



An
Bord
Pleanála

Inspector's Report PL93.248487.

Development	26,000 sq.m solar farm.
Location	Keiloge, Co. Waterford.
Planning Authority	Waterford City and County Council.
Planning Authority Reg. Ref.	17/113.
Applicant	Temporis Limited.
Type of Application	Permission.
Planning Authority Decision	Refusal.
Type of Appeal	First Party
Appellant	Temporis Limited
Observer(s)	None.
Date of Site Inspection	31 st July 2017
Inspector	Philip Davis.

Contents

1.0 Introduction	3
2.0 Site Location and Description	3
3.0 Proposed Development	4
4.0 Planning Authority Decision	4
4.1. Decision	4
4.2. Planning Authority Reports	5
4.3. Prescribed Bodies	5
4.4. Third Party Observations	5
5.0 Planning History.....	6
6.0 Policy Context.....	7
6.1. Development Plan.....	7
6.2. Natural Heritage Designations	8
7.0 The Appeal	8
7.1. Grounds of Appeal	8
7.2. Planning Authority Response	9
8.0 Assessment	9
9.0 Recommendation.....	23
10.0 Reasons and Considerations	23
11.0 Conditions	23

1.0 Introduction

This appeal is by the applicant against the decision of the planning authority to refuse permission for a solar farm on farmland south of Waterford City, close to Waterford Airport. The reasons for refusal relate to impacts on the possible expansion of the Airport and aircraft safety. The appellant submitted revised plans with the appeal deleting some of the proposed solar panels.

2.0 Site Location and Description

Keiloge Townland is located just under 10km south of Waterford City and 5km north-east of Tramore. It is characterised by a rolling landscape of low hills with poorly drained land in low-lying areas, with a general drop in levels to the south closer to the coast. The area is mostly moderate to low grade farmland in grazing use, with mid-sized fields used for grazing bounded by ditches and high hedgerows. The R708 is west of the townland, running due south from Waterford City, serving the small Waterford Airport, which is located on drained flat land on the western side of the regional road. There is a scattering of dwellings along the main road – in some sections ribboning into higher density linear developments, in particular on bypassed sections of the R708, which has in recent years been upgraded. There is a small industrial/commercial area south-east of the airport. The airport consists of one reception/control building and several large hangers, with a runway on a NNE-SSW alignment. The airport has a number of scheduled flights to Britain, and is used for private aircraft, training, and an aero club. The nearest settlement is Tramore, although the road connection to Waterford City is more direct.

The appeal site, with a site area given as 17.701 hectares, is a series of grazing fields on the eastern side of the R708. It is part of a larger landholding of approximately double this area. Most of the land is on a generally south-facing slope. It is separated from the R708 by some narrow fields approximately 60 metres in width and has a single connection to the main road via a narrow unpaved track with a gated access. There is one cattle shed on the site, close to the entrance on the western side and a smaller nearby structure. The land is divided by a series of ditches and hedges and is generally quite poorly drained grazing land.

The closest dwellings to the site are a series of bungalows on the western side of the R708, on a section of by-passed road – they are at their closest approximately 120 metres from the site entrance. There are some small gravel pits on lands to the north. Otherwise, the site is surrounded by farmland.

3.0 Proposed Development

A solar photovoltaic panel array consisting of up to 26,000 m² of solar panels on ground mounted steel frames, 2 no. substation buildings, 4 no. inverter units, 2 no. storage and control cabins, underground cable and ducts, boundary security fence, new internal tracks. CCTV, and the demolition of an agricultural farm building and all associated site services and works.

The associated documentation indicates that the solar array will be made up of individual PV solar modules of approximately 1.7 metres by 1 metre, arranged on a metal frame mounted structure which will be installed by either earth screws or piling.

The applicant requests a 10 year permission.

4.0 Planning Authority Decision

4.1. Decision

The planning authority decided to refuse permission for two reasons, I would summarise as follows:

- It is contrary to the Regional Planning Guidelines and the 2011 Development Plan with regard to its proximity to Waterford Airport, and as such may pose a hazard to aircraft operations and would prejudice the future expansion of Waterford Airport.
- It is considered that it has not been adequately demonstrated that glint and glare from the proposed development would not have a negative impact on future alterations to the existing runway or future expansion of the airport.

