An Bord Pleanála

Inspector's Report

ABP-304558-19

Development	An electrical substation and associated 110kV and MV infrastructure required to connect ground mounted solar PV generation to the electricity transmission system with all associated ancillary site development work.
Location	Rathnaskilloge, Stradbally, Co. Waterford
Planning Authority	Waterford City and County Council
Applicant(s)	Highfield Energy Services Ltd.
Type of Application	Application under provisions of Section 182A of the Planning and Development Act, 2000 (as amended)
Observer(s)	1. Breda, John and Aoife Kiely 2. Fiona Keane 3. Elaine Doris 4. Paul Lannon 5. Louise Williams Dowling 6. Ray Davis 7. John Kiely 8. Sally & Jim Thompson 9. Jonathan Oakes

Date of Site Inspection	20th November 2020
Inspector	Donal Donnelly

Contents

1.0 Introduction

1.1. An application under the provisions of Section 182A of the Planning and Development Act, 2000 (as amended) has been received by the Board from Highfield Energy Services Ltd. seeking approval for the development of an electricity substation and associated 110kV and MV infrastructure.

1.2. The applicant entered into pre-application discussions with the Board under Section 182E of the Act in November 2018. The Board issued a Direction in January 2019 that the proposed 110kV gas insulated switchgear (GIS) station and IPP control building with associated compounds is strategic infrastructure (SID), and that a planning application should be made directly to the Board.

1.3. The purpose of this application is to connect a proposed solar farm to the electricity transmission system. An appeal has been submitted to the Board against Waterford County Council's decision to grant permission for the solar farm (ABP-305817-19), and this is being considered concurrently with this SID application.

2.0 Site Location and Description

2.1. The subject site is located in the townland of Rathnaskilloge in Co. Waterford approximately 3km north of Stradbally and 5.5km south of Kilmacthomas.

2.2. The surrounding area comprises mostly of agricultural pastureland with coniferous and broad-leaf forest and semi-natural areas. There is forestry immediately to the north and west of the site and the site itself comprises semi-improved wet grassland.

2.3. The Dungarvan-Cullenagh/ Butlerstown 110kV overhead line traverses the site from south-west to north-east. Access to the site is via a laneway off the R675 Regional Route. There is a vacant dwelling to the south-west and farm building to the east of the substation site.

3.0 Proposed Development

3.1. The applicant has submitted an application for a period of 10-years to the Board for approval in relation to the following proposal for electricity transmission infrastructure and associated works:

- An electrical substation and associated 110kV and MV infrastructure required to connect ground mounted solar PV generation to electricity transmission system;
- Lightning protection masts;
- Perimeter security fencing;
- CCTV cameras;
- Access tracks;
- 110kV end masts;
- Underground cabling;
- Temporary construction compound;
- Drainage infrastructure; and
- All associated site development works.

3.2. The proposed substation facilitate the connection of the proposed solar farm (ABP-305817-19) to the Dungarvan-Cullenagh/ Butlerstown 110kV overhead line traversing the site, and will include an EirGrid owned compound and an operator owned IPP compound.

3.3. The proposed substation building will be metal clad and coloured green with height of 11.5m. Two lattice towers will facilitate the looped connection, one of which will replace an existing wooden pole set. Approximately 250m of underground 110kV cable will connect the towers to the substation.

4.0 Planning History

Waterford County Council Reg. Ref: 19/290 (ABP-305817-19)

4.1. Notification of decision to grant permission was issued to Highfield Solar Ltd. on 24th October 2019 (10-year permission) for the development of a solar farm on a site of c. 109 hectares. A total of 22 conditions were attached by the Council to this decision.

4.2. First and third party appeals where submitted to the Board against a condition and the decision of the Planning Authority respectively. The applicant seeks amendment of the duration of permission condition attached to the notification of decision, and the third party opposes the proposed solar farm development.

4.3. This appeal case is being assessed concurrently to the SID substation case.

Other Cases in Co. Waterford

Waterford County Council Reg. Ref: 17/564 (ABP-300004-17)

4.4. Permission granted in February 2019 for a 62.8-hectare solar farm and electrical substation at Ballyard, Ballyhane & Clashnagoneen, Cappoquin approximately 20km to the west of the proposed development.

Waterford County Council Reg. Ref: 17/645 (ABP-300267-17)

4.5. Permission granted in February 2018 for a 62.8 hectare solar farm and electrical substation at Carrigalong, Tramore approximately 20km east of the proposed development.

Waterford County Council Reg. Ref: 18/598 (ABP-303576-19)

4.6. Permission granted in May 2019 for a 29.7 hectare solar farm at Poulbautia, Cappoquin approximately 20km west of the proposed development.

Waterford County Council Reg. Ref: 18/598 (ABP-304651-19)

4.7. Permission granted in September 2019 for a solar farm on two parcels (27 and 11 hectares) near the village of Mothel approximately 15km north of the proposed development. The Board also granted permission for the associated grid connection case (ABP-303930-19).

Waterford County Council Reg. Ref: 16/126 (PL93.246902)

4.8. Permission granted in November 2016 for a 28.8 hectare solar farm at Drumroe, Cappoquin approximately 20km west of the proposed development.

Waterford County Council Reg. Ref: 15/770 (PL93.247310)

4.9. Permission granted in February 2017 for a 12 hectare solar farm at Picketstown, Tramore approximately 20km east of the proposed development.

Waterford County Council Reg. Ref: 16/371 (PL93.247677)

4.10. Permission refused in March 2018 for a 12 hectare solar farm near Lismore approximately 30km west of the proposed development.

4.11. It was noted in the reason for refusal that the development would have been within the preferred route corridor for the proposed realigned N72.

Waterford County Council Reg. Ref: 17/96 (PL93.248413)

4.12. Permission granted in March 2018 for a 10.2 hectare solar farm at Cooltubbrid approximately 2.8km north-east of the proposed development.

Waterford County Council Reg. Ref: 17/113 (PL93.248487)

4.13. Permission granted in March 2018 for a 17.7 hectare solar farm at Keiloge approximately 25km east of the proposed development.

5.0 Legislative and Policy Context

5.1. National Framework Plan, 2018

5.1.1. The National Planning Framework provides policies, actions and investment to deliver 10 National Strategic Outcomes (NSO) and priorities of the National Development Plan. Transitioning to a low carbon and climate resilient society is the main NSO that pertains to the proposed development. It is stated that new energy systems and transmission grids will be necessary for a more distributed, renewables-focused energy generation system.

5.1.2. Chapter 9 of the NPF: Realising Our Sustainable Future recognises the need to accelerate action on climate change for a low carbon energy future. In this regard, National Policy Objective 54 seeks to *"reduce our carbon footprint by integrating climate action into the planning system in support of national targets for climate policy mitigation and adaptation objectives, as well as targets for greenhouse gas emissions reductions."*

5.1.3. The transition to renewable sources of energy is an integral part of Ireland's climate change strategy as a means of reducing reliance on fossil fuels. Reflecting this, National Policy Objective 55 will *"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."*

5.2. Regional Spatial & Economic Strategy for the Southern Region, 2020

5.2.1. This document is a 12-year strategic regional development framework that will facilitate the delivery of the NPF. The Southern Regional Assembly will support the

implementation of the Climate Action Plan, 2019 by prioritising decarbonisation, resource efficiency and climate resilience. It is recognised that there is significant potential to use renewable energy across the Region to achieve climate change emission reduction targets and in this regard the Strategy will support renewable industries and requirements for transmission and distribution infrastructure.

5.3. Waterford County Development Plan, 2011-2017 (as extended)

5.3.1. The subject site is located within a 'Stronger Rural Area'. The R675 and the section of the N25 to the south-west of McGrath's Cross are designated as 'scenic routes' within the Development Plan Scenic Landscape Evaluation. There is a strip between the two local roads running north-south through the overall solar farm site that is shown to be 'visually vulnerable'. The onus is on the applicant to demonstrate that there will be no obstruction or degradation of view towards visually vulnerable features nor significant alterations to the appearance or character of sensitive areas.

5.3.2. It is anticipated in Section 6.9 that the green economy will yield significant results for businesses, particularly in rural areas (farmers, energy producers and businesses). Policy ECD15 seeks *"to facilitate appropriate renewable energy infrastructure and promote the use of renewable energy among businesses and households throughout Waterford County."*

5.3.3. Under Section 7.23 – Energy, Policy NF26 seeks the following:

1. *To facilitate improvements in energy infrastructure and encourage the expansion of the infrastructure at appropriate locations within the County.*
2. *To support and facilitate the future expansion of the natural gas pipeline.*
3. *To facilitate, where appropriate, future alternative renewable energy developments throughout the County that are located in close proximity to the National Grid Strategy improvements so as to minimise the length and visual impact of grid connections.*
4. *To collaborate with EirGrid in accordance with the Grid 25 Strategy to facilitate the delivery of quality connection, transmission and market services to electricity generators, suppliers and customers utilising the high voltage electricity system at appropriate locations within County Waterford.*

5.3.4. Under Section 8.8 – Renewable Energy, Policy ENV10 seeks *"to facilitate and encourage sustainable development proposals for alternative energy sources and energy efficient technologies."*

5.3.5. All lands outside designated settlements and land use zoning maps are regarded as *"Agriculture A – to provide for the development of agriculture and to protect and improve rural amenity."* A solar farm or electricity infrastructure are not listed uses within the land use zoning matrix. Uses not covered may be allowed in accordance with the written provisions of the Development Plan.

5.3.6. Variation 2 of the Development Plan incorporates the **Waterford City and County Renewable Energy Strategy 2016-2030**, which examines the renewable energy potential for the city and county and considers the strategic planning factors contributing towards the deployment of such renewable energy. It is noted in this Strategy that Waterford is in the top 15% in terms of solar resource in Ireland and a projection has been set in the Strategy of 84.1MW of solar energy for the county up to 2030, requiring a land mass of 168.2 hectares.

5.4. Climate Action Plan, 2019

5.4.1. This plan puts in place a decarbonisation pathway to 2030 consistent with reaching the EU target of net zero emissions by 2050. It builds on the measures set out in the National Mitigation Plan, Project Ireland 2020 and the draft National Energy and Climate Plan.

5.4.2. It is noted that electricity accounted for 19.3% of Ireland's greenhouse gas emission in 2017; however, 30.1% of electricity produced in 2017 was from renewable sources. The target is to reach 40% by 2020 but there is a very rapid projected growth in electricity demand. The Climate Action Plan therefore seeks to ensure that renewable rather than fossil fuel generation capacity is built to meet this demand. The aim is to have 70% of electricity generated from renewable sources by 2030. The Climate Action Plan acknowledges that increased levels of renewable generation will require very substantial new infrastructure, including wind and solar farms, grid reinforcement, storage development and interconnection.

5.5. National Adaption Framework, 2018

5.5.1. The Framework was developed under the Climate Action and Low Carbon Development Act, 2015. A number of Government Departments are required under this Framework to prepare sectorial adaptation plans to reduce the vulnerability of the country to the negative effects of climate change and to avail of the positive impacts. The Climate Change Adaptation Plan for Electricity and Gas Networks Sector has been prepared under the National Adaption Framework to identify the potential impacts of climate change on energy infrastructure, assess associated risks and set out an action plan for adapting to those impacts.

5.6. Natural Heritage Designations

5.6.1. The following designated sites are within 10km of the proposed solar farm:

Site Name	Site Code	Distance (nearest point to solar farm)	Direction
Mid-Waterford Coast SPA	004193	2.1km	South
Helvick Head to Ballyquin SPA	004192	9.8km	South-west
Dungarvan Harbour SPA	004032	8km	South-west
Comeragh Mountains SAC	001952	5.4km	North-west
Glendine Wood SAC	002324	7.4km	West
Helvick Head SAC	000665	9.8km	South-west
Dungarvan Harbour pNHA	000663	8km	South-west
Helvick Head pNHA	000665	9.8km	South-west
Ballin Lough (Waterford) pNHA	001691	6.8km	East
Ballyvoyle Head to Tramore pNHA	001693	2.2km	South
Stradbally Woods pNHA	001707	480m	South-west
Comeragh Mountains pNHA	001952	5.4km	North-west

5.7. **EIA Screening**

5.7.1. Schedule 5 of the Planning and Development Regulations, 2001 (as amended) sets out development for the purposes of Part 10 (Environmental Impact Assessment). An electrical substation is not a class of development contained in Parts 1 and 2 of Schedule 5.

