



An
Bord
Pleanála

Inspector's Report

ABP-304651-19

Development	Ten-year permission for a Solar Farm of up to 30MW located at two sites
Location	Mothel & Curraghduff, County Waterford
Planning Authority	Waterford City and County Council
Planning Authority Reg. Ref.	19183
Applicant(s)	BNRGN Mothel Ltd
Type of Application	Permission
Planning Authority Decision	Grant permission subject to conditions
Type of Appeal	Third Party
Appellant(s)	David & Pauline O'Keeffe & Others Marty & Bernadette Whelan Patrick Baldwin & Others Linda Power & Declan Kelly Zita & Paul Walsh Katherine & Kevin Power Patrick Cullen Sean Kelly

Andrea Cummins
Angela & Henry Skehan & Others
Sarah Hennebry & Others
Gerard Dunphy & Others
Vincent & Mary Kelly

Observer(s)

None

Date of Site Inspection

23rd August 2019

Inspector

Ciara Kellett

Inspector's Recommendation

Grant permission subject to conditions

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1.0 Introduction

- 1.1. This is a third-party appeal against the decision of the Planning Authority to grant permission for the development of a solar farm. The proposed solar farm will be connected to the grid via a new 110kV substation and ancillary infrastructure. A pre-application consultation process was held with An Bord Pleanála to determine whether or not the substation and ancillary infrastructure was deemed to constitute Strategic Infrastructure Development (SID). The Board determined that the substation and ancillary infrastructure was SID, and an application for approval was submitted directly to the Board on 14th March 2019. This subject appeal is being considered concurrently with that SID application (ABP Ref. 303930-19).

2.0 Site Location and Description

- 2.1. The location of the proposed development of the solar farm is located in the townlands of Curraghduff and Mothel near the village of Mothel in a very rural part of Co. Waterford. The village of Mothel is c.4.5km south of Carrick-on-Suir and close to the border of counties Kilkenny and Tipperary. The proposed solar farm development is located across two parcels of land identified as the 'northern parcel' in the townland of Curraghduff and the 'southern parcel' in the townland of Mothel, divided by a distance of c.1km. The R676 regional road runs to the west of the northern parcel in a roughly north-south direction. A local road serving the village of Mothel from the R676 runs to the south of both parcels. Both sites are bisected by the existing ESB 110kV Ballydine to Cullenagh overhead electricity line.
- 2.2. The northern parcel is described as being c.27Ha and the southern parcel as being c.11Ha. The northern parcel is c.1.3km to the north-west of Mothel village and the southern parcel is located to the east of Mothel village. Each land parcel is owned by a different landowner.
- 2.3. The lands are currently in agricultural use and there is evidence of cattle grazing across the sites. The land is flat to mildly undulating. Mature hedgerows and trees bound the sites. There are no watercourses within the sites. The Abbey Bishop stream runs alongside the south-western perimeter of the northern parcel and connects to the Joanstown River which is a tributary of the Clodiagh River. The

Lower River Suir SAC is c.2.5km at its closest to the south-east of the northern parcel and c.1km to the south-east of the southern parcel.

2.4. Appendix A includes maps and photos.

3.0 Proposed Development

3.1. It is proposed to develop a 30MW solar farm comprising photovoltaic (PV) panels on ground mounted frames laid out in arrays across an area of c.19.5Ha over the two land parcels of c.38Ha, identified as the northern and southern parcels. In summary the development includes:

- Solar PV panels and associated cabling and ducting
- 6 single storey inverter stations
- 24 Battery Energy Storage containers
- 2 onsite storage containers
- Access tracks, perimeter fencing and security gates
- Temporary construction compound/material storage areas
- Landscaping including new ecological zones and buffers
- Security CCTV

3.2. The solar panel modules will be fixed in position using pile driven galvanised steel framing. Where required, depending on ground conditions, some foundations may comprise a pre-cast concrete footing. They will be arranged to be in south facing rows ranging from 2 to 6m apart. The panels will be set c.0.5 to 1m above ground level at the lowest point increasing to a maximum height above ground to c.3m. The panels will be mounted typically at 15 – 25 degrees to the horizontal.

3.3. An area within the northern parcel will be developed for the purpose of battery energy storage of up to 60MW consisting of 24 no. containers typically 13m x 2.5m and 24 no. external transformers and inverter housing for the battery storage units.

3.4. The 6 central inverter stations will sit on a 250mm reinforced concrete slab. The inverter stations typically measure 7m x 2.5m x 3m high.

- 3.5. Access to the northern parcel is directly off the R676. The southern parcel is accessed from a local road located to the north of Mothel village. The fencing proposed is a meshed fence up to 2.45m in height using pressure treated timber posts at 6m intervals. There will be a 0.1m gap on the underside of the fence to allow for the passage of mammals.
- 3.6. The security CCTV poles are c.3m high and will be fixed in position located around the perimeter of the site. It is proposed to remotely monitor the site and the cameras will only be focused along the fence line and not towards any neighbouring dwellings.
- 3.7. It is proposed to connect both land parcels to each other by means of an underground cable connection. This cable will be at 38kV, as is the voltage of the cables within the site. The applicant considers that this cable is exempt from the requirement for planning permission and is not included as part of the application.
- 3.8. The proposed substation and ancillary infrastructure are located in the northern parcel and as previously noted are the subject of a SID application directly to the Board (ABP Ref. 303930-19).
- 3.9. Permission is sought for a period of ten years with an operational life of 30 years.
- 3.10. The application was accompanied by the following:
 - A Planning & Environmental Considerations Report
 - A Natura Impact Statement
 - Photomontages
 - Mandatory standard drawings and application forms.

4.0 **Planning Authority Decision**

4.1. **Decision**

- 4.1.1. The Planning Authority decided to grant permission subject to 22 conditions. Of note condition no.4a requires the applicant to submit a revised layout omitting solar panels in the northern parcel on lands indicated as 1.73 and 1.09, being panels located adjacent to identified Dwelling no. H37 in the Glint and Glare Report.

4.2. Planning Authority Reports

4.2.1. Planning Report

The Planner's Report is the basis for the Planning Authority's decision. In summary it includes:

- R676 Regional Road is a scenic route listed in the Development Plan and the area is zoned for agricultural purposes.
- One recorded monument (Ringfort WA003-047) is directly adjoining but outside the Curraghduff site.
- States the acceptability of the principle of development must be considered in the context of national, regional and local planning policy. When assessed against the policy backdrop, considers the development is acceptable in principle and will contribute towards increasing output of renewable forms of energy.
- Site is not within a sensitive landscape and the Landscape & Visual Impact Assessment submitted is thorough and images are representative of the existing landscape.
- VP3 is most notable post mitigation but considers the solar farm will appear well consolidated within the working rural context.
- Considers most notable physical landscape impact relates to the 110kV substation and battery storage compound within the northern parcel.
- All landscape impacts will be considerably softened by the proposed mitigation.
- References Glint & Glare analysis and inclusion of 53 dwellings within study area, of which 7 required further assessment. Detailed analysis determined the impact is either None or Low for all dwellings identified. Notes conclusion of study whereby there will be no substantial effects.
- Considers it necessary to omit the solar panels in the northern parcel adjoining residential property H37 by way of condition for reasons relating to residential amenity.

- Notes compensatory storage will be provided to replace any flood plain volume occupied by post frames.
- Notes Roads Department have no objection subject to conditions.
- Notes site boundary has been drawn to exclude monument in northern parcel and further recommends archaeological monitoring conditions.
- Concludes that development is acceptable and recommends that permission is granted subject to conditions.

The decision is in accordance with the Planner's recommendation.

