



An
Bord
Pleanála

Inspector's Report ABP-303013-18

Development	A solar farm consisting of c. 159,100 sqm of solar panels on ground mounted frames and all ancillary equipment.
Location	Ballinrea, Carrigaline, Co. Cork
Planning Authority	Cork County Council
Planning Authority Reg. Ref.	17/6784
Applicant(s)	Terra Solar II Ltd
Type of Application	10-year permission
Planning Authority Decision	Grant, subject to 38 conditions
Type of Appeal	First Party -v- Condition 4 Third Party -v- Decision
Appellant(s)	Terra Solar II Ltd Ballinrea Community Group
Observer(s)	None
Date of Site Inspection	22 nd February 2019
Inspector	Hugh D. Morrison

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1.0 Site Location and Description

- 1.1. The site is located 2.1 km to the south of the outskirts of Greater Cork in Castletreasure and 2.1 km to the north west of the outskirts of Carrigaline. This site lies in open countryside between the N28 to the east and the L2464 to the west. It comprises farmland, which is accompanied on the western side of the local road by predominantly residential ribbon development. To the north and south of the site such development also occurs on the eastern side of this road.
- 1.2. The site encompasses several amalgamated fields, which are presently down to grass. This site is of elongated form on a north/south axis, with gradients falling gently in easterly directions over the northern and central portions and southerly over the southern portion. It extends over an area of 47.30 hectares and it is served by an existing access off the local road that connects with a lane to the farm centre, which comprises a farm yard and a farmhouse sited centrally in the northern half of the site.

2.0 Proposed Development

- 2.1. The proposal seeks a ten-year permission for a solar farm consisting of c. 159,100 sqm of solar panels on ground mounted frames. This solar farm would be accompanied by the following items:
 - 1 no. sub-station (52.4 sqm),
 - 10 no. single storey inverter/transformer stations (298 sqm),
 - Battery storage module and associated equipment building (29.4 sqm + 15 sqm),
 - Security fencing, satellite pole, CCTV and all associated ancillary development works.
- 2.2. Traffic generated by the construction and operational phases of the proposal would access the site via the existing entrance from the L2464 described above.
- 2.3. While the proposal does not include delineate a specific route for the grid connection, a corridor as a field of search is identified between the site and the Barnahely 110 kV sub-station, to the east in Ringaskiddy.

3.0 Planning Authority Decision

3.1. Decision

Following receipt of further information, permission was granted subject to 38 conditions, including the following one, denoted as No. 4:

If following installation, the photo-voltaic solar panels are the subject of occurrence reports from the aviation community and are deemed to present an unacceptable risk to the safety of aviation activities (in particular with respect to the visual holding point at Carrigaline and operations on Runway 07 at Cork Airport), then appropriate mitigation measures (e.g. re-orientation of the panels, additional screening, etc.) shall be agreed and implemented to the satisfaction of the Irish Aviation Authority and the Dublin Airport Authority/Cork Airport.

Reason: In the interests of aviation safety.

3.2. Planning Authority Reports

3.2.1. Planning Reports

Further information was sought with respect to the following:

- Sightlines at the site entrance,
- Site-specific glint and glare study that addresses aviation safety,
- Clarify type of proposed photo-voltaic solar panel,
- Clarify intended voltage output and route of the proposed electricity transmission line,
- Site-specific measures to prevent silt laden run-off to the on-site water course during the construction phase,
- Site-specific measures to avoid damage to soil structure from traffic movements during the construction phase,
- Revised Construction and Environmental Management Plan,
- Revised Habitats Directive Screening Statement,

- Geo-physical survey across the site for sub-surface archaeology, excluding the archaeological monuments CO086-111, 112 & 131 and their buffer zones,
- Revised landscaping plan,
- Maintenance proposals for the management of grasslands, and
- Boundary treatments.

3.2.2. Other Technical Reports

- Atlantic Flight Training Academy: Assurances to allay concerns sought.
- IAA: Following receipt of further information, commentary states that “Potential risk for temporary after image for aircraft operating at the visual holding point over Carrigaline and for aircraft on the approach to Runway 07 operating under visual flight rule conditions.” Condition 4 requested.
- Cork Airport: Following receipt of further information, deferral to IAA’s advice.
- TII: Attention drawn to the proximity of the route of the proposed M28.
- IW: No objection, standard observations.
- IFI: Conditions requested.
- Area Engineer: No objection, subject to conditions.
- Environment (4 reports re: waste, surface water, air and noise): No objection, subject to conditions.
- Archaeology: Following receipt of further information, no objection, subject to a condition.
- Heritage: Further information requested, on receipt of which no further comments forthcoming.
- Ecologist: Following receipt of further information, no objection, subject to conditions.

3.2.3. **Consultees**

DoCHG: Requests that archaeological condition 10 be reproduced verbatim.