5.7.2. Class 19 of Part 1 lists the *"construction of overhead electrical power lines with a voltage of 220 kilovolts or more and a length of more than 15 kilometres."* However, the proposed development comprises a 110kV substation and underground cable connection to the Dungarvan to Butlerstown 110kV overhead line that traverses the solar farm site. The proposed development does not entail the construction of any overhead powerlines and the voltage and length of the underground cable connecting the existing overhead line to the proposed substation are well below the thresholds under Class 19.

5.7.3. Class 3(b) of Part 2 of Schedule 5 lists *"industrial installations for carrying gas, steam and hot water with a potential heat output of 300 megawatts or more, or transmission of electrical energy by overhead cables not included in Part 1 of this Schedule, where the voltage would be 200 kilovolts or more."* Again, the proposed development comprises underground cabling and is well below the thresholds under this Class.

5.7.4. Having regard to the nature size and location of the proposed development, it is considered that it would not be likely to have significant effects on the environment in terms of any sub-threshold development and that the preparation and submission of an environmental impact assessment report is not therefore required.

6.0 **Submissions**

6.1. **Local Authority**

6.1.1. Waterford City and County Council submitted the comments hereunder on the electrical substation and associated infrastructure application. It should be noted that this submission was made at a time when a further information response was pending on Reg. Ref: 19/290.

- Site is located on land zoned 'Agriculture' with the objective to provide for the development of agriculture and to protect and improve rural amenity. Substation development is not listed as a land use category – principle of proposal would therefore need to be assessed on its own merits at this location.
- Overall development would assist towards supporting the national objective of achieving 70% of electricity generation from renewable sources by 2030. Principle of the development is acceptable.
- Waterford Renewable Energy Strategy 2016-2030 notes that Co. Waterford is in the top 15% in terms of solar resource in Ireland and has good potential for solar energy.
- Heritage Officer commented on the NIS that "…the proposed solar farm and substation development will not adversely affect the integrity and conservation status of the Mid-Waterford Coast SPA and with implementation of mitigation measures set out in Section 6 of the EcIS and implementation of the Biodiversity Management Plan that the proposed development presents an opportunity to enhance the biodiversity value of the site."
- Mitigation measures should be definitive in their nature, description and location with specific reference to location of construction compounds, designated areas for machinery refuelling and sediment control measures – Planning Authority requested a CEMP to address this as further information under Reg. Ref: 19/290. This requirement and detailed Surface Water Management Plan should be a relevant condition of planning for the proposed substation.
- No protected structures or ACAs close to the site.
- Full study should be undertaken to establish the extent of localised flooding. Surface water from the site will not be permitted to flow onto the public road or adjacent properties.
- Construction of site entrance should be agreed with District Engineer prior to commencement – should include road drainage and maintenance of existing road drainage.
- Current arrangement at proposed access to substation off the R675 is not ideally suited to frequent HGV traffic movements and may represent a road safety

hazard – access to the site during construction recommended from L3029 (via the new entrance already proposed as part of the solar farm development).

- Development along scenic route (R675) needs to be carefully considered and developments need appropriate screening.
- Close cooperation will be required between the developers and Roads Department during construction to ensure that appropriate traffic management plan is agreed and implemented, e.g. HGV movements limited to 14 per day and no HGV movements on L7031 or through Faha Village.
- Policy 6.6(b) of Appendix A9 of Development Plan – no obstruction or degradation of views towards visually vulnerable features and no significant alterations to the appearance or character of sensitive areas.
- Site within Copper Coast UNESCO Global Geopark. Proposed substation is not located inside a designated geological heritage site as listed in Appendix A14 of the Development Plan.
- Photomontages at Viewpoints 04, 05 and 09 provide adequate visual representation of existing landscape conditions and the proposed substation development.
- Preferable to obtain longer range viewpoints from Comeragh Mountains and Coast Road.
- Additional semi-mature screen planting measures are likely to be required adjoining the perimeter of the substation compound in order to help visually absorb the proposed development into the landscape.
- Findings and mitigation contained in the Planning and Environmental Report accompanying the planning application are generally acceptable.
- There are some concerns regarding separation distances to residential properties and farms and this should be considered by the Board.
- Community gain conditions may be appropriate on the following:
    - Additional landscaping measures (semi mature planting);
    - Traffic management plan and pre and post construction surveys of public road – bond put in place to cover potential road damage.

- Detailed Construction Environmental Management Plan and Surface Water Management Plan;
- Mitigation measures in NIS to be implemented in full.

- Two buildings proposed in the substation compound will attract development levies of €19,481.40.

6.2. **Observers**

6.2.1. A total of nine third party observations were received on the application. The main points raised in these submissions are summarised as follows:

Breda, John and Aoife Kiely, Carrigcastle, Kilmacthomas

- This is zoned agricultural land and EIAR may be required - determination on the current application must have relevance to a stay on Ref: ABP-302037-18.
- Second application amounts to project splitting and would require an EIAR – connection to national grid is fundamental to the entire project and cumulative effect must be assessed.
- Substation is situated on a floodplain which was refused development for a piggery over 20 years ago. Substations are classified as highly vulnerable.
- Not possible for the proposed development to pass the justification test on the basis of the land not being zoned/ designated for this type of development.
- Proposal at 109 hectares is one of the biggest applied for in Ireland – would make local area an industrial zone.
- Co. Waterford has exceeded obligations in renewable energy strategies.
- Traffic management plan should be put in place.
- Grid connection may be incapable of accepting further viable input which would challenge the stability of the entire network – 20% level of variable renewable power has already been reached.
- Scale of proposed development is enormous and surrounded by geopark, Copper Coast drive, SPA, pNHA and greenway.
- Associated solar panels will be easily mistaken for water by birds.

- Proposal is situated on elevated land and would visually dominate the local rural area and existing dwellings.
- Proposed laneway into substation site is a right of way which is shared by four landowners – how can one give access to Highfield Solar to enter the site?
- Rooftop and RESS solar are the future and will not have a devastating effect on the small rural community.

  Fiona Keane

- Site unsuitable as the rural nature of the area would not absorb such a huge industrial development.
- Would have a negative effect on Unesco Copper Coast and Waterford Greenway.
- There is currently a lack of appropriate guidelines in relation to industrial development of this nature – proposal would set precedent for other industrial developments in the area, e.g. wind turbines.
- Proposal would have a negative impact on local wildlife, including red squirrel and buzzard.

  Elaine Doris, Brenan, Stradbally

- Observer did not receive any form of literature and consultation was poor.
- Many cyclists, including cycling clubs, use the R675.
- Proposal will be a significant blight on the Copper Coast route.
- Sustainable tourism in the area is on the rise and cannot be overlooked.
- Many people in the area use the route frequently to access schools.
- Private water wells depend on lack of interference to watercourses.
- Substation should be sited much further away from homes – there are links between living near substations and a range of health issues. Perception will devalue local property.

Paul Lannon, Ballydwan, Bonmahon

- Proposal contributes to the industrialisation of a very scenic rural area deemed as prime agricultural land.
- Would be more appropriate for the project to be reviewed in its entirety with the solar farm.
- Applicant has stated that the solar farm will affect c. 100 rural households – unacceptable in terms of affecting residential amenity of the area.
- Layout of development is widely dispersed and will cause a larger than necessary impact on the surrounding environment, visual amenity and impact on local community.
- Proposed working hours (7am-7pm) will present a significant burden and invasion to residents.
- Council has recently deemed Reg. Ref: 19/327 not appropriate in the area due to the industrial nature of the operation and increase in construction traffic.
- Current proposal would see some 2,080 truck deliveries during the construction phase – local roads inadequate to cope with this level of traffic and would prove hazardous to other road users, including cyclists.
- Applicant has failed to mention why the previous grants of permission in 1998 were not constructed in this scenic area.
- Disagrees that the supply of bird boxes and bat boxes would mitigate any displacement.
- Public consultation was unsatisfactory.
- Moratorium should be in place at local and national level on the grant of planning permission for such large-scale industrial projects until appropriate policy and guidelines exist.
- 11 year old glint and glare document has been presented to support the Reg. Ref: 19290 application – now out of date and should be updated to reflect the status quo.

Louise Williams Dowling, St. James Wood, Stradbally

- Proposal would be a colossal disturbance to the habitat of red squirrel in residence. Pine martin are also resident on site.
- Development of proposed substation is large scale and inappropriate in a rural area.
- If solar farm is declined, what will happen to the planning if it were to be granted for the substation?
- No detail that fire services have appropriate training should a fire occur.
- There may be long-term medical effects from exposure to electromagnetic fields.

Ray Davis, Carriganna, Stradbally

- Board should take notice of the direction to hold application Ref: ABP-302037-18 in abeyance and not determine a decision to grant/ refuse or request further information until there is a clear decision from the High Court.
- Application as a whole should be assessed as one entity.
- 10-year permission and 30-year approx. lifespan – if there is a policy change or if solar farm ceases trading, community will be left with a sea of panels, steel and vacant oversized buildings.
- Immediate area will not benefit from employment at the proposed facility.
- Proposed GIS switching building is of rectangular bulk mass, quite unlike all existing agricultural buildings.
- Only one elevation of the IPPC building and two elevations of the GIS building have been submitted to the Board.
- Applicant should be requested to submit all information as specified in Article 23 of the Planning and Development Regulations, 2001 (as amended).
- Reference made to ABP-303577-19 for a solar farm on 26 hectares that was refused permission for reasons relating to the impact on the character of the local setting. Aspects of this case are very similar to the 109 hectare subject application.

- Combined land mass of solar energy proposals in Waterford (including subject application) is 337.8 Ha, some 169.6 Ha above the required threshold for the county to meet the requirements of the Renewable Energy Strategy. Anything over this can be regarded as intensification of development.
- Junctions of N25 and L3209 and the 5-Roads Crossroads are extremely busy and there are concerns regarding pedestrian and traffic safety when junction is used by construction vehicles.
- There is no traffic count survey of existing use by time/ type of vehicle and no comparison of same with inclusion of construction traffic. There is also no auto track turning model.
- Sightlines should be assessed with a 4.5m setback – 160m required. Traffic currently approaches access to Rathnaskilloge compound at great speed.
- Health effects of locating the development over a regionally important aquifer must be explored in more detail.
- New bored well on site can only lead to more issues of concern for locals.
- Other local farmers are considering the use of their lands for solar farms.

John Kiely, Carrigcastle, Kilmacthomas

- Similar points to above.

Sally & Jim Thompson

- Contents of this submission are similar to concurrent appeal case ABP-305817-19 (Reg. Ref: 19/290). In summary, these relate to the following:
- Subject application does not provide a coherent development proposal – comprises an island site without an entrance or access road included with the planning application.
- Without evidence of permission to access the grid network or evidence of capacity in the grid network, the subject application is untenable, unviable and unsustainable.
- Separate applications amount to project splitting and are premature in light of the O'Grianna Judgement – totality of impact cannot be assessed.

- There are substantial grounds to warrant the submission of an EIAR for the solar farm and grid connection and substation.
- Development of a substation is unrelated to any significant urban settlement and exceeds 65% of the Waterford Renewable Energy Strategy projections for solar power.
- There are material and substantive defects in the public notice and the plans submitted.
- Proposed development and associated infrastructure and solar farm would comprise an incompatible high-risk vulnerable use in an area subject to flood risk.
- Site overlays an important fissured aquifer of high to extreme vulnerability – there is risk of ground water pollution and change in water levels.
- Extent, scale and industrial nature of the proposal, including substation, compounds, wirescape and associated 109 hectare solar farm would materially contravene the landscape policy and designated landscape zoning objectives of the development plan.
- Proposed substation and solar farm would visually dominate the local rural area and existing dwellings and change the landscape character context of Stradbally and Woodhouse Estate and its setting.
- AA Screening and Appropriate Assessment does not provide adequate scientific evidence as to whether or not the solar farm will have a significant effect on the integrity of the relevant European Sites – mitigation measures are imprecise.
- Proposal would materially contravene the agricultural zoning objective for the area.
- Proposal would materially interfere with the character of the landscape or with a view or prospect of special amenity value for nearby scenic routes.
- No baseline noise surveys have been carried out and overall approach including mitigation and absence of monitoring is deeply flawed.

