



An
Bord
Pleanála

Inspector's Report ABP-300389-17

Development

Ten-year permission for the construction of an up to 5MWp (Mega Watt peak) Solar Photovoltaic (PV) farm, with a maximum export capacity of 4MW comprising approximately 18,000 no. photovoltaic panels on ground mounted frames within a site area of 6.08 ha, and all associated ancillary development.

Location

Pollardstown, The Curragh, Co. Kildare.

Planning Authority

Kildare County Council

Planning Authority Reg. Ref.

17/707

Applicant(s)

Power Capital Renewable Energy Ltd.

Type of Application

Permission

Planning Authority Decision

Grant permission

Type of Appeal

3rd Parties

Appellant(s)

Denis & Geraldine Egan

Guy O'Callaghan

Irish Racehorse Trainers Association
Pollardstown Residents Association
Desmond & Julie Swan
Michael & Martina Gibbons
James & Elizabeth Hamilton
Ann Gibbons & Family

Observer(s)

None

Date of Site Inspection

30th March 2018

Inspector

Michael Dillon

1.0 Site Location and Description

- 1.1. The site, with a stated area of 6.08ha, is located on the west side of the L7032 county road – some 1.5km due west of the built-up area of the town of Newbridge, Co. Kildare. The L7032 is a narrow county road on which the 80kph speed restriction applies. It is not possible to pass two cars along much of its length. The surface of the road is breaking up in places. There are no public footpaths, and there is no public lighting. The L7032 provides vehicular access to a public car-park at the boardwalk in Pollardstown Fen – to the north of the site.
- 1.2. The local road network is flanked by farmland, farmyards, equine facilities, a substantial number of one-off houses, GAA grounds, former sand & gravel quarry, and Pollardstown Fen to the north and northeast. The Curragh Racecourse is located on the R413 Regional Road to the south. Aerial photography submitted with the application indicates the level of development in the immediate area.
- 1.3. The roadside boundary hedgerow at the proposed entrance is set back from the edge of the carriageway behind a deep drain, which does not appear to be linked with any other drainage in the area. Sight distance in either direction at the proposed entrance is good. There are farm buildings/stables/agricultural feeds business/large house immediately adjacent to the site entrance – already served by a recessed entrance. Access to the solar PV site is through this cluster of buildings. The site for the solar panels comprises two reasonably flat, arable fields – separated by an hedgerow. There was no evidence of any water ponding within the two fields on the date of site inspection. However, there was a small amount of waterlogging within the grassed field immediately to the northeast – through which a hard-core access track is to be created. The site is surrounded by agricultural lands on all sides, except to the west where there is garden curtilage of an adjoining house. The site is surrounded by mature hedgerows – except to the west, where the boundary is a timber post & rail fence. Drawings submitted show a badger sett within the southwestern boundary of the larger field – which did not appear to be active on the date of site inspection. However, there is another badger sett within the northeastern boundary of the smaller field, which did show signs of recent activity.

The solar PV site is on or about the 110m contour elevated slightly above Pollardstown Fen to the north and northeast. The site is not visible from this area of Pollardstown Fen. There are two sets of electricity cables traversing Pollardstown Fen – mounted on twin timber poles.

- 1.4. Maps accompanying the application indicate that the site owner owns the land to the north and east of the solar PV farm and also on the opposite side of the L7032 access road. There is a large dormer dwelling immediately to the south of the proposed vehicular entrance.

2.0 Proposed Development

- 2.1. Ten-year permission sought on 16th June 2017, for solar PV farm as follows-

- 5MW peak – with maximum export capacity of 4MW (due to inefficiencies in the conversion of Direct Current to Alternating Current – DC to AC).
- 18,000 PV panels mounted on angled, galvanised frames of 3.0m height maximum.
- Associated ancillary development including 4 no. inverters; 4 no. transformers; 4 no. auxiliary transformers; 1 no. client-side sub-station; 1 no. single-storey storage building; 1 no. single-storey communications building; 1 no. single-storey DNO (Distribution Network Operator) building on eastern side of landholding; 3 no. security cameras mounted on 4m high support poles; 2m high perimeter security fencing over a length of 1.5km.
- Site access from L7032 country road.
- Hard-core access road.

- 2.1.1. The application is accompanied by the following documentation of note-

- Planning Statement – dated June 2017.
- Environmental Impact Report – dated 14th June 2017.
- Construction Traffic Management Plan – dated June 2017.
- Access Report – dated June 2017.
- Appropriate Assessment – Stage 1 Screening Report – dated June 2017.

- Construction Management Plan – dated 19th April 2017 (including a Landscaping Management Plan and Decommissioning Method Statement).
- Letter of consent from site owners to the making of the planning application.

2.2. Following a request for additional information, the following was submitted on 5th September 2017-

- Four additional viewpoints and photomontages.
- Classes 16 & 17 of Part 1 of Schedule 2 of the Planning and Development Regulations, 2001 (as amended), provide that site compounds are exempted development. A revised drawing is submitted showing the site compound within the red line boundary of the site.
- No invasive species noted on site surveys. Appropriate measures will be undertaken to prevent the introduction of invasive species on construction machinery or plant.
- Classes 26 & 27 of Part 1 of Schedule 2 of the Planning and Development Regulations, 2001 (as amended) provides that the laying underground of cables is exempted development. No additional overhead lines will be required to connect to the national grid.

2.2.1. The response was accompanied by the following-

- Revised Construction Management Plan – dated 4th September 2017.
- Hydrogeology and Hydrology Report – dated August 2017.
- 4 no. additional photomontages.

2.3. Following a request for clarification of additional information, the following was received by KCC on 19th October 2017-

- The applicant is committed to establishing an underground cable along the L7032 as opposed to an over-ground line.
- The water table is inferred to be 16m below the solar PV site.
- Potential surface drainage to Pollardstown Fen is limited.

2.3.1. The response is accompanied by the following-

- Drawing showing sightlines at proposed entrance.
- Line of proposed connection to the national grid.
- Site Layout Plan.

3.0 Planning Authority Decision

By Order dated 15th November 2017, Kildare County Council issued a Notification of decision to grant planning permission subject to 31 no. conditions, the principal ones of which may be summarised as follows-

1. The development to be carried out in accordance with documentation submitted on 16th June, 5th September and 19th October 2017.
2. Permission is valid for a period of five years.
3. All structures to be removed not later than 25 years from the date of commencement of development, unless permission has been granted for their retention.
4. Site shall be decommissioned in accordance with details submitted on 5th September 2017.
8. Requires selected method of grid connection to be notified to the PA.
9. Requires that no external lighting be installed.
10. Existing hedgerows shall be retained.
14. Requires employment of an Ecological Clerk of Works to oversee mitigation measures.
15. Requires pre-development survey for bats and badgers.
18. Requires a Waste Management Plan for C&D waste prior to decommissioning.
20. Requires resurfacing of the access road for 20m either side of the entrance.
- 21-22. Relate to sight visibility at the new entrance.
27. Relates to archaeological monitoring.
28. Requires a bond for restoration and reinstatement of the site.

30. No vegetation shall be removed during nesting season.
31. Requires payment of a development contribution of €50,000.

4.0 Planning History

There is no recent relevant planning history referred to in documentation submitted.

5.0 Policy Context

5.1. Development Plan

The relevant document is the Kildare County Development Plan 2017-2023. The site is not zoned.