4.2. Planning Authority Reports

4.2.1. Planning Reports

- It is noted that there were pre-planning meetings and a public consultation meeting.
- Notes objections, in particular from the Waterford Aero Club and Waterford Regional Airport – notes references to Board decision **PL10.246875** (Belview Port).
- Notes lack of national policy guidance on solar farms.
- Recommends a refusal for the reason of its impact on the airport.

4.2.2. Other Technical Reports

Water Services: No objection.

4.3. Prescribed Bodies

TII – no observations to make.

4.4. Third Party Observations

Waterford Aero Club

- Argues that the Glint and Glare study takes no account of the impacts on aircraft that are not in a straight line approach – its noted that the airport is used for training flights.
- It is argued it would prejudice the safe force landings in the event of an engine failure of a single engine aircraft.

Waterford Regional Airport

- It is noted that solar farms are being developed in the absence of clear national and regional policy.
- It is noted that it is adjacent to the Airfield Reserve Area (ARA) zone, and partly within the defined public safety zone.

- Various RPG and CDP policies are referred to, PPO5.19, PPO.5.20 and 10.2.2 in particular.
- The Board decision for the Belview Port appeal (**PL10.346875**) is referred to in support of an argument that it is premature.
- It is argued that it will impact on the operation of the airport.

5.0 Planning History

Planning permission is extant for a 350 metre extension to the south of the runway (**14/89**).

A significant number of solar farms have come to the Board on appeal within the past 2 years. As of writing this report, these appeals are as follows:

PL93.248483, for 26,000 sq. m² at Keilogue, Co. Waterford (no decision yet);

PL27.248424, near Rathnew, Co. Wicklow (no decision yet)

PL04.248400, near Castlelyons, Co. Cork (no decision yet);

PL26.248364, near Gorey, Co. Wexford (28 hectares) (no decision yet);

PL.04.248278, near Fermoy, Cork (8.7 hectares), (no decision yet);

PL11.248244, near Mountmellick, Co. Laois (no decision yet);

PL22.248238, near Portlaoise, Co. Laois (no decision yet);

PL17.248146, Gillinst, Co. Meath (no decision yet);

PL92.248089, near Carrick-on-Suir, Co. Tipperary (no decision yet).

PL91.248066, Lisnagry, Co. Limerick (no decision yet);

PL17.248028, Ninch, County Meath (no decision yet);

PL10.247979, Knocktopher, Co. Kilkenny (no decision yet).

PL27.247942, near Rathdrum, Co. Wicklow (no decision yet);

PL10.247941, Knocktopher, Co. Kilkenny (declared invalid).

PL26.247886, Ballyhoge, Co. Wexford for 268,000 sq. m² (no decision yet);

PL15.247808, near Dundalk, Co. Louth (no decision yet);

PL26.247801, near Murntown, Co. Wexford (no decision yet);

PL10.247616, Ballyhale, County Kilkenny (no decision yet)

PL08.247778, near Killarney, Kerry for 20,000 sq. m² (granted);
PL91.247653, near Listowel, Kerry, for 30,000 sq. m² (granted);
PL03.247632, Ballymorris, Co. Clare (granted)
PL93.247558, Kilmeaden, Waterford (withdrawn);
PL92.247443 near Caher, Tipperary for 32,000 sq. m². (amended condition on financial contribution);
PL26.247366 for 88,000 sq. m² of panels near Baldwinstown, Wexford (split decision, partial grant);
PL93.247310 near Tramore, County Waterford (granted);
PL26.247217 for nearly 99 hectares in Tomhaggard, Wexford (refused for reasons relating to visual and residential amenities and loss of agricultural land);
PL26.247179 in Clonroche, Wexford for nearly 20 hectares (granted);
PL26.247176, Enniscorthy, Co. Wexford, 12 hectares of solar (granted);
PL93.246902, in Cappoquin County Waterford (granted);
PL10.246875, near Belview, Kilkenny for solar farm (refused, by reason of its impact on the orderly expansion of Belview Port);
PL04.245862 for 33,000 sq. m. near Coachford, Cork (granted);
PL27.246527 for 13 hectares of solar panels near Avoca in county Wicklow, (granted);
PL04.244539, for 5,400 sq. m. near Lissarda, Co. Cork (granted);
PL26.244351 near Tintern, Wexford for a 5MW solar farm (granted); and,
PL04.233539 near Lissarda, Cork (granted).

6.0 Policy Context

6.1. Development Plan

The site is within an area zoned A – Agriculture – ‘*to provide for the development of agriculture and to protect and improve rural amenity*’. The site is close to (but does not include), the Waterford green belt and zoned lands relating to the airport. The Waterford County Development Plan incorporates the Waterford Renewable Energy Strategy 2016-2030 includes a projection for 84.1 MW of solar energy up to 2030.

