehicular access impacts are assessed in section 7.4 below.

Overall Residential Amenity Conclusion:

Having regard to the foregoing, I am satisfied that the proposed development would not seriously injure the residential amenities of houses in the surrounding area to any significant extent, subject to compliance with conditions.

7.4. Movement and access

Vehicular access to the proposed development would be via the national, regional and local road network, and the entrances to the 6 x separate land parcels would be off a mix of regional and local roads, and via 4 x upgraded and widened field entrances and 2 x new entrances. The regional roads are moderately trafficked and operational speeds are relatively high, whilst the narrow local roads are quiet and mainly serve the surrounding rural and residential uses. Most of the roads are defined by mature trees and hedgerows, and several agricultural, equine and residential sites have direct access to them. Chapter 11 of the Development contains a range of policies and objectives which seek to protect local road network, provide for adequate vehicular access and ensure traffic safety.

Prior to the FI request and response, the National Roads Authority raised concerns in relation to the impact of the proposed development on the surrounding road network and recommended the preparation of a Traffic Management Plan, and the PA queried the scale of hedgerow removal at the site entrances. No concerns were raised following the receipt of FI and Condition no.12 of the planning authorities' decision to grant planning permission set out the Council's transportation requirements. This includes agreeing the final traffic management and tie-in arrangements with the road network with the PA. I note that the Third Parties have raised concerns in relation to the impact of the proposed development on the surrounding road network (incl. road capacity, traffic safety, adequacy of the vehicular entrances & hedgerow loss). They noted the absence of a Traffic Impact Assessment, and raised concerns about the number of construction vehicle movements and impacts on rural road network. The contents of the third parties' Engineering Report are noted, as is the applicant's response to submission to the issues raised.

The application was accompanied by a Site Access Report, Noise Impact Analysis, Glint and Glare report, and a CEMP which included a traffic assessment. The traffic

and site access reports described the existing traffic environment, estimated future growth and trip generation rates, assessed the construction and operational traffic and predicted the potential impact of the proposed solar farm on the road network and junction. The Glint and Glare report assessed potential impacts on traffic safety and vehicles using the surrounding road network as a result of reflectance. The applicant's FI response addressed the Council's concerns in relation to: - site entrance details (incl. hedgerow loss), which are contained in the Site Access Report, confirmed that the widening was necessary to achieve 90m sightlines, and that replacement planting would be undertaken; and the delivery / haul route, final details of which would be agreed with the PA.

The applicant submits that the proposed development complies with all relevant policies, objectives and designations contained in Chapters 13 and 15 of the Development Plan, in relation to movement, access, biodiversity and hedgerows.

Construction phase:

Construction traffic:

Construction vehicles would access the site via a dedicated haul route from Dublin Port along the M7/N7 Dublin to Naas Road and the R411, R412 and R413. The entrances to the 6 x separate land parcels would be off a mix of regional (R412 & R413) and local roads (L6044, L6047 & L6063), and mainly via upgraded and widened field entrances. The regional roads are moderately trafficked and operational speeds are relatively high, whilst the narrow local roads are quiet and mainly serve surrounding rural and residential uses. All the roads are defined by mature trees and hedgerows, and they provide access to existing agricultural, equine and residential sites.

The applicant's Site Access Report states that the anticipated traffic movements during the construction phase would be c.19 vehicular movements on average per week (amended to 23 in the appeal response submission) over the c.24-week installation period (incl. 18 months construction), which would equate a total of 456 (520) return trips over the 2-year period. This would peak at c.32 x return trips per day during the delivery and installation of the solar panels around the 10th to 14th

months, with a substantial reduction in the final weeks of the project. Some 75-construction works (amended to 100 in the appeal response submission) would attend the site during the peak construction period. It also examined the existing levels of traffic associated with agricultural activity at the 6 x land parcels over a 1-year period and estimated that the annual number of return trips to be 1,520 per year (127 per month).

The predicted level of vehicular movements associated with the installation of the proposed solar farm would be substantially less than the estimated level of existing agricultural movements, even allowing for some degree of under or over estimation. However, it is possible that many of the agricultural vehicles would continue to use the road network to access neighbouring fields at a similar time to their use by construction vehicles, which could give rise to a net increase in vehicular movements during the construction phase. In this regard, I also note that the works would be phased and of a temporary duration, and that the level of vehicular movements associated with the operational solar farm at these separate locations would result in a net reduction in traffic movements in the long term.

In response to the concerns raised in the third party appeals in relation to:- the over estimation of agricultural traffic volumes; the capacity of some of the road network to accommodate extra traffic with large loads; the challenges posed by the intricate layout or narrow alignment of some of the surrounding road junctions (incl. Carnalway Crossroads); road condition (incl. horizontal alignment & pavement condition); and resultant impacts on traffic safety; along with the absence of a Traffic Impact Assessment and Road Safety Audit; the applicant submitted an Addendum to the Site Access Report. This report considered the site and the local road network, existing and anticipated traffic volumes, delivery routes and Swept Path Analysis, and road geometry.

The Addendum report notes that, in accordance with TII standards, Traffic Impact Assessments (TIA) are undertaken on the basis of completed and operational developments in line with traffic forecast scenarios and given that the operational solar farm will generate 2-4 vehicles per month, a TIA is not required. The estimated number of construction workers attending the site during the peak construction period was increased from 75 to 100 following discussions with the contractors, and the additional impact of the predicted traffic movements associated with the

concurrently proposed substation were also considered. I am satisfied that these additional movements would have a negligible impact on traffic predictions during the construction phases, subject to localised traffic management arrangements being agreed. The report also notes that there is no formal requirements for a Road Safety Audit (RSA) for solar farm developments, as no new roads or major improvement works are proposed. I am satisfied that the Addendum report does not raise any new issues, it addresses the third party concerns, and it reaffirms the conclusions of the original Site Access Report, which are reasonably robust.