- Policy ECD 24 seeks to “Actively promote and support the equine industry as an economic driver for Kildare”.
- Policy ECD 27 seeks to- “Support and facilitate sustainable agriculture, agri-food, horticulture, forestry, renewable energy and other rural enterprises at suitable locations in the county”.
- Policy ER 7 states- “Adopt a 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”.
- Policy SE 1 states- “Promote the development of solar energy infrastructure in the county, in particular for on-site energy use, including solar PV, solar thermal and seasonal storage technologies. Such projects will be considered subject to environmental safeguards and the protection of natural or built heritage features, biodiversity, views and prospects”.
- Policy SE 2 states-
Ensure that the assessment of solar energy development proposals will have regard to:

- site selection, by focussing in the first instance on developing solar farms on previously developed and non-agricultural land, provided that it is not of high environmental value;
- where a proposal involves greenfield land, whether (i) the proposed use of any agricultural land has been shown to be necessary and poorer quality land has been used in preference to higher quality land; and (ii) the proposal allows for continued agricultural use where applicable and/or encourages biodiversity improvements around arrays;
- the nature of solar farms as normally temporary structures. Decommissioning and site rehabilitation plans will be required providing for the land be restored to its previous use;
- the proposal's impact through glint and glare on neighbouring uses and on transportation and aviation safety;
- the proposal's visual and landscape impact and the potential to mitigate these impacts through, for example, screening with native hedges;
- the guidance provided in relation to compatibility with landscape designations of Tables 14.3 and 14.4 of Chapter 14 of this plan;
- the need for, and impact of, security measures such as lights and fencing;
- the need to ensure that heritage assets are conserved in a manner appropriate to their significance, including the impact of proposals on protected views and scenic routes etc. As the significance of a heritage asset derives not only from its physical presence, but also from its setting, careful consideration should be given to the impact of large scale solar farms on such assets, e.g. historic demesnes. Depending on their scale, design and prominence, a large scale solar farm within the setting of a heritage asset may cause substantial harm to the significance of the asset;
- the need to consider ecology so as to avoid or minimise damage on important species or protected habitats;
- the energy-generating potential, which can vary for a number of reasons including latitude and aspect;

- the design of the scheme needs to be carefully considered including layout, scale, land cover panel [sic], height, landscaping, access roads, noise, cumulative impacts and the design of ancillary elements.
- The Landscape Character Area is defined as ‘Central Undulating Lands’, which is ‘Class 1 Low Sensitivity’. These areas are noted as having ‘capacity to generally accommodate a wide range of uses without significant adverse effects on the appearance or character of the area’. Table 14.3 indicates that solar PV development has a high compatibility with other Class 1 Sensitivity landscapes, but for some unexplained reason, does not include ‘Central Undulating Lands’ (or ‘Southern Lowlands’). The Table is titled ‘Likely compatibility between a range of land-uses and Principle [sic] Landscape Areas’. It may be that ‘Central Undulating Lands’ is not considered a Principal Landscape Area’. Pollardstown Fen to the north and northeast has Class 5 Unique Sensitivity to development, with ‘little or no capacity to accommodate uses without significant adverse effects on the appearance or character of landscape, having regard to the unique and special sensitivity factors’. Solar installations are ‘Low’ compatibility [on a range of ‘Most’, ‘High’, ‘Medium’, ‘Low’ and ‘Least’] within this landscape area. The Curragh, to the south, has similar Class 5 Unique Sensitivity to development – with ‘Low’ compatibility.
- Scenic Route 37 relates to Views of Pollardstown Fen – and is located to the northwest of the appeal site along a section of the L7032 & R415 roads.
- Pollardstown Fen is identified as an Area of High Amenity. Section 14.5.2 of the Plan states- “Pollardstown Fen is situated on the northern margin of the Curragh, approximately 3km west-north-west of Newbridge. It lies in a shallow depression, running in a north-west/south-east direction. Pollardstown Fen the largest remaining calcareous spring-fed fen in Ireland. Covering an area of 220 ha, it is recognised as an internationally important fen ecosystem with unique and endangered plant communities. From a landscape point of view, the unique vegetation and the low-lying nature of the area allows for extensive vistas of the site along the local roads, as well as to the hilltops in the vicinity (e.g. The Hill of Allen). Consequently, development can have a disproportionate visual impact in the local context, due to an inherent inability to be visually absorbed by the existing topography.

5.2. Natural Heritage Designations

Pollardstown Fen, some 300m to the north and northeast, is as Special Area of Conservation (SAC). It is also a Natural Heritage Area (NHA), a Nature Reserve and Ramsar Site. It is a site of Geological Interest. The Curragh, some 900m to the south, is a proposed Natural Heritage Area (pNHA). It is traversed by the M7, a local road network, the Dublin to Cork/Limerick railway; and contains the Curragh Military Camp, a golf course and a race course.

5.3. Regional Planning Guidelines for the Greater Dublin Area 2010-2022

Section 6.6.5 states- "Renewable energy provision within the GDA will continue to become a more central issue in terms of environmental concerns, economic viability and development, and employment creation in green technologies. Approximately 5,500 MW of renewable generation by 2020 is required to meet the government target of 40% total consumption from renewable energy. The achievement of these national targets will require development of renewable energy options such as offshore wind generation, marine based energy generation, solar energy and geothermal both within, adjacent to, and outside the GDA. Subject to the provision of adequate capacity in the Grid to receive, transport and distribute energy, renewable energy provision will assist efforts to meet Kyoto Protocol targets, increase security of supply, and bolster energy supply levels catering for future demands arising from a knowledge and ICT intensive economy and will assist the decoupling of economic growth from carbon emission levels".

6.0 The Appeal

6.1. Grounds of Appeal

6.1.1. There are eight 3rd Party appeals, received by An Bord Pleanála, on the indicated dates below-

- Denis & Geraldine Egan, Pollardstown (5th December 2017).
- Guy O'Callaghan, Grangemore Stud, Pollardstown (8th December 2017).
- The Irish Horse Trainers Association (11th December 2017).

- Marston Planning Consultancy, agent on behalf of Pollardstown Residents Association [Denis Egan, Chairman] (12th December 2017).
- Desmond & Julie Swan, Nightingale Stud, Pollardstown (12th December 2017).
- Michael & Martina Gibbons, Pollardstown (11th December 2017).
- James & Elizabeth Hamilton, First Flyer Stables, Pollardstown (12th December 2107).
- Ann Gibbons & Family, Pollardstown (11th December 2017).

6.1.2. The principal issues raised can be summarised in bullet point format as follows-

- In the absence of national guidance on solar farms, KCC should not have granted permission.
- Site is located too close to Pollardstown Fen. There is a hydrogeological connection.
- Development would impact on birds from the Fen. Bird surveys were carried out on 15th September – outside the optimal survey period.
- A Natura Impact Statement should have been submitted with the application – and the grid connection will likely require an NIS.
- Development would undermine existing rural activities – particularly equine/bloodstock enterprises. Trainers use the L7032 daily to walk horses to access the gallops at The Curragh. Construction noise would adversely affect horses, as would construction dust. Horses will be closer than the noise-sensitive receptors identified by the applicant. Horses are particularly susceptible to respiratory infections. A solar PV farm is in the nature of an industrial development. There are 300 stables and 75 people are employed in training horses. This figure does not include stud farms. The Development Plan acknowledges the importance of the equine industry within the county. Policy EQ 1 states- 'Encourage the expansion of the bloodstock industry by protecting the environment and amenity value of rural areas from encroachment by urban sprawl and incompatible development'.