4.2.2. **Other Technical Reports**

- **Roads Department:** No objection subject to conditions
- **Heritage Officer:** No objections

4.3. **Prescribed Bodies**

- **TII:** No observations to make
- **IAA:** No observations to make
- **OPW:** No response
- **Development Application Unit:** No response

4.4. **Third Party Observations**

There were 55 submissions received objecting to the proposal. The issues raised are similar to those in the appeal detailed in Section 7 below.

5.0 **Planning History**

From a review of the Council's online information, there are no planning applications of note in the vicinity. The majority of the applications relate to domestic or agricultural development. As previously noted the SID application for the development of the substation and ancillary infrastructure to support the development of the solar farm (ABP Ref. 303930-19) is being considered concurrently with the subject appeal.

6.0 Policy Context

National Planning & Development Context

6.1. National Planning Framework

6.1.1. Chapter 9 of the NPF addresses sustainability. It is stated that:

Ireland's national energy policy is focused on three pillars: (1) sustainability, (2) security of supply and (3) competitiveness. The Government recognise that Ireland must reduce greenhouse gas emissions from the energy sector by at least 80% by 2050, compared to 1990 levels, while at the same time ensuring security of supply of competitive energy sources to our citizens and businesses.

National Policy **Objective 55** seeks to promote renewable energy use and generation at appropriate locations to meet national objectives towards achieving a low carbon economy by 2050.

6.2. Government White Papers

6.2.1. The *Ireland's Transition to a Low Carbon Energy Future, 2015 – 2030* white paper was issued by the Department of Communications, Energy and Natural Resources in December 2015. This paper sets out a vision for transforming Ireland's fossil fuel-based energy sector into a clean, low carbon system by 2050. This paper supports and acknowledges the growing solar technology.

6.3. Climate Action Plan 2019

6.3.1. In June 2019 the Department of Communications, Climate Action and the Environment published *Climate Action Plan 2019*. This Plan seeks the achievement of 70% of national electricity generation to be from renewable sources by 2030. This renewable energy target will require up to 1.5GW of grid-scale solar energy production as part of this goal.

6.4. National Mitigation Plan

- 6.4.1. The National Mitigation Plan was published in July 2017. This first National Mitigation Plan represents an initial step on a pathway to achieve the level of decarbonisation required. It was prepared in accordance with the provisions of the Climate Action and Low Carbon Development Act 2015. It contains a series of mitigation measures and actions to prepare for the EU targets that Ireland will take on for 2030. Solar technology is recognised as contributing to renewable energy targets.

6.5. National Renewable Energy Action Plan

- 6.5.1. Ireland submitted the NREAP to the European Commission in July 2010. It sets out the targets for the share of energy from renewable resources. Ireland's overall target is to achieve 16% of energy from renewables by 2020. It states that the Government has set a target of 40% electricity consumption from renewable sources by 2020.

Regional Plans

6.6. Draft Regional Spatial & Economic Strategy (RSES)

- 6.6.1. This is only a Draft of the Plan and the opportunity to make a submission on the Plan closed on 8th March 2019. At the time of writing this Report, only a draft is available. However, in the Draft plan, Chapter 5 considers the environment. Within this chapter there are numerous Regional Policy Objectives (RPO) which seek to support sustainable renewable energy generation in the region.
- 6.6.2. Chapter 8 of Volume 1 considers Water and Energy Utilities. It notes that the region is particularly rich in renewable energy resources and contains significant energy generation infrastructure of national and regional importance.

6.7. Regional Planning Guidelines for the South East Region 2010 – 2022

- 6.7.1. It is a Strategic Goal to *support the development and improvement of key economic infrastructure, such as energy generation and transmission networks, including renewable energies and telecommunications, all of which are essential for the continued development of the region*

- 6.7.2. It is a Strategic Goal to develop *the Green Economy in rural areas; actively promoting the exploitation of wind energy and other forms of renewable energy as valuable regional assets in appropriate locations*

Local Development Plans

6.8. Waterford County Development Plan 2011 – 2017 (as extended)

- 6.8.1. Chapter 4 of the Plan addresses the Settlement Strategy. Chapter 6 addresses Economic Development. Chapter 7 of the Plan addresses Infrastructure. Chapter 8 of the Plan addresses Environment & Conservation.
- 6.8.2. Mothel is not identified in the Settlement Strategy for the County. It is a rural area with a sparse population.
- 6.8.3. Section 6.7 of the Plan refers to Rural Employment & Enterprise. It is stated that '*The Planning Authority will support and facilitate sustainable agricultural developments and improvements where the developments are considered in relation to their likely impact on the environment, landscape, character and amenity of the surrounding area*'.
- 6.8.4. Section 7.23 of chapter 7 considers Energy. It states that '*Waterford County Council recognises that the increased utilisation of the County's indigenous energy resources in conjunction with the reduction in use of fossil fuels is imperative to developing a sustainable future for the people of Waterford*'.
- 6.8.5. **Policy INF 26** seeks:
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.

6.8.6. Section 8.8 of chapter 8 considers Renewable Energy. Policy **ENV 10** seeks:

To facilitate and encourage sustainable development proposals for alternative energy sources and energy efficient technologies.

6.8.7. Appendix 9 of the Plan is a Scenic Landscape Evaluation. It identifies Scenic Route 13 as being the R676 road south from Clonmel to Lemybrien

6.9. Renewable Energy Strategy for Waterford City and County 2016 – 2030

6.9.1. The Strategy states that '*This Renewable Energy Strategy has been prepared for Waterford City and County in the context of EU and national renewable energy targets. Waterford has varied renewable energy resources with objectives to support the development of renewable energy*'.

6.9.2. Section 5 considers Solar Energy. It states that '*Waterford is in the top 15% in terms of solar resource in Ireland and therefore, subject to rigorous planning assessment, solar energy has good potential in Waterford*'. It is further noted that '*This Renewable Energy Strategy has included a projection of 84.1MW of solar energy for Waterford up to 2030*'.

6.10. Natural Heritage Designations

- Lower River Suir SAC (Site Code 002137) is c.1 - 2km south of the site.
- The Comeragh Mountains SAC (Site Code 001952) is c.8km to the south-west of the site.
- River Barrow and River Nore SAC (Site Code 002162) is c.25km to the east.

6.11. EIA Screening

6.12. The proposed development does not fall into a class of development contained in Schedule 5, Parts 1 or 2 of the Planning and Development Regulations 2001, as amended.

6.12.1. Furthermore, having regard to the nature and scale of the proposed development it is considered that the issues arising from the proximity to European Sites can be adequately dealt with under the Habitats Directive (Appropriate Assessment) as there is no likelihood of other significant effects on the environment. The need for environmental impact assessment can, therefore, be excluded at preliminary examination and a screening determination is not required.

7.0 The Appeal

7.1. Grounds of Appeal

The Council's decision to grant permission was appealed by 13 parties as listed on the front of this Report. Similar issues were raised by all parties and have been summarised as follows:

- Development will have detrimental effects on the agricultural environment and top-quality agricultural land will be repurposed for an unproven and potentially dangerous commercial enterprise.
- Health and wellbeing will be affected by the solar farm and the substation. One appellant expressed concern for her children's health and provided information on her particular circumstances.
- Sufficient consideration was not given by the Council to the concerns raised by the objectors. Not all objections were taken into account and only 35 acknowledgement letters are on the website thereby blocking some people's ability to appeal to the Board.
- It is out of context with the rural and scenic nature of this part of Waterford.
- Project Splitting is occurring due to the two separate planning applications.
- The cumulative effect of the development has not been considered.
- More than 120 people have signed an online petition and tens more signed a hard copy objecting to the proposal.
- Not in accordance with Development Plan standards.
- Information submitted is inadequate and incomplete.