6.2. Natural Heritage Designations

The closest Natura 2000 sites in the vicinity are the SAC and SPA for the Tramore Dunes and Backstrand (site codes 004027 and 000671). These sites are approximately 3 km to the south.

7.0 The Appeal

7.1. Grounds of Appeal

Reason 1:

- It is noted that the site is not within the area designated as 'Airport Area' and Airport Reserve Area', but is across the road, which, it is suggested, is a natural separation between the land uses.
- It is noted in this regard that a range of airports, including Gatwick, Heathrow and Birmingham Airport have solar PV close to, or within the grounds of the airport (this includes roof top solar).
- It is noted that the permission for extending the runway is to the south – it is denied that there is any realistic circumstances where the airport would extend further to the north, closer to the appeal site.
- It is noted with regard to the Masterplan that there is no Public Safety Zone around the airport (These can only be established through Ministerial consent). It is claimed that the PSZ for Waterford is non-statutory and nor relevant to the proposed development. It is also noted that the Development Plan does not expressly preclude development within the PSZ.
- It is argued that PSZ's are intended to protect the public on the ground, not aircraft, and as there would be no occupancy of the solar farm, it is not a relevant consideration.
- It is argued that the site was chosen through a rigorous process, based on solar yield and on grid connection and through the absence of environmental sensitivities.

- It is denied that there is any evidence that solar panels represent a safety hazard to aircraft.

Reason 2

- It is argued that it is inappropriate to make an assessment based on a northern extension of the runway, when the Masterplan states that any extension to the south is the preferred option. It is argued in detail that the location of the proposed panels is such that they are not visible from the control tower, or from aircraft taking off either north or south.

7.2. Planning Authority Response

The planning authority did not respond to the grounds of appeal.

8.0 Assessment

Having inspected the site and reviewed the file documents, I consider that the appeal can be assessed under the following broad headings:

- Principle of Development
- Site selection issues
- Glint and Glare
- Residential Amenity
- Landscape and visual impacts.
- Cultural heritage
- Drainage and flooding
- Ecology
- Loss of agricultural land
- Traffic and construction impacts
- Grid connection
- EIS and AA
- Other issues

8.1. Principle of Development

There are two main policy aspects to this appeal – the policy aspects concerning the construction of solar farms in Ireland, and the specific policy concerns regarding the Keiloge site, specifically with regard to its location so close to Waterford Airport.

Solar farm policy

National policy (within the EU context) on renewable energy is set out in the **National Renewable Energy Action Plan (NREAP)** submitted under Article 4 of Directive 2009/28/EC, which sets out targets for increasing the proportion of renewable energy in the national energy mix. This sets out (Section 3.1) a target of 16% of all energy from renewable sources of 16% by 2020 (up from 3.1% in 2005). It does not provide specific target figures for solar PV. In addition, the 2015 White Paper '**Ireland's Transition to a low carbon energy future 2015-2030**' sets out targets for the further development of the renewable energy sector. This White Paper notes the potential importance of PV technology (paragraph 137), but does not provide specific targets. There are no specific national or regional planning guidelines relating to the locational aspects of solar PV farms. The **Sustainable Energy Authority of Ireland** have a best practice guide for solar electricity and the grid, but it does not address locational or planning aspects in detail. The **Regional Planning Guidelines** (2010-2022) states that it is policy (PPO 6.3) to maximise the use of renewable energy technologies.

Waterford County Council have adapted a '**Renewable Energy Strategy for Waterford City & County 2016-2030**'. This is intended as a statutory variation on the three main Development Plans for the County – the Waterford and Dungarvan city/town plans, and the County Development Plan. Section 5.0 of this Strategy addresses solar energy. It notes that Waterford is in the top 15% of solar resources in Ireland, and describes it as having 'good potential'. Table 3.3 of the Strategy provides a target of 84.1 MW of solar PV (from zero at the moment). It projects that this would require just over 168 hectares of land. It does not provide any guidance on the best locations. It notes the potential disadvantages (table 5.4) as land take, impact on crop production, glint/glare issues and possible hydrological effects.

The appeal site and surrounds

As regards the appeal site, it is in open agricultural countryside without any specific zoning designation. It is not in any areas zoned or otherwise designated for

landscape protection or any other type of designation or zoning. It is just south of the green belt around Waterford City, and north-east of the designated Airport Masterplan area around Waterford Airport.