- Depriving the soil of sunlight (as beneath panels) would result in break-down of the soil – ruining the possibility of full return to agricultural use. The solar farm will be on prime agricultural land.
- The cost of building the solar farm and the output of electricity is completely unsustainable. To be cost efficient, the size would need to be 30-40 acres. Without the Renewable Energy Support Scheme in place – projects such as this will not be viable.
- The L7032 is unsuitable for construction traffic.
- Permission should not have been granted in the absence of definite knowledge as to the grid connection.
- Solar panels will increase the risk of flooding on adjoining lands. This will be compounded by compaction of soil during construction. There is already a problem with flooding in the area. The site is up to 6m higher than lands to the west and northwest. The applicant has relied on desk studies and has not consulted with local people who would have more information in relation to local flooding. Pluvial flooding occurs along local roads and at the entrance to this site [photographs submitted]. The reliance on a study by Cook & McCuen (2013) is invalid, as the site at Pollardstown is different, in that the area covered by panels is far greater – the angle of tilt towards the sun being much less.
- There is a risk of leakage of toxins into the ground from PV cells during installation, decommissioning, and in the event of fracture.
- The development could damage tourism in the area.
- The solar PV farm will be a visual disamentiy for residents – particularly from upper floors of houses to the west of the site.
- An EIAR should have been submitted with this application, not just an Environmental Impact Report.
- The decision of the High Court in the Ó Grianna case requires the grid connection to be considered in association with application for the solar farm.

- No bat survey, tree survey or invertebrate survey was undertaken for this application.
- There have been a number of recent flooding events in the vicinity – not adverted to by the applicant.
- The biodiversity of the site was failed to identify key elements of the flora and fauna which exist within the site and within the sphere of influence of the site.
- Noise was not properly assessed. There was no baseline survey work carried out, with assessment based on typical noise emissions from construction equipment rather than equipment which the applicant proposes to use. Cooling fans generate a lot of noise during the operational phase.
- Glint and glare will negatively impact on residential amenity – particularly for houses to the west.
- There are a number of Annex I bird species which use Pollardstown Fen, and which must be protected – irrespective of whether they are inside or outside of designated Special Protection Areas.
- Electromagnetic fields would impact on residential amenity.

6.1.3. The appeals are accompanied by the following documentation of note-

- Colour photographs of garden of first 3rd Party appellants.
- Parkmore Environmental Services Ltd. letter (updating an earlier report submitted to KCC) relating to water, soil and geology.
- Article by Maureen McHale on Solar Farm Operations and Maintenance Issues (April 28, 2015) – source not stated.

6.2. Applicant Response

The response of IMG Planning, agent on behalf of the applicant, Power Capital Renewable Energy Ltd, received by An Bord Pleanála on 17th January 2018, can be summarised in bullet point format as follows-

- Ecological assessment of the proposed development was carried out by a qualified ecologist. Only ecological receptors which could be significantly impacted by the development were examined.
- The development, alone or in combination with other development, will not impact on the Conservation Objectives of Pollardstown Fen. No definitive surface hydraulic link exists between the application site and the Fen. There is a potential link via the aquifer beneath the site – an aquifer that covers 200km².
- Monocultural arable fields will be returned to more species-diverse grassland, and this will have a positive impact on biodiversity.
- Installation of panels will take place on a grassed surface – the owner of the land being obliged to return the site to grassland use 12 months before commencement of construction.
- The noise report was completed by a qualified acoustician. A reasoned and comprehensive assessment was made based on the proximity of noise-sensitive receptors and the equipment/machinery to be used during the construction and operational phases of development. The EPA limit of 45dB_{LAeq} for night-time noise will be adhered to at all noise-sensitive receptors. The primary noise source in the area is the M7, the local road network and the Dublin to Cork/Limerick railway line. A one-day noise survey was carried out on Monday 8th January 2018, at four representative locations. Current _{LAeq, T} values ranged between 42dB and 63dB, with peak events ranging up to 86dB. The area is determined not to be uniquely quiet.
- There will be no visual impact on Pollardstown Fen or The Curragh.
- There are mature trees surrounding the Hamilton house (appellants) to the west of the site. Only oblique views into the site will be available from upper floors of the house. The 1m earth berm and new hedgerow will screen the development.
- The site is not up to 6m above the level of the Swan house (appellants) to the west. There is only a 30m length of boundary between this property and the

solar farm site – the boundary being a mature hedgerow. The house is 145m from the solar farm.

- The application site is more than 300m from Pollardstown Fen, and not less, as has been suggested by some appellants.
- The 1m high berm on the western side of the site will eliminate any possibility of flooding of adjacent lands.
- Glint and glare was assessed in documentation submitted with the application. The low potential identified, will be reduced by hedgerows and landscaping. Any glimpses of glint would be no worse than viewing a sunlight refraction from window glass similar to those used in glasshouses or still water.
- In the absence of national guidance in relation to solar PV farms, the County Development Plan is considered to be the principal guiding document.
- It is acknowledged that the site is within an area which is a centre for breeding and training racehorses. The construction period will be of limited duration – 12-16 weeks. Impacts will be short-term and managed.
- The site will continue to be used for agriculture when the solar PV farm is constructed. Other sites were examined by the developer but were not available for various reasons.

6.3. Planning Authority Response

The response of KCC, received by An Bord Pleanála on 17th January 2018, indicated that there was no further comment.

6.4. Observations

None.

6.5. Further Responses

6.5.1. The response submission from IMG Planning was referred by An Bord Pleanála to the other parties to the appeal, for comment on or before 5th March 2018.

6.5.2. There were responses received from the following 3rd Parties-

- Desmond & Julie Swan, Nightingale Stud, Pollardstown (5th March 2018).
- Marston Planning Consultancy, agent on behalf of Pollardstown Residents Association (5th March 2018).
- James & Elizabeth Hamilton, First Flyer Stables, Pollardstown (5th March 2018).
- Denis & Geraldine Egan, Pollardstown (1st March 2018).
- Ann Gibbons & Family, Pollardstown (5th March 2018).

6.5.3. The issues raised, where not repeating information contained in earlier submissions, can be summarised in bullet point format as follows-

- Because there is no community use or participation in the scheme, it is unlikely to be approved for state aid or a grid connection.
- The applicant at last acknowledges the importance of this area for horses. KCC should have more understanding of the equine industry and its location in Co. Kildare.
- The reason that there are no field drains in Pollardstown is that they are not permitted.
- The solar farm will be up to 6m above the level of the Swan property. The highest point of the solar farm is 114m OD. Panels will be 2.5m above this. All of the Swan land is below 110m OD.
- There will be less growth beneath solar panels due to cooler temperatures and less sunlight/daylight. Some 65% of the site will be covered by panels.
- No details on baseline noise monitoring carried out on 8th January 2018, has been submitted. Constant low frequency noise will be a problem. It is acknowledged that tractors can be as loud as 100dB.
- Solar arrays are located within 47m of the Swan residence.
- The 1st Party has failed to provide any new information to deal with the issues raised by 3rd Party appellants.
- The Board has refused permission for solar PV farms where they can have a negative impact on European site.

- It has not been established if bats use this site for foraging or nesting.
- Mitigation measures put forward to screen the development will not be sufficient to obscure views of this development from nearby houses.
- Hazardous materials will be used and stored on this site, which may contaminate surface water, and ultimately groundwater.
- The construction of the grid will cause disruption in the area and local consent to traverse private land has not been secured.