Notwithstanding any increase in vehicular activity along the regional and local roads, and the concerns raised by the third parties which are summarised above, having regard to the short-term duration of the works (c.24 months) which would not take place simultaneously at all the land parcels, and the spread of vehicular movements across the parcels, I am satisfied that the proposed traffic and access arrangements are considered acceptable. However, the developer should be required to agree the final traffic management arrangements with the planning authority as per Condition no.12 of its decision to grant planning permission. A dedicated Construction Traffic Management Plan should also be put in place before development commences. These concerns could be addressed by a planning condition.

Having regard to the foregoing, I am satisfied that the effects of construction traffic on the operation of the regional and local road network would be acceptable given the temporary and limited duration of the works, and that the proposed development would not give rise to a traffic hazard or endanger the safety of other road users.

Vehicular access:

As previously stated, the land parcels would be accessed off the regional and local road network as described above. Four existing agricultural entrances off the R412, R413 and L6063 would be upgraded and widened to accommodate construction traffic, and two new entrances would be provided off the L6044 & L6047. The entrances would provide for sightlines in excess of 90m in each direction along the regional roads, and in excess of 70m along the local roads, with a c.2.4m setback. The Site Access Report contained a Swept Path Analysis which indicates that the junction corners along the haul route and at the site entrances can accommodate

articulated vehicles, subject to mitigation measures (incl. advance warning signs and a booking management system for delivery traffic entering & leaving the site).

In response to the concerns raised in the third party appeals which are summarised above, the applicant submitted an Addendum to the Site Access Report which re-appraised the site entrances, road geometry and Swept Path Analysis. The number of site entrances was reduced from 6 to 5 to take account of the conditioned omission of Parcel 1 (& entrance No. 5). Four of the five remaining entrances have sightlines in excess of 90m, while No.2 has a 70m sightline (N) and a 90m sightline (S), which I am satisfied are in accordance current guidelines and practices. I also note that the Planning Authority engineers have no objections subject to the agreement of a CEMP and TMP.

Having regard to the foregoing, I am satisfied that the proposed access arrangements to the solar farm development would not give rise to a traffic hazard or endanger the safety of other road users.

Operational Phase:

The Planning and Environment Statement states that the site will generate c.2-4 vehicle trips per month by maintenance staff as the site will be remotely monitored. Having regard to the physical characteristics of the regional and local carriageways in the vicinity of the various land parcels, I am satisfied that the proposed entrances and sightlines are adequate and that sufficient stopping distances could be provided in line with required standards. I am also satisfied that the surrounding national, regional and local road network would have more than adequate spare carrying capacity to accommodate any additional traffic associated with the operational solar farm. I am therefore satisfied that the proposed development would not give rise to a traffic hazard or endanger the safety of other road users.

Glint & glare: potential glint and glare impacts on the surrounding road network are assessed in section 7.2 above.

Conclusion:

Having regard to the above, I am satisfied that the vehicular access arrangements and sightlines are adequate, and that the traffic generated during the construction and operational phases would not give rise to a traffic hazard or endanger the safety of other road users. The augmentation of the roadside boundary hedgerows with semimature trees and hedgerows would ensure that the visual impact of any localised hedgerow removal would diminish over time, and that passing motorists are not distracted by glint and glare from the solar panels.

7.5. Cultural heritage

The site is located within a rural landscape that has a rich cultural heritage and there are several Recorded Monuments, features of archaeological interest, Protected Structures, Designed Landscapes and NIAH structures in the wider area. Chapter 11 of the Development Plan contains a range of policies and objectives which seek to protect cultural heritage features in the surrounding area, including:

- National Monuments: Excavation – miscellaneous (KD01106).
 Dun Aillinne –Royal site (c.5km to W)
- Protected structures: Harristown House & Demesne
 Woodville House
- Designed Landscape: Annfield House

The Department of Housing, Local Government and Heritage had no objection to the proposed development subject to compliance with standard heritage conditions. I note that prior to the FI request and response, An Taisce, and the Councils' Conservation and Heritage Officers raised concerns in relation to the impact of the solar farm on historical sites. I also note that some of the Third Parties have raised concerns in relation to the impact of the proposed solar farm development on cultural heritage (incl. Dun Aillinne, Harristown House & a section of the Pale Ditch).

The applicants' various documents (incl. application, FI & appeal response submissions) note the presence of several heritage features in the vicinity of the site and wider area. The applicant submits that the proposed development complies with all relevant national and local policies, objectives, and designations. Condition no.2

of the planning authorities' decision to grant permission, which requires the omission of Parcel 1 within Harristown Demesne, has not been challenged. It is submitted that there would be no adverse impact on any other demesnes or Designed Landscapes in the area (incl. Annfield House), there is no evidence that a section of the Pale Ditch lies nearby, and Dun Ailinne is located over 5km away and to the W of the M9 Motorway. It is further stated that pre-commencement geophysical surveys and/or testing is standard for solar farm applications as per DHLG&H recommendations.