4.0 Planning History

Site

- 08/8807: Construction of cubicle house, slatted channel, lined lagoon and associated works: Permitted.
- Pre-application consultations occurred on 3rd February and 28th September 2018.

Wider area – Townland of Carrigaline East

- 17/6351: A 10 MW solar farm comprising c. 44,400 photovoltaic panels on ground mounted frames on 25.8-hectare site: Permitted.

5.0 Policy and Context

5.1. Development Plan

Under the Cork County Development Plan 2014 – 2020 (CDP), the site is shown as lying within the Cork Metropolitan Green Belt, which is the subject of Objectives RCI 5-1 to 5-7 and an accompanying commentary in Paragraphs 4.5.5 – 8. The majority of the site is also shown as lying within the Prominent and Strategic Metropolitan Green Belt Area, i.e. all but the north western and south western corners of this site. This Green Belt is the subject of Objective GI 8-1 and accompanying Paragraphs 3.8.1 – 3. This Objective states the following:

Protect these prominent open hilltops, valley sides and ridges that define the character of the Metropolitan Cork Green Belt and those areas which form strategic, largely undeveloped gaps between the main Green Belt settlements. These areas are labelled MGB1 in the Metropolitan Green Belt map (Figure 13.3) and it is an objective to preserve them from development.

Under the CDP, the Route Protection Corridor for the proposed M28 is shown as running to the east of the site and the Scenic Route portion of the R613 is shown as running, at some remove, to the south. The site is also shown as lying within Landscape Character Type 6(a), Broad Fertile Lowland Valleys, within which the landscape value and sensitivity are deemed to be high and the landscape is deemed to be of County importance.

The CDP addresses solar energy under Paragraphs 9.4.13 – 18. No Policy Objectives pertain specifically to solar energy. The following energy Policy Objective ED 1-1 states “Ensure that through sustainable development County Cork fulfils its optimum role in contributing to the diversity and security of energy supply and to harness the potential of the county to assist in meeting renewable energy targets.”

5.2. Natural Heritage Designations

- Cork Harbour SPA (site code 004030)
- Owenboy River (site code 001990)

5.3. EIA Screening

The applicant comments on whether or not the proposal is a type of development that would potentially be the subject of EIA. It concludes that this proposal would not come within the ambit of any of the types of development set out under Part 1 and 2 of Schedule 5 to Article 93 of the Planning and Development Regulations 2001 – 2018. Accordingly, the possibility of it being sub-threshold for the purposes of EIA does not normally arise. Nevertheless, the applicant has undertaken a screening exercise, which concludes that no significant environmental impacts would arise and so the need for EIA can be further discounted.

I concur with the applicant’s conclusion that the proposal would not be of a type of development that is subject to EIA.

6.0 The Appeal

6.1. Grounds of Appeal

(a) Terra Solar II Ltd

- Condition 4 is critiqued in the light of the criteria set by the Development Management Guidelines for the drafting of conditions. Thus, it is not:
 - Necessary, as no appropriate justification for this condition has been given in the light of the submitted assessments on glare and glint and aviation safety. Furthermore, the condition is excessively broad.

- Precise, as it lacks definition and so the developer would be left not knowing what exactly is required of him/her. Furthermore, the condition, confusingly, refers to Runway 07, which would be capable of being operated within FAA standards.
- Enforceable, as it would, in the light of the foregoing critique, be ambiguous.
- Reasonable, as it would potentially nullify the benefit of the permission in practise.
- Condition 4 fails to recognise the following:
 - A Solar Glare Hazard Analysis Tool (SGHAT) was used to assess glare from the proposal upon the two-mile approaches to Runways 07/25 and 17/35 and no glare was identified.
 - A view shed analysis shows that there is no possibility that the proposal would be visible from the air traffic control tower.
 - A SGHAT was used to assess glare from the proposal upon the Carrigaline Holding Pattern, which is denoted by means of 8 observation points. This Pattern is used by aircraft operating to Visual Flying Rules. This assessment identified the following:
 - No glare at OP1, 2, 3, 7 & 8,
 - Green glare, i.e. low potential for after image at OP4 & 5, and
 - Yellow glare, i.e. potential for after image at OP4, 5 & 6.
 - As the FAA provides no guidelines as to what is an acceptable level of ocular impact for aircraft operating to Visual Flying Rules, which are not on an approach path, the applicant commissioned an assessment by an aviation safety specialist. He concludes that only a brief glint would be experienced and that in the context variously of glint from Cork Harbour and/or a low sun during the summer solstice this glint would be insignificant. He therefore concludes that the proposal would not pose a safety hazard to aircraft.