6.5.4. The response of KCC, received by An Bord Pleanála on 5th March 2018, indicated that there was no further comment.

7.0 Assessment

7.1. Development Plan and Other Guidance

7.1.1. The Government White Paper entitled 'Ireland's Transition to a Low Carbon Energy Future 2015-2030', published in December 2015, is of relevance. The White Paper is an energy policy update, which sets out a framework to guide policy up to 2030. The vision is to achieve a low-carbon energy system that targets greenhouse gas (GHG) emissions from the energy sector, that will be reduced by 80-95% (compared with 1990 levels) by 2050, and will fall to zero or below by 2100. Paragraph 137 states- 'Solar photovoltaic (PV) technology is rapidly becoming cost competitive for electricity generation, not only compared with other renewables but also compared with conventional forms of generation. The deployment of solar in Ireland has the potential to increase energy security, contribute to our renewable energy targets, and support economic growth and jobs. Solar also brings a number of benefits like relatively quick construction and a range of deployment options, including solar thermal for heat and solar PV for electricity. It can be deployed in roof-mounted or ground-mounted installations. In this way, it can empower Irish citizens and communities to take control of the production and consumption of energy. Solar technology is one of the technologies being considered in the context of the new support scheme for renewable electricity generation which will be available in 2016'.

- 7.1.2. The document 'Planning Guidance for the development of large scale mounted solar PV systems', prepared by BRE National Solar Centre (UK), gives some guidance, where none exists in an Irish context. It provides advisory information on planning application considerations including construction and operational works, landscape/visual impact, ecology, historic environment, glint & glare, and duration of planning permission. The document provides guidance on the information which should be provided within a Landscape and Visual Impact Assessment, and guidance on EIA screening procedures.
- 7.1.3. The Kildare County Development Plan supports the development of solar PV as per Policy SE 1. Policy SE 2 sets out location criteria and sets down considerations for dealing with planning applications – such as decommissioning, glint & glare, visual and landscape, security fencing/lighting, heritage assets, ecology, noise and cumulative impact. These considerations are largely addressed with in the succeeding sections of this Inspector's Report. Other elements of policy set down in the Plan are dealt with under the appropriate headings below.

7.2. Site Layout & Design

- 7.2.1. The solar PV arrays are arranged in rows east/west – angled towards the southern sun at 16 degrees – with the highest point being 3.0m above ground level. The metal support frames will be driven into the ground to a depth of not more than 2.0m. The 18,000 panels will be separated sufficiently to allow grass to grow between the rows – to be grazed by sheep. The panels will be set back a minimum of 6.0m from the site boundary – 10m in the instance of a badger sett on the southwestern boundary. I note that there is a second badger sett on the northeastern boundary which will require a similar set-back.
- 7.2.2. The amount of buildings/plant required is minimal. The largest building will be the single-storey ESN sub-station (64m²) located adjacent to the L7032, at the site entrance. The other small buildings are contained within four clusters amongst the solar PV arrays. The equipment clusters are linked by an hardcore track, which will link back to the L7032 access road.
- 7.2.3. A 2.0m high deer fence (1.5km in length) will surround the solar PV arrays – set inside the boundary hedgerows.

7.2.4. Three pole-mounted CCTV cameras are proposed for the development – 4.0m in height. It is difficult to see why the one at the roadside boundary is required – this being a public road, along which there are a number of houses. The new entrance will serve the existing farm buildings/agricultural feed business on the site. The other two are located to the north and south of the solar PV array. The site will be visited on three/four occasions per year, so it is understandable why such cameras might be required – to indicate weather damage, breaches in fencing etc. A condition should be attached to any permission from the Board requiring CCTV cameras to be angled to face into the site and not directed towards adjoining property.

7.3. Visual Impact

7.3.1. The landscape and visual assessment was carried out in early spring 2016 and spring 2017. The application was accompanied by a series of 11 photomontages – subsequently increased to 15, by way of additional information submission. These illustrated the impact of the development from surrounding roads – but did not include views from private property. Members of the general public do not generally have access to such private property.

7.3.2. The Kildare County Development Plan indicates that the site is located within a Landscape Character Area defined as ‘Central Undulating Lands’, which is Class 1 Low Sensitivity. These areas are noted as having ‘capacity to generally accommodate a wide range of uses without significant adverse effects on the appearance of character of the area’. Table 14.3 of the Plan indicates that solar PV development has a ‘High’ compatibility with other types of Class 1 landscapes, but for some reason does not refer to ‘Central Undulating Lands’. Pollardstown Fen to the north (300m), and The Curragh to the south (900m), have Class 5 Unique Sensitivity to development, with ‘little or no capacity to accommodate uses without significant adverse effects on the appearance or character of landscape, having regard to the unique and special sensitivity factors’. Solar installations are ‘Low’ compatibility within this landscape character sensitivity. Table 14.4 refers to compatibility where development is within 300m of Principal Landscape Sensitivity Factors – such as canals, ridgelines, peat bogs etc. This Table is not of relevance in the current instance, as no part of the solar PV array is within 300m of such a feature (Pollardstown Fen or The Curragh in this instance). I note that the Allen View

Heights suburban housing development, on the edge of Newbridge, is located 300m from the Pollardstown Fen. Hedgerows exist between Pollardstown Fen/The Curragh and the solar farm site. It will not impact on the Class 5 'Unique Sensitivity' of either. The site and its surrounds are relatively flat, if raised slightly above Pollardstown Fen. The site is enclosed by mature hedgerows, which will screen the development from view. It is set back from roads. There is no sense in which a development like this must be completely screened from view, any more than a farm shed, industrial unit, roadway etc. within a rural area needs to be screened. The maximum height of panels at 3.0m, and the low height of associated equipment and buildings, means that the development will not be a dominant element in the landscape. The proposed solar PV array will be visible from houses immediately to the west – where the boundary with the site is a post & rail fence. The applicant proposes to erect a 1m high earth berm for a length of 130m along this boundary, and to plant a hedgerow of native species along it. This will help screen the development from view from garden curtilages of houses. Existing hedgerows will be maintained and strengthened. There are no listed/protected views from these houses or their curtilages – and the solar array may well be visible from upper floors of adjacent houses. It is open to all house-owners to screen their own property with walls/fences/hedges if so desired or required.

- 7.3.3. Scenic Route 37 to the northwest will not be impacted, as the view protected is over Pollardstown Fen to the north, and not in the direction of the appeal site.

7.4. Access & Traffic

- 7.4.1. The access to the site is from the L7032 county road at a point where the 80kph speed restriction applies. There is no public lighting in the area, and there are no public footpaths. The road is narrow, and it is only possible to pass two vehicles in limited places. The surface is breaking up in places. Condition 20 of the Notification of decision to grant planning permission required the developer to resurface the L7032 for a distance of 20m on either side of the proposed new entrance. This would appear to be reasonable, and a similarly worded condition should be attached to any permission which might issue from the Board.
- 7.4.2. A traffic survey was undertaken at the proposed entrance between 17th and 23rd January 2017 – with an average figure of 175 vehicles for each of the seven days.

Of these, cars accounted for 93%, with HGVs accounting for 1.5%. The bulk of construction traffic is concentrated in a period of 6-8 weeks, involving delivery of frames and panels. Maximum daily HGV deliveries would be five in week five – with between two and four daily HGV deliveries in other weeks. The total HGV delivery traffic would be 132. The delivery route will be from the R413 to the south (via the L7032 and L7027). It is approximately 2.0km from the site to the R413. Sight visibility at the junction of the L7027/R413 priority junction, to the southwest of the appeal site, is adequate. The volume of traffic will not be significant, and will result in only minor delays and obstruction for other road users. The disruption will be of limited duration. The fact that this road is used by trainers to walk racehorses to The Curragh, is not a reason for refusal of planning permission. I note that the L7027 also serves as access to the substantial Moorefield GAA grounds just to the north of the railway line. The road network is for all road users – residents, farmers, horse-owners, tourists visiting the public car-park at Pollardstown Fen, visitors to Moorefield GAA grounds and commercial traffic. Operational traffic to this site will be negligible. I note that there is a former sand & gravel pit on the opposite side of the L7032 – the entrance to which is located to the south. Traffic exiting this facility, and heading towards the R413 would not have been captured in the traffic survey undertaken.