Archaeology:

There are several recorded archaeological sites within a c.250m zone extending from the site boundaries (incl. Enclosures, Burials, Standing stones, Mounds, Graveyards, Churches), with none of recorded note along the underground cable route. I note the third parties concerns in relation to the scale of 250m sturdy area however I also note the absence of any objections to it from the DHLG&H, and I am satisfied that it adequate. There is one Recorded Monument on the periphery of the site which was previously excavated and there are no surface traces of this feature. The solar farm layout has been designed to avoid a large Zone of Notification in the Harristown Townland, which is associated with a Castle, Medieval settlement, Church, House & Motte. (Parcel 1 has been omitted from the overall development). The various land parcels comprise a series of agricultural fields, and it is possible that as yet un-discovered features may remain below ground level.

The NMS 1991 guidance document contains advice on appropriate methods of archaeological testing in different circumstances (incl. large scale projects), whilst the 2016 internal supplementary guidance notes that FI requests for solar farms, which may have low levels of ground impact along with the flexibility to avoid impacts, should not take the form of blanket requests for testing on the sole grounds that the development is large scale, and that such requests should be based on specific and verifiable indicators of archaeological potential. At local level, the current Development Plan contains several policies and objectives which seek to protect and/or preserve archaeological heritage (incl. AH P2 & AH P6).

The proposed development would comprise the installation of a substantial but unspecified number of solar arrays and ancillary development on 6 land parcels within an extensive site (incl. inverter/transformer stations, internal tracks, cabling &

fencing) (Refer to section 2.0 above for more details). The application was accompanied by Archaeological Impact Assessment Reports (incl. FI & appeal response submissions) which described the characteristics of the receiving environment, assessed potential heritage impacts, and proposed mitigation measures (incl. avoidance, pre-development testing & buffer zones).

As previously stated, the lands have been actively farmed for a considerable period of time although it is possible that as yet un-discovered features may remain below ground level. However, having regard to the information provided by the first party and my own observations, I am satisfied that there is no visible or verifiable evidence of any surface level features within the site. Having regard to the relatively low level of ground impact associated with the installation of solar farms and the inherent flexibility in their design and layout, I am satisfied that the layout of the arrays could be amended to exclude any sensitive features uncovered during pre-construction tests. I recommend that a condition should be attached requiring testing, reporting and further agreement with DHLG&H/NMS and or Kildare County Council prior to commencement of development.

I am also satisfied that the proposed development would not have an adverse impact on the character or setting of the Dun Aillinne Royal site which is located c.5km to the W of the solar farm site and M9 motorway. Having regard to this extensive separation distance, the topography of the intervening landscape and the degree of tree cover, any intermittent views of the solar farm from Dun Aillinne would be relatively benign as illustrated in the applicants Archaeological and Architectural Heritage Response Statement.

Concerns raised by the third parties in relation to the possible presence of a section of the Pale Ditch are noted, as is the applicant's response to them. Notwithstanding the absence of documentary evidence, the pre-construction geophysical testing of the lands for archaeological remains would ensure that any previously undiscovered artefacts would be either preserved in-situ or by record, with the relevant agencies being notified accordingly.

Built heritage:

There are several Protected Structures, NIAH features and Designed Landscapes within and close to the site (incl. Harristown House & Demesne, Woodville House and Annfield House Designed Landscape), with none of note along the underground cable route. There is one Protected Structure within the site (Harristown House & Demesne) about which concerns have been raised in relation to the impact of the project on the character and setting of this historic feature, and its attendant grounds which include the Gothic Gate Lodge and Old & New Bridge. However, I am satisfied that the conditioned omission of Parcel 1 from the overall development is an acceptable solution, and that the integrity of the Protected Structure and its attendant grounds would be protected. There is a second Protected Structure to the N of Harristown at Woodville House in the townland of Dunnstown which is located close to but not within any of the land Parcels. I am satisfied that its character and setting would not be adversely impacted by the proposed development. Annfield House, which set within a designated Designed Landscape, is located to the S of the River Liffey and N of Parcel 2 at Gagganstown. The nearby solar arrays would be screened from view by a wooded area and the existing well-established landscaping, and I am satisfied that its character and setting of Annfield House and its Designed Landscape would not be adversely impacted by the proposed development.

The concerns raised by the third parties in relation to several other structures in the vicinity of Parcels 4 and 5 (incl. Harristown station, Dunnstown House, Carnalway House, Bownstown House & Dunnstown Cottages), are noted as is the applicant's response to them. I am satisfied that the extent of any potential impacts mainly relates to views and that the proposed development would not impact any of these structures directly, other than disturbance during the construction phase. The proposed retention of field boundaries and hedgerows would also serve to mitigate any adverse impacts on Harristown Station in Parcel 4.

Conclusion:

Having regard to the foregoing, I am satisfied that the proposed development of the solar farm, associated infrastructure and underground cables would not have an adverse impact on cultural heritage, either on its own or in combination with the

concurrently proposed battery storage facility and substation at Dunnstown that it would be connected to.

7.6. **Water quality and flood risk**

The application was accompanied by a site-specific Flood Risk Assessment Report (FRA) which described the receiving environment and calculated the risk of the proposed development contributing to, or being affecting by fluvial flooding, along with details of the drainage proposals for the site.

Flood risk:

The proposed solar farms would comprise the works described in section 2.1 above, along with underground cabling within and between the various land parcels, and along several local roads to the proposed and existing substations. Some 5 x streams and several drainage ditches would be crossed along the cable route.

The elevations within the gently undulating rural site range from c.89.23OD to 100.5m OD with more localised variations within each of the land Parcels. The solar farm would be located to the N and S of the River Liffey (Parcels 1 & 4) and E and W of the Mullaghboy Stream (Parcels 2 & 3), and the land parcels are traversed by drainage ditches. The catchment of the River Liffey was delineated and found to be c.397sq.km, and the catchment of the Mullaghboy Stream was delineated and found to be c.2.85sq.km, to a point downstream of the site. The upstream catchment area is predominantly rural.

