



An
Bord
Pleanála

Inspector's Report ABP 300602-18

Development	Solar PV Development
Location	Ballyspillane West, Midleton, Co.Cork
Planning Authority	Cork County Council
Planning Authority Reg. Ref.	17/5498
Applicant	Terra Solar II Ltd.
Type of Application	Permission
Planning Authority Decision	Grant subject to conditions
Type of Appeal	3 rd Party v. Grant
Appellants	(1) Barry & Sinead Aherne (2) Ballyspillane West and Surrounding Area Action Group
Observers	Brian, Mary, Molly and Ameila Kennedy, East Cork Livery
Date of Site Inspection	25/04/18
Inspector	Pauline Fitzpatrick

1.0 Site Location and Description

The site, which has a stated area of c.27.53 hectares, is located in the townland of Ballyspillane West which is c. 3.5 km to the north-east of Midleton in east Cork. The site comprises of 5 no. fields currently in agricultural use with the boundaries delineated by hedgerows. Access to the lands is via two agricultural accesses immediately adjoining each other off the Ballyspillane Road West which runs c.120 metres to the east of the site.

The highest point of the site is in the south-west corner with site falls to the east and north. The northern half of the site slopes from east to west.

The general area is characterised by one off housing and agricultural holdings with the lands bounding the site in agricultural use. The nearest dwellings are located to the east with East Cork Livery opposite the site entrance. The East Cork golf course is c.1km to the south-west. The National Space Centre, Elfordstown, is c. 1km to the north-west.

2.0 Proposed Development

2.1. The application was lodged with the planning authority on the 14/06/17 with further plans and details received 08/11/17 following a request for further information dated 04/08/17.

2.2. The proposal is seeking a 10 year permission for a solar farm with a maximum installed capacity of up to 14.1MW of energy. The main elements of the proposed development can be summarised as follows:

- Solar PV modules covering an area of up to approx. 84,200 sq.m.
- Underground cabling and ducting
- Invertor and transformer stations
- 1 no. MV substation
- 1 no. storage container to house battery storage
- 1 no. 4 metre high communications mast
- Boundary security fencing (mammal accessible)

- Site entrance via existing access located along the south-east boundary of the site.
 - Site landscaping
 - CCTV
 - Temporary construction site compound
- 2.3. The PV modules are ground mounted on galvanised steel support structures/frames in an east to west alignment which are fixed at an angle of up to 30 degrees facing south. The panels will have a maximum height above ground of 2.8 metres.
- 2.4. Connection to the national grid is via the Midleton 38kV substation c.2.7km to the south-west. An indicative route corridor is identified and considered in the assessment.
- 2.5. The application, as amended, is accompanied by:
- Letter of consent from landowner
 - Planning and Environmental Report
 - Flood Risk Assessment
 - Drawings and Photomontages
 - Landscape and Visual Impact Assessment
 - Ecological Impact Assessment including Appropriate Assessment Screening.
 - Glint and Glare Assessment
 - Outline Construction and Environmental Management Plan
 - Archaeological Impact Assessment Report
 - Traffic Assessment Report
 - Noise Impact Assessment
 - Hedgerow Planting Specifications and Maintenance and Management Schedule.

3.0 Planning Authority Decision

3.1. Decision

Grant permission subject to 38 conditions. Of note:

Condition 2: (a) 30 year duration

(b) submission of restoration plan

Condition 3: Comprehensive landscape plan which details exact numbers and strategic 'gap fill' locations of all trees and hedgerows to be submitted.

Conditions 4-7: access requirements including 120 metre sight distances to be provided.

Condition 24: Noise limits

Conditions 27 & 28: Archaeological requirements including carrying out of a geophysical survey.

Condition 29: Identification of badger setts, if any, and requirement to apply for derogation licence if required.

Condition 32: Construction phase to be monitored by ecologist.

Condition 33: Critical root zone of trees, treelines and hedgerows to be retained to be identified by a tree specialist and fenced off.

Condition 34: 10 year permission

Condition 35: Special contribution of €20,400 for provision of structural upgrade of the local access road.

Condition 37: Security of €12,500 to guarantee satisfactory completion of tree and shrub planting and other landscaping proposals.

3.2. Planning Authority Reports

3.2.1. Planning Reports

The *1st Area Planner's* report dated 28/07/17 considers the photomontages to be acceptable. Given the topography and existing vegetation the site is not visible from many long range views. The long range views provided present only a modest to

minor impact. Some of the more local views have the potential to provide a more significant impact. The landscape plan will need to be implemented in full. Details are lacking in terms of planting specifications. Further tree planting along the site boundaries should be looked at to assist in the assimilation of the development into the landscape and to further strengthen and improve wildlife corridors. A management plan and substantial bond will be required re. landscaping. A request for further information in line with the contents of the Environment Report detailed below is recommended. The 2nd report dated 27/11/17 following FI recommends a grant of permission subject to 35 conditions.

The *Senior Planner's* report dated 04/08/17 notes the Area Planner's report summarised above. There is no objection to solar farm development within rural areas. There is no classification of the quality of agricultural lands for planning purposes. There is a concern with the large scale of the development and its potential impacts, especially in the absence of national guidance. Having discussed the issue with the Director of Planning and the Divisional Manager (South Cork) it is considered that each development proposal shall be considered on its merits. While the landscape plan clearly helps assimilate the development an additional hedgerow should be planted across the western most field running in an east-west direction. There is no objection in terms of archaeology. A request for further information requiring a revised landscape plan and details on noise emissions is recommended. The 2nd report dated 30/11/17 following FI considers that the photomontages show that the development can be satisfactorily assimilated into the landscape. A revised landscape plan is recommended which identifies the location of the planting required to fill in gaps in the hedgerows. A grant of permission subject to 38 conditions is recommended.