- 7.4.3. The Roads & Transportation Section of KCC had no objection to the proposed development, subject to conditions in relation to the new entrance, drainage and resurfacing the L7032 in the vicinity of the access – reflected in conditions attached to the Notification of decision to grant planning permission. This would appear to be reasonable. The proposed development will not cause a traffic hazard or result in obstruction of road users.

7.5. Ecology

- 7.5.1. The application is accompanied by an Environmental Impact Report – which addresses the issue of ecology, amongst others. The site was surveyed on 15th September 2016. A badger sett is identified on the southwestern boundary of the site – and another exists on the northeastern boundary. The Heritage Officer of KCC expressed concern in relation to the impact on Pollardstown Fen, invasive species and the necessity for pre-development survey for bats and badgers.

- 7.5.2. The application was referred to the Development Applications Unit of the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs. The DAU noted the proximity of Pollardstown Fen, and advised KCC of the issues it would need to address in dealing with the application. The Hydrology and Hydrogeology Report submitted by way of additional information on 5th September 2017, dealt comprehensively with these associated issues, and concluded that there would be no impact on either ground or surface water – and more particularly on Pollardstown Fen. I would be satisfied with the conclusions reached, regard being had to the absence of watercourses within or in the immediate vicinity of the site. Whilst the site is likely connected hydrogeologically to Pollardstown Fen, normal construction management practices should ensure that there will be no accidental spillages of hydrocarbons or other chemicals during the construction phase. The support frames for the solar PV panels will not impact on groundwater (foundations no more than 2m in depth) – where the water table is stated to be 16m below ground level (as inferred from wells located elsewhere on the wider landholding). Approximately 200m² of hardcore area will potentially drain to the roadside ditch – which in turn ultimately discharges to Pollardstown Fen. There was a small amount of water in the bottom of this ditch on the date of site inspection by this Inspector – with no obvious outfall. Best environmental practice observation during the construction phase (including bunding of hydrocarbons and chemicals), will ensure that there will be no significant impact on water quality within the Fen.
- 7.5.3. The site currently comprises arable land – divided into two fields by an hedgerow – the larger field to the south and the smaller to the north. All boundary and dividing hedgerows are to be retained. Hedgerows comprise hawthorn, blackthorn and elder for the most part; with some sycamore, ash, beech, willow and sessile oak trees within them. The site will be surrounded by a 2m high deer fence. This fence will be fitted with small mammal gates measuring 300 x 150mm each – to allow such animals to traverse the site, as at present. There is a badger sett within the southwestern boundary earth bank/hedgerow – which appeared disused on the date of site inspection by this Inspector. A 10m setback from this feature has been incorporated into the design – including the deer fence (which would exclude badgers from the site). I note that there is a second badger sett in the northeastern hedgerow boundary of the smaller northern field. This badger sett did appear active

on the date of site inspection by this Inspector. A condition should be attached to any grant of planning permission to protect setts during the construction phase. I note that the solar array is already set back approximately 15m from this hedgerow and the deer fencing set back approximately 7-8m. It would be possible to attach a condition to any grant of planning permission requiring a minimum 10m setback for the new fencing. A pre-construction survey for badgers will be undertaken. Such a pre-development survey for badger setts could result in discovery of others (dug at a future date) – so the 10m set-back should be required for all such badger setts. Habitat piles (stacks of cleared vegetation) will be left on site to encourage biodiversity (as referred to in Policy SE 2 of the Development Plan).

- 7.5.4. The development will not have any significant impact on bats – as all hedgerows are to be retained (with the exception of 8m roadside hedgerow at the site entrance). Work will not be carried out at night-time. There will be no floodlighting of the development. Bat boxes are to be provided to encourage biodiversity.
- 7.5.5. No invasive species were noted on site surveys. Appropriate measures will be undertaken to prevent the introduction of invasive species by construction machinery or plant. An ecological clerk of works will inspect the site before commencement of development, to establish if invasive species have since entered the site.
- 7.5.6. All cables will be run underground within the site. There is no proposal to provide over-ground cables, and there could, therefore, be no impact on bird species. Hedgerow removal at the site entrance will take place outside of bird-nesting season – 1st March to 31st August. Bird boxes are also to be provided – to encourage biodiversity.
- 7.5.7. Inland Fisheries Ireland expressed concern in relation to potential impacts on rivers of release of sediment or pollutants. There is no hydrological connectivity between the site and the river network (Slate and Barrow). A detailed Hydrogeology & Hydrology Report was submitted, which concluded that there would be no impact on either ground or surface water arising from this development. I would be satisfied with these conclusions.
- 7.5.8. The use of grid-formed panels (with white grid partitioning and borders) reduces the attractiveness to aquatic invertebrates (who may mistake them for water bodies).

The site is 300m from Pollardstown Fen and screened by hedgerows – resulting in less likelihood of insects from the Fen being attracted to the site

- 7.5.9. The Curragh proposed Natural Heritage Area (pNHA) – some 900m to the south of the site, will not be impacted by the development – there being no pathway linking the two.
- 7.5.10. Annex I and other bird species use Pollardstown Fen. The Fen is not an SPA. The Conservation Objectives for the SAC do not include any bird species. It is claimed by a 3rd Party appellant that Buzzard is resident on the site. I note Buzzard is not an Annex I species. There is no reason why a development such as this one (as opposed to any other type of development in the vicinity of Pollardstown Fen – such as housing, roads, railway lines, farms, commercial buildings, sports grounds etc.) should result in any detrimental impact on bird species. The risk of bird collision with solar panels is low (where birds mistake them for water bodies).

7.6. **Glint & Glare**

- 7.6.1. Appendix F of the Environmental Impact Report, submitted with the application, relates to the issue of glint – sometimes referred to as glare. The intensity of glint is much higher than glare. There are no Irish guidelines relating to glint & glare. Ground-based glint will generally occur in the early morning or late evening. Sunshine hours are indicated in Figure 2.2 – maximum average 35% in summer. Panels are fixed at an angle of 16 degrees to the horizontal. The impact on road, rail, air traffic and residential use is assessed. The site is well-contained, due the solar arrays generally being at a higher level than the surrounding area. Solar PV arrays are designed to absorb sunlight – the reflectance of glass coating on panels being 9% compared with 19% in normal window glass. Water bodies on a calm day have similar reflective properties to solar PV arrays, and snow is considerably higher.
- 7.6.2. The Ground Glint Zone (GGZ) is used to identify areas to southeast and southwest which might be subject to glint. A Zone of Theoretical Visibility (ZTV) is used to establish areas from where the solar PV farm might be visible. Representative observation points (16 in total) were selected within the GGZ, where a group of properties (mostly residential) are present. These were modelled for glint potential

(assuming bare earth – no screening potential from buildings or vegetation). The maximum exposure (worst case) was estimated for point OP9 for some 0.48% of total daylight hours. This would be more noticeable in upstairs rooms of the two houses comprising the observation point.

7.6.3. Existing hedgerow boundaries screen the development. A proposed 1.0m high berm (with new hedgerow) on the western boundary will further serve to screen the development. This berm will be 130m in length. Existing and proposed screening will result in there being no material impact on residential amenity. Any glimpses of glint would be no worse than viewing sunlight reflection from window or greenhouse glass. Motorists are used to driving during periods when the sun is low in the sky – providing a much more intense form of glint or dazzle than solar panels ever could. Some seven representative observation points were selected on the local road network within the GGZ, and glint was modelled for these (again assuming bare earth and no screening from buildings or vegetation). There is low potential for glint affecting road users due to presence of hedgerow screening. Any glimpses of the site in hedgerow breaks would be passed quickly by motorists and would be unlikely to be noticed. There are numerous examples of large-scale solar developments placed adjacent to motorways without any impact on traffic safety. The Dublin to Cork/Limerick railway line passes through the GGZ at two points – 900m and 800m lengths. Intervening vegetation will ensure that there is no possibility for glint to occur.