Most of the solar farm site would be located in Flood Zone C where there is no discernible flood risk, however small sections located in the vicinity of the two main watercourses are potentially located within Flood Zones A and B. Although solar panels are considered to be water compatible development, none of the arrays would be located within any part of the site where the estimated 1%AEP (1 in 100 year) or 0.1% (1 in 1,000 year) fluvial flood depths from the ***River Liffey*** are greater than the minimum panel height of 0.8m. I am satisfied that water would more than likely flow under the arrays in the event of a fluvial flood. None of vulnerable project elements (incl. inverters & transformer stations) would be located within flood risk areas. The Hydraulic modelling along the ***Mullaghboy Stream*** indicates that none of the panels would be inundated during a 1 in 1000 year (0.1 AEP Flood Zone B)

fluvial flood event. Furthermore, there is no recorded history of fluvial flooding in the area, and the risk of fluvial and pluvial flood risk to the proposed solar farm is low.

The proposed interconnector and underground cables would cross under 5 x small watercourses and several drainage ditches using Horizontal Directional Drilling (HDD) or dry deck construction as per the relevant construction methodology for the various project elements. The applicant's Site-specific FRA states that the underground cables would be laid well below ground level with no resultant impacts on overland flow paths or fluvial flood water volumes associated with the watercourses and drainage ditches. The HDD would have no resultant impacts on channel capacity at the crossing locations, subject to the implementation of best construction practice and mitigation measures (incl. silt fencing).

Drainage:

The proposed solar farm would be located within a series of gently undulating agricultural fields which are currently mainly used for grazing. The applicant's Planning and Environment Report states that the installation of solar arrays, which do not require substantial site excavations or resultant hard surfaces, would not have a significant impact on existing drainage patterns in the area, subject to good design and best construction practice (incl. generous separation distances between arrays, adequate angles, grass reseeding & active management, avoidance of drainage to roads, and regular inspection & maintenance of existing drains). The applicant's Report referenced a paper in the Journal of Hydrological Engineering which confirmed that solar farms do not have a significant effect on runoff volumes and peak flows subject to the maintenance of an underlying permeable grass surface. Notwithstanding this, the applicant should be required to submit a surface water management plan for the written agreement of the planning authority before development commences. This could be addressed by way of a planning condition.

Conclusion:

Having regard to the foregoing, I am satisfied that the proposed development which would retain existing grazing lands with minimal new hard surfaces, would not give rise to a flood risk downslope of the works. The proposed solar farm would not be vulnerable to fluvial flooding because of its location mainly within Flood Zone C. The separation distance with the two watercourses and the height of the arrays (c.0.8m)

above ground level in Flood Zones B and C, along with the avoidance of siting vulnerable equipment within these Zones would ensure that the works would not contribute to flooding or be damaged by it.

7.7. Biodiversity

The site is located within a rural landscape that has a rich natural heritage and there are several European and National sites in the wider area. Chapter 15 of the Development contains a range of policies and objectives which seek to protect sensitive sites, habitats and species in the surrounding area.

The DHLG&H and IFI had no objection to the proposed development subject to compliance with conditions (IFI), and that the Council's Environment Officer had no objection following the submission of FI in relation to mammal underpasses and fencing. I also note that some of the Third Parties have raised concerns in relation to the impact of the proposed solar farm development on sensitive sites, ecology and biodiversity (incl. hedgerows & trees).

The applicants' various documents (incl. application, FI & appeal response submissions) note the presence of several natural heritage features in the vicinity of the site and the wider area. The application was accompanied by two Ecological Impact Assessment reports (terrestrial & aquatic), a Biodiversity Management Plan, and an AA Screening Report. The applicant submits that the proposed development complies with all relevant national and local policies, objectives, and designations.

Terrestrial ecology:

The Terrestrial Ecological Impact Assessment report (EclA) described the receiving environment (incl. agriculturally improved grassland, hedgerows, trees, watercourses, wetlands & marsh) and a variety of mammal, bird and bat species. It described the various project elements, the nature of the survey work (desk study & field surveys), and it assessed potential connections to designated sites (incl. SACs, SPAs & p/NHAs). It noted that less than c.300 linear metres of hedgerow and several mature trees will be permanently removed from the overall c.246ha site to facilitate site entrances, access tracks and underground cabling. It stated that this loss will be compensated for by the substantial provision of new hedgerows, along with wooded areas, ponds, riparian corridors and species rich grasslands.

The EclA report noted the recorded or expected presence (based on suitable habitat) of protected species within the site and environs (incl. Badger, Otter, Bats & Birds). The lands do not contain suitable roosting habitat for Bats although the extensive network of hedgerows may provide foraging opportunities for several species (incl. Soprano pipistrelle, Leisler's, Brown long-eared & Daubenton's), and also nesting and foraging habitat for birds (incl. passerines). No reptiles or amphibians were recorded, given the agricultural nature of the lands, however it is possible that common frog may be present. No rare or protected plant species were recorded, however a section of Marsh habitat was recorded along the Mullaghboy Stream and in the vicinity of the nearby access tracks. The proposed development would be well set back from any recorded sections of Riparian or Alluvial woodlands along the River Liffey. No rare or protected invertebrates were recorded. Some invasive species were recorded within the site close to the River Liffey (incl. Himalayan balsam & Japanese knotweed).