- Viewing points selected by developer do not reflect views from residential homes.
- Many homes will be affected by glint & glare. Panels have not been selected so how is it possible to carry out a study. Individual submission refers to specific glint & glare concerns directly affecting amenities of her property.
- Wind noise will become a nuisance.
- Little consideration has been given to the restoration of the lands after the life of the development. The bond is unacceptably small.
- Request Board to refuse permission until National Strategy is in place.
- Solar development is still in the trial and error space and not sufficiently well proven technology.
- Devaluation of property due to the substation as well as the solar farm.
- This development will not benefit the local community and there was no meaningful engagement with the community.
- Risk of fire and explosion.
- Aquifer vulnerability is high here.
- The Abbey Stream which enters the Clodiagh River where much of the proposed run-off from the solar farm will be taken, is used by many farmers for 30-40km to water livestock and it is used as a drinking water source by Irish Water – the risk of contamination was not assessed.
- A very limited study of Flora & Fauna was undertaken and should have been over a minimum of two years.
- The SAC is only 2km away and local knowledge indicates that the sites have multiple underground springs – any disturbance to the ground could seriously jeopardise water quality.
- An Environmental Impact Assessment is required.
- No evidence has been provided that there is no impact on species in connected waterways.

7.2. Applicant Response

The applicant was provided an opportunity to respond to the appeals. In summary the response includes:

- The solar farm is not large scale and comprises two separate sites more than 1km apart. Categorising it as industrial can be simplistic and misleading. The panels stand no higher than a mature crop of maize.
- There is a strong legacy of visible energy infrastructure within the central study area.
- Regarding the scenic route, the entire area is not designated scenic and the presence of a solar development will not make the area any less scenic. The site is located in an area of landscape classed as having a 'normal' sensitivity.
- There are no sensitive, vulnerable or visually vulnerable areas occurring within the study area. The site is not located near the Comeragh Mountains but more than 5km away. The proposal will not markedly affect the extant landscape pattern.
- Visual impacts were assessed in accordance with Best Practice methodology. Production of LVIA involved a transparent assessment.
- Fact that the solar farm will be visible from some parts of the landscape should not preclude it. It is not warranted to include each and every location that has the potential to provide a view – selected views are intended to reflect the nature of the visual change from a range of different receptors – but all from the public realm – not select private property.
- Within the proposed substation, only the communications mast is visible and that is a fine lattice steel structure typical of many structures found throughout rural areas.
- With respect to Glint & Glare, the 7 dwellings that were subjected to further assessment found that the magnitude was deemed to be none in 3 houses, very low in two and low in remaining two houses. It was concluded that there will be no substantial nuisance effects from Glint & Glare.

- Any noise producing equipment is at a reasonable distance from sensitive receptors. Construction will be temporary. The 110kV transformer will be the main source of noise and it only operates when power is being produced, i.e. during daylight hours. Noise output is within relevant noise thresholds at the nearest residence.
- The panels are designed to withstand excessive wind speeds without the creation of noise or wind channelling.
- All three 'source-pathway-receptor' need to be present to pose a risk to groundwater protection and vulnerability. The solar farm is considered to be low risk in terms of source. There are no proposed discharges to ground, therefore the vulnerability of the aquifer does not arise. There are no downgradient wells or groundwater dependent ecosystems near the development.
- With respect to the flora & fauna surveys, the results of the habitat surveys were conclusive, therefore no additional surveys were required.
- References the NIS submitted with the application in terms of addressing the concerns raised about annex I habitat or annex II species. Protective mitigation measures restated.
- Benefits listed in the absence of typical farming activity.
- With respect to decommissioning it is stated that modern panels are silicon based which is inert; developer will only purchase panels from manufacturers who are registered with the PV cycle scheme; and, the scrap/recycle value of the raw materials exceeds the cost of removing them and therefore there is a high incentive to remove them at the end of the life.
- Addresses concerns with performance of solar farms – notes that analysis shows that a utility scale solar is cheaper than new conventional power generation.
- There is no evidence that property values will be impacted.
- Expect there will be a community gain in terms of employment.

7.3. Planning Authority Response

No submission was received from the Planning Authority.

7.4. Observations

No valid observations were received.

8.0 Assessment

8.1. Introduction

- 8.1.1. This is a planning application for a 10-year permission to develop a solar farm over 2 sites amounting to c.38Ha for an operational life of 30 years. As discussed previously this solar farm will connect to the grid by means of a substation and associated infrastructure which is the subject of a separate application to the Board. Following a pre-application consultation with the Board, it was determined that the substation and ancillary infrastructure constitutes Strategic Infrastructure Development (SID). Therefore, under Section 182A of the Planning and Development Act 2000, it is subject to a separate application process and does not form part of the development for which permission is sought under this appeal. That separate SID application was made directly to the Board (Ref. ABP-303930-19 refers).
- 8.1.2. It is noted that the potential impacts of the *Overall Development* were included as part of the Planning & Environmental Considerations Report and Natura Impact Statement. The same reports have been submitted for both applications. Therefore, I am satisfied that the Board has the necessary information before it to allow for a cumulative assessment of impacts for the *Overall Development*. I am also satisfied that taken together with my site inspection there is adequate information available on both files to consider the two proposals concurrently and to enable the Board to determine the impact of the schemes on the proper planning and sustainable development of the area.
- 8.1.3. Having regard to the information presented, I am satisfied that the main issues in this appeal are those raised in the grounds of appeal and I am satisfied that no other

substantive issues arise. The issue of appropriate assessment also needs to be addressed. The issues can be dealt with under the following headings:

- Principle of development
- Procedural matters
- Landscape & Visual Impact
- Glint & Glare
- Noise
- Biodiversity
- Water
- Other issues
- Appropriate Assessment

8.2. Principle of Development

8.2.1. The appellants query the permitting of what they consider amounts to ‘large-scale industrialisation’ of the Co. Waterford countryside. It is further contended that the high quality of the agricultural land has not been taken into account.

8.2.2. I concur with the Council’s Planner when it is stated that in considering the acceptability of the proposed development in an area zoned for agricultural purposes, it is necessary to assess the development in the context of national, regional and local planning policy. The proposal is for the generation of a renewable source of energy and I consider that all policy documents support such developments to assist in the transition to a low carbon economy, including Policy INF26 of the County Development Plan. Solar power is also acknowledged as being capable of being delivered relatively quickly and efficiently.

8.2.3. The appellants are of the opinion that the Board should not proceed further with the application until a National Strategy is in place with respect to solar farms. There are no guidelines specifically for solar farms, but there is guidance and policies for renewable energy developments at national, regional and local level. I have referred to renewable energy policies in section 6 above. Having regard to the policy support

at national, regional and county level, I am satisfied that subject to other normal planning considerations, the lack of specific national guidelines is not a reason for refusal in this instance.

- 8.2.4. With respect to the use of agricultural lands, this is not a permanent land use, and it is reversible. In addition, I note that other solar farms have referred to ongoing grazing by small animals (sheep etc.) during the operational life of the solar farm. While this is not specifically referred to by the applicant in this application, having regard to other applications and having viewed solar farms in operation in the north of the country, I am satisfied that the proposed development will not have a seriously negative impact on agricultural land or prohibit such uses in the vicinity.
- 8.2.5. Accordingly, I consider the proposal to be acceptable in principle and that furthermore, it would contribute to the diversity of sources of energy supply and hence the security of energy supply.

8.3. **Procedural Matters**

- 8.4. Having regard to the nature and scale of the proposed development, I consider it reasonable and appropriate to specify a period of permission in excess of 5 years namely 10 years, should the Board be of a mind to grant permission.
- 8.4.1. With respect to the production of an Environmental Impact Assessment Report (EIAR) as referred to by the appellants, solar farms are not a development class for which an EIAR is required from the applicant. It does not fall within Part 1 or Part 2 of Schedule 5 of the Planning and Development Regulations. I am satisfied that an EIAR is not required and I note that a similar conclusion has been reached by the Board on other solar farm developments.
- 8.4.2. Project Splitting is normally a term associated with avoidance of the production of an EIAR. As noted above, solar farms are not of a class that requires an EIAR or a screening for an EIAR with respect to the Planning and Development Regulations. The application for connecting the solar farm to the grid has been submitted directly to the Board under Strategic Infrastructure Development (SID) provisions of the Planning and Development Act. The applicant has submitted similar documents for that development. An EIAR has not been submitted with the SID application. As such, neither development requires an EIAR either alone or in combination.