The Regional Planning Guidelines for the South-East Region recognises the strategic importance of Waterford Airport, as the most important airport within the region. A key implementation objective (Section 10.2.G) is identified as:

‘Development of the full potential of the Waterford Regional Airport, through extension of the existing runway, improved transport linkages between the airport, Waterford City and the region and facilities for additional operators offering services from this location’.

Section 2.3.1 states:

Waterford Regional Airport is located 9 kms. by road from Waterford city centre and is also close to Tramore. Aer Arann operates daily services linking the South-East with London Luton and some European destinations. The Irish Coast Guard operates an air/sea rescue service from the airport. The Regional Airport plays an important role as a Gateway to the South-East Region and passenger numbers at the Airport have grown significantly, from 54,432 in 2004 to 112,000 in 2009. There is potential for further expansion of the Airport and the Regional Authority supports the future expansion and upgrading of airport infrastructure together with improvements to the accessibility of the airport, including access by public transport, and the potential for development of economic and commercial business is also recognised.’

Policy PPO 5.19 states:

The Regional Authority will support the further development of the South-East Regional Airport and, in particular, the development of:

- an extension of the existing runway to accommodate larger aircraft, subject to an Appropriate Assessment of the impact on Tramore Back Strand SPA and to ensure avoidance of adverse impacts on the integrity of this SPA
- improved transport linkages and services between the airport, Waterford City and the entire South-East Region, i.e. roads and public transport
- measures to encourage additional operators offering services from this location
- the expansion and development of aviation-related industries at the airport.

PPO 5.20 Development Plans should incorporate policies to protect longer-term flight path public safety zones and to control uses which could adversely impact on the airport's operations or the potential for new runway development and extensions sufficient to handle larger aircraft to a wider variety of destinations. All such projects at 5.19 and 5.20 will be required to comply with the principles of sustainable development and to be assessed in accordance with Article 6 of the Habitats Directive.

The Development Plan, specifically Objective INF4 reflects this, and states:

6.6.4 Waterford Regional Airport and Business Park

Waterford Regional Airport plays a critical role in the development of Waterford and the South East, in terms of accessibility, supporting economic development and tourism. Reflecting this, lands have been zoned at this location to facilitate the development and expansion of the Airport as 'Airport Area' (To provide for Airport related activities including passenger terminal buildings and services, airside retail, hotel, airport infrastructure, hangerage, storage, maintenance and ancillary facilities, park & ride, transport, depot, training facilities, storage depot, warehouse, offices and light industrial/ enterprise units) and Light Industry. A masterplan for the Airport and this Business Park is attached to Appendix A6.

Objective INF 4

To assist the future expansion of services and routes at the Airport, the Council support the lengthening and widening of the runway, subject to compliance with proper planning and sustainable development and in compliance with Article 6 of the Habitats Directive.

The **Waterford Regional Airport & Business Park Masterplan** is an appendix to the Development Plan and sets out detailed technical guidance and issue relating to the Airport. I note that all zoned land associated with the airport is on the western side of the R708. A **Public Safety Zone (PSZ)** extends out over and includes a small part of the appeal site, but the zone is stated to be clearly identified as one '*to protect the public against accident risk arising from overlying aircraft failing to remain airborne and impacting inside the high risk areas off the ends of a runway*' (Section 3.0). I note that there are no zoning designations or specific references to lands on the opposite side of the road in this Masterplan.

I note that there is a planning permission for a runway extension – this is to the south of the airport, on the opposite side from the appeal site. I also note the Board decision in for Belview is referred to as a precedent (**PL26.247217**). I do not

consider that the circumstances regarding the Belview refusal are particularly relevant to this appeal – or at least no more relevant than any of the other recently decided appeals - as it was for a much larger development, and in an area which is not identified as having very high levels of solar potential. I concur with the applicant that it is misleading to refer to the ‘Public Safety Zone’ in the reason for refusal as these are intended to prevent developments which would attract people on the ground and is not relevant to aircraft safety – a solar farm is not likely to involve bringing more people to the lands than a regular working farm. I see no basis for stating that because it’s in ‘close proximity’ to the ‘Airport Area and ‘Airport Reserve Area’ that this is a reason to refuse any such development.