The EclA report did not identify any significant potential adverse impacts on habitats and species as a result of the construction works or during the operational phase. Although the proposed works would result in the loss of hedgerows and trees and would give rise to general disturbance during the construction phase, the Biodiversity Management Plan and landscaping plans would provide for additional and substantial native species hedgerow planting. There would be a significant net gain in hedgerow related habitats with resultant positive impacts for biodiversity (incl. nesting & foraging birds, bees & other invertebrates as well as foraging bats). Pre-construction Badger and Otter surveys should be undertaken, with appropriate buffer zones provided and Derogation Licences sought from NPWS as required. The EclA report contains mitigation measures for badgers in the event of any setts being identified during the pre-construction surveys, the implementation of which should be required by way of a planning condition. A buffer should be provided along the Marsh habitat in the vicinity of the Mullaghboy Stream and nearby access tracks as per the EclA recommendations. An invasive species plan should be put in place for dealing with any invasive species present within the site and along the cable route.

The concerns raised by the third parties in relation to deer are noted. However, no evidence of deer (incl. trails) was recorded during the field surveys, and the applicant refers to the absence of any NBDC records of deer in the locality. I am satisfied that

the proposed fencing would not have an adverse impact on the movement of deer across the overall lands. However the fencing should be raised above ground level to allow for the free movement of small mammals across the lands, and the proposed provision of mammal underpasses should be fully implemented.

Having regard to the nature of the receiving environment for the proposed solar farm, associated infrastructure and underground cabling, I am satisfied that the proposed development would not have an adverse impact on terrestrial habitats or species present within the proposed solar farm site, along the underground cable route and surrounding farmland.

Aquatic ecology:

The Aquatic Ecological Impact Assessment report (EclA) carried out a similar range of surveys in relation to aquatic ecology as for terrestrial ecology. The report described the aquatic receiving environment of the River Liffey and Mullaghboy Stream, the Parcel 6 drains, and the 6 x smaller field drains that would be traversed by the underground cables and grid connection route. This included river substrate, flow types, aquatic vegetation, aquatic invertebrates, fisheries and water quality. The River Liffey has Good to High water quality status (EPA Q4-5) with suitable fisheries habitat for several species (incl. Salmon & Lampreys), along with abundant White-tailed crayfish populations within the reach of the study area. The Mullaghboy Stream has a Moderate to Good water quality status (EPA Q3-4) with relatively unsuitable fisheries habitat mainly because of its small size, along with an very small White-tailed crayfish populations which would accord with the Q3-4-status of the stream which is also highly poached and grazed. The Parcel 6 drains do not provide suitable habitat for fish or White-tailed crayfish.

The Aquatic EclA report identified potential adverse impacts on water quality and aquatic life as a result of sedimentation during the construction phase and contaminated run-off during the construction and operational phase. However, the proposed mitigation measures for the construction phase (incl. management of sediment loss, hydrocarbons & concrete, timing & seasonality of works, and control of invasive species), along with & adherence to best practice for HDD and compliance with relevant IFI requirements, the operational phases (incl. sediment loss), and the on-site drainage arrangements would ensure that the field drains and

the receiving watercourses and their constituent habitats and species would be protected.

I am satisfied that the proposed development, which would implement a pragmatic range of mitigation measures and drainage arrangements, would not have an adverse impact on water quality of aquatic life.

Conclusion:

Having regard to the foregoing, I am satisfied that the proposed development of the solar farm, associated infrastructure and underground cables would not have an adverse impact on biodiversity and ecology either on its own, or in combination with the proposed substation and energy storage facility at Dunnstown.

7.8. Other issues

Cumulative impacts: The applicant has considered the various cable connections between the land parcels, along with the concurrently proposed substation and battery storage facility at Dunnstown. I am satisfied that no significant cumulative impacts would arise subject to the implementation of the CEMP and other mitigation measures, and agreement of a Traffic Management Plan with the planning authority.

Decommissioning & restoration: The contents of the report are noted. Potential impacts would be similar to the construction phase, but of a lower magnitude, and full details should be agreed in writing with the planning authority.

EMF & public health: The contents of the applicants EMF/EMC Impact assessment and the concerns raised by the third parties in relation to public health risks are noted. However, there is no evidence to indicate that the resultant transmission of electrical energy from solar panels poses a risk to public health.

Material contravention: I note the concerns raised by the third parties in relation to the purported material contravention of Development Plan policies and objectives, however I am satisfied, on balance, that the proposed development is compliant.

Tourism & recreational activities: The concerns raised by third parties are noted, however I am satisfied that the proposed development would not interfere with any nearby tourist attractions, recreational activities or walking routes to any significant extent. The conditioned linear omission of the solar panels located parallel to the

former railway track would ensure that any future Greenway would not be adversely affected by the Solar Farm. The agreed setback from the R413 Scenic Route and the conditioned omission of Parcel 1 at Harristown House and Demesne would have a positive impact on the amenities of the area.

7.9. Screening for EIA

Solar energy development is not listed as a class of development for the purposes of EIA under Part 2 of Schedule 5, within the Planning and Development Regulations, 2001 (as amended). In this regard, a requirement for preliminary examination or EIA would not arise.

The proposed solar energy development will require a connection to the national grid. While this appeal relates to a decision under S.34 of the Act, an application for such grid connection would fall under the Strategic Infrastructure provisions of the act requiring a separate application under S.182. Such underground grid connection would not constitute a class of development under Schedule 5 and would not require preliminary examination or EIA.

A requirement for EIA may arise, under Part 2 of Schedule 5 Class 10: Infrastructure projects (dd) “all private roads which would exceed 2000 metres in length”. I note that the proposed development does not include such private roads and therefore does not fall under Class 10. A requirement for fire access roads has been considered above, however, notwithstanding any such requirement I note that the Board has previously determined that such access tracks in respect of solar developments do not fall to be considered under Class 10 (incl. ABP-301028-18, ABP-302681-18, PL17.248146).