Therefore, I am satisfied that project splitting has not occurred. With respect to the cumulative effect of both projects, I am satisfied that the Board has sufficient information before it to assess the cumulative impacts. As noted, the relevant documents submitted for both applications are almost identical and both files are being considered concurrently. I also note the appellants reference to O’Grianna v An Bord Pleanála in terms of cumulative environmental impacts and project splitting. This relates to EIA cases only and is not therefore relevant to this Case.

8.4.3. The appellants state that the Council did not give sufficient consideration to the substance of objections raised by the objectors. In addition, it is stated that they have facts to believe that not all objections were taken into account. They also state that only 35 acknowledgement letters are on the website. No further information has been provided by the appellants who make this point, with respect to identifying those persons who did not receive letters, nor have any facts been provided in terms of the submissions not being taken into account.

8.4.4. I note that 55 submissions were listed on the Council’s Planner’s Report and I can confirm to the Board that copies of 55 objections are on the file, as well as copies of 55 letters advising third-parties of the Council’s intention to grant permission. In the absence of any further information to the contrary, I am satisfied that all third-parties have been provided adequate opportunity to engage in the process.

8.5. Landscape & Visual Impact

8.5.1. The appellants refer to this area as being a scenic rural area near the Comeragh Mountains and used primarily for agricultural purposes. It is considered that the sheer scale of the development is out of context with the rural, agricultural and scenic nature of this part of the county.

8.5.2. The applicant considers that this part of Waterford has a ‘normal’ sensitivity classification and that there is a strong legacy of visible energy infrastructure within the central study area. The Landscape & Visual Impact report states that the study area assessed is a 5km radius. It is considered that the development will be difficult to discern beyond 5km and is not likely to give rise to significant landscape or visual impacts beyond 2km. The applicant states that there are no sensitive, vulnerable or

visually vulnerable areas occurring within the study area and makes reference to the scenic route along the R676.

- 8.5.3. I am of the opinion that the most notable physical landscape effect will occur from the excavation required for the construction of the 110kV substation and works as well as the battery storage area. It is proposed that the substation will be a permanent change to the landscape while the solar farm PV panels will have a defined life. The substation and battery storage area are located in the south-east corner of the northern parcel, away from the R676 road and shielded by substantial hedgerows and treelines already in existence.
- 8.5.4. Having visited the site and driven around the study area, I am satisfied there will only be fleeting glimpses of the northern parcel development from certain roads – the R676 being the most obvious as there is very little screening in place along the boundary with the R676. The southern parcel is not near any well travelled roads and is accessible from rural lanes only. I consider that additional screening is required to lessen the magnitude of the impact of the proposal on the landscape. This can be addressed by way of condition and I address this further below.
- 8.5.5. With respect to the visual impact, the applicant prepared 13 photomontages. I am satisfied that they are a reasonable representation of how the development will look and how it will be seen from the various viewpoints. I note that one of the appellants in particular is concerned about the view from her dwelling. I fully accept that her view will alter but there are two fields with associated hedgerows in between and having regard to all policies to increase renewable energy supplies, I am satisfied that this is not a reason to recommend a refusal of permission.
- 8.5.6. I draw the Board's attention to photomontage VP3 which is taken from the R676 Scenic Route. This is a view looking northwards towards the northern parcel. Having visited and driven this particular stretch of road, I acknowledge that there will be views of the panels and fleeting views of the communication mast having regard to the patchy hedgerow and the topography. However, the views that will likely be of most interest to tourists etc. will be in the other direction travelling south towards the Comeragh Mountains. Regardless because the development is visible is not a reason to recommend refusal of permission. Furthermore, within the general area there are 110kV and 38kV lines with associated wooden poles, as well as wind

turbines in the distance. Thus, while I acknowledge that the proposal will be visible from the R676, it is not wholly at odds with the surrounding landscape. However as noted with respect to the landscape above, I am of the opinion that additional landscaping is required to lessen the view from the R676 at this point. Additional screening can be provided on the site along the west and south-western boundary. I fully accept that this will not completely screen the development, but as noted I am of the opinion that just because there may remain fleeting glimpses is not a reason for refusal of permission.

8.5.7. I am satisfied that there are very few views of the southern parcel and it is not easily viewed from either the village of Mothel, Mothel Abbey or surrounding roads.

8.5.8. Thus, in conclusion, I do not consider that the proposal will cause a serious visual impact on the amenities of the area. I acknowledge that there will be views of the northern parcel remaining along the R676 following mitigation and there will be changed views from private dwellings in the immediate vicinity of the development, but I am of the opinion that with additional landscaping these views are acceptable and furthermore the development must be considered in terms of the national, regional and local policy documents which seek to encourage the development of renewable energy. I recommend that a suitable condition requiring additional semi-mature landscaping along the west and south-western boundary of the northern parcel should be appended if the Board consider granting permission.

8.6. **Glint & Glare**

8.6.1. The appellants express concern with the potential impact of glint & glare on their residential amenities. In addition, the Planning Authority recommended removing some panels adjacent to dwelling H37. I note that the applicant did not appeal this condition.

8.6.2. The applicant submitted a Glint & Glare assessment with the application. The assessment sets out the times of day and months of the year that glint and glare effects could theoretically be experienced at residential and road receptors within the study area. Receptors (house and road points) situated to the west of the solar array can only be affected by morning reflectance, when the sun is rising in the east. Receptors situated to the east of the site can only be affected by evening

reflectance, when the sun is setting in the west. In the absence of regulations or guidance as to acceptable levels of glint and glare effects, the applicant's consultant has established categories of effect to assist in the determination of the impact. In cases where the calculated total minutes per day for a dwelling receptor is less than 15 minutes and for a small number of days, less than 36 days, the magnitude of impact is deemed to be Very Low and has been assigned accordingly.

- 8.7. The Glint & Glare assessment considered that 53 dwellings were within the study area and following an initial analysis only 7 required further assessment to determine if there were impacts. The particular dwellings are identified in the report. The further detailed analysis concluded that following mitigation planting the impact is either 'none', 'very low' or 'low' for all the dwellings identified. The study concludes that there will be no substantial effects upon surrounding dwellings.
- 8.8. In terms of road receptors, route points have been positioned along all the potentially affected roads within the study area. A total of 143 receptor points were examined. The analysis identifies that glint and glare is theoretically possible along 10 route points which have been examined further.
- 8.9. A detailed assessment of each of the 10 route points was undertaken with consideration of the screening provided by existing and proposed vegetation. The analysis indicates that there is potential for glare for certain timeframes but that the glare is unlikely to present as anything more than fleeting glints to a passing motorist and that any glare will be oblique to the driving direction. It is further noted that a driver travelling along the roads in the study area may glance towards/at the reflecting panel, but their main focus is likely to be on the road ahead. It is further stated that hazardous impacts have the potential to occur as a result of unavoidable persistent solar reflectance rather than fleeting reflectance resulting from a sideways glance. Solar reflectance that is oblique to the direction of travel ($>30^\circ$ which is outside of the central field of vision for most people) is avoidable as a source of distraction and should not pose a hazard.
- 8.10. In terms of aviation receptors, it was determined that there is no potential for hazard glare effects at the aviation receptors which included Waterford Airport.
- 8.10.1. As stated the Planning Authority considers it necessary to omit certain solar panels within the two fields adjacent to dwelling H37 for residential amenity purposes. This

is done by way of condition no.4a of their grant of permission. It is unclear why PV panels in these two fields were identified by the Planning Authority for omission and there is no explanation provided as to why these fields in particular are chosen or if there is disagreement with the findings of the Glint & Glare assessment.