3.2.2. Other Technical Reports

4 no. reports titled *Environment Report* dated 20/07/17, 21/07/17, 26/07/17, 28/07/17 noted. 3 have no objection subject to conditions. The 4th recommends a request for further information on noise emissions during the operational phase. 4 no. reports subsequent to the FI submission dated 15/11/17 20/11/17 23/11/17 & 27/11/18 have no objection subject to conditions.

Area Engineer's report dated 31/07/17 states that the access location appears, in principle, to be acceptable, when altered. The minor road accessing the site is very narrow and in poor condition for approx. 600 metres. This is a legacy road and would not be structurally up to construction traffic. A special contribution would be required for repair after the construction phase. It is proposed to attenuate flows to the stream to the north of the site so as not to contribute to downstream flooding. There is no objection to the proposal subject to conditions.

Heritage Unit in a report dated 03/08/17 is satisfied with the conclusions of the AA Screening Assessment. The measures proposed in the CEMP are acceptable. The proposal will not lead to a net loss of biodiversity and that impacts on badgers and other mammals can be ruled out. The proposal will not result in the removal of habitats that will affect the use of the site by passerine or protected bird species or bats. There is no objection to the proposal subject to conditions. A 2nd report dated 21/11/17 following FI reiterates it's no objection.

The *Council Archaeologist* in a report dated 26/11/17 has no objection to the proposal. Given the extent of medieval archaeology in the surrounding area, the site location, and scale of proposal, it is recommended that a geophysical survey to be required by way of condition.

3.3. **Prescribed Bodies**

Inland Fisheries Ireland recommends conditions should permission be granted.

3.4. **Third Party Observations**

The submissions received by the planning authority are on file for the Board's information. The issues raised are comparable to those as set out in the 3rd Party appeals and observations received summarised in section 6 below.

4.0 **Planning History**

I am not aware of any previous applications on the site.

5.0 Policy Context

5.1. National Policy

5.1.1. National Planning Framework

Objective 55 – promote renewable energy use and generation at appropriate locations within the built and natural environment to meet national objectives towards achieving a low carbon economy by 2050.

5.1.2. Government White Paper ‘Ireland’s Transition to a Low Carbon Energy Future 2015 – 2030’, published in December 2015.

The White Paper sets out a framework to guide energy policy between now and 2030. It includes an objective to ‘accelerate the development and diversification of renewable energy generation’ and increase the country’s output of electricity from renewable sources’. It states that this will be achieved through a number of means including wind, solar PV and ocean energy.

Section 137 - Solar photovoltaic PV technology is rapidly becoming cost effective for electricity generation, not only compared with other renewables but also compared with conventional forms of generation. The deployment of solar energy 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.

5.2. Regional Policy

The Regional Planning Guidelines for the South-West Region 2010-2022 recognises that the region has a key role to play in the attainment of the national renewable energy targets. ‘The guidelines support the sustainable development of renewable energy generation subject to the sustainable development of local areas and the protection of areas of high scenic amenity. Possible effects on Natura 2000 Sites, including effects on water supply and hydrology, wildlife disturbance, habitat loss and species mortality associated with collisions should be an essential consideration

when planning for renewables and these should be considered at the local or project-level stage. (Section 5.6.32)

5.3. Local Policy

Cork County Development Plan 2014

Sections 9.4.13 to 9.4.18 refer to solar energy in which it is noted that in other jurisdictions there are some larger scale electricity generating schemes using this method where climatic conditions allow. With technological advances it is possible that these larger scale installations may become practical in Cork and if this occurs careful consideration will need to be given to their scale, location and other impacts.

As per Appendix E the site is within Landscape Character Type 1 – City Harbour and Estuary which is stated to have very high landscape value and sensitivity of national importance. As a consequence it has been designated as a High Value Landscape (Figure 13.2).

Within these High Value Landscapes considerable care will be needed to successfully locate large scale development without them becoming unduly obtrusive. Therefore the location, siting and design of large scale developments within these areas will need careful consideration and any such development should generally be supported by an assessment including a visual impact assessment which would involve an evaluation of visibility and prominence of the proposed development in its immediate environs and in the wider landscape.

Objective GI 6-1 Landscape

- (a) Protect the visual and scenic amenities of County Cork's built and natural environment.
- (b) Landscape issues will be an important factor in all land-use proposals, ensuring that a proactive view of development is undertaken while maintaining respect for the environment and heritage generally in line with the principle of sustainability.
- (c) Ensure that new development meets high standards of siting and design
- (d) Protect skylines and ridgelines from development

- (e) Discourage proposals necessitating the removal of extensive amounts of trees, hedgerows etc.

Objective GI 6-2 Ensure that the management of development throughout the County will have regard for the value of the landscape, its character, distinctiveness and sensitivity as recognised in the Cork County Draft Landscape Strategy and its recommendations, in order to minimise the visual and environmental impact of development, particularly in areas designated as High Value Landscapes where higher development standards (layout, design, landscaping, materials used) will be required.

The western portion of the site abuts, but is outside of the Strategic Metropolitan Greenbelt.