The proposed development may comprise rural restructuring of farmland requiring screening under the Environmental Impact Assessment (Agriculture) Regulations, 2011, by the Department of Agriculture, Food and the Marine. In this regard I note the more recent amending regulation S.I. 383 of 2023 Planning and Development (Amendment) (No. 2) Regulations 2023, which amends Class 1 of Part 2 of Schedule 5, by inserting the following:

- (a) Projects for the restructuring of rural land holdings, undertaken as part of a wider proposed development, and not as an agricultural activity that must comply with the European Communities (Environmental Impact Assessment)(Agriculture) Regulations 2011, where the length of field boundary to be removed is above 4 kilometres, or where re-contouring is above 5 hectares, or where the area of lands to be restructured by removal of field boundaries is above 50 hectares.

I note that these thresholds reflect those set out in Schedule 1, Part B of the 2011 EIA (Agriculture) Regulations. Furthermore, Part A of Schedule 1 of the 2011 regulations sets out the following thresholds for screening for EIA:

Restructuring of rural land holdings	Screening Required
Length of field boundary to be removed	Above 500m
Re-contouring (within farm-holding)	Above 2 hectares
Area of lands to be restructured by removal of field boundaries	Above 5 hectares

These screening thresholds may be a useful guide in considering the reinserted Class 1(a) above. The Environmental Impact Assessment (Agriculture) Regulations Guide for Farmers describes restructuring of rural land holdings as involving changing the layout of the farm. I note that the 2023 amending regulations do not identify solar development as a class of development to be subject to EIA / EIA Screening.

Circular EUIPR 01/2023 notes that it is the elements of field boundary removal or recontouring of a field which amount to restructuring of a rural land holding which would need to be screened for EIA. The proposed development involves the removal of a limited extent of hedgerow, comprising less than 300m. This is significantly below the threshold of 4km for EIA reinserted by the 2023 amending regulations and is also considerably below the screening threshold set out in the 2011 (Agricultural) regulations. Such removal is mainly associated with access requirements and would not result in the significant amalgamation or enlargement of existing fields or change in the layout of the lands. I have concluded above that significant effects on biodiversity are not likely as a result of such works.

The development does not involve the recontouring of the lands by, for example, the levelling off hills or by infilling of hollows (by removing or shifting earth or rocks), or other use or drainage works. I note also that ground levels in this area do not vary significantly, and no substantial excavation will be required. The panels can be installed to existing topography, without excavation or alteration of levels. Inverter / transformer containers will be sited on areas of hardstanding which may require some localised levelling and foundation works, however, such works are not significant in nature and would not constitute recontouring of the lands.

Having regard to the purpose and to the nature and extent of the works in this case, I am satisfied that such non-agricultural development, would not constitute rural restructuring. However, the applicant provided an EIA Screening report Schedule 7A information with the appeal response submission, and, therefore, the proposed development would requiring preliminary screening or EIA. I refer to Form no.3 appended to this report which concludes that sub-threshold EIA is not required.

7.10. Screening for Appropriate Assessment

Compliance with Articles 6(3) of the EU Habitats Directive

The Habitats Directive deals with the Conservation of Natural Habitats and of Wild Fauna and Flora throughout the European Union. Article 6(3) of this Directive requires that any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. The competent authority must be satisfied that the proposal will not adversely affect the integrity of the European site.

Stage 1 AA Screening Report

The Screening report described the site, the location and the proposed development, it summarised the regulatory context and it carried out a desktop surveys. It stated that the site is not within or adjacent to a European sites and does not provide habitat suitable for any QI or SCI species. It noted that there is no hydrological connection between the site and the River Slaney SAC, or any other European sites. The report described the sites and their respective qualifying habitats and species, and it listed their conservation objectives. It concluded that the proposed development would not present a significant risk to the Qualifying Interests or Conservation Objectives of the European sites and that an NIS was not required.

AA Screening Assessment

The proposed development would not be located within an area covered by any European site designations and the works are not relevant to the maintenance of any such sites. The following European sites are located within a 15km radius and their Qualifying and Conservation Interests, and separation distances are listed below.

European Site	Site Code	QIs & SCIs	Distance
Mouds Bog SAC	002331	Active & Degraded raised bogs; & Depressions on peat substrates	c.5.5km
Pollardstown Fen SAC	000396	Calcareous fens; Petrifying springs; Alkaline fens; Geyer's whorl snail;	c.5.5km

		Narrow-mouthed whorl snail; & Desmoulin's whorl snail	
River Slaney Valley SAC	000781	Estuaries; Mudflats & Sandflats; Salt meadows; Floating River vegetation; Old sessile oak woods; Alluvial forests; Freshwater pearl mussel; Sea, River & Brook Lampreys; Twaité shad; Salmon; Otter; & Harbour seal	c.12km
Red Bog, Kildare SAC	003397	Transition mires & quaking bogs	c.10km
Wicklow Mountains SAC	002122	Oligotrophic waters; Natural dystrophic lakes & ponds; Wet & Dry heaths; Alpine & Boreal heaths; Calaminarian grasslands; Nardus grasslands; Blanket bogs; Siliceous scree; Calcareous rocky slopes; Siliceous Rocky slopes ; Old sessile oak woods; & Otter	c.11km
Ballynafagh Lake SAC	001387	Desmoulin's Whorl Snail & Marsh fritillary	c.12km
Wicklow Mountains SPA	004040	Merlin & Peregrine	c.12.5km
Poulaphouca Reservoir SPA	004063	Greylag goose & Lesser black-headed gull	c.4.5km