7.6.4. There are five airfields within 30km of the site – the closest being 12.6km distant. The principal impact must be considered the final approach to landing strips/runways. Only those within 15km were modelled for glint for approaching aircraft – Kilrush Aerodrome and Gowran Grange Aerodrome. Glint was not identified as being a problem. It is noted that solar PV arrays exist next to airports in the UK and Europe, and have not caused problems.

7.7. **Water, Drainage & Flooding**

7.7.1. Hydrology & Hydrogeology

The additional information submission of 5th September 2017, included an Hydrogeology & Hydrology Report. There are no watercourses either within or

immediately adjacent to the site. The closest is the Roseberry Stream within Pollardstown Fen – approximately 400m to the north of the site. The site is underlain by well-drained mineral soils. The regionally important Curragh Aquifer (a gravel aquifer covering some 200km²) underlies the site and the Pollardstown Fen. The site measures 6ha. only, and there are a wide variety of uses within the 200km² of the Curragh Aquifer. Bedrock comprises limestone of the Rickardstown Formation: the bedrock aquifer is classified as a regionally important karstified aquifer. Groundwater flow is inferred to be to the north – in the direction of Pollardstown Fen. The groundwater vulnerability rating is ‘High’. There will be no impact on groundwater recharge. There are no groundwater source protection zones in the vicinity of the site.

7.7.2. Construction

The fields are arable, but will be returned to grassland use twelve months before commencement of development. A mobile piling rig or tractor-mounted pile-driver will be used to drive the metal supports for the frames upon which the solar PV panels will be mounted. Cable trenches will be 1m in depth. Inferred groundwater is located 16m below current ground level at the solar PV array site: the inferred levels are stated to be taken from depths in existing wells in the area (location unspecified). Piles will be at most 2m deep, and so will not encounter the water table. Temporary chemical toilets will be used during construction, and there will be no permanent site facilities during the operational phase. A site-specific Construction Environmental Management Plan will be drawn up which will deal with the issue of sediment run-off from excavated areas. Hard-standing areas on access roads and around site facilities will permit of percolation of surface-water to ground.

7.7.3. Flooding

Run-off from panels will be absorbed by grassland beneath the frames – which will continue in agricultural use for grazing by sheep. A minimum 6m buffer is maintained at all boundaries. Panels will not be cleaned using chemicals during the operational phase – using deionised water only. The application was referred to Inland Fisheries Ireland by KCC for comment. Comments received back related to generic concerns in relation to construction projects, particularly in relation to siltation of watercourses and accidental spillages of hydrocarbons. There are no records of

flooding at this site (from OPW flood mapping). Evidence submitted by 3rd Party appellants of pluvial flooding on the road network in the area is not a relevant consideration in relation to construction of a solar PV farm. It is claimed that the site is located above the level of adjoining lands to the north and west and run-off from the site will flood adjoining lands – particularly to the northwest. Any existing waterlogging within fields will not be altered by the proposed development. The proposed development will not have any impact on drainage, and there will be no impact on flooding on adjoining lands – particularly lands to the northwest (where a new 1m high earth berm is to be constructed). Rainfall run-off from panels onto grassland, will be absorbed by existing ground drainage, and there is no reason to believe that rivulets and channels will be formed which will convey rainwater to adjoining lands.

7.8. Appropriate Assessment

7.8.1. The application was accompanied by a Stage 1 Screening Report for Appropriate Assessment – dated June 2017. The site is located neither within nor immediately abutting any European Site. The closest such is the Pollardstown Fen SAC (Site code 000396) – located some 300m to the north of the solar PV array site. This SAC extends to 226.2ha, and the conservation interests comprise the following-

- Calcareous fens with *Cladium mariscus* and species of the Caricion davallianae [Annex I habitat].
- Petrifying springs with tufa formation (Cratoneurion) [Annex I habitat].
- Alkaline fens.
- *Vertigo geyeri* (Geyer's whorl snail).
- *Vertigo angustior* (Narrow-mouthed whorl snail).
- *Vertigo moulinsiana* (Desmoulin's whorl snail).

7.8.2. The generic conservation objectives for this site are to maintain or restore the favourable conservation status of habitats and species of community interest. Much of the site with fen vegetation is now owned by the OPW. It is the largest spring-fed fen in Ireland and has a well-developed and specialised flora and fauna. Pollardstown is the only site in Europe to support all three species of whorl snail.

Owing to the rarity of this habitat and the numbers of rare organisms found there, the site is rated of international importance.

7.8.3. The application was subjected to screening for appropriate assessment by KCC. There is no surface hydrological connection between the appeal site and the SAC. The land will continue in agricultural use – for grazing by sheep. Whilst the site is likely connected hydrogeologically to the SAC, there is nothing in the construction or operation of this development which would give rise to concern in relation to negative impact on the SAC. The claim by appellants that inadequate bird surveys were carried out is not borne out by any evidence submitted. There is no indication that the site is used by bird populations of significance which are of conservation interest to any nearby SPA. I note that there are no bird species listed as Conservation Interests for the SAC. The proposed grid connection has not been decided, but an indication is given of the likely route. This may involve an additional consent procedure. There is no sense that any in-combination impact of the solar PV farm and its grid connection could somehow be greater, where it is established that the solar PV farm itself will not have an impact on the SAC. Whatever the route and the means of construction (underground/over-ground) of the grid connection, the likely impacts will only be established when the route is fully known. The granting of planning permission does not entitle a developer to carry out a development – if there are other codes which must be adhered to, or consents obtained.

7.8.4. Having regard to the nature and scale of the proposed development, the separation distance from the Pollardstown Fen SAC to the north, the absence of any pathway between the development and the SAC (there being no watercourses either within or immediately abutting the appeal site), 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. 000396, or any other European site, in view of the site's Conservation Objectives, and a Stage 2 Appropriate Assessment is not, therefore, required.

7.9. **Other Issues**

7.9.1. Archaeology

Appendix G of the Environmental Impact Report, submitted with the application, comprises an archaeological assessment. There are no identified sites either within or immediately abutting the boundaries of the appeal site – the closest such being some 300m to the northeast (now quarried out). The site, an extensive one, and will require some degree of excavation for ancillary equipment, cable trenches and hard-core access roads. I note that it is arable land. The application was assessed by the Heritage Officer of KCC, who had no objection to the development, subject to appropriate conditions being attached. The application was referred by KCC to the Development Applications Unit of the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs; and archaeological monitoring was recommended on account of the scale of the development. Condition 27 of the Notification of decision to grant planning permission required archaeological monitoring of ground disturbance. Any grant of permission to issue from the Board should include a similarly-worded condition.

7.9.2. Financial Contribution & Bond

Condition 31 of the Notification of decision to grant planning permission required payment of a development contribution of €50,000 – based on the calculation of €10,000 per megawatt. This condition was not appealed by the applicant. Any grant of permission to issue from the Board should include a condition requiring payment of a development contribution in accordance with the Kildare County Council Development Contribution Scheme. Condition 28 required a bond for restoration of the site. Such would be reasonable, having regard to the estimated life span of the development of 25 years, and a similarly-worded bond condition should be attached.