5.4. Natural Heritage Designations

The site is approx. 4.5 km to the north of the Great Island Channel SAC and Cork Harbour SPA.

6.0 The Appeal

6.1. Grounds of Appeal

Two 3rd party appeals refer.

1. Barry & Sinead Aherne
2. Ballyspillane West & Surrounding Area Action Group

The submissions can be summarised as follows:

6.1.1. Policy Provisions

- There is a lack of national, regional and local policy guidance.
- The Board refused permission for a solar farm in Wexford on the grounds of lack of guidance at national, regional and local level and scale of proposal.
- In the UK there is preference for brownfield sites and factory roofs rather than large scale solar farms.

- The proposal conflicts with Cork County Development Plan which encourages the use of brownfield land, where possible, in preference to developing green field sites in order to reduce the loss of the county's more agriculturally productive soils.
- The land quality is not poor.
- There are concerns that the quality of the soil and its ability to grow crops will be severely disrupted.
- The size and scale is vast in comparison to other such type proposals in County Cork.

6.1.2. Access and Traffic

- The roads are unsuitable for construction and maintenance traffic.

6.1.3. Amenities of Adjoining Property

- The scale of the proposal in proximity to houses is unsettling.
- Impact on the structural integrity of adjoining property arising from construction traffic.
- Noise impact from the units storing the power and from construction and maintenance traffic in a quiet rural landscape.
- The study on glint and glare admits that a number of houses would be affected.

6.1.4. Drainage

- Whilst drainage to the north of the site has been addressed the lack of drainage in the south-east has not been tackled. There are concerns about surface water runoff onto the road.
- The impact of the runoff from the panels on the soil quality is queried.

6.1.5. Health Impacts

- There are concerns of corroding components of panels and frames contaminating water supplies.
- Are there guarantees that toxic substances are not used in the frames.

- Are there studies on the electromagnetic field of solar farms and impacts on health.
- The risk to aircraft monitoring the gas line is also queried.
- Are there risks from fire.
- Structural integrity of panels in high wind.

6.1.6. Visual Impact

- The site is within an area designated as a high value landscape in the County Development Plan.

6.1.7. Ecology

- Buzzards, kestrels and bats, which are protected species, are in the area.
- The protection of wildlife is queried.
- The proposal would not be enhancing the natural resources of the county.

6.1.8. Other Issues

- There is no reinstatement programme following decommissioning.
- Decommissioning of project should the company become insolvent is queried.
- There is no timescale for the project.
- It is not clear how connection to the grid is proposed.

6.2. **Applicant Response**

The submission by HWP Planning on behalf of the applicant refers and can be summarised as follows:

6.2.1. Policy

- There are a number of policy documents which set out the Government's support for renewable energy developments including the National Planning Framework, Programme for a Partnership Government, Ireland's Transition to a Low carbon Energy Future 2015-2030 – White Paper and Renewable Electricity Support Scheme.

- The absence of bespoke national guidelines does not preclude the assessment and granting of permission for such proposals. Precedent has been set with regard to the question of prematurity –PL04.246850, PL26.246966 & High Court ruling on 09.PA0041 referenced.

6.2.2. Site Suitability and Scale of Development

- There is no Irish equivalent of the Agricultural Land Classification system in England nor is there any alternative qualitative land grading assessment used in the planning system. It follows that this is not a material planning consideration.
- The proposal represents a form of agricultural diversification as supported by policy RED-05 of the Regional Planning Guidelines for the South-West Region.
- It will allow for continued agricultural use such as grazing by small livestock. Approx. 95% of the lands will be accessible for vegetation growth and can support agricultural activity as well as wildlife.
- The suitability of agricultural lands for solar farm development is well established nationally and internationally and compatible with the continuation of agricultural activities.
- There is no basis to the assertion that solar farms should be channelled to brownfield sites.

6.2.3. Proximity to Residential Properties

- The solar farm has been designed with the explicit intention of reducing prospective impacts on adjoining residential dwellings. A separation distance of c.154 and 156 metres are to be maintained between the nearest array to two of the three nearest dwellings. The nearest arrays will be screened by the existing hedgerows which are to be supplemented. The 3rd dwelling is located on the opposite side of the road with the nearest array being c.67 to the west. Intervisibility is currently limited due to the boundary hedge. A new north-south hedgerow as proposed will screen the development from same.
- The issue of scale should be viewed in the context of proposals nationally. Perception of excessive scale should be prefaced by its actual visibility and

potential to result in adverse landscape impacts. The site is very well screened. It is not visible as a single whole from any receptor.

- It is not visible from any designated scenic route, is not visible from many long range views, given the topography and existing vegetation and, where visible locally, panels do not appear as a significant feature.
- Consideration has been given to landscape mitigation to address potential residual impacts.

6.2.4. Access and Traffic

- The site, predominantly used as arable land, generates a significant amount of agri-plant and HGV movements.
- There are no instances of collisions in the local area.
- Maintenance traffic has been considered in full in the Traffic Assessment Report. Such visits will be limited to 2-4 times a month by light goods vans. As such the operational development will give rise to a significant reduction in overall trip numbers on the Ballyspillane West road.
- Potential for traffic disruption will be limited to the 16 week construction phase. A total of 230 HGV visits are anticipated with the maximum daily average of 10 trips per day during weeks 9-11. This is not significant over the construction timeframe.
- HGVs will be able to enter and exit the site.
- Condition 35 requires a special contribution towards the structural upgrade of the road. Condition 36 which requires a payment in accordance with the County Development Contribution Scheme, would include a roads component.
- Traffic generated by both construction and operational phases of solar farms have not been seen as impediments. Case reference PL26.247179 cited.