I have reviewed all the available policies and the planning history and I find that there is no basis for a refusal for permission for policy reasons. The site is:

- within unzoned agricultural land with no specific protective designation;
- across the main road from the lands zoned for development for the Waterford Airport Business Park. There is a very significant separation distance from the lands. There are no indications that there are any active proposals for extending developments directly or indirectly associated with the Airport to the area across the R708, and,
- there are no indications from existing policy that a solar farm (notwithstanding glint and glare issues to be discussed below) represents an unacceptable form of development within a PSZ.

I would conclude therefore that as there are no policy objectives to developing a solar farm on this land, and that there is a general policy presumption nationally, regionally, and locally, in favour of developing renewable energy, there would be a favourable policy presumption in favour of the proposed development, subject to site specific issues and normal planning considerations.

I would note in this regard that as solar farms are likely to be dependent on both financial support from the government, and access agreements with ESB Networks,

there would be a significant delay before it could potentially be brought to site. For this reason, I consider that a 10-year permission is reasonable within the policy context. I note that the Board has granted such an extension in other similar appeals.

I further note that in the appeal submission **the appellant submitted revised plans showing the removal of solar panels from that part of the site** (the western side, around the existing farm buildings) **included within the Public Safety Zone (PSV)** for the Board to accept by condition if it is considered not acceptable to have solar panels within such a PSZ. The Board may wish to consider that this has the additional merit of reducing further any residual view of the solar panels from the R708. Notwithstanding this, as I have outlined above it is clear from the available documentations that this is not necessary – the only planning necessity for PSZ areas is to ensure that developments which put members of the public **on the ground** in harm's way should be refused within these zones. I do not consider that solar panels would attract any more people than agricultural land, so I do not consider that a condition removing panels in line with drawing no. KE-P-A03 as submitted with the appeal is necessary.

8.2. Site selection issues

As the Board is aware from the number of recent appeals relating to solar farms, there has been something of a scattergun approach to site location issues in the absence of specific policy guidance on the most appropriate sites for this relatively new form of development. The applicants have stated they are seeking sites with good solar potential, good grid connection, and minimal environmental sensitivities. I would note in this regard that the appeal site is in a generally low quality and robust rural landscape and not one close to the scenic tourist areas along the coast. This part of Waterford has, according to available information, among the highest potential in the country for solar generation in Ireland. There is a power line and a 38kV transformer in the vicinity and the area seems to have a generally robust grid with good potential for a solar farm of this size. The agricultural land is generally low quality and seems poorly drained, despite its gentle south facing slope. The immediate area is unusually free of dwellings and is not close to a settlement. I

would therefore consider that applying normal best practice criteria, the appeal site would be very suitable for this type of development.

8.3. Glint and Glare

The planning authority refused for reasons relating to glint and glare, but did not give specifics as to why it was considered that the report submitted with the application was inadequate. I note that the flying club based at the airport objected as they note that aircraft practising landing manoeuvres will do circuits around the runway and so will be approaching from a variety of different angles, unlike scheduled flights.

The applicant has submitted a report which is in line with FAA guidance. There is no published Irish guidance on this issue, but the UK guidance document ‘Renewable Energy Planning Guidance Note 2 – The Development of large scale (>50kW) solar PV arrays – Cornwall (UK) 2012’ states (page 26):

Glint may be produced as a direct reflection of the sun in the surface of the PV solar panel. It may be the source of the visual issues regarding viewer distraction. Glare is the continuous source of brightness, relative to diffused lighting. This is not a direct reflection of the sun, but rather a reflection of the bright sky around the sun. Glare is significantly less intense than glint.

Solar panels are designed to absorb, not reflect, irradiation. However the sensitivities associated with glint and glare, and the landscape/visual impact and the potential impact on aircraft safety, should not be underestimated. In some instances it may be necessary to seek a glint and glare assessment as part of a planning application. This may be particularly important if ‘tracking’ panels are proposed as these may cause differential diurnal and/or seasonal impacts. Discussions are ongoing with airport operators in Cornwall regarding the potential impact of large scale solar PV development.

The potential for PV panels, frames and supports to have a combined reflective quality should be assessed. This assessment needs to consider the likely reflective capacity of all the materials used in the construction of the solar farm.

The report submitted by the applicant notes that solar farms and smaller rooftop installations have been constructed around a number of airports, both large and small, in the UK and Europe, without reported issues or problems. The analysis submitted indicates that any glint and glare effects would be at worst minor and would not represent a hazard. It is noted that public research indicates that at worst, the glint and glare from a PV solar farm is similar to smooth water, and less than materials such as Portland white cement, structural glass, or snow. The report also indicates that there would be no significant impacts on the adjoining road or residential properties. I note that it does not specifically identify circling aircraft in its analysis.