7.9.3. Decommissioning

The applicant states that the site will be used for grazing sheep throughout the operational phase. Therefore, it will not be necessary to restore the site to agricultural use after the 25-year permission, as it will already be in agricultural use. The solar PV panels, frames and associated buildings/equipment will be removed over a 12-14 week period. A further similar period would be required to restore the site to full agricultural use. A Decommissioning Method Statement is included in the Environmental Impact Report submitted with the application.

7.9.4. Environmental Impact Assessment

Schedule 5 of the Planning and Development Regulations, 2001 (as amended) sets out projects within Annex I and Annex II which require submission of an EIS (now EIAR). Solar PV farms are not of a class within the annexes. The application was accompanied by an Environmental Impact Report, which concludes, that by reference to Schedule 7 of the Planning and Development Regulations, 2001 (as amended) – [as to whether a development is likely to have significant effects on the environment], that there would be no significant impact. I note that Article 92 of the Regulations, states- *‘sub-threshold development’ means development of a type set out in Schedule 5 which does not exceed a quantity, area or other limit specified in that Schedule in respect of the relevant class of development.* As solar PV is not a type/class set out in Schedule 5, it cannot, therefore, be considered for sub-threshold development either. The Board has decided a number of similar-type cases (some a good deal larger), and has concluded that EIA is not required.

7.9.5. Grid Connection

The stated preferred route is via 20kV underground cabling within the L7032, to connect to an existing overhead cable traversing Pollardstown Fen to the north of the site. Such connection would be subject to requirements of ESB Networks. Condition 8 of the Notification of decision to grant permission required that the grid connection route be notified to the PA. A Road Opening Licence would be required for laying cables within the L7032. Classes 26 & 27 of Part 1 of Schedule 2 of the Planning and Development Regulations, 2001 (as amended) provide that laying of underground cables is exempted development. The applicant indicated that there would be no requirement to erect any overhead lines. Any grant of permission from the Board could not be construed as consent to any connection to the national grid.

7.9.6. Construction Management

The proposed development will take an estimated 12-16 weeks to construct. A location for a site compound has been indicated immediately to the east of the solar PV farm. Most activity will take place in the first six to eight weeks, when components will be delivered to the site. The application was accompanied by a Construction Management Plan and a Construction Traffic Management Plan. Condition 7 of the Notification of decision to grant permission limited working hours to 0800-1800 Monday to Friday and 0800-1400 on Saturdays. This condition was

not appealed by the applicant. The hours set down are reasonable, although I would consider that 1900 hours would be more appropriate than 1800 hours. If the mitigation measures outlined in these two plans are observed, the proposed development will not have a detrimental impact on the amenities of the area or on traffic safety.

The issue of waste is dealt with in the Construction Management Plan. The Environment Section of KCC had no objection to the proposal, and recommended conditions in relation to dealing with waste during the construction and operational phase of development – reflected in conditions 17 & 18 of the Notification of decision to grant planning permission.

7.9.7. Floodlighting

Condition 9 of the Notification of decision to grant permission required that no floodlighting of the development be installed. The drawings submitted do not indicate any proposals for floodlighting. In the interest of visual amenity, any proposals for floodlighting should be subject to assessment by way of a planning application.

7.9.8. Security Cameras

It is proposed to erect security cameras at three locations, on 4m high support poles. Two are located within the solar PV array whilst the third is located at the proposed sub-station beside the L7032. I have elsewhere in this report commented on the locations, and the lack of an apparent need for one adjacent to the L7032.

7.9.9. Limit on Permission

A ten-year planning permission was sought by the applicant. Condition 2 of the Notification of decision to grant planning permission limited the permission to five years. There is no valid reason for granting a ten-year permission for a development of this nature – particularly in light of the rapid changes which are taking place in the renewable energy sector and the supply of PV panels. I note that this condition was not appealed by the applicant.

7.9.10. Limit on Duration of Permission

The applicant has stated that the design-life of solar PV panels is 25 years. Condition 3 of the Notification of decision to grant planning permission was for a temporary period of 25 years from the date of commencement of development. This

would appear to be entirely reasonable. I note that the applicant did not appeal this condition. A similarly-worded condition should be attached to any grant of permission from the Board.

7.9.11. Water Connection

The application was referred by KCC to Uisce Éireann/Irish Water for comment. There is no proposal to connect to any watermain.

7.9.12. Geological Heritage

Pollardstown Fen and Springs has been identified by Geological Survey Ireland as a County Geological Site (CGS). The application was referred for comment to GSI by KCC. The proposed development was not considered to have any impact on this CGS or on The Curragh further to the south.

7.9.13. Depreciation of the Value of Property

No evidence has been submitted by 3rd Parties to substantiate the claim that a development of this nature would devalue property in the vicinity. I note that whilst permission has been granted for a number of solar PV farms (including within County Kildare), none have been developed to date. However, such do exist extensively elsewhere within the EU.

7.9.14. Absence of National Guidelines in relation to Solar Farms

The fact that there are no national guidelines in relation to solar PV farms is not a relevant planning consideration, and is certainly not a valid reason to refuse planning permission. There is national policy in relation to renewable energy. The County Development Plan does contain guidelines in relation to alternative energy and siting recommendations for facilities such as this one.

7.9.15. Electromagnetic Fields

EMFs are universally present in the environment – both natural and man-made. The evidence submitted with this (and other appeals) indicates that due to the relatively low generating power per hectare (<50Hz), emissions associated with solar PV farms are low, and would be concentrated around the transformer connecting to the grid. Strength diminishes with distance. Any emissions would be similar to that associated with household electrical equipment or normal electrical power

connections. All equipment must comply with EC standards for EMF. The proposed development will not have any impact on human health.

7.9.16. Noise

A Noise Assessment was undertaken for the construction element of the development. This involved the identification of noise-sensitive receptors in the vicinity – eight in total. Predicted sound pressure levels at the eight receptors were made using typical noise emissions from the type of machinery to be used in construction. Only NSR02 was predicted to exceed the day-time 70dB threshold set by Transport Infrastructure Ireland (TII) for nuisance – at a level of 71dB. This will be largely associated with the construction of the roadside sub-station. Noise nuisance will be mitigated by turning off machinery when not in use, utilising modern plant and machinery, enclosing of compressors and power generation units, and erection of a temporary hoarding around the boundary. Noise during the operational phase will arise from inverter and transformer stations and the sub-station. No houses are within the 45dB noise contour for each of the four clusters within the solar PV array. The noise arising from the sub-station has been assessed based on the operation of the cooling vent. All noise-sensitive receptors are outside the 45dB contour of the sub-station – in particular NSR02. I note that NSR03 is within the landholding of the owners of the land on which the proposed development is to be constructed. There is stated to be no documented evidence of broadband or aeolian noise from solar farms in the UK or Europe. The closest noise-sensitive receptor to any solar PV array, is NSR07 to the west – at approximately 50m (with the distance to the nearest transformer cluster being approximately 165m). The 1st Party response to the grounds of appeal states that a one-day noise survey was carried out on Monday 8th January 2018, at four representative locations. Current $L_{Aeq, T}$ values ranged between 42dB and 63dB, with peak events ranging up to 86dB. This survey was not submitted as part of the response, and no reliance can, therefore, be placed on the assertions made in relation to background noise. This 1st Party response submission was referred to the other parties for comment.

Permission has been granted for similar-type solar PV arrays in rural areas. The Notification of decision to grant planning permission did not contain any condition relating to operational noise. It has not been the practice of the Board to attach noise conditions to permissions for solar PV farms, and I would not consider that one

is warranted in this instance. I would be satisfied that the proposed development would not have a detrimental impact on the residents of noise-sensitive receptors in the vicinity or on agricultural animals or horses.