- 8.10.2. From a review of the study provided there are 4 dwellings where the magnitude of impact is 'low/very low' rather than 'none'. This indicates that there will be potential for glare nuisance at dwellings, albeit for extremely low number of minutes at particular times of the year. However, I note that solar panels are designed to absorb as much light as possible and reflect as little as possible to maximise their electricity generation. I also note that many documents state that the reflectivity of solar panels is similar to that of still water and significantly less than glass and steel. I am satisfied that with appropriate mitigation measures – including additional landscaping, the impact of glint and glare is acceptable.
- 8.10.3. I do not consider that the omission of certain panels is warranted or that it has been demonstrated that by omission of these particular panels, the impact will reduce to 'none' at the identified dwellings. With respect to proximity to dwelling H37, I note that the panels are behind the dwelling in the fields to the south-east and are well screened along the western boundary with the dwelling.
- 8.10.4. Thus, I recommend that condition no.4 is unnecessary.
- 8.10.5. With respect to the roads, I note that there is theoretically the potential to experience glare, however I am satisfied that these views will be intermittent and oblique to the driver's central field of vision.

8.11. **Noise**

- 8.11.1. Noise was raised as a concern in the appeals. Noise during construction will be temporary only and is stated as having a threshold of 65dB. In terms of operational noise, the main source will be the substation transformers. It is noted that these will only be operational when power is being produced – i.e. during daylight hours. Furthermore, I note the location of the substation to the south-east of the northern parcel and away from dwellings. The nearest dwelling is to the south and is shielded by farm buildings, fields and hedgerows. The noise output is stated as being within

relevant noise threshold limits. I am satisfied that an appropriate condition can be appended to a grant of permission to limit noise output during the operational phase.

- 8.11.2. With respect to the converters, I note that these are located centrally among the PV panels. In terms of the panels themselves and the issue of noise channelling, it is stated that due to the lattice type structure wind can pass freely under and between the structure.
- 8.11.3. I am satisfied that solar farms are not a noise intensive activity and once construction has completed there is very little noise generating equipment or activities. The panels themselves are fixed in place with no moving parts. The transformers are only active when power is being generated i.e. during daylight. The location of the substation and the central location of the inverters are unlikely to create a noise impact. Notwithstanding this, I consider an appropriate noise condition could be appended if the Board are of a mind to grant permission.

8.12. **Biodiversity**

- 8.12.1. A Natura Impact Statement was submitted with the application and is dealt with in more detail below. With respect to other biodiversity concerns, the appellants are of the opinion that a very limited flora & fauna study was carried out and consider it is commonly accepted that seasonal habitat surveys are required over a two-year period. In response to this the applicants restate what surveying was carried out in terms of flora & fauna. They state that the results of the habitat surveys were conclusive and subsequent targeted fauna surveys were not required due to the lack of significant findings.
- 8.12.2. I am satisfied with the findings and reports prepared by the applicant. These fields are in active agricultural use and there are no identified features of biodiversity significance that could be impacted by the proposed development. There is no indication that the site is a habitat for any protected or rare species.
- 8.12.3. The applicant states that the solar farm can provide a number of longer-term benefits to the stream quality as the after use of the site is low-intensity agricultural with reduced nutrient inputs. In addition, it is stated that the absence of more intensive farming activity will reduce soil compaction which should improve the soils water acceptance potential and run-off from the site.

8.12.4. In conclusion, I am satisfied that with appropriate conditions and mitigation measures that there will not be a significant adverse effect on the biodiversity of the area.

8.13. **Water**

8.13.1. Concerns are raised about the aquifer vulnerability in the area. The applicant refers to the source-pathway-receptor model. The applicant considers that the source being the solar farm and associated activities does not present a significant source of contamination. It is considered that the excavations are limited on site and the machinery is comparable in scale to existing farm activities and therefore the risk is low in terms of the potential source. I agree with the applicant in terms of the source being low risk. The construction of the substation has potentially the most impact, however, with the use of best practice construction methods and implementation of the mitigation measures as detailed in the NIS, I am satisfied that the risk is low.

8.13.2. As noted above, an NIS was submitted with the application which details the potential impact on the nearest Designated Sites and concludes that there will not be a significant impact on the Lower River Suir SAC. I have carried out an Appropriate Assessment below. One of the appellants referred to the use of the Clodiagh River for cattle and drinking water. I am satisfied that there will not be a significant impact on water quality as a result of the proposed development as demonstrated in the Appropriate Assessment.

8.13.3. In conclusion, I am satisfied that there will not be a seriously adverse impact on water or aquifer vulnerability.

8.14. **Other Issues**

8.14.1. Concerns were raised about health and wellbeing due to the siting and emissions from the solar farm. The applicant responded stating that all equipment associated with the proposal will be certified and in accordance with EU standards. I am satisfied that the development must comply with EU legislation with respect to EMF etc.

8.14.2. The appellants were concerned at what they considered to be an unacceptably small bond to ensure that the fields would be restored following the decommissioning of the development. The applicants state that the scrap value of the equipment

exceeds the cost of removing the materials and there will be a high incentive to remove the infrastructure. Accordingly, I am satisfied that with an appropriate bond as well as the financial incentive there will be suitable incentives to remove the equipment.

- 8.14.3. No specific evidence has been provided to indicate that there will be a local impact on property prices due to the existence of a solar farm, nor has any evidence been supplied to indicate that this is the case elsewhere. In addition, there is already energy infrastructure within the general area. Thus, while I acknowledge that the proposal is a change, it is not wholly at odds with the surrounding landscape.
- 8.14.4. The appellants do not consider that the open day which was held by the applicant was meaningful or that all local residents were made aware of it. However, I am satisfied that the applicant has complied with legislative requirements with respect to the planning process.
- 8.14.5. Concerns were raised that the panels constitute a fire or explosion risk. Having regard to the type of materials used in the solar panels and the mounting frames, I do not agree that the materials could be seen as a fire hazard. The components have to comply with EU safety legislation. This is the same for the electrical equipment.
- 8.14.6. Benefits to the local community are referred to. The appellants do not consider there are any benefits while the applicant considers there will be employment benefits. I am of the opinion that there will be minor benefits in terms of employment during construction, but these will be temporary only. During operation there is unlikely to be many specific community benefits. Benefits are at a wider level in terms of generation of renewable energy.

9.0 Appropriate Assessment

9.1. Introduction

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

- Compliance with Articles 6(3) of the EU Habitats Directive
- The Natura Impact Statement

- Appropriate Assessment

9.1.2. **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.

9.1.3. The application was accompanied by a Natura Impact Statement (NIS) which described the proposed development, the project site and the surrounding area. The NIS contained a Stage 1 Screening Assessment which concluded that a Stage 2 Appropriate Assessment was required. The NIS outlined the methodology used for assessing potential impacts on the habitats and species within several European Sites that have the potential to be affected by the proposed development. It predicted the potential impacts for these sites and their conservation objectives, it suggested mitigation measures, assessed in-combination effects with other plans and projects and it identified any residual effects on the European sites and their conservation objectives.

9.1.4. Having reviewed the NIS and the supporting documentation, I am satisfied that it provides adequate information in respect of the baseline conditions, does clearly identify the potential impacts, and does use best scientific information and knowledge. Details of mitigation measures are provided, and they are summarised in Section 6 of the NIS. I am satisfied that the information is sufficient to allow for appropriate assessment of the proposed development as well as the grid connection.

9.2. **Stage One - Screening**

9.2.1. I consider that the proposed development as described in Section 3 of this Report is not directly connected with or necessary to the management of any European site.