On the basis of the available evidence, I do not consider that there is any basis for a refusal for the reason of a 'glint and glare' impact on aircraft safety. The applicant has submitted a detailed report in line with international guidelines, and has correctly noted that all available research indicates that the impact of existing PV installations in and around airports is minor and not significant. I do not consider that the reason for refusal is based on a technical rebuttal, and while in some circumstances a precautionary approach is justified, in this case I am satisfied that the applicant has demonstrated that there is no significant hazard.

8.4. Residential Amenity

The closest dwellings to the proposed installations are on the opposite side of the R708, the closest just over 100 metres from the site. Most of these houses are served via a by-passed section of the main road, which appears to be in shared ownership by the dwellings. While the distance separating the dwellings from the proposed PV installations is relatively short, they are separated by at least 2 hedgerows and the road. The houses are either due west of the site or to the north-west. The glint and glare report indicated that the angles of the panels relative to the sun and the general orientation of the topography will ensure there are no glare effects, and the existing vegetation will provide adequate screening. I am satisfied from my site visit that so long as the existing hedgerows are maintained and strengthened in line with the landscaping proposals submitted, the panels will not be visible to any significant extent and there will be no glint/glare impacts. I would

consider the main impact to be the additional traffic from construction access, but this is likely to be relatively short term and within the normal bounds of acceptability.

8.5. Landscape and visual impacts.

As I have outlined above, the landscape is well vegetated, and is generally robust, with a capacity to absorb buildings and other uses such as the small quarries that exist to the north of the site. The gently undulating nature of the landscape and the heavy multiple hedgerows ensures that the panels would not be particularly intrusive, and of course the overall wider landscape of the area has been significantly altered by the buildings associated with the airport. Although the airport itself is a gateway for some tourists to the region, this is not one of the tourist hotspots of Waterford. I would therefore conclude that the proposed development would, subject to the maintenance and strengthening of the hedgerows as indicated in the submitted plans, not be unnecessarily intrusive into the landscape and would not have serious visual impacts.

8.6. Cultural heritage

There are no recorded ancient monuments or protected structures or buildings on the NIAH on, or within 100 metres of the site. The farm buildings for demolition are relatively modern and do not have any apparent cultural importance. Older OS plans show what appear to have been farm buildings in the centre of the site, but there are no remains visible and no indications that these were structures of cultural importance. The applicants submitted an archaeological assessment which indicates that there is a possibility of archaeological remains, but none were identified (a field walk was carried out, but no other form of investigation). As the lands do not appear to have been ploughed or intensively farmed, I would recommend an archaeological monitoring condition as a precaution.

8.7. Drainage and flooding

There are no indications from available sources that the site is subject to flooding. The construction of a solar farm would alter flow rates on the site, but available information suggests that there is no significant increase in overall run-off, compared

to a ploughed field - the application documents (Section 6.3.1 of the Planning and Environmental Report) states that there will be no increase in run-off, or of contamination. I note that older OS plans show a spring on the lands, although there were no watercourses visible when I surveyed the lands, apart from slightly stagnant ditches – the site plans indicate one small stream, the Keiloge, running south through the site. There are no indications that the solar farm could increase run-off down slope, but as a precaution I would recommend a condition such that a run-off study be carried out and sufficient swales and areas of vegetation be maintained to ensure run-off is no more than that predicted for a pasture field.

8.8. Ecology

There are no Natura 2000 sites or NHA's on or around the lands. The high hedgerows and relatively low intensity agriculture has maintained what would seem to be a moderately rich farmland ecology, with plenty of shelter for nesting birds and mammals. The application documents (Section 7.3 of the Planning and Environmental Report) outlines a number of site enhancement measures for ecology on the site, which I would consider worthwhile mitigation for any losses. While there is not a great deal of available information on potential impacts of solar farms, if the hedgerows are maintained as indicated in the application documents I would consider that overall impacts would be neutral compared to maintaining agricultural use on the lands.

8.9. Loss of agricultural land

The issue of loss of agricultural land has been raised in other similar appeals. I note that unlike some other solar farm appeals with the Board which are frequently on former tillage, this land is mostly low level grazing, and does not appear to be particularly productive. I would not consider the temporary loss of this land for productive agricultural use to be a significant issue.