- Condition 4 would be contrary to the pattern of decision making in similar cases of solar farms within the environs of airports. The following cases are of relevance in this respect:
 - Waterford County Council's refusal of 17/113 was overturned at appeal PL93.248487,
 - While Waterford County Council permitted 15/770, a condition similar to condition 4 was omitted at appeal PL93.247310,
 - Cork County Council permitted 17/0635 without a condition similar to condition 4, notwithstanding the identification of green and yellow glare upon the Carrigaline Holding Pattern. This decision was not appealed by the IAA.
 - Fingal County Council's refusal of F16A/0562 was overturned at appeal ABP-300230-17.

(b) Ballinrea Community Group

The third party appellant begins by describing the site and the proposal. It then proceeds to set out the general policy context, which includes a reference to solar farm guidelines in the Kildare County Development Plan 2017 – 2023, and to recent planning decisions, i.e. PL26.247217 and a Northern Irish case 2015/A0135. The specific policy context of the CDP is also referred to and it is summarised as follows:

...the Council in principle supports solar energy technologies in new...buildings and in retrofitting projects; it is more cautious regarding larger scale electricity generation using solar photo-voltaic and does not make any mention of these in agricultural and rural areas, particularly green belt designated areas.

Concerns are outlined subject-by-subject, as follows:

- Landscape character and visual impact
 - Attention is drawn to the site's location within the Landscape Character Area Type 6(a), which under Paragraph 13.6.4 of the CDP is classified as a high value landscape. This classification is not shown visually in Appendix E (or on the CDP website map). However, the aforementioned Paragraph takes precedence.

- Attention is also drawn to the cumulative impact that would be in prospect, due to the proposed M28 and the proposed grid connection.
- Access, traffic management and operations
 - Residents to the south of the site express concern that proposed 4m hedgerows could affect their property's sightlines if not maintained.
 - While significant numbers of traffic movements would occur during the construction phase, the applicant has not acknowledged that agricultural related traffic movements would continue during the operational phase, i.e. in connection with the sheep that would graze the developed site.
- Further information
 - The original and further information plans are compared, and changes noted.
 - The omission of the siting of the temporary construction compound and the proposed car park for operation period site inspections is noted.
 - Whether the omission of some panels would be compensated for by the siting of retained panels closer to one another is unclear. If this is envisaged, then there maybe adverse implications for the planned sheep grazing.
- Impacts on residential amenity
 - The proposed 4m high hedgerow would reduce lighting to residential properties to the south and west of the site. Such reduction could be eased if these hedgerows were to be sited further back.
 - The proposal would profoundly affect the rural character of the landscape. The majority of the site also lies within green belt, which should afford protection against extensive development.
 - Short range views of the proposal would be adversely impact by not only the 2.8m high support structures and panels but by accompanying structures such as extensive security fencing, which together would present as semi-industrial landscape.

- The proposal, including the screen hedgerows, would enclose the landscape, which is presently open and thus one that affords panoramic views to the south and south east.
- Exception is taken to the applicant's contention that the proposal would safeguard the site from inappropriate uses in the green belt. This contention underestimates the strength of CDP policies and objectives to protect this designation.
- Grid connection
 - Concern is expressed that the 4.7 km route for the grid connection has neither been finalised nor formally included within the current application.
 - Concern is also expressed that overhead lines could have a significant impact upon visual amenity.
- EIA requirement
 - While the proposal would be reversible, the screen planting that would accompany it would be likely to represent a permanent change to the landscape over an extensive area. Attention is drawn in this regard to the screening thresholds cited under the European Communities (Environmental Impact Assessment) (Agriculture) Regulations 2011.
- Site designation – Metropolitan Green Belt
 - Attention is drawn to Figure 13.3 and Objective GI 8-1 of the CDP, which show the site as lying within Metropolitan Green Belt 1 and to preserve it from development. A strict application of this Objective to the housing field has led to the construction of only one additional dwelling house within the area surrounding the site in recent years.
- Cork City boundary extension
 - The new City boundary would run c. 500m to the north of the site. The distance between this boundary and Carrigaline would be c. 3.7 km and so the green belt designation is likely to increase in importance.

6.2. Applicant Response

The applicant has responded to the third party appellant as follows:

- Principle of development
 - Notwithstanding the absence of national planning guidelines with respect to solar farms, national and regional policies are supportive of the same. The Judicial Review of PL26.247217 established that the absence of such guidelines could not be used to conclude that a proposal is premature.
 - The CDP is supportive of renewable energy policies and the only reason that ground mounted solar farms are not explicitly endorsed is that this Plan predates their prevalence in Ireland. Likewise, the underlying principles of green belts do not preclude the siting of such farms within them.
 - Policy Objectives 23 and 55 of the National Planning Framework support energy projects in rural areas and so solar farms cannot be deemed to be, in principle, unsuitable for agricultural land.
- Traffic and access
 - The applicant does not accept that sightlines would be encroached upon. Thus, the northern sightline of the southerly dwelling house, which would be surrounded by the site to the north east and to the north west, is examined and found to be unaffected by the line of the proposed hedgerow. Furthermore, the applicant undertakes to maintain this hedgerow.
 - Traffic movements generated by the grazing of sheep on the site would be minimal and insignificant by comparison with the traffic movements that would be negated by the discontinuation of dairy farming.
 - The siting of the proposed construction compound is shown on the submitted plans and the need for formal parking during the operational phase of the proposal would not arise.