6.2.5. Drainage

- The issue of drainage in the south-east section of the site at the entrance is dealt with in the report addressing site drainage. Section 6.3 states that it is proposed to drain the entrance road runoff to soakaways and to also provide

attenuation storage with calculations for same provided in Appendix IV of the report

- The proposed site entrance, at the junction of the access track and public road will be designed to ensure that existing public road drainage will not be affected.
- All drainage proposals follow SuDS principles and comply with the standards set out in the Greater Dublin Strategic Drainage Study.
- Intensive harvesting of lands can contribute to increased rates of surface water runoff (both rates and velocity flows) when compared to grassland.
- Subject to appropriate design specifications the installation of solar PV arrays will not give rise to increased surface water runoff (volume or rates). This position is supported by both academic and industry testing of pre and post panelled ground conditions.

6.2.6. Ecology

- The application is supported by an Ecology Impact Assessment and AA Screening. No Annex 1 species were identified.
- Yellowhammer, a red listed bird species, in addition to Linnet and Robin which are amber listed species were recorded along the site hedgerows. The report confirms that the habitats of highest value on the site are hedgerows and these will not be significantly affected by the proposal. They are to be augmented with additional planting.
- International practice confirms that solar farms can deliver net benefits to local biodiversity. The proposal provides for a buffer zone of wildflower/wild seed mix between the perimeter fence and existing hedgerow as part of a focused wildlife strategy.
- The Ecology Assessment confirms that there are no attractive bat roosting sites on the subject lands and the agricultural fields are considered to be of low suitability due to the lack of linear vegetated features that are favoured for commuting and foraging.

6.2.7. Noise

- PV panels do not generate any noise. The only components which emit noise are the invertors and transformers which have a very low level hum. Solar farms only operate during daylight hours. Noise would not be generated at night. The inverters/transformer will be housed in noise insulating prefabricated structures. Noise will not be perceptible.
- The infrastructure is positioned away from residential receptors.
- Noise from the construction will be temporary in nature.

6.2.8. Glint and Glare

- Reflection from PV modules is almost negligible.
- A precautionary approach has been taken to glint and glare assessment.
- The model results in Appendix A of the Glint and Glare Report identified that glint and glare is theoretically possible at 26 no. dwellings. However, in practice, only 9 have the potential to actually be affected due to local landform and the degree of screening which occurs within the intervening landscape.
- The report confirms that there will be minimal glint and glare impacts with a low/very low magnitude of effect post the implementation of screen planting. These findings are not significant in the context of accepted assessment methodologies.
- The prepared hedgerow maintenance and management plan also provides comfort in this regard with operational hedgerows maintained to a height of 4 metres.
- The site is over 25km from Cork Airport and significantly outside the Irish Aviation Authority referral radius for solar farm applications. Other airports have solar farms in closer proximity.

6.2.9. Health and Safety

- There are no tangible links between electromagnetic health impact and solar farms.
- EMFs are highest in the inverter/transformer units but these are not excessive in nature with studies outlining levels of 0.2mG at a distance of 50 metres.

There is a minimum separation of 244 metres between the nearest inverter and 3rd party property.

- Suitable layout design setbacks have been incorporated to the on-site gas line and construction activities will be advanced in full consultation with Gas Networks Ireland.
- Fire Risk is not a significant issue in the assessment of solar farm development.
- There is no scientific basis to support the view that the material used in the panels may pollute groundwater.

6.2.10. Construction and Decommissioning

- There are no significant constraints on site that cannot be mitigated by proper planning, design and utilisation of sound construction practices. The steel frames and associated array fixings will be mounted in accordance with normal best practice industry standards and mechanically stress-tested prior to its opening.
- The ground works for the piles are non-intrusive in nature and typically extend to less than 0.2% of total site area. The minor nature of the works in an open field away from residential properties means they will not contribute to destabilising buildings.
- The documents include a commitment to restore the site to full agricultural use on decommissioning of the project.

6.2.11. Other matters

- A programme of community engagement was undertaken in the local area prior to the lodgement of the application.
- The grid connection is outlined in the application documentation. An application has been made to ESB Networks for this connection and it is envisaged that it will be provided by them under exempted development provisions within Classes 26 & 27.
- The solar farm will have an expected life of up to 30 years.

6.3. **Planning Authority Response**

None received.

6.4. **Observations**

The submission from Brian, Mary, Molly & Amelia Kennedy can be summarised as follows:

6.4.1. Drainage

- Drainage from the site is problematic and no provision has been made for same.
- There are increased dangers of electromagnetic induction in the runoff.
- Contamination of well from runoff.
- Impact on structural integrity of their house from runoff.

6.4.2. Ecology

- The panels would have a negative impact on wildlife including protected birds.

6.4.3. Health and Safety

- Solar panels create electromagnetic induction which has been proven to cause cancer and infertility. Health impacts on residents is a concern.
- The protection of the gas pipeline is queried. Solar power malfunction coupled with a gas leak could create a serious disaster.
- Have measures been put in place to prevent lighting strike, transformer station fire or battery explosion.
- Numbers and types of batteries to be installed and maintenance queried.