The construction phase of the proposed development would comprise some minor site levelling, the removal of some mature trees and the removal of hedgerows (less than 300 linear metres combined), and the installation of solar panel structures which would be secured to the ground. There would be minimal site clearance and excavation works. Adherence to general best practice methodologies during the construction phase would control the release of sediments to surface water and prevent surface and ground water pollution as a result of accidental spillages and leaks. There is no recorded aquatic connection between the solar farm site and the European sites, and having regard to the nature and scale of the proposed works and the substantial separation distances to the nearest European sites, it is unlikely that any sediments released during the construction phase would reach the

European sites, provided that best construction practices are adhered to. The mainly agricultural grazing lands do not provide optimal foraging habitat for the SCI species listed for the SPA sites to the E. The operational phase of the proposed solar farm would be relatively environmentally benign with no adverse effects anticipated, and there is no potential for cumulative impacts in-combination with other plans and projects in the surrounding area.

Having regard to the nature and scale of the proposed development, and absence of an aquatic connection to the European sites via any onsite drains and nearby watercourses, and taking account of the substantial separation distance to the nearest European sites and to the nature of their Qualifying Interests and Special Conservation Interests, it is my opinion that the proposed development, subject to compliance with best construction practices, does not have the potential to affect the European sites or their conservation objectives. I am satisfied that the proposed solar farm development can be screened out from any further consideration of potential adverse effects on European sites.

AA Screening Conclusion

It is reasonable to conclude that on the basis of the information on the file, which I consider adequate in order to issue a screening determination, that the proposed development, individually or in combination with other plans or projects would not be likely to have a significant effect on European Site No. 002331, 000396, 000781, 002122, 000397, 001387, 004040 and 004063, or any other European site, in view of the site's Conservation Objectives, and a Stage 2 Appropriate Assessment is not therefore required.

8.0 Recommendation

Arising from my assessment of this appeal case I recommend that planning permission should be granted for the proposed development for the reasons and considerations set down below, and subject to the attached conditions.

9.0 Reasons and Considerations

Having regard to:

- The National Planning Framework – Ireland 2040,
- The Eastern & Midland Regional Spatial & Economic Strategy 2019-2031,
- The Government of Ireland Climate Action Plan, 2024,
- The policies of the planning authority as set out in the Kildare County Development Plan, 2023-2029,
- The distance to dwellings or other sensitive receptors,
- The submissions made in connection with the application,
- The likely consequences for the environment and the proper planning and sustainable development of the area in which it is proposed to carry out the proposed development and the likely significant effects of the proposed development on European Sites,
- The report and recommendation of the Inspector.

and to the nature, and scale of the proposed development, it is considered that subject to compliance with the following conditions, the proposed development would not seriously injure the amenities of the area or of property in the vicinity or give rise to a traffic hazard. The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area.

10.0 Conditions

1. The development shall be carried out and completed in accordance with the plans and particulars lodged with the application, including the Further Information received by the planning authority on the 1st day of November 2023, and the information received by an Bord Pleanála on the 2nd day of January 2024, except as may otherwise be required in order to comply with the following conditions. Where such conditions require details to be agreed with the planning authority, the developer shall agree such details in writing with the planning authority prior to commencement of development and the development shall be carried out and completed in accordance with the agreed particulars.

Reason: In the interest of clarity.

2. The development shall be amended as follows:
 - (a) The parcel of land located within Harristown Demesne, referred to in the documentation as Parcel 1, shall be omitted from the development in its entirety.
 - (b) A 15m wide route along both sides of the former track bed of the Tullow to Harristown Railway where it traverses the site (referred to in the documentation as Parcel 4) shall be maintained free of development.

Reason: In the interest of protecting architectural heritage and having regard to Objective AH051 and TM025 of the Kildare County Development Plan 2023-2029.

3. The mitigation measures identified in the CEMP, Ecological Impact Assessment report, Biodiversity Management Plan, and other plans and particulars, including submitted with the planning application, shall be implemented in full by the developer, except as may otherwise be required in order to comply with the conditions of this permission.

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

4. The period during which the development hereby permitted may be carried out shall be 10 years from the date of this Order.

Reason: Having regard to the nature of the proposed development, the Board considered it reasonable and appropriate to specify a period of the permission in excess of five years.

5. The permission shall be for a period of 40 years from the date of the commissioning of the solar array. The solar array and related ancillary structures shall then be removed unless, prior to the end of the period, planning permission shall have been granted for their retention for a further period.

Reason: To enable the planning authority to review the operation of the solar array in the light of the circumstances then prevailing.

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. The developer shall comply with the following additional nature conservation requirements:

- a. No felling or vegetation removal shall take place during the period 1st March to 31st August.
- b. The area of Marsh habitat located along Mullaghboy Stream and access tracks shall be marked and fenced off, and kept free from machinery and equipment, for the duration of the construction works.
- c. A pre-construction mammal survey shall be carried out by a suitably qualified ecologist to check for the presence of any protected species (incl. otter and badger).
- d. In the event of badger setts being identified proximate to the proposed development, the mitigation measures contained in the Ecological Impact Assessment report shall be implemented in their entirety.
Derogation licences shall be obtained as required.

Reason: In the interest of biodiversity and nature conservation.