- Residential amenity
 - There is a lack of detail and precision as to how the proposal would impact upon lighting to and views from adjacent dwelling houses. Thus, the proposal would be laid out to the north of the southerly dwelling houses and those to the west would be on the opposite side of the L2464.
 - Mitigation measures to ease the impact of the proposal upon visual amenity are delineated. These would minimise its visibility from adjacent dwelling houses.
 - The site is not within a high value landscape. The proposal would represent farm diversification and its limited visibility would ensure that its landscape impact would certainly not be profound. Thus, for example, roadside hedgerows would be returned at the site entrance to screen the solar farm.
- EIA
 - The proposal would not be a candidate for EIA and so, in keeping with practice to date in Ireland, no EIAR has been prepared.
 - The need for sub-threshold EIA does not arise.
 - Any reference to “recontouring above 2 hectares within a farm holding” would not arise, as no recontouring is proposed.
- Grid connection
 - Notwithstanding the fact that the grid connection does not form part of the current application, considerable information on this connection has been made available. Thus, it would run between the on-site sub-station to ESBN’s Barnahely station. The exact route has yet to be finalised but it is likely to comprise over ground and underground sections, with the former utilising at least some existing pylons and poles.
- Other matters
 - Under further information, some reduction in the number of panels proved necessary. The retained panels would exhibit a 9m separation distance from one another, thereby facilitating sheep grazing.

6.3. **Planning Authority Response**

None

6.4. **Observations**

None

6.5. **Further Responses**

None

7.0 **Assessment**

7.1. I have reviewed the proposal in the light of the CDP, the submissions of the parties, and my own site visit. Accordingly, I consider that this application/appeal should be assessed under the following headings:

- (i) Land use, Green Belt, and amenity,
- (ii) Traffic, access, and parking,
- (iii) Condition 4 and aviation safety,
- (iv) Archaeology, ecology, and water,
- (v) Appropriate Assessment – Stage 1 Screening.

(i) Land use, Green Belt, and amenity

7.2. Although solar farms are often viewed as a means of farm diversification and they are compatible with livestock grazing, for planning purposes they do not come within the definition of agriculture set out in Section 2(1) of the Planning and Development Act, 2000 – 2018. Rather they are renewable energy generating stations, which entail the installation of considerable man-made apparatus on sites with consequential impacts upon the countryside.

7.3. Objective ED 1-1 of the CDP states the following:

Ensure that through sustainable development County Cork fulfils its optimum role in contributing to the diversity and security of energy supply and to harness the potential of county to assist in meeting renewable energy targets.

- 7.4. Under Policy Objectives 23 and 55 of the National Planning Framework (NPF), energy is cited as an activity in connection with the development of the rural economy and renewable energy generation at appropriate locations within the built and natural environment is to be promoted.
- 7.5. The CDP addresses solar energy under Paragraphs 9.4.13 – 18. This Plan was adopted in 2014 and it comments largely upon roof top applications for the harnessing of solar energy. However, Paragraph 9.4.17 does acknowledge the existence of larger scale generating schemes elsewhere and with technological advances the possibility of their occurrence here. In these circumstances, “careful consideration will need to be given to their scale, location and other impacts.”
- 7.6. Under the CDP, the site lies within not only the Cork Metropolitan Green Belt between Greater Cork and Carrigaline, but the majority of this site lies within that portion of this Green Belt which is referred to as the Prominent and Strategic Metropolitan Green Belt Area. The site also lies within Landscape Character Type 6(a), Broad Fertile Lowland Valleys, within which landscape value and sensitivity are deemed to be high and the landscape is deemed to be of County importance.
- 7.7. Under Objective RCI 5-2(a) of the CDP, the Cork Metropolitan Green Belt is to be maintained for the following purposes:
- Retaining the open and rural character of lands between and adjacent to urban areas,
 - Maintaining the clear distinction between urban areas and the countryside,
 - To prevent urban sprawl and the coalescence of built up areas, and
 - To focus attention on lands within settlements which are zoned for development and provide for appropriate land uses that protect the physical and visual amenity of the area.

Paragraph 13.8.1 states that Prominent and Strategic Metropolitan Green Belt Areas “require the highest degree of protection because they are made up of the prominent open hilltops, valley sides and ridges that give Metropolitan Cork its distinctive character and the strategic, largely undeveloped gaps between the Green Belt settlements.” This Paragraph is then reflected in Objective GI 8-1.