Jonathan Oakes, Carrigahilla, Stradbally

- One of the most pleasant approaches to Durrow, at one of the most scenic parts of the greenway, is via “the Glen”, the road that passes between the proposed installations at Glen West and Rathnaskilloge.
- Potential loss of the financial benefit to the county from reduced visitor numbers has not been given full consideration.
- Use of photovoltaic solar power generation cells in countries like Ireland, at higher geographical latitude, is questionable. Ireland has between 3 ¼ and 3 ¾ hours of sunshine per day and demand for power is greater in winter.
- Advances in renewable energy could render the proposed type of photovoltaic cell obsolete and there may be no available funding to remove the installations.
- Proposed development area has less potential for significant power generation than the areas marked at the two higher levels of intensity on the solar radiation map.
- There are very many other areas where the same level of solar intensity prevails but with less impact.
- Observer’s property would be at risk of significant glint and glare from the proposed solar panels if existing hedging, trees and forestry are disturbed or subject to commercial felling. Timescale for additional planting to be effective is not adequately assured.
- Chemicals within solar panels are known toxins and if released through damage to panels could enter the ground and contaminate the soil and water sources.
- Sea spray deposits in prevailing breezes form quickly on metallic and glazed surfaces – solar panels may have to be cleaned regularly with potential for release of large quantities of cleaning agents into the environment.
- Battery storage containers have been reported to catch fire releasing caustic and toxic chemicals.
- Cooling fans for battery storage have the potential to cause noise disturbance. Containers will also be unsightly.

6.3. **Applicant's Response**

6.3.1. The applicant responded to the issues raised in observations as follows:

- *Further information* – concurrent appeal is now with the Board.
- Reg. Ref: ABP-302037-18 – judicial review of the decision was taken (Ref: 2019 223 JR: Kavanagh v An Bord Pleanála & Ors). There are similar JR proceedings under case ref: 2019 No. 33 JR: Peter Sweetman v An Bord Pleanála & Ors).
- *Requirement of EIAR* – Neither solar farms or substations fall within the wording of Annex I or II of the EIA Directive (2011/92), nor do they come within the wording of Part 1 or 2 of Schedule 5 of the Regulations (2019 No. 33 JR).
- Environmental Impact Assessment screening concluded that the development is unlikely to have significant effects sufficient to trigger a requirement for EIA.
- *Project splitting* – relevant only to cases requiring EIA. Clarified by Board under ABP-302731-18 in similar SID application for a 110kV substation to facilitate the grid connection of a solar farm.
- All studies in support of the planning application, including the NIS, were carried out for the development as a whole, i.e. solar farm and substation.
- *Flooding* – Flood Risk and Drainage Impact Assessment submitted with the application illustrate that the substation is not on a flood plain. Substation located on Flood Zone C and justification test for such infrastructure is only required on Flood Zones A & B.
- *Renewable Energy Strategy* – 84.1MW of solar power projected in 2016 document is only a projection and not a limit.
- Renewable Energy Strategy references the National Renewable Energy Action Plan, which sets out projections to 2020. These targets have been missed and new Climate Action plan has dramatically increased targets.
- *Scale of development* – precedent exists for the granting of permission for solar farms of similar and much larger scale {Westmeath County Council Reg. Ref: 196168 (260 ha); ABP-302475 (152.8 ha in Co. Wexford); Laois County Council Reg. Ref: 17532 (141 ha); PL17.248146 (130 ha in Co. Meath); Meath County

Council Reg. Ref: RA170873 (129 ha); ABP-302681 (99 ha in Co. Kerry); and ABP-301321 (89 ha in Co. Wexford)}.

- *Site access* – site is accessed by existing private agricultural entrance and is owned by one of the development landowners. Further information included a more detailed surveyed drawing of the site entrance.
- *Contrary to proper planning and sustainable development of area* – results of noise, visual impact and glint and glare studies have informed the final design of the development and setback distances from nearby residents.
- *Perceived impact on Copper Coast UNESCO site* – submission from GSI notes that *"the proposed solar farm development has some areas within the Copper Coast UNESCO Global Geopark, whilst others are very close to the boundary… As climate change, climate change education and green tourism are aspects of one of the focus areas of UNESCO Global Geoparks, Geoparks encourage the use of sustainable and renewable energy."*
- GSI also confirms that their records show there are no County Geological Sites (CGS) in the vicinity of the proposed development and therefore no impact on the integrity of any CGS is envisaged.
- *Perceived impact on Waterford Greenway* – there is very limited visibility of any part of the site from the greenway.
- *Lack of guidelines* – Minister for Housing, Planning and Local Government states that the current planning code is sufficiently robust to assess developments of this nature.
- *Impact on local wildlife* – NIS, Ecological Impact Statement and Biodiversity Management Plan have been prepared for the site. Mitigation and enhancement measures proposed for local wildlife.
- *Public consultation* – carried out in advance of the submission of the planning application, including letters to all residents within 500m, a public event and suitable advertisement of planning application.

- *Impact on R675* – nearest publicly accessible location to substation is 550m from Viewpoint 9. Substation will blend with coniferous forestry and lies below horizon line of elevated lands to the north.
- *Health impacts of substations* – no specific evidence is provided within observation as to health impacts of substations.
- Dwelling located ~217m from proposed substation received planning permission in 1999 and remains incomplete and vacant. Substation is more than 400m from the nearest occupied residence.
- ESBN publication provides a suitable background to the issue of electric and magnetic fields arising from various levels of voltage – levels of Magnetic Flux Density will be minimal and well below international guidelines.
- ESBN operate more than 450 substations and thousands of kilometres of overhead and underground cabling nationally, much of which is in immediate proximity to densely populated residential areas.
- *Visual impact from Comeragh Mountains* – viewpoint from Mahon Falls car park is c. 7.3km from nearest solar panels and 9.5km from substation. Three additional viewpoints were assessed as imperceptible.
- *Working hours* – standard but applicant will adhere to whatever construction working hours deemed suitable by the Board.
- *Traffic impact* – in line with the conditions proposed by the Council, the applicant is committed to liaising with the District Engineer to agree suitable traffic management measures to be put in place for the construction phase.
- *Property devaluation* – no evidence or studies have been provided to substantiate this and development has been deemed acceptable in terms of policy and proper planning and sustainable development of the area.
- *Department Circular* - current status quo on many energy and infrastructure projects is to include for a 10 year permission. Applicant will be guided by any specific planning condition included by the Board.

- *Scale of substation in rural area* – Site Selection Criteria notes the presence of 110kV infrastructure. Indoor substation has been applied for to minimise perceived impacts.
- *Fire risk* – ESBN and EirGrid employ strict technical standards and requirements to be adhered to, including those relating to fire prevention and fire safety features.
- *Zoning* – substations are regularly permitted on agricultural lands. Proposed development is in a "preferred area" for wind turbines, significantly taller structures than that proposed.
- *Road safety* – note Council's planning conditions 5-8 for adjacent solar farm. Includes requirement to develop a Traffic Management Plan.
- *Planning duration* – Likelihood is that substation, ultimately becoming an asset of EirGrid, will remain in operation beyond the life of the solar farm. Requested that no operational duration be conditioned, as was the case under ABP-303568-19, ABP-303930-19 and ABP-303878-19.
- *Land classification & agricultural zoning* – refers to land classification system used in the UK for the planning of solar farm developments. Ireland does not have such a classification system. Refer to Inspectors' Reports on PL17.248939 and PL17.248028.
- *Adequacy of drawings* – applicant understands that required documentation has been submitted but any additional details be can be provided to the Board upon request.
- *PL09.303577* – refused due to its location within the Chair of Kildare Special Landscape Character Area. Applicant has demonstrated that current proposals for both solar farm and substation are both unobtrusive in terms of visual impact.
- *Regionally important aquifer* – noted in Flood Risk & Drainage Impact Assessment.
- *New bored water well* – proposed water supply is to service welfare facilities of intermittently onsite workers only.

- *Renewables increase cost of electricity* – "Wind Energy for a Euro – Cost Benefit Analysis of Wind Energy in Ireland 2000-2020" concludes that deployment of 4.1GW of wind generation capacity in Ireland between 2000 and 2020 will result in total net cost to consumers, over 20 years, of €63 million. Report also shows that higher penetration of renewables reduces wholesale electricity price, which offsets cost of subsidising the technology.
- Report also calculates that wind energy avoids 33 million tonnes of power sector CO_2 emissions and 137 tWh of fossil fuel consumption at a saving of €2.7bn. Addition of solar to the energy mix in Ireland will only serve to further enhance the benefits highlighted.
- *No evidence of grid capacity* – Mothel/ Curraghduff project (ABP-304651-19/ ABP-303930-19) is not intended to connect to the same line as the subject development.
- Applicant is now in receipt of formal grid connection contract from EirGrid for 95 MW confirming that line has capacity for connection applied for.
- Output of associated solar farm with range of 65-95MW has no material bearing on the size or impact of the substation.
- *Inadequacy of public notices* – prepared in line with the Planning and Development Regulations, 2001 (as amended). Ultimate ownership of substation by transmission systems operator is not a matter for public notices.
- *Inadequate plans* – red line planning boundary does not extend to public road. Level of details submitted with planning application has been deemed sufficient for similar planning applications, e.g. ABP-302731-18 and ABP-303568-19.
- *Environmental site context* – thorough assessment of the impacts of the proposal on the surrounding environment has been carried out.
- *Need for EIAR* – wide scale recontouring is not required for the proposed solar farm. Panels are installed to follow natural contours without need for regrading or recontouring.
- Development will include permeable unbound internal "access tracks" (same design as proposed under ABP-302681-18).

- *Traffic* – sightlines of 160m are available at Rathnaskilloge entrance.
- *Noise* – separation distances between development and nearby dwellings are based on thorough, industry standard assessments, including noise impact assessments. Noise impact assessment prepared to industry standards that were acceptable by the Board for other similar developments (ABP-302731-18).
- *Landscape* – indoor GIS solution limits visual impact and Rathnaskilloge substation will be ~550m from nearest publicly accessible location.
- *Archaeology* – one monument is located within the footprint of the solar farm but is approximately 700m south-east of the proposed substation. Buffer zones are recommended due to potential presence of archaeological remains.
- *Appropriate Assessment* – NIS covers overall development. Ecological pathways to Natura sites were identified and mitigation measures recommended with the ecologist, Wetland Surveys Ireland.
- Cumulative assessments have been carried out for all relevant development within the vicinity of the proposed development, i.e. Cooltubrid West Reg. Ref: 1796. Mothel solar development is >15km from the subject development.
- Nearby quarry development (Reg Ref: 19327) was refused without appeal.
- *Flawed business case* – solar PV is commonplace across Europe, including countries at similar latitudes, e.g. UK, Netherlands & Germany. Financial viability of the site is a matter for the developer and is not a material planning consideration.
- *Chemicals & solar panels* – cadmium and telluride are used in thin film solar PV panels which is not proposed in the adjacent solar farm development.
- *Sea spray on panels* – solar PV manufacturer design modules specifically for operation in coastal environments. Frequent washing of solar panels only required in arid climates. Estimated that panels will need to be cleaned once a year with water only.
- *Fire services training for battery storage* – refers to solar panel application.

- *Construction period impacts* – noise impact assessment looked at operational and construction noise. Construction noise shown to be below threshold values at all nearby receptors.

6.4. Applicant's Report

6.4.1. The planning application is accompanied by a Planning and Environmental Report that includes an EIA Screening determination and sets out the policy context; development description and site selection criteria; and pre-planning and public consultation details. The Report also incorporates the following assessments:

- Ecological Impact Assessment
- Landscape and Visual Impact Assessment
- Assessment of Archaeology and Cultural Heritage
- Noise Impact Assessment
- Flood Risk Assessment
- Assessment of Site Geology

6.4.2. A Natura Impact Statement and Biodiversity Management Plan is appended to the Planning and Environmental Report, as well as a Construction Environmental Management Plan and Traffic Management Plan.

7.0 Assessment

7.1. Having regard to the requirements of the Planning and Development Act, 2000 (as amended), this assessment is divided into two main parts, the planning assessment, and an Appropriate Assessment.

8.0 Planning Assessment

8.1.1. Planning permission is sought from the Board under Section 182A of the Planning and Development Act, 2000 (as amended) for a proposed electricity substation and ancillary infrastructure. The proposed development is for the purposes of connecting a solar farm to a 110kV overhead line that traverses the site at Rathnaskilloge, Co.