8.10. Traffic and construction impacts

The main construction access to the site is the existing agricultural track between the site and the R708. The submission documents indicate that this is of sufficient

width and has adequate sight lines and so will not require altering. The R708 at this point is quite wide and of good alignment – the access is close to a gentle but distinct ridge, but there is sufficient vertical as well as horizontal visibility in both directions. I would consider that with the mitigation measures set out in the Planning and Environmental Report and the ‘Outline Construction and Environmental Management Plan’ submitted with the application, the disruption – while significant during the construction works – would over the life of the proposed farm be minimal and in line with what would be expected from an active agricultural operation.

8.11. Grid connection

It is proposed to connect the site via an underground route running due north through farmland from the site, to the existing Kilcarragh 38kV substation (see figure 4.1 in the Planning and Environmental Report submitted with the application). This is approximately 1 km to the north. The connection would be mostly through the landowner’s property, with the last section requiring a wayleave. This grid connection does not go through any lands with a habitat designation or other sensitivity. As the works are not subject to EIA I do not consider that any underground connection would require planning permission.

8.12. EIS and AA

The planning authority suggested that there was a question as to whether an adequate screening for EIS had been done, but no EIS was requested. In this regard I note that photovoltaic solar farms are not listed as a specific use category under Schedule 5 of the 2001 Regulations as amended. Under Part 1, Article 2(a) includes:

A thermal power station or other combustion installation with a heat output of 300 megawatts or more.

The proposed development is for photovoltaics, so is not by any reasonable definition a ‘thermal’ power station and does not involve combustion, and will be of

far lower capacity than 300 MW, even taking account any other proposed solar farms in the area (a 300 MW solar farm would probably cover around 1,000 hectares). I do not consider that any other categories under Part 1 apply.

Under Part 2, Article 3(a) includes:

Industrial installations for the production of electricity, steam and hot water not included in Part 1 of this Schedule with a heat output of 300 megawatts or more.

My interpretation of 3(a) is that EIA may apply for power plants of a thermal design independent of the source of energy – i.e. if they produce ‘*electricity, steam **and** (my emphasis) hot water*’. I note that other non-thermal types of electricity generation such as hydroelectricity and wind power, are specifically included in other subsections. Photovoltaics are **not** included. As the proposed development is for the production of electricity by way of direct solar power using photovoltaics and does not involve the production of heat or hot water, I conclude that it does not come within this category. In any event, total output will be far below the 300MW threshold and so would be sub-threshold if 3(a) applied.

I conclude therefore that a photovoltaic (non-thermal) power station such as that proposed does not require a mandatory EIS as it does not come within any category in either Part 1 or Part 2 of Schedule 5 of the 2001 Regulations as amended, even if it is carried out close to, or in combination with, other significant sized solar farms in the area.

As I have outlined above, I do not consider that there are any specific cultural, ecological or other sensitivities relating to the lands. I therefore do not consider that there are specific sensitivities of the site which would lead to a conclusion that the proposed development would have a significant effect on the environment (Article 109(2)) of the 2001 Regulations as amended.

I therefore conclude that EIS is not mandatory for this proposed development and it does not come within the scope of Article 109 of the Regulations. I would conclude

therefore, that a solar farm on this site, even if assessed cumulatively with other significantly sized solar farms in the vicinity, would not require an EIS.

As regards **Appropriate Assessment**, the applicants submitted a screening report, which concluded that there would be no adverse impacts on a Natura 2000 site, and the planning authority concurred with this conclusion.

There are no Natura 2000 sites within the immediate vicinity of the site. The Screening Report lists 8 sites within the broader area, but highlights two where there may be an issue – **Tramore Dunes and Backstrand SAC** (site code 000671) and **Tramore Backstrand SPA** (site code 004027) which are just over 3km to the south. The appeal site lands drain to a number of minor streams which ultimately discharge to Tramore Bay and these two designated habitats and as such there is a potential hydraulic connection.