- 7.8. The site is located equidistant between Castletreasure and Carrigaline on elevated lands between these two settlements. The site itself extends over an area of 47.30 hectares and it is composed of several large open fields, which together comprise an elongated form on a north/south axis. These fields are subject to gentle gradients, which rise in westerly and northerly directions over the northern/central and southern portions of the site, respectively. Consequently, over the western half of the site, levels rise from c. 90m OD in the south to 110m OD in the north.
- 7.9. During my site visit, I observed how the site has an expansive and open character that is visible from the surrounding area, both the immediate environs of the site, e.g. along the local road that passes along its western boundary, the L2464, and further away, e.g. similarly elevated lands to the east, beyond the N28, and in the far distance, e.g. similarly elevated lands to the south of Carrigaline.
- 7.10. Under the proposal, a sizeable solar farm would be developed with the installation of c. 159,100 sqm of solar panels over the majority of the site and accompanying supportive and ancillary structures. These man-made panels and structures would have landscape and visual impacts upon the Green Belt. The applicant has sought to assess these impacts by means of a Landscape and Visual Impact Assessment (LVIA). In doing so, it draws attention to the layout of the proposed solar farm, which is such that the part of the site with the steepest gradients, i.e. in the northwest quadrant of its southern portion, would be left undeveloped. (Elsewhere, undeveloped parts of the site would reflect variously the presence of the farm yard/farm house and known features of archaeological interest).
- With respect to landscape impact, the applicant discusses the proposal within the context of the existing landscape. It states that, while the proposal would be contained within the existing field pattern, it would represent a departure from more familiar agricultural land use to that of a new land use. The view is further expressed that this land use would entail a “built” form of development, which would display more rural than urban characteristics, i.e. the solar panels would be ground-hugging and of uniform texture and tone. They would thus contribute to the patchwork appearance of the landscape arising from its existing agricultural and forestry uses. The applicant concludes that the proposal would be compatible with the Green Belt. It also concludes that the overall significance of landscape impact would be “no greater than moderate

– slight with most of the 5 km radius study area likely to experience slight and imperceptible landscape impacts.”

- With respect to visual impact, 12 representative view-points were selected at various public vantage points within a 5 km radius of the site. Photomontages were prepared, and the resulting landscape and visual impacts were assessed. Pre-mitigation the significance of visual impact ranged from imperceptible – slight perceptible – moderate – substantial moderate and post-mitigation the one instance of moderate reduced to slight moderate and the one instance of substantial moderate reduced to moderate. (This mitigation would be afforded by the planting of hedgerows along the western boundary of the site with the L2464, along field divisions within the southern portion of the site, and as a back drop/screen to a standing stone in the central portion). These two instances were of short range views of the site from the L2464.

7.11. During my site visit, I observed the open and expansive nature of the site and its inter-visibility with other elevated land further to the east along the L6477 and much further to the south beyond Carrigaline. The visibility of the site is affected by the L2464 and residential ribbon development along this local road, much of which has first floor windows that overlook the site. I anticipate that the applicant’s proposed mitigation would only partially screen views of the site from these windows. Nevertheless, the views concerned do not lie within the corridor of any scenic route identified by the CDP and more generally householders do not have right to a view under planning legislation.

7.12. I consider that the applicant’s LVIA is a reasonable and fair assessment of the likely landscape and visual impacts of the proposal. Beyond these impacts lies the question of how this proposal would affect the Green Belt, in the light of both its purposes, as outlined in Objective RCI 5-2(a) set out above, and the inclusion of the majority of the site within the Prominent and Strategic Metropolitan Green Belt Area. Objective GI 8-1 of the CDP emphasises the importance of preserving this Area from development, which I understand to mean, in practise, an underscoring of the importance of the said purposes, which when applied to the site, in effect, seek the maintenance of its openness.

- 7.13. The applicant draws attention to the extensiveness of the proposal and the consistency of its appearance. It thus contends that this proposal would “read” as a modern addition to the existing patchwork pattern of the landscape, which is composed from existing agricultural and forestry practices. I consider that this contention is persuasive, especially with respect to medium and long-range views of the site. Shorter range views would be capable of discerning more of the details of the proposal and so its man-made nature would be more apparent. That said these views would be capable of being largely screened.
- 7.14. The appellant expresses concern that the proposal would adversely affect the visual and residential amenities of the area. Attention is thus drawn to the height of the support structures of the panels and the security fences that would encircle the developed portions of the site. Attention is also drawn to the proposed height of hedgerows and their impact upon lighting.
- 7.15. I note that the proposed hedgerows along the western boundary of the site would be planted forward of the proposed security fencing and so, in time, these hedgerows would screen this fencing and the support structures behind it. I note, too, that the proposed hedgerows to the rear of residential properties to the south of the site would be planted to the north east of these properties and so any impact on lighting, in the form of overshadowing, would be confined to the early morning.
- 7.16. The applicant has submitted a Glint and Glare Assessment of the proposal, which concludes that the potential for reflectance in neighbouring residential properties would, if it arises at all, be at worst low and, following mitigation, very low. It thus concludes that no significant nuisance would arise.
- 7.17. I conclude that the landscape impact of the proposal would be capable of being accommodated within the existing landscape, which lies with the Green Belt, and the visual impact would, subject to mitigation, be compatible with the amenities of the area.