Waterford. The solar farm development has been appealed to the Board (ABP-305817-19), and is being assessed concurrently with this SID application.

8.1.2. It should be noted that, where appropriate, the overall project including solar farm and grid connection are addressed together within documentation accompanying both the SID application to the Board and the appeal case. In this regard, I am satisfied that there is sufficient information available to the Board to determine each case. In addition, a large number of the observations on this planning application relate to the overall solar farm project. A cumulative assessment is therefore carried out hereunder, where relevant, of the combined impact on the substation infrastructure and solar farm.

8.1.3. Having regard to the nature of the proposed development and the submissions on file, I consider that the following are the key issues to assessing this case:

- Development principle
- Requirement for EIA
- Landscape and visual impacts
- Impact on residential amenity
- Drainage and flooding
- Access and traffic
- Ecology
- Appropriate Assessment

8.2. Development Principle

8.2.1. Under the Waterford County Development Plan, 2011-2017 (as extended), all lands outside designated settlements and land use zoning maps are regarded as *"Agriculture 'A' – to provide for the development of agriculture and to protect and improve rural amenity."* The subject site is located in a rural area and is predominantly in agricultural use.

8.2.2. A solar farm or electricity infrastructure are not listed uses within the land use zoning matrix. Uses not covered may be allowed in accordance with the written provisions of the Development Plan. Appropriate Development Plan provisions that may allow

for the proposed solar farm and associated infrastructure include Policy ECD which seeks *"to facilitate appropriate renewable energy infrastructure and promote the use of renewable energy among businesses and households throughout Waterford County."* In this regard, it is recognised in the Development Plan that the green economy will yield significant results for businesses, particularly in rural areas including farmers.

8.2.3. The proposed development is also supported by Policy NF26 which *inter alia* seeks *"to facilitate improvements in energy infrastructure and encourage the expansion of the infrastructure at appropriate locations within the County…"* and *"to facilitate, where appropriate, future alternative renewable energy developments throughout the County that are located in close proximity to the National Grid Strategy improvements so as to minimise the length and visual impact of grid connections...".*

8.2.4. The proposed solar farm and associated grid connection is adjacent to the Dungarvan-Cullenagh/ Butlerstown 110kV overhead line, which traverses the site at Rathnaskilloge. Moreover, the Waterford City and County Renewable Energy Strategy 2016-2030 notes that County Waterford is in the top 15% in terms of solar resource in Ireland. Thus, the proposal is situated in an area with good solar potential that minimises the impact of the required grid connection.

8.2.5. Observers on this application submit that the proposal will give rise to an over-intensification of solar farms in areas zoned for agricultural use. Reference is made to the projection within the Waterford Renewable Energy Strategy of 84.1MW of solar energy for the county up to 2030 that would require a land mass of 168.2 hectares. There is also concern regarding the use of prime agricultural land for a solar farm and the fact that the proposed solar farm may account for all the County's solar energy projection up to 2030.

8.2.6. The projection contained within the Waterford Renewable Energy Strategy is not a limitation, and as noted in Section 4 above, there are permissions for solar farms in the county that in total are already well in excess of this projection. It should also be noted that since the preparation of the Renewable Energy Strategy, the Government's Climate Action Plan has been released with the aim of generating 70% of electricity from renewable sources by 2030. Increased levels of renewable

generation will therefore require increased projections and substantial new infrastructure, including solar farms.

8.2.7. With respect to concerns within submissions regarding the use of agricultural lands for solar panels, I note that the solar farm can continue to be used for grazing of sheep during its operational life and that the proposed use is reversible. There are no other permitted solar farms that would be easily viewed from the appeal site and thus the predominant use in the area will continue to be agriculture.

8.2.8. Overall, I would be satisfied that the proposed 110kV GIS substation and associated infrastructure for the purposes of connecting a solar farm to the national grid is acceptable in principle at this location and in accordance with all local and national policy regarding the essential need to increase renewable energy production. As recognised in the National Planning Framework, the transition to renewable sources of energy is an integral part of Ireland's climate change strategy as a means of reducing reliance on fossil fuels and this is reflected in National Policy Objective 55 which will *"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."* I consider that the proposed development will make an important contribution to the achievement of this objective.

8.2.9. A number of other issues have been raised by observers regarding the standard of application material, legal interest and right of way, public consultation, grid capacity, decommissioning and the absence of guidelines for solar farms. However, I am satisfied that these matters are adequately addressed.

8.2.10. Planning application material is up to a required standard and is sufficient for the Board to determine this case. The applicant has sufficient legal interest to make the application and the site is accessed by existing private agricultural entrance, which is owned by one of the development landowners. Public consultation in advance of the planning application was carried out with all residents within 500m of the proposed development and a public event was held. The planning application was also properly advertised. The issue of grid capacity will be agreed between the applicant and EirGrid and in this regard the applicant has confirmed receipt of a formal connection contract. Appropriate conditions will be attached to any grant of permission regarding the decommissioning and reinstatement of the site.

8.2.11. Finally, it is recognised that there are no specific guidelines for solar farms and associated infrastructure; however, there is guidance at local, regional and national level for renewable energy, all of which support the introduction of solar power.

8.3. Requirement for EIA

8.3.1. As noted under Section 5.7 above, the proposed development does not fall under any class of development listed within Part 2 of Schedule 5, and notwithstanding this, would not be likely to have significant effects on the environment in terms of any sub-threshold development. The preparation and submission of an Environmental Impact Assessment Report is not therefore required.

8.3.2. Notwithstanding this, it is considered within observations that the full project including grid connection may warrant EIA and that the splitting of the project into two parts avoids the need for EIA. An observer also considers that the proposed solar farm requires EIA under Class 3(a) of Annex II, i.e. *"industrial installations for the production of electricity, steam and hot water (projects not included In Annex I)"*. It is submitted that this class is general in nature and does not have to include all three forms of electricity production. By way of reference, it is submitted that under Class 9B it is not envisaged that *"industrial installations for carrying gas, steam and hot water"* must encompass all three forms.

8.3.3. I refer the Board to a recent judgement which found that solar farms in themselves are not a class of development for the purposes of EIA. Under Sweetman v An Bord Pleanála (IGP Solar Farm, Ballyhea, Co. Cork), Mr. Justice McDonald concluded that the generation of electricity (without the concomitant generation of heat and stream) does not fall within Class 3(a) of the Directive. Class 3(a) does not therefore extend to the generation of electricity unless the project in question also generates heat and steam. If the generation of electricity was covered by Class 3(a), there would be no need to include Class 3(h) [hydroelectric] and 3(i) [wind farms].

8.3.4. The observer makes the argument that elements of the proposed development could fall under other classes of development under Part 1 or Part 2 of Schedule 5. Reference is made to Class 10: Infrastructure projects (dd) *"all private roads which would exceed 2000 metres in length".* It is contended that the proposed solar farm

includes private roads with a total length of c. 7km and therefore EIA is required under this Class.

8.3.5. This issue has arisen before with solar farms and the definition of "private roads". The definition of 'road' is that set out in the Road Act, 1992:

> *(a) any street, lane, footpath, square, court, alley or passage,*
>
> *(b) any bridge, viaduct, underpass, subway, tunnel, overpass, overbridge, flyover, carriageway (whether single or multiple), pavement or footway,*
>
> *(c) any weighbridge or other facility for the weighing or inspection of vehicles, toll plaza or other facility for the collection of tolls, service area, emergency telephone, first aid post, culvert, arch, gulley, railing, fence, wall, barrier, guardrail, margin, kerb, lay-by, hardshoulder, island, pedestrian refuge, median, central reserve, channelliser, roundabout, gantry, pole, ramp, bollard, pipe, wire, cable, sign, signal or lighting forming part of the road, and*
>
> *(d) any other structure or thing forming part of the road and—*
>
> *(i) necessary for the safety, convenience or amenity of road users or for the construction, maintenance, operation or management of the road or for the protection of the environment, or*
>
> *(ii) prescribed by the Minister.*

8.3.6. Upgraded and new access tracks will be constructed to a width of approximately 4m with construction depths between 0.25m and 0.75m. Figure 2.6 illustrates the tracks comprising of road stone with geogrid/ geo textile layers where required that tie in with and reuse existing site track material. Interceptor drains are shown upslope and roadside drainage to control surface water flows is shown downslope of the access track. A note on the drawing states that *"final bearing tests to meet technical requirements of turbine/ crane supplier"*, which may suggest a generic drawing used for windfarm access roads. However, solar farm access tracks would not have the same load bearing requirements as windfarm access tracks.

8.3.7. The Board may wish to consider that the proposed access tracks over a total distance of 7km fall under Class 10 and therefore request an EIAR from the applicant. However, in view of the precedent set by other solar farm cases that

included access tracks in excess of 2km (ABP-301028-18, ABP-302681-18, PL17.248146), I agree that the proposed access tracks are materially different from a 'road' as defined under the Roads Act, 1993.

8.3.8. The observer also makes the case that the proposed development comprises rural restructuring of farmland and that recontouring within a farm holding above 5 hectares requires a consent application. Notwithstanding that this activity falls under the Environmental Impact Assessment (Agriculture) Regulations, 2011, with any rural restructuring requiring a screening application to the Department of Agriculture, Food and the Marine, the applicant has confirmed within responses on the concurrent application to the Board that widescale recontouring is not required for the proposed solar farm; panels are installed to follow natural contours without need for regrading or recontouring.

8.3.9. Having regard to the above, I am satisfied that the proposed solar farm, and the substation it will serve, are not of a class that requires EIAR or screening for EIAR. Furthermore, the substation and grid connection are also not of a class of development listed under Parts 1 or 2 of Schedule 5. As noted by the applicant with respect to O'Grianna V An Bord Pleanála, cumulative environmental impacts and project spitting relate to EIA cases only, and as no EIAR is required, it has no relevance to this case.

8.3.10. The observer also refers to the requirement for case by case examinations of 7th Schedule development by reference to the characteristics, location and impact of the development. Schedule 7 of the Planning and Development Regulation, 2001 (as amended) sets out criteria for determining whether development listed in Part 2 of Schedule 5 should be subject to EIA. As the proposed development and associated substation and grid connection are not listed under Part 2 of Schedule 5, a determination under Schedule 7 does not apply in this case. This also relates to the observer's submission regarding Class 15 of Part 2 which relates to projects listed in this Part.

8.4. **Landscape and Visual Impacts**

8.4.1. Observers refer to the subject development being located in a rural agricultural area with sloping topography along a scenic route and in view of cycling and walking

routes. It is considered that the proposal would be dominant on the landscape setting and character of the wider area because of its extensive scale and dispersed layout. There are also concerns regarding the industrial appearance of the solar farm development, and the bulk of the proposed substation building. It is submitted that the visual impact on the landscape character of Woodhouse Estate, Stradbally, Waterford Greenway and the Copper Coast have not been considered.

8.4.2. The planning application is accompanied by a Landscape and Visual Impact Assessment Report, which identifies the likely effects of the proposed solar farm and associated infrastructure on the landscape character and visual amenity of the area. A 5km study area is applied to the assessment which I consider to be appropriate for this type of development. The assessment is illustrated by a Landscape Character Plan which shows landscape sensitivity (Figure LVIA 1); Long Distance Routes and Tourist Attractions (Figure LVIA 2); a 7.5km Zone of Theoretical Visibility (Figure LVIA 3); and an Aerial Context of Layout (LVIA 4). A total of 16 Viewpoints were recorded from around the solar farm site showing the existing view, a wireframe view, a proposed view without planting, and proposed views with planting (years 1 & 5).

8.4.3. The assessment concludes with a landscape assessment of the potential effects of the proposed development on landscape fabric, landscape character and landscape designations, together with a visual assessment of the potential effects on the visual amenity of receptors in the study area. The LVIA also assesses the cumulative impact of the solar farm and grid connection.

8.4.4. The study sets out the activities and temporary features that would be in place during the 10 month construction phase of the overall development. There would be limited loss of ground vegetation and ground disturbance would be minimised by good site management and reinstatement. The main elements of the operational phase are described including the solar arrays, substation compound, battery modules, transformer and inverter stations (64 no.), spare parts container, 2.2m high deer fencing and gates, CCTV (max. 5m high poles at 200m intervals around perimeter), internal maintenance tracks (6,300m), seeding between solar panel of with native grasses and landscape enhancement measures, and periodical site visits for maintenance.