7.9.17. Commercial Viability

The contention that the development is too small to be commercially viable is not a relevant planning consideration – and is a matter of opinion, not supported by any evidence. The existence or absence of price support under the Renewable Energy Support Scheme is a matter for Government policy, and is not a relevant planning consideration. It is a matter for the developer to consider whether any planning permission can be put into effect – for whatever reasons – economic or otherwise.

7.9.18. Tourism

No evidence has been submitted to substantiate the claim by 3rd Parties that the development would impact negatively on tourism. Facilities such as this exist widely throughout the UK and Europe.

7.9.19. Carbon Savings

It is estimated that the proposed development would result in a saving of 2,000 tonnes of carbon emissions per annum – compared with electricity produced by the burning of fossil fuels.

7.9.20. Consultation with Local Community

The applicant is not obliged to consult with the local community prior to lodging an application with KCC. The planning permission process offers interested parties the opportunity of making their views known – to KCC, and then by way of appeal, if relevant/required, to An Bord Pleanála.

7.9.21. Equine/Bloodstock Sector

Appellants claim that the development will impact negatively on equine facilities close by, by virtue of noise and dust during the construction phase and resulting from noise during the operational phase. This has not been supported by any evidence. I note that there are stables and horses within the landowner's landholding (as outlined in blue) – through which access to the solar farm will be gained. The area is

developed for rural housing, a former sand & gravel pit to the southeast, contains a military camp at The Curragh, is home to the Curragh Racecourse, the substantial Moorefield GAA grounds, is traversed by road network which includes the M7, the Dublin to Cork/Limerick railway line, and is the location for the large towns of Newbridge and Kildare. It is not reasonable that the equine/bloodstock industry should seek to restrict the types of development which can be carried out on privately-owned land – particularly where such development is in accordance with national policy and County Development Plan policy. I note Policy EQ 1 of the County Development Plan – which seeks to encourage the expansion of the bloodstock industry by protecting the environment and amenity value of rural areas from incompatible development. There is no indication in the County Development Plan of what amounts to ‘incompatible development’, and clearly KCC did not consider a solar PV farm to be incompatible development. I do not see that a development of this nature would be in any way incompatible with surrounding agricultural activity – including equine enterprises and the bloodstock industry.

7.9.22. Loss of Agricultural Land

The claim that the proposed development would result in such a significant deterioration in soil, as to render the land useless for agriculture upon decommissioning of the solar PV farm, is not bore out by any evidence submitted. The land is to be used for grazing during the operational phase of this development. The County Development Plan does not contain any assessment of agricultural land quality. Policy SE 2 refers to ‘focus on previously developed and non-agricultural land, provided that it is not of high environmental value’, but stops short of suggesting that agricultural land is unsuitable for solar PV farms – most of which are located within agricultural areas in the UK and EU. Permission has been granted by KCC and by the Board for solar PV farms on agricultural land – without reference to land quality.

7.9.23. Site Compound

The original application drawings indicated a site compound outside the site as outlined in red (within a field immediately adjoining the solar PV farm to the east). This was amended by way of additional information submission of 5th September 2017, to relocate the site compound inside the red line site boundary. Classes 16 &

17 of the Part 1 of Schedule 2 of the Planning and Development Regulations, 2001 (as amended), provide that site compounds are exempted development.

8.0 Recommendation

I recommend that permission be granted for the Reasons and Considerations set out below, and subject to the attached Conditions.

9.0 Reasons and Considerations

Having regard to the provisions of the current development plan for the area and to regional and national policy, it is considered that, subject to compliance with the Conditions set out below, the proposed construction of a solar PV farm would not seriously injure the visual or residential amenities of the area, would not impact negatively on the agriculture/equine sector in the area, or on the ecology of the area. 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, as amended by the further plans and particulars submitted on the 5th day of September and the 19th day of October 2017, except as may otherwise be required in order to comply with the following conditions. Where such conditions require details to be agreed with the planning authority, the developer shall agree such details in writing with the planning authority prior to commencement of development, and the development shall be carried out and completed in accordance with the agreed particulars.

Reason: In the interest of clarity.

2. This permission is for a period of five years from the date of this Order.

Reason: In the interest of clarity.

3. No works shall commence without the submission for the written approval

of the planning authority of final details for the chosen solar panels.

Reason: In the interest of clarity.

4. The proposed earthen berm on the western boundary of the site shall be constructed, and planted with an hedgerow of native species, prior to commissioning of any part of the solar PV array.

Reason: In the interest of visual amenity.

5. (a) All structures including foundations hereby authorised shall be removed not later than 25 years from the date of commencement of the development, and the site shall be reinstated, unless planning permission has been granted for their retention for a further period prior to that date.

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

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

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

Reason: In the interest of visual amenity and residential amenity.

7. CCTV cameras shall be fixed and angled to face into the site and shall not be directed towards adjoining property or the public road. The proposed CCTV camera, mounted on a pole adjacent to the L7032, shall be omitted.

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

8. The solar panels shall be fixed in place by way of driven pile or screw pile foundations only, unless otherwise authorised by a prior grant of planning permission.

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

9. All existing boundary hedgerows shall be retained around the solar PV array. Where gaps exist, they shall be planted with native trees and hedging plants within the first planning season associated with the commencement of development.

Reason: In the interest of providing adequate screening to protect the rural amenities of the area.

10. The construction of the development shall be managed in accordance with the Construction Management Plan and the Construction Traffic Management Plan submitted to the planning authority with the application.

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

11. Site development and building works shall be carried out only between 0800 to 1900 hours Monday to Friday inclusive, between 0800 to 1400 hours on Saturday, and not at all on Sunday 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.

12. Cables from the solar arrays to the compound/equipment areas shall be located underground.

Reason: In the interest of visual amenity.

13. A pre-construction survey shall be carried out to establish the location of any badger setts within the solar PV array fields. The proposed deer fencing shall be set back a minimum of 10m from any identified badger setts located within hedgerows.

Reason: In the interest of nature conservation.

14. 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.

15. The proposed new access to the site shall be constructed to the requirements of the planning authority. The L7032 shall be resurfaced, at the developer's expense, for a distance of 20m on either side of the new entrance.

Reason: In the interest of traffic safety.

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

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

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

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

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

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

17. Prior to commencement of development, the developer shall lodge with the planning authority a cash deposit, a bond of an insurance company, or such other security as may be acceptable to the planning authority, to secure the satisfactory reinstatement of the site upon cessation of the project, coupled with an agreement empowering the planning authority to

apply such security or part thereof to such reinstatement. The form and amount of the security shall be as agreed between the planning authority and the developer or, in default of agreement, shall be referred to An Bord Pleanála for determination.

Reason: To ensure satisfactory reinstatement of the site.

18. The developer shall pay to the planning authority a financial contribution in respect of public infrastructure and facilities benefiting development in the area of the planning authority that is provided or intended to be provided by or on behalf of the authority in accordance with the terms of the Development Contribution Scheme made under section 48 of the Planning and Development Act 2000, as amended. The contribution shall be paid prior to commencement of development or in such phased payments as the planning authority may facilitate and shall be subject to any applicable indexation provisions of the Scheme at the time of payment. Details of the application of the terms of the Scheme shall be agreed between the planning authority and the developer or, in default of such agreement, the matter shall be referred to An Bord Pleanála to determine the proper application of the terms of the Scheme.

Reason: It is a requirement of the Planning and Development Act 2000, as amended, that a condition requiring a contribution in accordance with the Development Contribution Scheme made under section 48 of the Act be applied to the permission.

Michael Dillon
Planning Inspectorate

4th April 2018