(ii) Traffic, access, and parking

- 7.18. Traffic would be generated by the proposal, during its construction and operational phases. The applicant has submitted an Outline Construction and Environmental Management Plan OCEMP, within which it is estimated that 411 trips would be made by HCVs over a 16 – 18 week construction period. Additionally, the workforce, which

would rise at its peak to 40 – 50 people, would generate car/mini-bus trips. The OCEMP identifies the main and secondary delivery route options from the Port of Cork at Ringaskiddy and it states that cars and mini-buses would be parked within the on-site compound.

- 7.19. The aforementioned routes would pass through Ballinrea Cross to the south of the site. The County Council's Area Engineer draws attention to both the estimated HCV trips and the existence of a proposal to upgrade this cross roads. In these circumstances, he recommends that a special contribution be raised by means of a condition. This recommendation is reflected in condition 38 attached to the draft permission, which requires payment of €30,000.
- 7.20. The aforementioned figures indicate that there would be an appreciable level of vehicular traffic at the site during the construction period. That said, this traffic would be capable of being accommodated on the road network. Under further information, sightlines at the site entrance were revisited to ensure that x and y distances of 3m and 90m would be available. Hedgerows that would be removed to facilitate the establishment of necessary visibility splays in this respect would subsequently be reinstated. (Elsewhere, the applicant undertakes to maintain hedgerows under its control so that they do not encroach upon sightlines that serve egresses to residential properties).
- 7.21. The applicant has also submitted a Planning and Environmental Statement, which refers to the 12 – 24 annual maintenance trips to the site that would arise during the proposal's operational phase. This Statement also refers to an average of 292 annual trips made by HCVs in connection with the servicing of the existing agricultural use of the site. As this use would be largely displaced by the proposal (apart from sheep grazing), a reduction in vehicle trips to the site would ensue.
- 7.22. Traffic generated by the proposal would be capable of being accommodated on the road network, the site egress would be accompanied by the requisite sightlines, and on-site parking would be made available.

(iii) Condition 4 and aviation safety

- 7.23. The applicant has appealed the attachment of condition 6 to the draft permission. This condition, which was attached "In the interests of aviation safety", states the following:

If following installation, the photo-voltaic solar panels are the subject of occurrence reports from the aviation community and are deemed to present an unacceptable risk to the safety of aviation activities (in particular with respect to the visual holding point at Carrigaline and operations on Runway 07 at Cork Airport), then appropriate mitigation measures (e.g. re-orientation of the panels, additional screening, etc.) shall be agreed and implemented to the satisfaction of the Irish Aviation Authority and the Dublin Airport Authority/Cork Airport.

The applicant critiques this condition and requests its omission from any final grant of permission.

7.24. I have reviewed the applicant's critique. Under further information, the applicant augmented its Glint and Glare Assessment, by means of more detailed analysis of the potential for glare to affect pilots. This analysis concluded definitively that pilots on approach to each of Cork Airport's runways would not be so affected. It also identified the potential for glare to affect pilots flying in the Carrigaline Holding Pattern and operating to Visual Flying Rules. This Pattern comprises 8 observation points, 5 of which would be unaffected by glare from the proposal. Of the remaining 3 points, there would be low potential for green glare from 2 of them and potential for yellow glare from all 3. The effect in each case would be to cause an after-image (flash blindness) when observed prior to a typical blink response time.

7.25. At the appeal stage, the applicant submitted a report from a recognised expert in aviation safety, which reviews and assesses the information on glint and glare submitted at the application stage. This report concludes as follows:

The proposed solar farm at Ballinrea may produce a brief glint during later summer evenings as an aircraft completes its turn at the Ringaskiddy end of the Carrigaline Holding Pattern. This glint will be minor in magnitude compared to the concurrent glare of the setting sun.

Such brief glint does not violate FAA or other aviation guidelines and does not pose a hazard to aviation.

It is my considered opinion that the proposed development at Ballinrea, Carriagaline, does not pose a safety hazard to aircraft operating in the Carrigaline Holding Pattern.

7.26. In the light of the definitive conclusion cited above with respect to Cork Airport and in the light of the foregoing expert opinion, I conclude that the requested omission of condition 4 can be acceded to without jeopardising aviation safety.