8.4.5. There were concerns presented in observations regarding the description of the proposed development including that relating to the substation building. However, I consider that all proposed works structures on site are adequately described for the purposes of landscape and visual assessment and in general terms for the Board to assess the overall impact of the proposed development.

8.4.6. Overall, I consider that the methods used by the applicant for viewpoint analysis, landscape assessment and visual assessment are satisfactory and in accordance with industry standards. Most of the photomontages are of the overall solar farm development and the substation and associated infrastructure does not appear prominently. However, I consider this to be an indication of the location of the substation in a low-lying part of the site and reasonably well concealed from public view. Viewpoint 9 from the R675 shows the main visual impact of the proposed substation element of the overall development. A more detailed assessment of the visual impact of the overall proposal is carried out in the concurrent report on the solar farm appeal (ABP-305817-19).

8.4.7. Observations have been submitted that the visual impact on Woodhouse Estate, Stradbally, the Copper Coast and Waterford Greenway have not been considered. Views of the overall development from each of these locations would likely be very limited or non-existent. A submission received by the applicant from GSI confirms that no impact on County Geological Sites is envisaged and whilst it is recognised that some areas of the proposed solar farm are within the Copper Coast UNESCO Global Geopark, such Geoparks encourage the use of sustainable and renewable energy.

8.4.8. Concern has also been expressed regarding the scale and bulk of the proposed substation building. I note, however, that this structure will have a dark green finish and will not appear any more obtrusive in the landscape than a new agricultural building. The substation and several of the battery storage units will be located on the lowest parts of the site and it is noteworthy that there is existing electricity infrastructure in the area. A development of this nature is better placed in proximity to existing overhead lines to avoid the visual impact of a longer grid connection. In this regard, an observer objects to the location of the proposal is a rural area rather than a brownfield site where grid connection infrastructure and land requirements would be more difficult to achieve.

8.4.9. There is a dwelling located approximately 217m from the proposed substation to the south-west. This dwelling received planning permission in 1999 and remains incomplete and vacant. The substation is more than 400m from the nearest occupied residence and will blend with the adjacent coniferous forestry. The applicant confirms that there are no imminent plans to fell nearby forestry. This will help to integrate the proposed structures into the landscape over time.

8.4.10. In conclusion to this section, I would be satisfied that the proposed development can be accommodated within this landscape without undue visual impact. I accept that the overall development will be extensive in scale and dispersed; however, the solar farm is a low-rise development in an undulating landform and the proposal mostly avoids the higher parts of the site. The overall development is also spread out over four arrays and at no place on the ground would the entire development be visible.

8.4.11. The proposed substation building will be 11.5m in height and the 110kV lattice steel towers will be 17.6m. Having regard to the location of these structures and surrounding vegetation, I would be satisfied that there will be no obtrusive impact. I note that the R675 is designated as a scenic route. However, I consider that this section of the R675 does not display any outstanding scenic features found along other sections of the Waterford coastline or towards the Comeragh Mountains. Views of the overall development from the greenway or other recreational routes or tourist points would also be extremely limited.

8.5. Impact on residential amenity

8.5.1. A number of issues have been raised in submissions concerning the potential impact of the overall solar farm development on residential amenity including visual dominance, glint and glare, noise and human health. These are considered in more detail under the concurrent appeal report for the solar farm (ABP-305817-19). This assessment addresses any impacts on residential amenity from the development of the substation and associated infrastructure.

8.5.2. It is submitted in observations that the substation should be sited much further away from homes. It is considered that there are links between living near substations and a range of health issues and there is the perception that the proposed development will devalue local property. Construction related impacts on residential amenity are

also concern, including working hours, construction vehicles and noise. As noted above, the nearest occupied residence is more than 400m from the substation.

8.5.3. The planning application is accompanied by a Noise Impact Assessment which analyses construction and operational noise at all noise sensitive receptors within a 1km study area of the overall solar farm site boundary. There is a total of 164 such receptors made up of residential and commercial properties.

8.5.4. Construction works and associated noise will be carried out during the day and is predicted to be below the daytime construction noise limit of 65dB $L_{Aeq, 1hr}$ at all noise sensitive locations. The Noise Impact Assessment also includes mitigation measures that will be incorporated into the construction phase to minimise noise nuisance. A condition will also be attached to any grant of permission requiring the submission of a Construction Management Plan prior to commencement of development. This will include details of intended construction practice for timing and routing of construction traffic, mitigation measures of noise, dust and vibration, and measures to deal with spillages.

8.5.5. Operational noise prediction modelling was carried out for the inverter/ transformer stations, battery storage modules and substation transformers. It was demonstrated that daytime and evening time limits are in accordance with Noise Guidance (NG4) and night-time limits are exceeded at four receptors. However, solar farms only operate during the daylight and noise emission will be highest at peak output. A number of mitigation measures are proposed that would guarantee compliance at all periods of the day and I consider that these can be implemented by way of an appropriate noise condition should the Board be minded to grant permission.

8.5.6. A number of issues have been raised within submissions suggesting that the proposed development could have implications for human health through electromagnetic fields, toxic materials and fire risk. I would be of the opinion that the proposed development would have negligible impacts on human health. The proposed development will be within EU electromagnetic field limits and all components will comply with EU safety legislation. In response to observations, the applicant highlighted that ESBN and EirGrid employ strict technical standards and requirements to be adhered to, including those relating to fire prevention and fire safety features. Notwithstanding this, the Construction and Environmental

Management Plan sets out emergency response measures that includes fire detection and suppression at the proposed battery storage units.

8.6. Drainage and flooding

8.6.1. It is submitted within observations that the nature of electricity use connected to the substation, batteries and inverter stations, etc. are highly vulnerable and incompatible in regard to flood water. It is considered that the proposed solar farm and infrastructure would comprise an incompatible high-risk vulnerable use in an area subject to flood risk.

8.6.2. The applicant refers to the Flood Risk and Drainage Impact Assessment submitted with the application, which illustrates that the substation is not on a flood plain. The substation is located on Flood Zone C and a justification test for such infrastructure is only required on Flood Zones A & B. The Flood Risk and Drainage Impact Assessment also concludes that the proposal will not increase flood risk away from the site during construction, operational and decommissioning phases. Furthermore, specific mitigation measures will result in a net reduction in surface water flow to sensitive receptors. These include filter drains and attenuation storage.

8.6.3. A conceptual drainage design is proposed to manage surface water run-off throughout the site and to maintain existing greenfield runoff rates. A permanent swale is proposed at the substation compound and roadside drainage and interceptor ditches will be retained for the operational phase where deemed necessary.

8.6.4. It was recommended within the Flood Risk and Drainage Impact Assessment that a Construction and Environmental Management Plan (CEMP) should be produced prior to construction to adequately protect from contamination. It should be noted, however, that a CEMP has been already been prepared for the proposed development and this document outlines key environmental management issues typically associated with the construction, operation and decommissioning of the solar farm and associated infrastructure. The existing drainage network is assessed, and proposals are included for the new drainage network, earthworks and environmental protection measures. The operational period drainage regime is also set out.

8.6.5. Overall, I would be satisfied that the applicant has submitted comprehensive information to allow the Board to adequately assess the drainage implications and any flood risk arising from the overall development. I am satisfied that it has been demonstrated that the proposed development will not increase flood risk outside the application site and specific measures will be put in place to contribute to a net reduction in surface water flow to sensitive receptors. Measures will also be put in place to prevent contamination of surface water from soil erosion or during the construction phase of the proposed development.

8.6.6. Observers have submitted concerns regarding the potential impacts associated with the cleaning of solar panels, the underlying aquifer and risk of groundwater pollution. The applicant estimates that the solar panels will be cleaned annually with water only. I would be satisfied that the proposed development will not give rise to any adverse impact on groundwater.

8.7. **Access and traffic**

8.7.1. Submissions have been made by observers on matters of access and traffic affecting the proposed development and surrounding road network. There are concerns regarding sightlines from site access, traffic hazard on the R675 and the impact of construction traffic.

8.7.2. The main site entrance is to the Rathnaskilloge array (site entrance 3). The applicant submitted site entrance plans in response to a further information request on the concurrent appeal case (ABP-305817-19), showing 160m sightlines at the access onto the R675. This was acceptable to the Planning Authority subject to conditions relating to the submission of a Construction Stage Management Plan that includes a construction traffic management plan; installation and maintenance of roadside drainage; and confirmation of the size of HGVs accessing the site.

8.7.3. I would be satisfied that the site can be accessed safety and without undue disruption to existing road users during the construction, operational and decommissioning phases of the development. I have inspected the location of the site access and consider that safe and appropriate means of access can be facilitated. I note that traffic volumes to the site during the operational phase will be

very low. I am also satisfied that the local road network is capable of accommodating construction delivery.

8.7.4. I propose that the attachment of a condition to any grant of planning permission requiring the submission of a Construction Management Plan to the Planning Authority prior to commencement of development that shall include details of the timing and routing of construction traffic to and from the construction site and associated directional signage, to include proposals to facilitate the delivery of abnormal loads to the site; measures to obviate queuing of construction traffic on the adjoining road network; and confirmation of the size of HGVs accessing the site.

8.8. **Ecology**

8.8.1. The planning application to the Board and concurrent appeal (ABP-305817-19) for the solar farm development are accompanied by an Ecological Impact Assessment and Biodiversity Management Plan, which assess the cumulative impact of the proposed development on ecology. An Appropriate Assessment Screening and Natura Impact Statement also assess the in-combination impacts of the solar farm and substation development on European Sites. Ecological matters pertaining to Appropriate Assessment are covered below under Section 9.

8.8.2. Section 4 of the Ecological Impact Assessment sets out the elements of the overall project that could give rise to ecological impacts on sensitive flora and fauna. Potential impacts during the construction phase include habitat loss and alteration from installation of panels; construction works leading to habitat loss, disturbance to fauna and deterioration of water quality; habitat loss at location of overhead line towers; watercourse crossing works at existing entrance to Rathnaskilloge and new entrance to Curraheen array; noise, vibration and light; sediment and hydrocarbon run-off from excavation and earthworks; and potential spread on non-native invasive species.

8.8.3. During the operational phase, potential impacts could occur through the presence of fencing, routine maintenance and artificial lighting. Site works during the decommissioning phase could also give rise to similar impacts to the construction phase.

8.8.4. An evaluation of the existing environment and potential impacts is carried out in Section 5 of the Ecological Impact Assessment. Designated sites are described and any pathways from the site are identified. European Sites are evaluated in more detail under Section 9.

8.8.5. Multidisciplinary ecological walkover surveys were carried out in March and July 2018 and the site was ecologically mapped in accordance with the Fossitt (2000) classification scheme. The proposed substation will be located within an area of species poor semi-improved wet grassland.

8.8.6. Badger activity was recorded on site and marsh and wet grassland habitat may support a diverse range of species, including Snipe and Curlew. The proposed solar farm occurs within an area of low to moderate suitability for bats. Table 5 of the Ecological Impact Assessment sets out mammal species within the 10km grid square within which the proposed development occurs. Red squirrel is not included. The presence of Pine Martin is considered unlikely.

8.8.7. In general, the overall site is deemed in the Ecological Impact Assessment to be of low value to mammal species of conservation concern. The applicant has indicated that the use of mammal fencing has previously been included for in grants of permission issued by the Board and could be condition for the proposed development.

8.8.8. Table 6 of the Ecological Impact Assessment includes the bird species recorded within and surrounding the overall development site during March and July 2018. Significant bird observations during targeted winter bird surveys are set out in table 7. The only red listed species recorded was the Yellowhammer during the March/ July 2018 surveys and Black-Headed Gull, Curlew and Herring Gull during winter surveys. Annex I species included the Chough and Whooper Swan. Habitat within the site is considered to be of low value to bird species of high conservation concern. Habitat such as treelines, hedgerow and marsh which are deemed to be of most value to birds will remain intact.

8.8.9. Drainage ditches and natural watercourses are likely to provide suitable habitat for frogs and possibly smooth newt. However, this habitat will be avoided and maintained during the operational phase. No invasive alien species were recorded

on site. Notwithstanding this, appropriate mitigation measures will be put in place to avoid the spread and introduction of such species.