9.2.2. The Stage 1 Screening Report is set out in Section 3 of the separately bound document which accompanies the planning application. Using the source-pathway-

receptor model an examination of the potential effects of the project was undertaken (alone and in-combination) to identify what European sites and which of their qualifying interests, special conservation interests or conservation objectives were potentially at risk. This was required to determine the Zone of Influence (Zol) of the proposed development.

9.2.3. Based on the type of development the Zol is considered to be in the local vicinity, with the exception of hydrological linkages where the Zol has potential to be of an increased distance, particularly downstream. It notes that there are two European sites within the Zol of the site, both SACs. Table 3.1 in the Screening Report lists the designated sites located within the Zol and includes their qualifying interests, pathway and possibility of likely Significant Effects.

9.2.4. Table 3.1 includes summary descriptions for each European site. The sites considered within the Stage 1 Screening and the distances from the solar farm site and the substation are summarised below.

Site	Site Code & Designation	Approx. distance from site (km)
Lower River Suir	002137 SAC	2
River Barrow and River Nore	002162 SAC	25

9.2.5. Based on my examination of the report and supporting information, the NPWS website, aerial and satellite imagery, the scale of the proposed development and likely effects, separation distance and functional relationship 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 would conclude that a Stage 2 Appropriate Assessment is required for the European site namely the Lower River Suir SAC (Site Code 002137). Out of an abundance of caution I consider that the River Barrow and River Nore SAC (Site Code 002162) should also be subject to a Stage 2 Appropriate Assessment.

9.3. Stage Two – Appropriate Assessment

9.3.1. **Relevant European sites:** The Conservation Objectives and Qualifying Interests for these sites, are set out below.

Site Name	Qualifying Interests	Distance
<p>1. Lower River Suir (Site Code 002137)</p>	<p>Atlantic Salt Meadows <i>Glauco-Puccinellietalia maritima</i></p> <p>Mediterranean salt meadows <i>Juncetalia maritim</i></p> <p>Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation</p> <p>Hydrophilous tall herb fringe communities of plains and montane to alpine levels</p> <p>Old sessile oak wood with ilex and Blechnum in the British Isles</p> <p>Aluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> <i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i></p> <p>Taxus baccata woods of the British Isles</p> <p>Freshwater Pearl Mussel <i>Margaritifera margaritifera</i></p> <p>White Clawed crayfish <i>Austropotamobius pallipes</i></p> <p>Sea Lamprey <i>Petromyzon marinus</i></p> <p>Brook Lamprey <i>Lampetra planeri</i></p> <p>River Lamprey <i>Lampetra fluviatilis</i></p> <p>Twaite shad <i>Alosa fallax</i></p> <p>Salmon <i>Salmo salar</i></p> <p>Otter <i>Lutra lutra</i></p>	<p>2km</p>
<p>2. River Barrow and River Nore SAC (Site Code 002162)</p>	<p>Estuaries</p> <p>Mudflats and sandflats not covered by seawater at low tide</p> <p>Reefs</p> <p>Salicornia and other annuals colonising mud and sand</p>	<p>25km</p>

Site Name	Qualifying Interests	Distance
	<p>Atlantic salt meadows <i>Glauco-Puccinellietalia maritima</i></p> <p>Mediterranean salt meadows <i>Juncetalia maritimi</i></p> <p>Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation</p> <p>European dry heaths</p> <p>Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels</p> <p>Petrifying springs with tufa formation <i>Cratoneurion</i></p> <p>Old sessile oak woods with Ilex and Blechnum in the British Isles</p> <p>Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> <i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i></p> <p><i>Vertigo moulinsiana</i> <i>Desmoulin's Whorl Snail</i></p> <p>Freshwater Pearl Mussel <i>Margaritifera margaritifera</i></p> <p><i>Austropotamobius pallipes</i> (White-clawed Crayfish)</p> <p><i>Petromyzon marinus</i> (Sea Lamprey)</p> <p><i>Lampetra planeri</i> (Brook Lamprey)</p> <p><i>Lampetra fluviatilis</i> (River Lamprey)</p> <p><i>Alosa fallax fallax</i> (Twaite Shad)</p> <p><i>Salmo salar</i> (Salmon)</p> <p><i>Lutra lutra</i> (Otter)</p> <p><i>Trichomanes speciosum</i> (Killarney Fern)</p> <p><i>Margaritifera durrovensis</i> (Nore Pearl Mussel)</p>	

9.4. Lower River Suir SAC (Site Code 002137)

Brief Description of the Site

- 9.4.1. The Lower River Suir SAC consists of the freshwater stretches of the River Suir immediately south of Thurles, the tidal stretches as far as the confluence with the Barrow/Nore immediately east of Cheekpoint in Co. Waterford, and many tributaries including the Clodiagh in Co. Waterford, the Lingaun, Anner, Nier, Tar, Aherlow, Multeen and Clodiagh in Co. Tipperary. The Suir and its tributaries flow through the counties of Tipperary, Kilkenny and Waterford. Much of the system flows through Carboniferous limestone, though towards Waterford the geology changes to Old Red Sandstone and Ordovician bedrocks. The site supports a diverse range of habitats, including marsh, reedbeds, wet and dry grasslands, broad-leaved semi-natural woodlands, salt marshes, tidal rivers and estuarine channels. Substantial areas of improved grassland and arable lands are included for water quality reasons.
- 9.4.2. This site contains a range of Annex I habitats, including floating river vegetation, eutrophic tall herbs, alluvial forest, old oak woods, yew woods and salt meadows. The site is very important for the presence of a number of scarce and specialised Annex II animal species with particularly important populations of the fish species; Freshwater Pearl mussel, Salmon, Lamprey and Twaité Shad. Otter is widespread on the system, as is freshwater white-clawed crayfish (*Austropotamobius pallipes*).
- 9.4.3. The site supports two Annex I priority and five non-priority Annex I habitats. Old oak woodlands are also of importance at the site. Parts of the site have also been identified as of ornithological importance for a number of Annex I (E.U. Birds Directive) bird species.
- 9.4.4. Fishing is a main tourist attraction on stretches of the Suir and some of its tributaries, and there are a number of Angler Associations, some with a number of beats. Fishing stands and styles have been erected in places. Both commercial and leisure fishing takes place on the rivers.

Conservation Objectives

- 9.4.5. A copy of the detailed conservation objectives for the site are set out in Table 4.1 of the NIS, along with an evaluation as to whether there is potential for the conservation objectives to be affected by the proposed development. The overall aim of the

objectives is to maintain or restore the favourable conservation status of habitats and species of community interest.

9.4.6. I note that the Qualifying Interest *Water Courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation* has not been addressed in the table 4.1. This is assumed to be a typographical error and I address this qualifying interest in this Appropriate Assessment. I am satisfied that there is no potential for adverse effects on this QI given the nature and location of the proposed development, and the location of the habitat and its ecological characteristics.

9.4.7. Of the 15 habitats and species, based on the conservation objectives and an understanding of the works entailed for the project combined with its location, it was determined that 7 of the qualifying interests are outside the Zone of Influence.

Information on aquatic species (Sea Lamprey, Brook Lamprey, River Lamprey, Twaité Shad and Salmon) were noted to be in preparation or unavailable in the NIS. Subsequent to the submission of the NIS, the NPWS have published updated Article 17 Data, *The Status of EU Protected Habitats and Species in Ireland 2019*, which I have had regard to.

The remaining species are mobile and without further details on their distribution using the precautionary principle, it is assumed that they occur throughout the catchment of the SAC.

9.5. River Barrow and River Nore SAC (Site Code 002162)

Brief Description of the Site

9.5.1. This site which is located c.25km downstream of the development site consists of the freshwater stretches of the Barrow and Nore River catchments as far upstream as the Slieve Bloom Mountains, and it also includes the tidal elements and estuary as far downstream as Creadun Head in Waterford. The site passes through eight counties – Offaly, Kildare, Laois, Carlow, Kilkenny, Tipperary, Wexford and Waterford. The site includes the extreme lower reaches of the River Suir.