6.4.4. Roads and Traffic

- The road is incapable of accommodating the proposed development.
- The entrance is directly opposite their property.

6.4.5. Policy Provisions

- The site is within the greenbelt. It is A3 zoned area now known as a restricted planning area.
- It would be contrary to the objectives of the County Development Plan which strives to preserve the rural character
- The development plan encourages the development of brownfield sites. Solar panels should be put in industrial areas and brownfield sites.
- It will not enhance the area and is of no benefit to the community.
- The proposal does not accord with the guidance from Sustainable Energy Authority of Ireland and Irish Solar Energy Association.
- There should have been public consultation.

6.4.6. Residential Amenity and Livelihood

- Their property will be devalued.
- Noise from the panels during north-easterly and north-westerly winds will arise.
- The proposal would cause dynamic negative changes to their livery yard and to the horses. Horse drink from the well on the land and from the stream at the bottom of the hill. Contamination by electromagnetic induction of concern.

7.0 Assessment

I consider that the issues arising can be assessed under the following headings:

1. Principle of Development
2. Access and Traffic
3. Residential Amenity
4. Drainage
5. Visual Impact
6. Glint and Glare
7. Ecology
8. Other Issues
9. AA- Screening

7.1. Principle of Development

- 7.1.1. The proposed development is supported by national, regional and local policies in terms of renewable energy. Objective 55 of the National Planning Framework seeks to promote renewable energy and generation at appropriate locations within the built and natural environment, whilst paragraph 130 of 'Transition to a Low Carbon Energy Future 2015-2030 - White paper on Energy policy' recognises that solar energy will become more cost effective as technology matures and that it will be an integral part of the mix of renewables going forward. At a regional level it is an objective of the South West Regional Planning Guidelines to facilitate the sustainable development of additional electricity generation capacity throughout the region and to support the sustainable expansion of the network. At a local level, whilst there is support for solar energy production as a renewable resource, due to the emerging nature of the technology at the time of the plan preparation specific objectives with respect to same or identification of areas considered suitable/unsuitable for solar farms were not included. Therefore, in the absence of a 'plan-led' approach, applications are to be considered on their individual merits and subject to normal planning considerations.

7.1.2. The development would be sited on agricultural land, most of which is currently used for tillage. The appellants consider the loss of such land to be contrary to best practice and that UK policy guidance should be followed. The said UK National Planning Policy Framework and supporting Planning Practice Guidance on Renewable and Low Carbon Energy encourages solar farms on previously developed and non-agricultural land. It advocates that where a proposal involves greenfield land the use of agricultural land has been shown to be necessary and that poorer quality land has been used in preference to higher quality land. I also note that the UK has a grading system for land, ranging from Grade 1 (most productive) to Grade 5 (most marginal). There is no such grading system in Ireland and specifically there is no policy which precludes the development of solar farms on agricultural land including lands used for tillage, which is relevant in the context of the assessment of this appeal.

7.2. **Access and Traffic**

- 7.2.1. The site is accessed via a narrow local road referred to as the Ballyspillane West Road which slopes up from south to north along which unrestricted two way vehicular movements are not possible. The agricultural lands are currently served by two agricultural accesses immediately adjoining each other in the south-eastern section of the site opposite a dwelling and associated buildings (East Cork Livery). The 80kph speed limit applies. Vehicular movements were noted to be light on day of inspection.
- 7.2.2. Access to the site is proposed from the point where the two agricultural accesses are immediately adjoining with alterations and modifications to allow for improved sight lines.
- 7.2.3. Of particular concern is the construction period which is anticipated to last in the region of 16 weeks with 580 HCV trips in total. The peak traffic flows are likely to occur during weeks 9 and 10 when the delivery of panels overlap with the delivery of other components, machinery and waste removal. As per Tables 1 and 2 of the Traffic Assessment Report this two week period would have in the region of 56 trips comprising 28 HCV arrivals and 28 HCV departures throughout the week or an average of 10 trips per day. In addition it is estimated that 50 construction staff would be on site during peak construction resulting in a further 42 trips in the

morning and evening peaks. A preliminary traffic management plan has been provided for the construction phase which proposes a shuttle/static temporary traffic management plan at the Ballyspillane junction with Gortacruie road to the south to prevent 2 vehicles meeting along the access road.

7.2.4. A special contribution towards the repair and strengthening of the local road following the construction phase has been attached by way of condition. The basis for the calculation is set out in the Area Engineer's report and refers to a 600 metre stretch along the proposed haul route from Gortacruie. The €20,000 levied would be approx. 50% of the cost estimated. I note that the applicant has not appealed this condition. Notwithstanding I consider that a more appropriate approach would be to seek structural assessment and monitoring of the local road as part of a construction management plan and the application of a bond to secure its reinstatement should it be damaged by the transport of materials to the site. I note that the Board adopted a similar approach for a solar farm development in Fermoy under file ref. PL04.248278.

7.2.5. I consider that subject to the traffic management plan and construction management plan that the proposed construction traffic can be accommodated on the local road network. Whilst the additional traffic and management measures will inconvenience local road users and residents of dwellings in the vicinity the impacts are considered acceptable having regard to the limited duration of the works.

7.2.6. The operational phase of the solar farm would generate limited vehicular movements estimated to be in the region of 2 to 4 trips per month. As per the applicant's response to the grounds of appeal the existing accesses are used by machinery associated with the harvesting of crops. Having regard to the established use of the existing access and the low level of operational traffic that would arise as a result of the operation of the proposed development, I do not consider that a material intensification in the use of the access would arise. Its use during the operational phase is therefore acceptable.