8.8.10. Section 6 of the Ecological Impact Assessment also include mitigation measures for the construction and operational phases of the proposed development. I am satisfied that these measures will reduce the impact of the proposed development on ecology to non-significant levels.

9.0 Appropriate Assessment

9.1. The areas addressed in this section are as follows:

- Compliance with Articles 6(3) of the EU Habitats Directive
- Geographical Scope and Main Characteristics
- Screening the need for Appropriate Assessment
- The Natura Impact Statement and associated documents
- Appropriate Assessment of implications of the proposed development on each European Site

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

9.3. The proposed development comprises and 110kV electrical substation and ancillary structures and works to provide a grid connection to a solar farm with maximum capacity export of 65-95MW on a 109 hectare site to the north of Stradbally in mid Co. Waterford. The substation and solar farm are assessed as one overall project. The proposal is not directly connected with or necessary to the management of any European site and is therefore subject to the provisions of Article 6(3).

9.4. Geographical Scope and Main Characteristics

9.4.1. The proposed solar farm is located in a rural area comprising mostly of agricultural pastureland with nearby and adjoining forestry. The highest part of the solar farm site is to the north at Glen West and in general the surrounding area has a rolling topography with rivers and streams along valleys. Elevations throughout the overall site are between 50m and 110m OD.

9.4.2. The solar farm development is proposed on mostly agricultural lands across four arrays and over a total area of 109 hectares. Solar photovoltaic panels will be laid in rows over the existing surface on metal racks driven into the soil and elevated above the ground, thereby allowing vegetation to grow beneath. A 20mm gap between panels will allow rainwater to drain between the modules. Existing drainage will be used and enhanced where appropriate and the greenfield runoff rate from the site is not expected to increase.

9.4.3. The Faha River flows to the east of the Rathnaskilloge array and enters the sea at Ballyvooney Cove approximately 4.3km downstream. Ballyvooney Cove is surrounded by the Mid Waterford Coast SPA. The Rathnaskilloge River to the south of the Rathnaskilloge array is also a tributary of the Faha River.

9.4.4. The Tigh River flows parallel to the R675 to the south of the Curaheen array. A stream which flows through the Curraheen array enters the Tigh River and the Tigh River in turn forms a tributary of the Tay River, which enters the sea at Stradbally Cove. The confluence of the steam through the site and the Tigh River is approximately 5km upstream of Stradbally Cove, which is also surrounded by the Mid Waterford Coast SPA.

9.4.5. The solar farm will be provided with c. 7km of maintenance roads comprising 4m wide loose stone tracks with interceptor ditches and roadside drainage. The site will be surrounded by security fencing and the proposal also includes security lighting at the substation and CCTV.

9.4.6. The overall development will also include a GIS substation and compound, 2 no. 110kV overhead line towers and other electrical infrastructure including inverter and transformer stations and battery storage units. Power will be exported from the substation to the national grid via a buried grid connection cable to the 110kV

transmission line passing through the site. Shallow trenches (1m deep) will be excavated to accommodate underground wiring and an underground cable along the public road will connect the Curraheen array to the substation at Rathnaskilloge. No instream works are foreseen.

9.4.7. The proposed substation will require the stripping back of vegetated soil over an area of approximately 0.4 hectare. This soil will be stored and reused in landscaping and drainage runs, and settlement ponds will be installed, as necessary. Construction works for the substation will last approximately 6 months and the timeframe for the entire development will be 10 months. A temporary site compound will be located at the entrance to each array, with the main compound at the Rathnaskilloge array.

9.5. Screening the need for Appropriate Assessment

9.5.1. The first test of Article 6(3) is to establish if the proposed development could result in likely significant effects to a European site. This is considered stage 1 of the appropriate assessment process i.e. *screening.* The screening stage is intended to be a preliminary examination. If the possibility of significant effects cannot be excluded on the basis of objective information, without extensive investigation or the application of mitigation, a plan or project should be considered to have a likely significant effect and Appropriate Assessment carried out.

9.5.2. Having regard to the information and submissions available, the nature, size and location of the proposed development and its likely direct, indirect and cumulative effects, the source pathway receptor principle and sensitivities of the ecological receptors, the European Sites set out in Table 1 below are considered relevant to include for the purposes of initial screening for the requirement for Stage 2 appropriate assessment on the basis of likely significant effects. A 10km study area from the proposed solar farm is applied for this purpose, wherein a total of six European Sites are included (3 SACs & 3 SPAs). An observer considers that a 15km study area is appropriate; however, I consider this to be unnecessary having regard to the nature and scale of the proposed development.

9.5.3. European sites considered for Stage 1 screening:

European site (SAC/SPA)	Site code	Distance to solar farm	Connections (source, pathway, receptor)	Considered further in Screening (Y/N)
Mid-Waterford Coast SPA	004193	2.1 km	Potential connections	Y
Helvick Head to Ballyquin SPA	004192	9.8 km	No pathway	N
Dungarvan Harbour SPA	004032	8 km	No pathway	N
Comeragh Mountains SAC	001952	5.4 km	No pathway	N
Glendine Wood SAC	002324	7.4 km	No pathway	N
Helvick Head SAC	000665	9.8 km	No pathway	N

Table 1 – Summary Table of European Sites considered in Screening for Appropriate Assessment

9.5.4. Based on my examination of the NIS, together with other supporting information, the NPWS website, aerial and satellite imagery, the scale of the proposed development and likely effects, separation distances and functional relationships between the proposed works and the European sites, their conservation objectives, and taken in conjunction with my assessment of the subject site and the surrounding area, I conclude that a Stage 2 Appropriate Assessment is required for the following European Site in view of the conservation objectives of that site:

- Mid-Waterford Coast SPA

9.5.5. Table 2 below provides a screening summary matrix where there is a possibility of significant effects, or where the possibility of significant effects cannot be excluded without further detailed assessment.

Site name **Qualifying Interest feature**	**Is there a possibility of significant effects in view of the conservation objectives of the site?** **General impact categories presented**		
	Habitat loss/ modification	Water quality and water dependent habitats (pollution)	Disturbance/ displacement barrier effects
Mid-Waterford Coast SPA **Special Conservation Interest:** Cormorant (A017) Peregrine (A103) Herring Gull (A184) Chough (A346)	No	Yes The River Faha drains much of the eastern side of the site and discharges to the SPA c. 3.3km downstream. Watercourses that drain the western part of the proposed solar farm discharge to the River Tigh and River Tay, which also discharge to the SPA. Potential for sediment run-off and impacts on aquatic receptors downstream during construction. Potential run-off of hydrocarbons or other harmful substances leading to deterioration of downstream water quality.	Yes Potential for special conservation interest species being dependent on the solar farm site for foraging resulting in displacement impacts. Potential for collision risk with birds confusing solar panels with water, and with associated infrastructure such as overhead lines.

Table 2 Screening summary matrix: European Sites for which there is a possibility of significant effects (or where the possibility of significant effects cannot be excluded without further detailed assessment)

9.5.6. The remaining sites can be screened out from further assessment because of the scale of the proposed works, the nature of the Conservation Objectives, Qualifying and Special Conservation Interests, the separation distances and the lack of a substantive ecological linkage between the proposed works and the European sites.

9.5.7. There is no potential for the proposed solar farm, substation and associated works to cause direct habitat loss, fragmentation or disturbance in any of the Special Areas of Conservation screened out within the study area due to the location of the works outside of any such European Sites. Indirect terrestrial or aquatic habitat loss or degradation will not occur in all sites screened out due to the absence of hydrological connectivity and the separation distance between construction works, or any operational stage work, and these sites. There is also no potential for indirect/ ex-situ disturbance or displacement of animal species as the qualifying interests in SACs relate to habitats / plant species and rock / cliffs only.

9.5.8. The proposed solar farm and associated grid connection are outside all SPAs. Indirect terrestrial or aquatic loss, reduction or degradation or disturbance effects to the Special Conservation Interests of Helvick Head to Ballyquin SPA and Dungarvan Harbour SPA will not occur due to separation distances, the absence of hydrological connectivity, or the large downstream distance and dilution factors.

9.5.9. It is therefore reasonable to conclude that on the basis of the information on the file, which I consider adequate in order to issue a screening determination, that the proposed development, individually or in combination with other plans or projects would not be likely to have a significant effect on Comeragh Mountains SAC (site code: 001952), Glendine Wood SAC (site code: 002324), Helvick Head SAC (site code: 000665), Helvick Head to Ballyquin SPA (site code: 004192) and Dungarvan Harbour SPA (site code: 004032) in view of the sites' conservation objectives and a Stage 2 Appropriate Assessment for these sites is not therefore required. I am therefore satisfied that no additional sites other than that assessed in the NIS (Mid-Waterford Coast SPA) need to be brought forward for Appropriate Assessment. I confirm that no mitigation has been taken into account at the screening stage.

9.6. The Natura Impact Statement and Associated Documents

9.6.1. The application was accompanied by a Natural Impact Statement for the proposed solar farm and substation/ grid connection comprising an Appropriate Assessment Screening and a Stage 2: Natura Impact Statement dated April 2019. The NIS forms part of the Planning and Environmental Report submission with the planning application, which also includes an Ecological Impact Assessment, a Biodiversity Management Plan, a Construction and Environmental Management Plan and a Flood Risk and Drainage Impact Assessment.

9.6.2. In general, I am satisfied that the NIS for the proposed solar farm and substation/ grid connection adequately describes the proposed development, the project site and the surrounding area. The Appropriate Assessment Screening concluded that a Stage 2 Appropriate Assessment (NIS) was required. The NIS outlined the methodology used for assessing potential impacts on the habitats and species within the European Sites that have the potential to be affected by the proposed development. It predicted the potential impacts for the site and its conservation objectives, suggested mitigation measures, assessed in-combination effects with other plans and projects and identified any residual effects on the European site and its conservation objectives.

9.6.3. The NIS was informed by the following studies, surveys and consultations:

- Desktop review of existing datasets and published reports
- Two multidisciplinary ecological walkover surveys of the site during March and July 2018
- Ongoing winter bird surveys for the 2018/ 2019 winter period
- Detailed description of the existing ecological environment within and immediately surrounding the proposed development site as presented within the Ecological Impact Assessment.
- A habitat map of the area following the Fossitt (2000) classification scheme.
- Review of conservation objectives, site synopsis and site boundary information for European Sites within the study area (study area taken as 10km from construction works boundary).

- Review of planning documentation relating to the Cooltubbrid West Solar Farm

9.6.4. The NIS concluded that, subject to implementation of mitigation measures, that the proposed solar farm development at Rathnaskilloge will not adversely affect the integrity and conservation status of the Mid-Waterford Coast SPA in view of the conservation objectives for the site in light of best scientific evidence.

9.6.5. Having reviewed the NIS and the supporting documentation, I am satisfied that it provides adequate information in respect of the baseline conditions, clearly identifies the potential impacts, and uses best scientific information and knowledge. Details of mitigation measures are provided, and they are summarised in the NIS. I am satisfied that the information is sufficient to allow for appropriate assessment of the proposed development (see further analysis below).

9.7. Appropriate Assessment of implications of the proposed development on each European Site

9.7.1. The following is an assessment of the implications of the project (substation and solar farm), on the relevant conservation objectives of the European site using the best scientific knowledge in the field. All aspects of the project which could result in significant effects are identified and mitigation measures designed to avoid or reduce any adverse effects are examined and assessed.

9.7.2. I have relied on the following guidance:

- DoEHLG (2009). Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. Department of the Environment, Heritage and Local Government, National Parks and Wildlife Service.
- EC (2002) Assessment of plans and projects significantly affecting Natura 2000 sites. Methodological guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive 92/43/EC
- EC (2011) Guidelines on the Implementation of the Birds and Habitats Directives in Estuaries and Coastal Zones
- EC (2018) Managing Natura 2000 sites. The provisions of Article 6 of the Habitats Directive 92/43/EEC

9.7.3. **Relevant European site:** The following site is subject to appropriate assessment.

- Mid-Waterford Coast SPA (Site code: 004193)

9.7.4. A description of this site and its Conservation Objectives and Qualifying Interests, including any relevant attributes and targets for this site, is set out in the NIS and outlined in Tables 3 below. I have also examined the Natura 2000 data forms as relevant and the Conservation Objectives supporting documents for these sites available through the NPWS website (www.npws.ie).