9.5.2. Both rivers rise in the Old Red Sandstone of the Slieve Bloom Mountains before passing through a band of Carboniferous shales and sandstones. The Nore, for a large part of its course, traverses limestone plains and then Old Red Sandstone for a

short stretch below Thomastown. Before joining the Barrow, it runs over intrusive rocks poor in silica. The upper reaches of the Barrow also run through limestone. The middle reaches and many of the eastern tributaries, sourced in the Blackstairs Mountains, run through Leinster Granite. The southern end, like the Nore runs over intrusive rocks poor in silica. Waterford Harbour is a deep valley excavated by glacial floodwaters when the sea level was lower than today. The coast shelves quite rapidly along much of the shore.

- 9.5.3. Overall, the site is of considerable conservation significance for the occurrence of good examples of habitats and of populations of plant and animal species that are listed on Annexes I and II of the E.U. Habitats Directive. Furthermore, it is of high conservation value for the populations of bird species that use it. The occurrence of several Red Data Book plant species including three rare plants in the salt meadows and the population of the hard water form of the Freshwater Pearl Mussel, which is limited to a 10 km stretch of the Nore, add further interest to this site.

Conservation Objectives

- 9.5.4. A copy of the detailed conservation objectives for the site are set out in Table 4.2 of the NIS, along with an evaluation as to whether there is potential for the conservation objectives to be affected by the proposed development. The overall aim of the objectives is to maintain or restore the favourable conservation status of habitats and species of community interest.
- 9.5.5. Of the habitats and species, based on the conservation objectives and an understanding of the works entailed for the project combined with its location, it was determined that 17 of the qualifying interests are outside the Zone of Influence. Information on aquatic species (Sea Lamprey, Brook Lamprey, River Lamprey, Twaité Shad and Salmon) were noted to be in preparation or unavailable. As noted above with respect to the River Suir SAC, subsequent to the submission of the NIS, the NPWS have published updated Article 17 Data, *The Status of EU Protected Habitats and Species in Ireland 2019*, which I have had regard to. Without further details on their distribution using the precautionary principle, it is assumed that they occur throughout the catchment of the SAC.

9.6. Potential Impacts on Key Species

9.6.1. The key sensitive receptors are considered to be aquatic with the exception of Otter which can be considered semi-aquatic. They are:

- Freshwater Pearl Mussel Lower River Suir SAC only
- White-clayed crayfish Lower River Suir SAC only
- Brook Lamprey Lower River Suir SAC only
- Sea Lamprey Lower River Suir and River Barrow and Nore SAC
- River Lamprey Lower River Suir and River Barrow and Nore SAC
- Twaite Shad Lower River Suir and River Barrow and Nore SAC
- Atlantic Salmon Lower River Suir and River Barrow and Nore SAC
- Otter Lower River Suir and River Barrow and Nore SAC

9.6.2. No direct impacts are predicted on any European site as the application site is not directly located within a Natura 2000 site. The main source of impacts are therefore threats to the aquatic environment, including those that have the potential to affect the species themselves within the aquatic environment or reduce the quality of the environment within which the species carry out part, or all of their life-cycles.

9.7. Potential Adverse Effects

9.7.1. As mentioned the proposed site is not located within or directly adjacent to any designated European site. There will be no direct loss, fragmentation or disturbance to any Annex I habitat or Annex II species (or supporting habitat) which are QI for the relevant sites.

9.7.2. The site is located in agricultural lands. The Abbey Bishop stream runs alongside the south-western perimeter of the northern parcel and connects to the Clodiagh River via the Joanstown River. The point at which the Joanstown River flows into the Clodiagh River is within the Lower River Suir SAC.

9.7.3. The potential indirect effects on the conservation objectives of the qualifying interests of the SACs are detailed in section 5 of the NIS. In summary, the integrity of the sites could be indirectly affected by the proposal through release of sediment and other

pollutants to surface water, movement and maintenance of vehicles, storage of materials adjacent to any dry or wet surface water drainage features, transportation or pouring of concrete, fragmentation of wildlife corridors due to fencing, loss of habitat and loss of breeding spaces. These potential impacts are mainly associated with the construction phase. Once construction works are complete operational phase impacts will be minimal.

9.8. Mitigation Measures

Mitigation measures are identified in Section 6 of the NIS under a number of headings, which include and can be summarised as follows:

Design Phase

- 9.8.1. Sensitive habitats were avoided where possible, including treelines, hedgerows, and a linear strip of wet woodland. No new watercourse crossings are proposed for the overall project and no in-stream works will take place as part of the grid or cable connections. A 10m ecological exclusion zone runs along the Abbey Bishop Stream. In addition, existing treelines and a strip of wet woodland will be avoided where possible. Avoidance of this habitat that is part of the riparian zone will further protect the aquatic environment and the species it supports.

Construction Phase

- 9.8.2. It is stated that best practice construction methods as set out in CIRIA Guidance will be implemented on site. A summary of measures is identified including:

- Preparation and implementation of a Construction Environmental Management Plan (CEMP)
- Appointment of Ecological Clerk of Works with clear roles and responsibilities.
- Management of Excavations
- Management of Silt
- Management of Potential Pollutants
- Monitoring of Water Quality in Receiving Watercourses including at least 6 months sampling in advance of construction works commencing
- Bio-security

Operation Phase

- A hydrocarbon interceptor will be installed at the substation site with regular inspection and maintenance
- Transformers and all fuel will be banded
- No chemicals that are deleterious to aquatic organisms are to be used in cleaning works

9.8.3. As set out above the applicant proposes a suite of measures aimed at reducing potential effects on water quality. I am satisfied that the solar farm works would not cause changes to the key indicators of conservation value, including water quality, hence there is no potential for adverse impact to occur on either species or habitat associated with the Lower River Suir SAC or the River Barrow and River Nore SAC.

9.9. Cumulative and in-combination effects.

- 9.9.1. In-combination effects with other developments in the area are also possible. As noted above in Section 5 other planning applications in the vicinity relate to small scale domestic and agricultural developments. No large-scale commercial developments were noted in the Mothel area. Existing windfarms in the catchment are identified.
- 9.9.2. As discussed previously this solar farm will be served by a substation and associated infrastructure subject to a separate planning application. Both applications included an Appropriate Assessment Stage 1 Screening Report and a Natura Impact Assessment to evaluate the potential impacts of the overall development (Solar Farm and SID Works) on the European Sites.
- 9.9.3. The potential impact sources which pose a risk to the qualifying interests of the sites are the reduction in water quality in receiving watercourses during construction and the potential for invasive plant species to spread to the habitats downstream during construction and operation.
- 9.9.4. With the mitigation measures referred to above, it is unlikely that any of the identified potential impact sources would result in any adverse effects on the integrity of the Lower River Suir SAC or the River Barrow and River Nore SAC, and therefore I am satisfied that no in-combination impacts arise.

9.10. Residual effects/Further analysis:

No significant residual effects are identified following implementation of the recommended mitigation measures.

9.11. Appropriate Assessment Conclusions

9.11.1. Having regard to the works proposed, the hydrological distance between the site and the European sites and subject to the implementation of best practice construction methodologies and the proposed mitigation measures, I consider that it is reasonable to conclude on the basis of the information on the file, which I consider adequate in order to carry out a Stage 2 Appropriate Assessment, that the proposed development, individually or in combination with other plans and projects would not adversely affect the integrity of the Lower River Suir SAC (Site Code 002137) or the River Barrow and River Nore SAC (Site Code 002162) or any other European site, in view of the site's Conservation Objectives.