The features of interest for the SAC are as follows:

<p><i>Mudflats and sandflats not covered by seawater at low tide [1140]</i></p> <p><i>Annual vegetation of drift lines [1210]</i></p> <p><i>Perennial vegetation of stony banks [1220]</i></p> <p><i>Salicornia and other annuals colonising mud and sand [1310]</i></p> <p><i>Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330]</i></p> <p><i>Mediterranean salt meadows (Juncetalia maritimi) [1410]</i></p> <p><i>Embryonic shifting dunes [2110]</i></p> <p><i>Shifting dunes along the shoreline with Ammophila arenaria (white dunes) [2120]</i></p> <p><i>Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]</i></p>
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The SPA has the following features of interest:

Light-bellied Brent Goose (Branta bernicla hrota) [A046]

Golden Plover (Pluvialis apricaria) [A140]

Grey Plover (Pluvialis squatarola) [A141]

Lapwing (Vanellus vanellus) [A142]

Dunlin (Calidris alpina) [A149]

Black-tailed Godwit (Limosa limosa) [A156]

Bar-tailed Godwit (Limosa lapponica) [A157]

Curlew (Numenius arquata) [A160]

Wetland and Waterbirds [A999]

All the conservation interests are associated with the coastal habitats associated with a sheltered tidal bay. The only possible pathway for an impact from the proposed development would be surface run-off, and I am satisfied that with the mitigation measures set out in the application documents there is no reasonable likelihood of contaminated run-off from the site having any impact on the coastal habitats.

On this basis, I consider it 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 Sites No. 004027 or 000671, or any other European site, in view of the site's Conservation Objectives, and a Stage 2 Appropriate Assessment (and submission of a NIS) is not therefore required.

8.13. Other issues

The proposed development would be subject to a standard S.48 Development Contribution, and I would also recommend a bond requirement. I note that in previous applications for solar farms, having regard to the uncertainty over access to the grid the Board has accepted a 10 year time period for this type of development,

so I would consider it reasonable to allow it in this appeal. I do not consider that there are any other significant issues raised in this appeal.

9.0 Recommendation

I recommend that subject to the conditions set out below, the Board grant permission for the proposed windfarm for the following reasons and considerations.

10.0 Reasons and Considerations

Having regard to nature of the proposed development and its location in open unzoned countryside on lands used for grazing, the provisions of the current development plan, and regional and national policy with regards to renewable energy and to the development of Waterford Airport, it is considered that, subject to compliance with the conditions set out below, the proposed construction of a solar farm would not prevent the long term development and expansion of Waterford Airport and associated developments, would not represent a safety hazard, would not seriously injure the visual amenities of the area, and would otherwise be in accordance with the proper planning and sustainable development of the area.

11.0 Conditions

1. The development shall be carried out and completed in accordance with the plans and particulars lodged with the application, 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. All mitigation measures set out in the document 'Planning & Environmental Report for Keiloge Solar Array, County Waterford' dated February 2017

shall be implemented in full.

Reason: In the interest of clarity.

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

Reason: In the interest of clarity.

4. The permission shall be for a period of 25 years from the date of the commissioning of the solar array. The solar array and related ancillary structures shall then be removed unless, prior to the end of the period, planning permission shall have been granted for their retention for a further period.

Reason: To enable the planning authority to review the operation of the solar array having regard to the circumstances then prevailing and in the interest of orderly development.

5. Prior to commencement of development, a detailed restoration plan, providing for removal of all structures, 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: 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. Cables from the solar arrays to the inverters and substation shall be located underground.

Reason: In the interest of visual amenity.

8. Prior to the commencement of development, the applicant shall submit for

the agreement with the planning authority a surface water drainage management plan that shall include modelling to demonstrate that run-off from the site shall not exceed that expected from grassed fields in pasture. If necessary, additional swales and ponds shall be provided for the retention of stormwater.

Reason: In the interest of preventing pollution and protecting adjoining watercourses.

9. The site shall be landscaped in accordance with a comprehensive scheme of landscaping, details of which shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. All planting shall be adequately protected from damage until established. Any plants which die, are removed or become seriously damaged or diseased, within a period of five years from the completion of the development shall be replaced within the next planting season with others of similar size and species, unless otherwise agreed in writing with the planning authority.

Reason: In the interest of residential and visual amenity.

10. The developer shall facilitate an archaeological appraisal of the site and shall provide for the preservation, recording and protection of archaeological materials or features which 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, and
 - (b) employ a suitably-qualified archaeologist prior to the commencement of development. The archaeologist shall assess the site and monitor all site development works.

The assessment shall address the following issues:

- (i) the nature and location of archaeological material on the site, and
- (ii) the impact of the proposed development on such archaeological material.

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. 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.

11. The construction of the development shall be managed in accordance with a Construction Management Plan, which shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. This plan shall provide details of intended construction practice for the development, including noise management measures and off-site disposal of construction/demolition waste.

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

12. 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.

13. 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 as well as any arrangements relating to the phasing or staging of payments 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.

14. 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.

Philip Davis
Senior Planning Inspector

22nd August 2017