9.7.5. **Aspects of the proposed development:** The main aspects of the proposed development that could adversely affect the conservation objectives of European site include;

- Disturbance/ displacement of foraging birds (ex-situ) during construction works and the operational phase of the proposed solar farm.
- Decrease in water quality via: surface water runoff, sediment entrainment or release; release of fuels/ oils/ chemicals, surface/ ground water quality impacting on the qualifying interests of the Mid-Waterford Coast SPA.
- Collision risk with solar panels and associated infrastructure.

9.7.6. **Table 3** summarises the appropriate assessment and site integrity test. The conservation objectives, targets and attributes as relevant to the identified potential significant effects are examined and assessed in relation to the aspects of the project (alone and in combination with other plans and projects). Mitigation measures are examined, and clear, precise and definitive conclusions reached in terms of adverse effects on the integrity of European sites.

9.7.7. Supplemental to the summary tables, key issues that arose through consultation and through my examination and assessment of the NIS are expanded upon in the text below:

Table 3

Mid-Waterford Coast SPA (Site code: 004193)

Key Issues:

- Water quality impacts
- Displacement impacts
- Collision risk

Conservation Objectives: https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004193.pdf

		Summary of Appropriate Assessment			
Conservation Objective	Targets & Attributes (as relevant)	Potential adverse effects	Mitigation Measures	In-combination effects	Can adverse effects on site integrity be excluded?
To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA: Cormorant (A017) Peregrine (A103) Herring Gull (A184) Chough (A346)	The favourable conservation status of a species is achieved when: - population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and - the natural range of the species is	*Water quality impacts* - River Faha and River Tay provide a potential pathway for harmful pollutants for the proposed solar farm site. - Cormorant may be associated with the freshwater element of both the River Faha and River Tay downstream of downstream of the proposed development and may therefore be potentially impacted by deterioration of water	- Instream works to be undertaken as per guidance within CEMP and outside of salmon spawning season. - Construction compounds located in area removed from sensitive habitats and watercourses. - Refueling to take place on designated areas and fuels to be stored in bunded units. Regular inspection for leaks and fitting of drip trays on plant and machinery.	- Assessed with smaller scale solar development at Cooltubbrid West, c. 2.8km north of proposed development. Above development linked to Mid-Waterford Coast SPA via two small streams - Best practice measures to protect water quality will be implemented and this proposal occurs on agricultural land of low value to SCIs of SPA.	Yes - SPA not designated for aquatic habitats, and in proximity to River Faha discharge points, the SPA comprises dry coastal terrestrial habitat (sea cliffs and dry grasslands). - Negligible impacts in terms of water quality even without mitigation having regard to the receiving environment, assimilation capacity of the marine water body and conservation objectives.

	neither being reduced nor is likely to be reduced for the foreseeable future, and - there is, and will - probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.	quality affecting prey items.	- Concrete washing of machines to take place off site and concrete pouring on dry days. - Stockpiling of materials during construction in designated areas away from watercourses and use of silt traps and silt curtains where necessary. - 50m buffer from watercourses for any concrete works, control buildings, transformer stations, site tracks or construction compounds. - 20m buffer from watercourses for other infrastructure (solar array tables, fencing, security cameras, trenching and cable works. - Sediment control measures to minimize run-off. - Surface water management plan to minimize potential impacts on downstream watercourses during construction and operation. - Existing drainage regime maintained as reasonably as possible. - Drainage design, earthworks, and environmental measures shall ensure that water	- Proposed Rathnaskilloge solar farm will not lead to significant adverse impacts on the SCI of SPA and therefore in-combination impacts will not arise.	

			quality and water levels of on-site drainage channels are not adversely affected.		
		Displacement impacts - Possible that SCIs listed for the SPA utilize habitat within and surrounding the proposed development site considering its scale and proximity to the SPA - Potential displacement impacts from noise and vibration during construction and habitat displacement during the operational phase. - Herring gull may potentially forage within grassland habitat and have been observed flying over site and foraging in suitable habitat in proximity.	No mitigation necessary		Yes - No suitable breeding habitat within or in close proximity to the proposed development site for any of the SCI species. - Absence of suitable habitat for Cormorant and Peregrine and low value habitat for Chough within the site - Farmland populations of Herring Gull are typically associated with ploughing activities and/ or slurry application. Species forage over wide areas and are not dependent on habitat within solar farm site – availability of more suitable habitat in the greater surroundings. No observations of Herring Gull feeding within the proposed development site during bird surveys (2018-2019).
		Collision risk - Potential for bird colliding with solar panels. - Potential that birds may confuse solar farm for open water body.	- Sufficient gaps and breaks between arrays longitudinally and transversely will enable birds flying over to		Yes - Little scientific evidence for fatality risks to birds associated with solar PV arrays (RSPB, 2014).

		- Bird collision more likely to be associated with infrastructure such as overhead lines (Harrison et al., 2016) - Potential impact on migratory bird flights from glint or glare.	differentiate solar array from natural body of water. - Solar PV modules will be industry non-reflective to enable birds to differentiate between the solar array and natural water bodies.		- DeVault *et al.,* (2014) found no obvious evidence of bird casualties arising from collisions with solar panels. - No evidence to suggest that glint or glare from solar arrays of the type and scale proposed would have any effect on migratory bird flights – issues not raised as a concern by RSPB in their policy on solar energy (RSPB, 2014). - Existing 110kV overhead line occurs in proximity to the proposed development site and therefore no new overhead line infrastructure is proposed. - Pole-set replacement with steel towers will not lead to additional collision risk for avifauna.
Overall Conclusion: Integrity test Following the implementation of mitigation, the construction and operation of this proposed development will not adversely affect the integrity of the Mid-Waterford Coast SPA in view of the site's conservation objectives. No reasonable scientific doubt remains as to the absence of such effects.					

Relevant European site: Mid-Waterford Coast SPA (Site code: 004193)

9.7.8. According to the Site Synopsis, the Mid-Waterford Coast SPA encompasses the areas of high coast and sea cliffs including land adjacent the cliff edge. Sea cliffs are the prominent habitat of the SPA and these are generally well vegetated by typical sea cliff species, with heath, improved grassland, unimproved wet and dry grassland and woodland occurring above.

9.7.9. It is noted that the site supports an internationally important population of breeding Chough, which is listed on Annex I of the Birds Directive. A survey in 1992 recorded 24 breeding pairs and a 2002/ 2003 survey recorded 20 pairs. Five flocks totalling 59 birds were recorded in 1992 and a flock of 24 birds was recorded in 2002/ 2003. The site also supports a nationally important population of Peregrine (10 pairs in 2002), and as recorded in 1999-2000 Cormorant (79 pairs) and Herring Gull (147 pairs). These four bird species represent the Special Conservation Interests for which the SPA is designated.

Baseline Ecological Conditions

9.7.10. The proposed development site is located as close as 2.1km to the north of the Mid-Waterford Coast SPA, with the farthest point being c. 5km from the SPA. The eastern part of the site drains to the Faha River, which enters the sea at Ballyvooney Cove. The nearest downstream part of the SPA is at a distance of 3.8m from the Rathnaskilloge array. The Curraheen array to the west drains to the Tigh River, a tributary of the Tay River, which in turn enters the sea at Stradbally Cove. The nearest downstream part of the SPA along this hydrological pathway is over a river distance of approximately 4.8km.

9.7.11. Multidisciplinary ecological walkover surveys were undertaken in March and July 2018 and habitat throughout the site was mapped in accordance with the Fossitt (2000) classification scheme. The predominant land classification throughout the site is Improved agricultural grassland (GA1). There are also smaller areas of conifer plantation (WD4), immature woodland (WS2), scrub (WS1), wet grassland (GS4), dry meadow and grassy verges (GS2), hedgerows (WL1), drainage ditches (FW4), treelines (WL2) and depositing/ lowland rivers (FW2).

9.7.12. Targeted monthly bird surveys undertaken during the 2018-2019 winter season included vantage point watches and walked transects. Site walkovers were conducted in March and July 2018 to record bird species.

9.7.13. Most of the bird species during the breeding season were recorded within treelines and hedgerows along the site boundary. Barn swallow, robin, mistle thrush and yellowhammer were among the species observed. The winter bird surveys recorded Herring Gull in low numbers flying over the eastern land holdings (76 observations). It is likely that Herring Gull utilise the farmland surrounding the site for foraging although no such sightings were recorded. Chough was heard on one occasion within the Curraheen array. Other birds of conservation concern recorded on site were Black-Headed Gull (13 observations), Curlew (5 observations) and Whooper Swan (1 observation).

9.7.14. Overall, I consider the surveys are appropriate having regard to the biodiversity of the area and adequate in terms of their content, duration and coverage. The baseline information is suitably up to date having regard to the lodgement dates of the planning application and the appeal submission dates.

Issues raised in submissions

9.7.15. A number of issues were raised within submissions regarding what is considered to be non-precise mitigation, in-combination impacts, development description and details, flight patterns and collision risk. Appropriate assessment screening is addressed in Section 8.5 above and in-combination effects are covered in Section 8.8 below.

Factors that can adversely affect the achievement of conservation objectives

9.7.16. There are factors arising from the proposed development, in-combination with other plans/ projects, that can adversely affect the achievement of the conservation objective for which the Mid-Waterford Coast SPA is designated. The conservation objective is to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA: Cormorant, Peregrine, Herring Gull and Chough.

9.7.17. The favourable conservation status of a species is achieved when its population dynamics data indicate that it is maintaining itself on a long-term basis as a viable

component of its natural habitats; the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future; and there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

9.7.18. The main potential impacts to the favourable conservation status of Cormorant, Peregrine, Herring Gull and Chough are water quality impacts, displacement impacts and collision risk. As noted above, the appellant and an observer are concerned that water quality impacts could arise through drainage proposals and the use of measures to control the release of sediments and pollution to watercourses. These issues and the potential pathways are clearly identified in the NIS, together with other potential impacts relating to water quality.

9.7.19. It is noted that the Cormorant may use the freshwater element of the Rivers Faha and Tay downstream of the proposed development and may therefore be adversely affected by deterioration of water quality affecting prey items. However, there would be negligible impacts on water quality even without mitigation having regard to the receiving environment and the assimilation capacity of the marine water body. Mitigation is nevertheless proposed in relation to construction works (timing of works, location of compounds, refuelling practice, use of concrete, buffers, sediment control, drainage, and surface water management).

9.7.20. The planning application is accompanied by a Construction Environmental Management Plan which sets out methodologies to minimise the risk of silt release from the construction phase and operational use of the site access tracks and facility. Details are also included on existing and proposed construction and operational drainage regimes, earthworks treatment and installation and protection of necessary environmental protection measures. A dedicated Pollution Prevention Clerk of Works will be employed full time on site to oversee implementation of CEMP environmental protection measures. The CEMP also includes an overview of construction works, a preliminary construction programme, and construction methodology including adequate details on site entrances and watercourse crossings.

9.7.21. The targets and attributes for the Special Conservation Interest species that potentially could be adversely affected by the proposed development are set out in

Table 3 above. The above mitigation measures will ensure that the proposed development will not adequately impact on water quality. The SPA is not designated for aquatic habitats and the SPA in proximity to the River Faha discharge point comprises dry coastal terrestrial habitats. Drawings accompanying the planning application show roadside drainage, interceptor drainage and silting pond locations and I consider that the installation of any silt control measures can be managed on site through the measures outlined in the CEMP. I am therefore satisfied that mitigation is clearly defined and appropriate in terms of the potential adverse impact on water quality. The proposed development will not interfere with the population dynamics and natural range of any of the Special Conservation Interest species.

9.7.22. In terms of displacement impacts, it is possible that Special Conservation Interest species utilise the habitat within and surrounding the solar farm site and could therefore be displaced by construction disturbance and by the solar farm itself during the operational phase. However, there is no suitable breeding habitat within or close to the solar farm site. Furthermore, no habitat exists on site for Cormorant and Peregrine, and habitat for Chough is considered to be of low value. Herring Gull may potentially forage within the site and have been observed flying over. However, farmland populations are typically associated with ploughing activities and/ or slurry application. Moreover, this species will forage over a wide area and is not dependent on the habitat within the solar farm site.