10.0 Recommendation

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

11.1. Having regard to:

- the nature, scale and extent of the proposed development,
- the decisions made in respect of an appropriate assessment,
- Government targets of 70% of national electricity generation to be from renewable sources by 2030
- national and local policy support for developing renewable energy, in particular:
 - Government's Strategy for Renewable Energy,
 - Climate Action Plan, 2019,

- National Planning Framework, 2018,
 - Regional Planning Guidelines for the South East Region 2010 - 2022 and,
 - Policy INF26 of the Waterford County Development Plan, 2011-2017 as extended
- the location of the proposed development,
 - the distance to dwellings or other sensitive receptors from the proposed development,
 - the planning history of the immediate area including proximity to the proposed electrical substation and associated 110kV infrastructure required to connect ground-mounted solar PV generation to the electricity transmission and all associated ancillary site development works (Ref. ABP-303930-19),
 - the submissions made in connection with the planning application and appeal, and
 - the documentation submitted with the application, including the Appropriate Assessment Screening Statement, Natura Impact Statement and the Planning & Environmental Considerations Report.

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

- not have an unacceptable impact on the character of the landscape,
- not seriously injure the visual and residential amenities of the area,
- not have an unacceptable impact on biodiversity,
- make a positive contribution to Ireland's requirements for renewable energy,
- be in accordance with:
 - Government's Strategy for Renewable Energy,
 - the National Planning Framework, 2018 and
 - Policy INF26 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.

11.2. **Appropriate Assessment Stage 1**

11.3. 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, as well as 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 River Suir SAC (Site Code 002137) and the River Barrow and River Nore SAC (Site Code 002162) and having regard to the qualifying interests for which these sites were designated, that significant effects could not be ruled out and that the carrying out of an appropriate Assessment, was necessary.

11.4. **Appropriate Assessment Stage 2**

11.5. The Board considered the Natura Impact Statement and all other relevant submission and carried out an appropriate assessment of the implications of the proposed development for the River Suir SAC (Site Code 002137) and the River Barrow and River Nore SAC (Site Code 002162) in view of the sites' 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, in particular

- (i) likely direct and indirect impacts arising from the proposed development both individually or in combination with other plans or projects, specifically the adjacent proposed electrical substation and associated 110kV infrastructure required to connect ground-mounted solar PV generation to the electricity transmission and all associated ancillary site development works (Ref. ABP-303930-19), and other developments including agricultural activities,

- (ii) mitigation measures which are included as part of the current proposal,
- (iii) Conservation Objectives for these European Sites.

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 Sites, 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 European Sites in view of the sites’ Conservation Objectives.

12.0 Conditions

1.	<p>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.</p> <p>Reason: In the interest of clarity.</p>
2.	<p>The period during which the development hereby permitted may be carried out shall be 10 years from the date of this Order.</p> <p>Reason: Having regard to the nature of the proposed development, the Board considered it reasonable and appropriate to specify a period of the permission in excess of five years.</p>
3.	<p>The mitigation measures contained in the Natura Impact Statement which was submitted with the application shall be implemented in full.</p> <p>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.</p>

4.	<p>All of the environmental, construction and ecological mitigation measures set out in the Planning and Environmental Considerations 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.</p> <p>Reason: In the interest of clarity and the protection of the environment during the construction and operational phases of the development.</p>
5.	<p>a) The permission shall be for a period of 25 years from the date of the commissioning of the solar array. The solar array and related ancillary structures shall then be removed unless, prior to the end of the period, planning permission shall have been granted for their retention for a further period.</p> <p>b) Prior to commencement of development, a detailed restoration plan, including a timescale for its implementation, providing for the removal of the solar arrays, including all foundations, anchors, CCTV cameras, fencing and site access to a specific timescale, shall be submitted to, and agreed in writing with, the planning authority.</p> <p>c) On full or partial decommissioning of the solar farm, or if the solar farm ceases operation for a period of more than one year, the solar arrays, including foundations/anchors, and all associated equipment, shall be dismantled and removed permanently from the site. The site shall be restored in accordance with this plan and all decommissioned structures shall be removed within three months of decommissioning.</p> <p>Reason: To enable the planning authority to review the operation of the solar farm over the stated time period, having regard to the circumstances then prevailing, and in the interest of orderly development.</p>
6.	<p>a) No additional artificial lighting shall be installed or operated on site unless authorised by a prior grant of planning permission.</p> <p>b) CCTV cameras shall be fixed and angled to face into the site and shall not be directed towards adjoining property or the road.</p> <p>c) Cables within the site shall be located underground.</p>

	<p>d) The inverter/transformer stations shall be dark green in colour. The external walls of the storage containers shall be finished in a neutral colour such as light grey or off-white and the roof shall be of black slate or tiles.</p> <p>Reason: In the interests of clarity, and of visual and residential amenity.</p>
7.	<p>Before construction commences on site, details of the structures of the security fence showing provision for the movement of mammals at regular intervals along the perimeter of the site shall be submitted for prior approval to the Planning Authority. This shall be facilitated through the provision of mammal access gates designed generally in accordance with standard guidelines for provision of mammal access (NRA 2008).</p> <p>Reason: To allow wildlife to continue to have access across the site, in the interest of biodiversity protection.</p>
8.	<p>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:</p> <ul style="list-style-type: none"> 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. <p>The assessment shall address the following issues:</p> <ul style="list-style-type: none"> a) the nature and location of archaeological material on the site, and b) the impact of the proposed development on such archaeological material. <p>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</p>

	<p>archaeological requirements (including, if necessary, archaeological excavation) prior to commencement of construction works.</p> <p>In default of agreement on any of these requirements, the matter shall be referred to An Bord Pleanála for determination.</p> <p>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.</p>
9.	<p>The applicant shall appoint a suitably qualified ecologist to monitor and ensure that all avoidance/mitigation measures relating to the protection of flora and fauna are carried out in accordance with best ecological practice and to liaise with consultants, the site contractor, the NPWS and Inland Fisheries Ireland. A report on the implementation of these measures shall be submitted to the planning authority and retained on file as a matter of public record.</p> <p>Reason: To protect the environmental and natural heritage of the area.</p>
10.	<p>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.</p> <p>Reason: In the interest of public health.</p>
11.	<p>Prior to commencement of development, a comprehensive landscaping scheme including additional landscaping at the west (alongside the boundary with the R676 road) and south-western boundary of the northern parcel shall be submitted to and agreed in writing with the planning authorities.</p> <p>Reason: In the interest of visual amenity</p>
12.	<p>A schedule of landscape maintenance shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. This schedule shall cover a period of at least five years, and shall include details of the arrangements for its implementation.</p> <p>Reason: To provide for the satisfactory future maintenance of this development in the interest of visual amenity.</p>

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| 13. | <p>The construction of the development shall be managed in accordance with a Construction Management Plan, to include a Construction Traffic Management Plan, which shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. This plan shall provide details of intended construction practice for the development, including:</p> <ul style="list-style-type: none">a) Details of the site and materials compound(s) including area(s) identified for the storage of construction refuse;b) Details 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; andk) Means to ensure that surface water run-off is controlled such that no silt or other pollutants enter local surface water sewers or drains. |
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	<p>A record of daily checks that the works are being undertaken in accordance with the Construction Management Plan shall be kept for inspection by the planning authority.</p> <p>Reason: In the interest of amenities, public health and safety.</p>
14.	<p>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.</p> <p>Reason: In order to ensure a satisfactory standard of development.</p>
15.	<p>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:</p> <p>(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.]</p> <p>(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.</p> <p>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.</p> <p>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.</p> <p>Reason: To protect the amenities of property in the vicinity of the site.</p>
16.	<p>Prior to commencement of development, the developer shall lodge with the planning authority a cash deposit, a bond of an insurance company, or</p>

	<p>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.</p> <p>Reason: To ensure satisfactory reinstatement of the site.</p>
17.	<p>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.</p> <p>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.</p>

Ciara Kellett
Senior Planning Inspector

3rd September 2019