8. The developer shall comply with the following landscaping requirements:
- a. Existing field boundaries shall be retained, and new planting undertaken. Revised drawings indicating existing and proposed landscaping, including augmentation of existing boundary trees and hedgerows, new planting taking into account any roadside boundaries where a low hedgerow exists and any trees or planting proposed to be removed, shall be submitted for approval by the Planning Authority prior to commencement of the development.
 - b. All landscaping, including augmentation of existing boundary trees and hedgerows, shall be planted to the written satisfaction of the planning authority prior to commencement of development. Any trees or hedgerow that are removed, die or become seriously damaged or diseased within five years from planting shall be replaced within the next planting season by trees or hedging of similar size and species, unless otherwise agreed in writing with the planning authority.

Reason: In the interest of biodiversity, the visual amenities of the area, and the amenities of dwellings in the vicinity.

9. The developer shall comply with the transportation requirements of the planning authority. Prior to commencement of development, a transport management plan for the construction stage shall be submitted to, and agreed in writing with, the planning authority. The traffic management plan shall incorporate details of the road network to be used by construction traffic, including over-sized loads, and detailed arrangements for the protection of roads, bridges, culverts or other structures to be traversed, as may be required. The plan should also contain details of how the developer intends to engage with and notify the local community (including farmers and stud farms operators) in advance of the delivery of oversized loads.

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

10. The developer shall comply with the following noise requirements: -

- (a) Noise from the construction stages of the development shall not give rise to sound pressure levels (L_{eq} 15 minutes) measured at noise sensitive locations which exceed 70dB(A) (LA_{eq} 1hour) between the hours of 8.00 and 18.00 Monday to Friday inclusive (excluding bank holidays) and 8.00 and 13.00 on Saturdays when measured at any noise sensitive location in the vicinity of the site. Sound levels from the site development works shall not exceed 45dB(A) (LA_{eq} 1 hour) at any other time.
- (b) Noise from the operational stages of the development shall not give rise to sound pressure levels (L_{eq} 15 minutes) measured at noise sensitive locations which exceed which exceed the following limits:
 - a. 55dB(A) between the hours of 8.00 and 18.00 Monday to Friday inclusive (excluding bank holidays) and 45dB(A) at any other time.
 - b. There shall be no clearly audible tonal component or impulsive component in the noise emissions from the development any noise sensitive location.

A detailed noise study (with recommendations as appropriate) shall be carried out by a qualified and experienced noise/environmental consultant within three months of the development being fully operational and at any other time specified by the planning authority.

Reason: In the interest of public health, to avoid noise pollution and to ensure a proper standard of development.

11. Water supply and drainage arrangements, including the attenuation and disposal of surface water, shall comply with the requirements of Irish Water and the planning authority for such works and services as appropriate.

Reason: In the interest of public health and to ensure a proper standard of development.

12. The developer shall comply with the following technical requirements: -
- 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. Each fencing panel shall be erected such that for a minimum of 300 millimetres of its length, its bottom edge is no less than 150 millimetres from ground level.
 - d. The solar panels shall have driven or screw pile foundations only, unless otherwise agreed in writing with the planning authority.
 - e. Cables within the site shall be located underground.
 - f. The inverter/transformer stations shall be dark green in colour.

Reason: In the interest of clarity, of visual and residential amenity, traffic safety, and to allow wildlife to continue to have access to and through the site.

13. The developer shall comply with the following archaeological requirements:

- (a) Pre-development archaeological testing shall be undertaken by a suitably qualified archaeologist, licensed under the National Monuments Acts 1930-2004. No sub-surface work shall be undertaken in the absence of the archaeologist without his/her written consent.
- (b) A report, containing the results of the assessment, shall be submitted to the planning authority and, arising from this assessment, the developer shall agree in writing with the planning authority details regarding any further archaeological requirements (including, if necessary, archaeological excavation) prior to commencement of construction works. A copy of the report shall be submitted to the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.
- (c) The planning authority and the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs shall be notified in writing at least four weeks prior to the commencement of any site operation (including hydrological and geotechnical investigations) relating to the proposed development.

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

Reason: In order to conserve the archaeological heritage of the area and to secure the preservation (in-situ or by record) and protection of any archaeological remains that may exist within the site.

14. The construction of the development shall be managed in accordance with a final Construction and Environmental Management Plan, which shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. This plan shall provide details of a construction traffic management plan, a surface water management plan, intended construction practice for the development, including hours of working, noise management measures, off-site disposal of waste, and an invasive species management plan.

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

15. The site development and construction works shall be carried out such a manner as to ensure that the adjoining roads are kept clear of debris, soil and other material and cleaning works shall be carried on the adjoining public roads by the developer and at the developer's expense on a daily basis.

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

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

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

17. The developer shall comply with the following restoration requirements:
- a. Prior to commencement of development, a detailed restoration plan, including a timescale for its implementation, shall be submitted to and agreed in writing with the planning authority.
 - b. On full or partial decommissioning of the solar array, or if the solar array ceases operation for a period of more than one year, the site shall be restored and structures removed in accordance with the said plan within three months of decommissioning/cessation, to the written satisfaction of the planning authority.

Reason: To ensure the satisfactory reinstatement of the site on full or partial cessation of the proposed development.

18. The developer shall pay to the planning authority a financial contribution of eight hundred thousand euro (€800,000) 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. The application of any indexation required by this condition shall be agreed between the planning authority and the developer or, in default of such agreement, the matter shall be referred to An Bord Pleanála to determine.

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.

19. Prior to commencement of development, the developer shall lodge with the planning authority a bond of an insurance company, a cash deposit, or other security to secure the provision and satisfactory completion of the development, coupled with an agreement empowering the planning authority to apply such security or part thereof to the satisfactory completion of any part of the development.

Reason: To ensure the satisfactory completion of the development.

Professional declaration

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.

Karla Mc Bride
Planning Inspector
28th June 2024