9.7.23. The issue of collision risk and impact of glare on the flight patterns of birds was raised within submissions. However, the NIS highlights that there is little scientific evidence of fatality risk to birds from solar PV arrays. Research by DeVault *et al.* (2014) found no obvious evidence of bird casualties arising from collisions with solar panels from over 500 surveys from solar farms. Notwithstanding this, there will be sufficient gaps between arrays and the modules will be non-reflective to enable birds to differentiate between solar arrays and natural water bodies. Bird collision is more likely to be associated with infrastructure and in this regard the proposed development includes the replacement of two wooden polesets with steel towers, which will not increase collision risk to avifauna.

9.7.24. In general, the habitats recorded on site are unlikely to support any of the Special Conservation Interest species for which the Mid-Waterford Coast SPA is designated. Furthermore, there is, and will probably continue to be, a sufficiently large habitat in

the wider area and in closer proximity to the SPA to maintain the Special Conservation Interest species on a long-term basis.

9.7.25. In conclusion, I am satisfied that with full and proper implementation of the above mitigation measures, it can be determined, beyond all reasonable and reliable scientific doubt, that the proposed development will not result in adverse effects on the integrity of the Mid-Waterford Coast SPA. The mitigation measures will address the source of any potential impacts and are adequate, in particular, to protect against sedimentation and pollutants arising from surface water run-off to various watercourses that drain to the coast.

9.8. In-Combination Effects

9.8.1. The proposed development comprises a new 110kV substation at Rathnaskilloge to connect a proposed solar farm to the 110kV transmission network which traverses the solar farm site. The 109 hectare solar farm is the subject of a concurrent appeal to the Board (ABP-305817-19) and will comprise of four arrays at Rathnaskilloge (38 ha), Glen East (14.5 Ha), Glen West (17.2 Ha) and Curraheen (39.3 Ha).

9.8.2. The NIS evaluates the in-combination impacts of the proposed solar farm and 110kV substation on the Mid-Waterford Coast SPA. This includes an assessment of the impact of connecting the separate Curraheen array to the proposed 110 kV substation at Rathnaskilloge via an underground cable along the public road.

9.8.3. In addition, the potential for in-combination impacts with a smaller scale solar farm development at Cooltubbrid, approximately 2.8km to the north of the proposed development is assessed. It is noted in the NIS that this development is also linked to Mid-Waterford Coast SPA via two small streams and best practice measures to protect water quality will be implemented throughout this proposal, which occurs on agricultural land of low value to the Special Conservation Interests of the SPA.

9.8.4. An observer submits that Appropriate Assessment screening does not consider the effect of other plans and projects for solar farms in Co. Waterford. I have analysed planning application data in the surrounding area, and I am satisfied that there are no other applications that merit in-combination assessment. This is a rural area within limited development taking place and the nearest other solar farms proposals within Co. Waterford are at significant distances from the subject site.

9.8.5. The potential for adverse effects due to in-combination effects with other projects and activities was excluded based on the following:

- Rathnaskilloge solar farm and grid connection will not lead to significant adverse impacts on the Special Conservation Interests of the SPA and therefore in-combination impacts will not arise.
- The proposal is located in a rural area with limited development taking place or proposed.
- The closest permitted solar farm at 2.8km is located on agricultural land of low value to the Special Conservation Interest species of the Mid-Waterford Coast SPA - best practice measures implemented at this site to protect downstream water quality on watercourses linked to the SPA.
- Other solar farms in Co. Waterford are located at significant distances from the subject site that will avoid in-combination effects.

9.9. Appropriate Assessment Conclusions

9.9.1. Having carried out screening for appropriate assessment of the proposed Rathnaskilloge solar farm and 110kV substation, it was concluded that it would be likely to have a significant effect on the Mid-Waterford Coast SPA. Consequently, an appropriate assessment was required of the implications of the project on the qualifying features of this site in light of its conservation objectives.

9.9.2. Following an appropriate assessment, it has been ascertained that the proposed development, individually or in combination with other plans or projects would not adversely affect the integrity of the Mid-Waterford Coast SPA, or any other European site, in view of the sites' Conservation Objectives. No reasonable scientific doubt remains as to the absence of such effects.

9.9.3. This conclusion is based on:

- A full and detailed assessment of all aspects of the proposed project and proposed mitigation measures in relation to the Conservation Objectives of the Mid-Waterford Coast SPA.
- Detailed assessment of in combination effects with other plans and projects.

- Identification and examination of the implications of the proposed development on Special Conservation Interest species found outside the boundaries of the European Site.
- No adverse effects to wintering or breeding Special Conservation Interest bird species of Mid-Waterford Coast SPA following the application of mitigation measures.
- Implementation of a Construction Environmental Management Plan and Biodiversity Management Plan.
- The demonstration, beyond reasonable scientific doubt, that with full and proper implementation of mitigation measures, the proposed development will not result in adverse effects on the integrity of the Mid-Waterford Coast SPA

10.0 Recommendation

10.1. I recommend that planning permission should be granted subject to conditions, for the reasons and considerations as set out below.

11.0 Reasons and Considerations

Proper Planning and Sustainable Development

Having regard to:

(a) the nature, scale and extent of the proposed development,

(b) the decisions made in respect of an appropriate assessment,

(c) Government target of 70% of national electricity generation to be from renewable sources by 2030,

(d) national and local policy support for developing renewable energy, in particular:

- the Government's Strategy for Renewable Energy,
- the Climate Action Plan 2019,
- the National Planning Framework 2018,

- the Regional Spatial & Economic Strategy for the Southern Region, 2020
- Policy INF 26 of the Waterford County Development Plan 2011 - 2017 as extended,

(e) the location of the proposed development,

(f) the distance to dwellings or other sensitive receptors from the proposed development,

(g) the planning history of the immediate area including proximity to the proposed solar farm. This development will serve as the grid connection for that development,

(h) the submissions made in connection with the planning application,

(i) the documentation submitted with the application, including the Appropriate Assessment Screening Statement, the Natura impact statement and the Planning and Environmental Report, and

(j) the Inspector's Report,

the Board considered that, subject to compliance with the conditions set out below, the proposed development:

- would not have an unacceptable impact on the character of the landscape,
- would not seriously injure the visual and residential amenities of the area,
- would not have an unacceptable impact on biodiversity,
- would make a positive contribution to Ireland's requirements for renewable energy, and
- would be in accordance with:
  - the Government's Strategy for Renewable Energy,
  - the National Planning Framework, 2018, and
  - Policy INF 26 of the Waterford County Development Plan 2011- 2017 as extended.

The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area.

Appropriate Assessment Stage 1

The Board considered the Screening Report for Appropriate Assessment, the Natura impact statement and all other relevant submissions and carried out an Appropriate Assessment screening exercise and an Appropriate Assessment in relation to the potential effects of the proposed development on designated European Sites. The Board noted that the proposed development is not directly connected with or necessary for the management of a European Site and considered the nature, scale and location of the proposed development, and the report of the Inspector.

The Board agreed with the screening assessment and conclusion carried out by the Inspector. The Board concluded that, having regard to the qualifying interests for which the sites were designated, namely the Mid-Waterford Coast Special Protection Area (Site Code: 004193) and having regard to the qualifying interests for which this site is designated, that significant effects could not be ruled out and that the carrying out of an Appropriate Assessment was necessary.

Appropriate Assessment Stage 2

The Board considered the Natura impact statement and all other relevant submissions and carried out an Appropriate Assessment of the implications of the proposed development for the Mid-Waterford Coast Special Protection Area (Site Code: 004193) in view of the site's conservation objectives. The Board considered that the information before it was adequate to allow the carrying out of an Appropriate Assessment.

In completing the assessment, the Board considered the likely direct and indirect impacts arising from the proposed development both individually or in combination with other plans or projects, the mitigation measures which are included as part of the current proposal and the Conservation Objectives for this European Site. In completing the Appropriate Assessment, the Board accepted and adopted the Appropriate Assessment carried out in the Inspector's report in respect of the potential effects of the proposed development on the aforementioned European Site, having regard to the sites' Conservation Objectives.

In overall conclusion, the Board was satisfied that the proposed development would not adversely affect the integrity of the Mid-Waterford Coast SPA (Site Code: 004193) or any other European Site in view of the sites' Conservation Objectives.

12.0 **Conditions**

1.	The development shall be carried out and completed in accordance with the plans and particulars lodged with the application, except as may otherwise be required in order to comply with the following conditions. Where such conditions require details to be agreed with the planning authority, the developer shall agree such details in writing with the planning authority prior to commencement of development and the development shall be carried out and completed in accordance with the agreed particulars. **Reason**: In the interest of clarity.
2.	The period during which the development hereby permitted may be carried out shall be 10 years from the date of this Order. **Reason**: Having regard to the nature of the proposed development, the Board considered it reasonable and appropriate to specify a period of the permission in excess of five years.
3.	The mitigation measures contained in the Natura Impact Statement which was submitted with the application shall be implemented in full. **Reason:** In the interest of clarity and the proper planning and sustainable development of the area and to ensure the protection of the European sites.
4.	The Biodiversity Management Plan shall be implemented in full and ecological monitoring progress reports in years 3, 6 and 9 post construction shall be submitted to the Planning Authority for written agreement. **Reason:** In the interest of clarity and the proper planning and sustainable development of the area and to protect the ecology of the area.

5.	All of the environmental, construction and ecological mitigation measures set out in the Planning and Environmental Report and other particulars submitted with the application shall be implemented by the developer in conjunction with the timelines set out therein, except as may otherwise be required in order to comply with the conditions of this order. **Reason**: In the interest of clarity and the protection of the environment during the construction and operational phases of the development.
6.	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: (a) the nature and location of archaeological material on the site, and (b) 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.
7.	a) No additional 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. Their location within the compound shall be submitted to and agreed in writing with the Planning Authority prior to commencement of work on site. **Reason:** In the interests of clarity, and of visual and residential amenity.
8.	Details of the materials, colours and textures of all the external finishes to the buildings shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. **Reason:** In the interest of visual amenity.
9.	Water supply and drainage arrangements, including the attenuation and disposal of surface water, shall comply with the requirements of the planning authority for such works and services. **Reason:** In the interest of public health.
10.	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: (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; (c) details of site security fencing and hoardings; (d) details of on-site car parking facilities for site workers during the course of construction;

	(e) details of the timing and routing of construction traffic to and from the construction site and associated directional signage, to include proposals to facilitate the delivery of abnormal loads to the site; (f) measures to obviate queuing of construction traffic on the adjoining road network; (g) measures to prevent the spillage or deposit of clay, rubble or other debris on the public road network; (h) details of appropriate mitigation measures for noise, dust and vibration, and monitoring of such levels; (i) 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; (j) off-site disposal of construction/demolition waste and details of how it is proposed to manage excavated soil; (k) details of on-site re-fuelling arrangements, including use of drip trays; (l) details of how it is proposed to manage excavated soil; (m) means to ensure that surface water run-off is controlled such that no deleterious levels of silt or other pollutants enter local surface water drains or watercourses. (n) confirmation of the size of HGVs accessing the site. 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. **Reason:** In the interest of environmental protection, amenities, public health and safety
11.	(a) During the operational phase of the proposed development, the noise level arising from the development, as measured at the nearest noise sensitive location shall not exceed:

	i An LAeqT value of 55 dB(A) during the period 0800 to 2200 hours from Monday to Saturday inclusive. [The T value shall be one hour.] ii An LAeqT value of 45 dB(A) at any other time. [The T value shall be 15 minutes]. The noise at such time shall not contain a tonal component. At no time shall the noise generated on site result in an increase in noise level of more than 10 dB(A) above background levels at the boundary of the site. (b) All sound measurement shall be carried out in accordance with ISO Recommendation R 1996 "Assessment of Noise with respect of Community Response" as amended by ISO Recommendations R 1996 1, 2 or 3 "Description and Measurement of Environmental Noise" as applicable. **Reason:** To protect the amenities of property in the vicinity of the site.
12.	All road surfaces, culverts, watercourses, verges and public lands shall be protected during construction and, in the case of any damage occurring, shall be reinstated to the satisfaction of the planning authority. Prior to commencement of development, a road condition survey shall be taken to provide a basis for reinstatement works. Details in this regard shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. **Reason:** In order to ensure a satisfactory standard of development.
13.	All other access arrangements to the site shall comply with the detailed standards of the Planning Authority for such works. **Reason:** In order to ensure a satisfactory standard of development.
14.	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.
15.	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.

Donal Donnelly
Senior Planning Inspector

27th November 2020