7.3. Residential Amenity

7.3.1. The site is located within a rural area characterised by sporadic one off housing along the local road network. The nearest properties are those to the east of the

site along Ballyspillane West Road with a separation distance of approx. 70 being maintained to the nearest dwelling which is opposite the site entrance.

- 7.3.2. As noted above it is estimated that the construction period would be in the region of 16 weeks and it is inevitable that potential negative impacts to the local population may occur particularly in terms of noise and traffic. However, these impacts will be temporary. As noted above the additional traffic generated during the operational phase would be minimal.
- 7.3.3. By way of further information a noise impact assessment was prepared. The panels in themselves would not generate noise. The main noise sources would be from the transformer/invertors which will be within containers which will have insulating properties and are located at a remove from the nearest dwellings. Noise would only be generated during daylight hours and consequently there will be no noise emissions at night. Having regard to the low level of noise that will be generated, the separation distance to dwellings (>250 metres) and the daytime operation of the solar farm when other noise sources such as traffic and farm machinery will contribute to the noise environment, I consider that impacts would be negligible and insignificant notwithstanding the wind direction.
- 7.3.4. In terms of structural stability of adjoining properties I note that the ground works for the piles are non-intrusive in nature and extend to approx. 0.2% of the total site area.
- 7.3.5. I note the observation received from the adjoining landowners that run East Cork Livery and concerns regarding impact on their operations. Whilst noise will arise during the construction phase the period is temporary in duration. Noise is not considered to be a factor during the operational phase. Issues raised in terms of drainage and water quality are dealt with below.

7.4. **Drainage**

- 7.4.1. Issues of site drainage and impact on adjoining roads and property has been raised by both the appellants and observers to the appeal. As noted on day of inspection water was noted to be flowing from the access which bounds the site in the south-eastern most corner onto the local road to a drain adjoining a property to the south-east. The said access does not form part of the application site.

- 7.4.2. Section 6.3 of the Flood Risk Assessment that accompanies the application addresses entrance road drainage. It is proposed to drain the entrance road runoff to soakaways whilst attenuation storage of in the region of 75m³ is to be provided for extreme rainfall events.
- 7.4.3. All drainage proposals for the development follow SuDS principles with discharge from the development to be to existing greenfield runoff rates, achieved through the use of soakways and swales around the site. It is not proposed to remove any existing on site drainage ditches. There is one ditch that was removed previously to create a larger tillage field which now has underground pipe work. This is connected to an existing open drain. Whilst it is not proposed to reinstate the drain it is proposed to attenuate flows feeding towards this drain via a hydrobrake to ensure they do not contribute to downstream flooding.
- 7.4.4. In terms of concerns about pollution of water supplies from leakage of chemicals from the solar panels I am not aware of such risks arising. During construction there is potential for sediment and other polluting matter but best practice during this phase would militate against such a potential.
- 7.4.5. On the basis of the information provided it is reasonable to conclude that the proposed development will not exacerbate the prevailing drainage conditions or water quality in the area.

7.5. **Visual Impact**

- 7.5.1. The subject site covers an area of 27.53 hectares in a landscape of rolling terrain largely in agricultural use with the mast in the National Space Centre c. 1km to the north-west dominant in views. The highest point of the site is in the south-west corner with site falls to the east and north. The northern half of the site slopes from east to west.
- 7.5.2. As per the current County Development Plan the site is within a High value Landscape and whilst the plan states that considerable care will be needed to successfully locate large scale development without them becoming unduly obtrusive such type development is not precluded.
- 7.5.3. The potential landscape and visual impact of the scheme is considered in the Landscape and Visual Impact Assessment report that accompanied the application

which is supported by photomontages. This is further supplemented by details provided by way of further information. Following an inspection of the site from points in the immediate vicinity and further afield I submit that the said photomontages are reasonable and provide a useful aid in the assessment of the potential visual impact.

7.5.4. Whilst the development will be visible from the immediate surrounds and from points along the local roads immediately to the east and north the undulating nature of the landscape provides a level of screening precluding open views either in the immediate environs or from further distances. Any views would be intermittent. I would concur with the view that the existing landscape consisting of a setting which is a working rural landscape would, following mitigation, have a low visual impact. The Board will note the intention of the applicant to retain existing hedgerows within and abounding the site as well as proposals to reinforce the existing site boundaries with further planting.

7.5.5. Whilst there is no doubt that the proposed development would change the local landscape from a visual perspective, in my view the established landscape is capable of absorbing change. Having regard to the mitigation measures proposed I am satisfied that the proposed development would not adversely impact on the landscape and visual amenities of the area including those from adjoining properties.

7.6. **Glint and Glare**

7.6.1. I note that the proposed development does not include tracking panels and that the panels are instead fixed in one orientation, facing due south. Solar PV panels, in order to be efficient, need to absorb as opposed to reflect solar irradiation and therefore have an anti-reflective coating.

7.6.2. A Glint and Glare analysis accompanies the application. In relation to dwellings the analysis states that whilst glint and glare effects would be geometrically possible at 27 properties in the 'bare ground' scenario (which does not consider screening from terrain or hedgerows) only 9 have the potential to be affected with calculations made for both ground and first floor levels where appropriate. The said properties are located to the north-west, west, north-east, east and south-east. The potential for period for reflectance ranges from between 6 to 34 minutes per day. Existing

screening in terms of hedgerows which are to be augmented with further planting in addition to the new hedgerow proposed in the south-eastern corner all of which are to have a minimum height of 3- 4 metres will restrict visibility which will reduce the potential for glint and glare.