(iv) Archaeology, ecology, and water

- 7.27. Under further information, the applicant submitted a Revised Archaeological, Architectural and Cultural Heritage Impact Assessment, which identifies sites of archaeological and heritage interest both in the site and within 1 km of the site. Of these sites that are in this site, 3 are Recorded Monuments and Places (RMPs), 9 are areas of archaeological potential, and 21 are unregistered sites. The proposed mitigation strategy would entail the provision of buffer zones around the RMPs, as well as around what a geophysical survey has indicated is either a hillfort or barrow cemetery. "No-dig" zones would also be established around 2 relict landscape features. Geophysical anomalies elsewhere in the site indicate that archaeology may lie elsewhere and so investigation by way of pre-development test trenching is recommended. Condition 10 attached to the draft permission reflects this recommendation and it is expressly supported by DoCHG for replication in any Board order to grant.
- 7.28. The applicant has submitted an Ecological Impact Assessment of the proposal. This Assessment concludes that the site is of low to moderate ecological value overall and that those portions that would be development, i.e. the fields (improved agricultural grassland) as distinct from existing hedgerows, are of low ecological value. Under the proposal, the temporary disturbance and permanent loss of a small area of semi-improved neutral grassland and mesotrophic wet grassland would occur. However, under the Landscape Mitigation Plan, new wild flower/grass seeding would be undertaken and so an overall increase in semi-natural grassland should occur. Furthermore, under this Plan, c. 1822m of existing hedgerows would be enhanced by native species planting and an additional c. 2180m of new hedgerows would be planted. Accordingly, the Assessment concludes that proposal would have a neutral to a slight positive impact on ecology.
- 7.29. Under the OPW's flood information website, the site is not the subject of any identified flood risk. With respect to surface water management, the proposal would during its operational phase, effectively, replicate pre-development run-off rates. During the construction phase, management measures would be undertaken to ensure that the un-named stream to the south of the site is not polluted. Such measures were delineated by the applicant by way of response to further information.

7.30. I conclude that the applicant has satisfactorily addressed those aspects of the proposal that relate to archaeology, ecology, and water.

(v) Appropriate Assessment – Stage 1 Screening

- 7.31. The site is neither in nor beside a Natura 2000 site. The nearest such sites are the Great Island Channel SAC (site code 001058) and Cork Harbour SPA (site code 004030). Under further information, the applicant submitted a Revised Screening Assessment, which acknowledged the presence of a hydrological link between the site and Cork Harbour, portions of which are subject to the aforementioned Natura 2000 designations. This link comprises an unnamed stream that passes to the south of the site and which is a tributary of the Owenboy River which, in turn, flows into Cork Harbour. I will draw upon this Assessment in my own Stage 1 Screening Exercise.
- 7.32. Given the aforementioned hydrological link, the construction phase would pose a potential risk to the said Natura 2000 sites, if contaminated water was to enter the said watercourses and hence into these sites. As outlined under the fourth heading of my assessment, surface water management measures would form an integral part of the applicant's approach to the development of the site and so the risk of contamination would be allayed. Furthermore, as the nearest Natura 2000 site is over 5.5 km downstream, the risk of, notwithstanding these measures, contamination reaching this site and having a significant effect upon the same is unlikely in the extreme.
- 7.33. The features of interest in the Cork Harbour SPA are bird species, the majority of which are wildfowl and waders. The wetland habitats of Monkstown Creek and Owenboy Estuary are suitable habitats for these species, rather than the grassland habitat of the site. That said, another of the bird species in question, the Curlew has been recorded as being on the site, although not for the purpose of foraging or roosting.
- 7.34. Concern has been expressed in some quarters that solar farms may pose a collision threat to birds as a result of the "lake effect" and the risk that birds may be singed. The applicant advises that the said effect has only been confirmed in desert locations, where large solar farms risk being mistaken for water. Likewise, any risk of

singing applies to a different type of technology to that which is being proposed for the site, i.e. concentrated solar power as distinct from photo-voltaic solar power.

7.35. In the light of the foregoing considerations, I take the view that the proposal would not be likely to significantly affect the features of interest in the Cork Harbour SPA.

7.36. 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 proposal, individually or in combination with other plans or projects would not be likely to have a significant effect on European Sites Nos. 001058 and 004030, or any other European site, 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. That permission be granted.

9.0 Reasons and Considerations

Having regard to the Cork County Development Plan 2014 – 2020, it is considered that, subject to conditions, the proposal would further the commitment of Objective ED 1-1 of the Development Plan to promote renewable energy and its location on a site within the Cork Metropolitan Green Belt would be consistent with the purposes of this Green Belt. Landscape and visual impacts of the proposal would, subject to mitigation, be compatible with the visual amenities of the area. Traffic generated by the proposal would be capable of being accommodated on the road network and proposed access and parking arrangements would be satisfactory. The proposal would not jeopardise aviation safety. It would be consistent with safeguarding the archaeological interest of the site and it would safeguard and enhance the more significant ecological interest of the site. Surface water would be capable of being handled satisfactorily at the construction and operational phases. No flooding issues pertain to the site and no Appropriate Assessment issues would arise. The proposal would thus accord with the proper planning and sustainable development of the area.