- 7.6.3. Overall I accept the findings of the report that no significant nuisance is predicted to surrounding dwellings or along surrounding roads from glint and glare.

7.7. Ecology

- 7.7.1. In support of the proposed development, the applicant submitted an Ecological Impact Assessment. The site is not within or in the vicinity of a European Site.
- 7.7.2. The flora as identified is synonymous with a managed agricultural landscape with no protected species identified. In terms of fauna a total of 15 bird species were noted during the site walkover, one being the Red Listed Yellowhammer which is likely to feed on cereal crop when the seed has developed. Two amber listed species were also recorded, Linnet and Robin. The existing hedgerow network is to be retained and augmented as part of the proposal in addition the proposal provides for a buffer zone of wildflower/wild seed mix between the perimeter fence and existing hedgerow.
- 7.7.3. An active badger sett was recorded with the layout designed to incorporate an exclusion zone of 50 metres from the sett entrance in accordance with established guidelines with monitoring by a suitably qualified person before and during the construction phase.
- 7.7.4. Whilst the appellants make reference to the presence of bats the assessment notes that there are no suitable bat roosting sites on the site. Whilst the hedgerows offer suitable foraging and commuting habitat the agricultural fields are considered to be of low suitability for bats due to the lack of linear vegetated features. No bat species have been recorded historically within the 2km grid square surrounding the site.
- 7.7.5. During the operational phase access by mammals will be maintained by suitably designed fencing.

7.7.6. Given the location of the site in an area characterised by similar lands and habitats and the mitigation measures to be incorporated I consider that the impacts on the ecology of the site and the wider area would be acceptable.

7.8. **Other Issues**

7.8.1. Concerns have been raised about the possible health effects of living in proximity to solar PV farms of this scale. I refer to the applicant's response to the appeal which references the European Commission report 2011 which concluded that there are no adverse health effects created by EMF. I am not aware of any scientific evidence to support the view that the materials used in the panels and frames can give rise to pollution.

7.8.2. The design incorporates a setback from the gas pipeline which traverses the site with the applicant committed to full consultation with Gas Networks Ireland.

7.8.3. I consider that the issues raised regarding health and safety are unfounded. Issues regarding fire risk have been raised in previous appeals for similar development and not considered to be a significant issue by the Board. The proximity of solar farms to airports both in Northern Ireland and England is noted without concerns in terms of safety and impact on flightpaths.

7.8.4. It is stated that following the cessation of electricity generation by the solar farm the site will be fully decommissioned and the land reinstated to its former agricultural use within the first year. I note that the Board has taken a consistent view of allowing a 25 period for such type development. A condition requiring a plan for decommissioning can be attached by way of condition.

7.8.5. Whilst there is a difference of opinion regarding the level of public consultation in relation to the project, it is clear that local residents were aware of the application and third party rights have not been compromised in any way.

7.9. **Appropriate Assessment**

An Appropriate Screening Report is attached to the Ecological Impact Assessment report

7.9.1. *Project Description and Site Characteristics*

The proposed development is as described in sections 1 and 2 above.

7.9.2. *Relevant Natura 2000 Sites, Qualifying Interests and Conservation Objectives*

The nearest designated site is the Great Island SAC which is approx. 4.5 km to the south of the site (site code – 001058). The qualifying interests are mudflats and sandflats not covered by seawater at low tide and Atlantic salt meadows

The site is also approx. 4.5 km to the north of Cork harbour SPA (site code 004030). The qualifying interests include wintering birds.

Detailed conservation objectives for the sites have been drawn up the overall aim being to maintain or restore the favourable conservation status of the qualifying interests.

7.9.3. *Assessment of likely effects*

As the site is not within a designated site no direct impacts will arise.

There is a hydrological connection between the site via the drainage ditches to the two designated sites. As a consequence there is potential for indirect effects from emissions to ground and surface water during the construction phase such as silt laden run off, hydrocarbons or other pollutants. The hydrologic connection is approx. 6.9km

Taking into consideration the incorporation of best practice methods during the construction phase to protect against sediment and hydrocarbon release I would concur with the conclusions of the Screening report submitted that no indirect impacts are envisaged. In terms of the operational phase all drainage proposals for the development follow SuDS principles with discharge from the development to be to existing greenfield runoff rates, achieved through the use of soakways and swales around the site. It is not proposed to remove any existing on site drainage ditches. There is one ditch that was removed previously to create a larger tillage field which now has underground pipe work. This is connected to an existing open drain. Whilst it is not proposed to reinstate the drain it is proposed to attenuate flows feeding towards this drain via a hydrobrake to ensure they do not contribute to downstream flooding.

In view of the intervening distance between the site and the SPA no ex-situ disturbance is expected.

In terms of cumulative impacts I have regard to the rural character of the area dominated by agricultural uses and one off housing. I am not aware of any large planned or permitted development in the vicinity. The proposed development therefore is not considered to result in cumulative effects.