10.0 Conditions

1.	<p>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 27th September 2018 and by the further plans and particulars submitted on the 20th day of November 2018, 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.</p> <p>Reason: In the interest of clarity.</p>
2.	<p>The period during which the development hereby permitted may be carried out shall be 10 years from the date of this order.</p> <p>Reason: Having regard to the nature of the development, the Board considers it appropriate to specify a period of validity of this permission in excess of five years.</p>
3.	<p>Prior to the commencement of development, a construction traffic management plan shall be submitted to and agreed in writing with the Planning Authority.</p> <p>Reason: In the interest of good traffic management.</p>
4.	<p>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:</p> <ul style="list-style-type: none"> (a) Location of the site and materials compound(s) including area(s) identified for the storage of construction refuse; (b) Location of areas for construction site offices and staff facilities;

	<p>(c) Details of site security fencing and hoardings;</p> <p>(d) Details of on-site car parking facilities for site workers during the course of construction;</p> <p>(e) Measures to prevent the spillage or deposit of clay, rubble or other debris on the public road network;</p> <p>(f) Details of appropriate mitigation measures for noise, dust and vibration, and monitoring of such levels;</p> <p>(g) Containment of all construction-related fuel and oil within specially constructed bunds to ensure that fuel spillages are fully contained. Such bunds shall be roofed to exclude rainwater;</p> <p>(h) Off-site disposal of construction/demolition waste and details of how it is proposed to manage excavated soil;</p> <p>(i) Means to ensure that surface water run-off is controlled such that no silt or other pollutants enter local surface water courses or ditches.</p> <p>A record of daily checks that the works are being undertaken in accordance with the Construction Management Plan shall be kept for inspection by the planning authority.</p> <p>Reason: In the interest of amenities, public health and safety.</p>
5.	<p>The landscape mitigation plan shown on drawing no. LD.BLNREA 3.1, as submitted to the planning authority on the 27th day of September 2018, shall be carried out within the first planting season following substantial completion of construction works.</p> <p>Prior to such planting, the boundary fencing shown in this plan shall be fully erected.</p> <p>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.</p>

	Reason: In the interest of residential and visual amenity.
6.	<p>Prior to any other development, the proposed site entrance sightlines shown on drawing no. 4918 0005 G, submitted to the planning authority on the 27th day of September 2018, shall be established and, thereafter, retained free of vegetation or structures that exceed 1m in height.</p> <p>Reason: In the interest of road safety.</p>
7.	<p>All works shall be carried out in accordance with the mitigation measures outlined in Section 5 of the Revised Archaeological, Architectural and Cultural Heritage Impact Assessment, submitted to the planning authority on the 27th day of September 2018.</p> <p>Reason: In the interest of preserving items of archaeological interest.</p>
8.	<p>This permission shall be for a period of 30 years from the date of commissioning of the solar farm.</p> <p>Reason: To enable the planning authority to review its operation in the light of the circumstances then prevailing.</p>
9.	<p>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 panels and their supporting structures and all ancillary equipment and structures shall be removed, and all decommissioned items shall be removed within three months of decommissioning.</p> <p>Reason: To ensure satisfactory reinstatement of the site upon cessation of the project.</p>
10.	<p>Prior to commencement of development, the developer shall lodge with the planning authority a cash deposit, a bond of an insurance company, or such other security as may be acceptable to the planning authority, to secure the satisfactory reinstatement of the site upon cessation of the project coupled with an agreement empowering the planning authority to apply such security or part thereof to such reinstatement. The form and amount of the security shall be as</p>

	<p>agreed between the planning authority and the developer or, in default of agreement, shall be referred to An Bord Pleanála for determination.</p> <p>Reason: To ensure satisfactory reinstatement of the site.</p>
11.	<p>The developer shall pay the sum of € 30,000 (thirty thousand euro) (updated at the time of payment in accordance with changes in the Wholesale Price Index – Building and Construction (Capital Goods), published by the Central Statistics Office), to the planning authority as a special contribution under section 48 (2)(c) of the Planning and Development Act 2000, in respect of the upgrade of Ballinrea Cross Roads. This contribution shall be paid prior to commencement of development or in such phased payments as the planning authority may facilitate. The application of indexation required by this condition shall be agreed between the planning authority and the developer or, in default of such agreement, the matter shall be referred to An Bord Pleanála to determine.</p> <p>Reason: It is considered reasonable that the developer should contribute towards the specific exceptional costs which are incurred by the planning authority which are not covered in the Development Contribution Scheme and which will benefit the proposed development.</p>
Note	<p>The developer shall advise the Irish Aviation Authority of when the proposal would be constructed, commissioned, and brought into use.</p>

Hugh D. Morrison
 Planning Inspector

13th March 2019