7.9.4. *Screening Statement and Conclusions*

In conclusion having regard to the foregoing and on the basis of the information available, 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 and in combination with other plans or projects would not be likely to have a significant effect on any European Site and in particular Great Island Channel SAC (site code 001058) and Cork Harbour SPA (site code 004030) in view of the sites' Conservation Objectives and a Stage 2 Appropriate Assessment (and submission of a NIS) is not therefore required.

8.0 **Recommendation**

8.1. Having regard to the foregoing I recommend that permission for the above described development be granted for the following reasons and considerations subject to conditions.

9.0 **Reasons and Considerations**

Having regard to:

- Regional and national policy objectives in relation to renewable energy,
- The provisions of the Cork County Development Plan 2014-2020,
- The nature, scale, extent and layout of the proposed development,
- The topography of the site
- The existing hedging and screening on the site, and
- The pattern of development in the vicinity

it is considered that, subject to compliance with the conditions set out below, the proposed development would not seriously injure the visual amenities of the area or the residential amenities of property in the vicinity, would not be likely to have significant effects on the environment, or the ecology of the area and would be acceptable in terms of traffic safety and convenience. The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area.

Appropriate Assessment Screening

The Board completed an Appropriate Assessment Screening exercise in relation to the potential effects of the proposed development on European Sites, taking into account the nature, scale and location of the proposed development, the receiving environment, the Appropriate Assessment Screening Report submitted with the application and the Inspector's report and submissions on file. In completing the screening exercise, the Board adopted the report of the Inspector and concluded that, by itself or in combination with other development in the vicinity, the proposed development would not be likely to have a significant effect on any European Site in view of the sites' conservation objectives.

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 8th day of November, 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 the development and the development shall be carried out and completed in accordance with the agreed particulars.

Reason: In the interests of clarity

2. (a) 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.

(b) Prior to commencement of development, a detailed restoration plan, including a timescale for its implementation, providing for the removal of the solar arrays, including all foundations, anchors, inverter/transformer stations, substation, CCTV cameras, fencing and site access to a specific timescale, shall be submitted to, and agreed in writing with, the planning authority.

(c) On full or partial decommissioning of the solar farm, or if the solar farm ceases operation for a period of more than one year, the solar arrays, including foundations/anchors, and all associated equipment, shall be dismantled and removed permanently from the site. The site shall be restored in accordance with this plan and all decommissioned structures shall be removed within three months of decommissioning.

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

3. 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.

4. (a) Existing field boundaries shall be retained, notwithstanding any exemptions available and new planting undertaken in accordance with the Landscape Mitigation Plan submitted to the planning authority on the 8th day of November 2017.

(b) All landscaping shall be planted to the written satisfaction of the planning authority prior to commencement of development. Any trees or

hedgerow that are removed, die or become seriously damaged or diseased during the operative period of the solar farm as set out by this permission, shall be replaced within the next planting season by trees or hedging of similar size and species, unless otherwise agreed in writing with the planning authority.

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

5. During the construction phase, the developer shall adhere to the 'Guidelines for the Treatment of Badgers prior to the Construction of National Road Schemes', published by the National Roads Authority in 2006. In particular, there shall be no construction works within 50 metres of such an active sett during the breeding season (December to June)

Reason: In the interest of wildlife protection.

6. (a) No artificial lighting shall be installed or operated on site unless authorised by a prior grant of planning permission.
(b) CCTV cameras shall be fixed and angled to face into the site and shall not be directed towards adjoining property or the road.
(c) Cables within the site shall be located underground.
(d) The inverter/transformer stations shall be dark green in colour. The external walls of the proposed substation shall be finished in a neutral colour such as light grey or off-white and the roof shall be of black slate or tiles

Reason: In the interest of clarity, of visual and residential amenity and to minimise impacts on drainage patterns and surface water quality.

7. Before construction commences on site, details of the structures of the security fence showing provision for the movement of mammals shall be submitted for prior approval to the planning authority. This shall be

facilitated through the provision of mammal access gates every 100 metres along the perimeter fence and in accordance with standard guidelines for provision of mammal access (National Roads Authority 2008).

Reason: To allow wildlife to continue to have access across the site.

8. The developer shall facilitate the 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.

9. 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 but not limited to, hours of working, noise and dust management measures, surface water management proposals, the management of construction traffic, a structural assessment and monitoring programme of the haul route along the Ballyspillane West Road and the off-site disposal of construction waste.

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

10. Prior to commencement of development, the developer shall lodge with the planning authority a bond of an insurance company, a cash deposit, or other security to secure the provision and satisfactory reinstatement of the local public road Ballyspillane West Road, if damaged by the transport of material to the site in connection with the development, coupled with an agreement empowering the planning authority to apply such security or part thereof to the satisfactory completion of any part of the development. The form and amount of the security shall be as agreed between the planning authority and the developer or, in default of agreement, shall be referred to An Bord Pleanála for determination.

Reason: To ensure the satisfactory reinstatement of local roads.

11. Prior to commencement of development, the developer shall lodge with the planning authority a cash deposit, a bond of an insurance company, or such other security as may be acceptable to the planning authority, to secure the satisfactory reinstatement of the site on cessation of the project coupled with an agreement empowering the planning authority to apply such security or part thereof to such reinstatement. The form and amount

of the security shall be as agreed between the planning authority and the developer or, in default of agreement, shall be referred to An Bord Pleanála for determination.

Reason: To ensure satisfactory reinstatement of the site. safety, and to allow wildlife to continue to have access to and through the site.

12. 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.

Pauline Fitzpatrick
Senior Planning Inspector

May, 2018