



An  
Bord  
Pleanála

## Inspector's Report ABP 303821-19

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<b>Development</b>	10-year permission for 100MW battery energy storage facility in 34 metal containers and associated works.
<b>Location</b>	Kellistown East, County Carlow.
<b>Planning Authority</b>	Carlow County Council
<b>Planning Authority Reg. Ref.</b>	1823
<b>Applicant(s)</b>	ENGIE Developments Ireland Ltd
<b>Type of Application</b>	Permission
<b>Planning Authority Decision</b>	Grant permission
<b>Type of Appeal</b>	Third Party
<b>Appellant(s)</b>	William Rooney
<b>Observer(s)</b>	<ol style="list-style-type: none"><li>1. Jennifer Murnane O'Connor</li><li>2. Paul Rooney</li><li>3. Scoil Phadraig</li><li>4. Carmel McCormack</li><li>5. Peter Sweetmen</li></ol>
<b>Date of Site Inspection</b>	25 <sup>th</sup> July 2019
<b>Inspector</b>	Hugh Mannion

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## 1.0 Site Location and Description

- 1.1. The site of the proposed development has a stated area of 1.97ha and is located at Kellistown East, County Carlow. The site is in pasture and silage may have been recently cut on it. Agriculture is the dominant land use in the area. Access is off a local road (L3046) which has a junction with the N80 (Wexford to Carlow) about 5 kms to the southwest. Carlow town is 8kms by road to the northwest, Rathoe village is about 1km to the east and Tullow is 5.5kms to the east.
- 1.2. There is a derelict house on a Y junction on the public road within a few metres the site access but there are no houses on the site boundary. Across the north-western boundary which is comprised of trees/shrubs and a drainage ditch, is an existing electricity substation which is accessed over a private lane which has a junction with another local road to the west of the application site. This other local road has significant ribbon residential development on it.

## 2.0 Proposed Development

- 2.1. A 10-year permission is sought for up to 100MW battery energy storage facility that will provide energy services to the national grid.
- 2.2. The development comprises the construction and operation of up to 34 metal containers to store up to 100mw (13.2 tones of lithium ion) sealed battery cells each with entrances, fire suppression systems, heating, ventilation and air conditioning systems, inverters, control systems, other electrical components, security lighting and ancillary infrastructure and all associated works including security fencing, landscaping and ancillary grid infrastructure on lands at Kellistown East, County Carlow.

## 3.0 Planning Authority Decision

### 3.1. Decision

Grant permission with conditions.

Condition 2 granted an extended period of 10 years to the lifetime of the permission. Condition 3 granted an operational lifetime of 25 years from the date of commissioning of the facility.

Condition 12 required measures to prevent water pollution.

### 3.2. **Planning Authority Reports**

#### 3.2.1. Planning Reports

After submission of further information the planner's report recommended a grant of permission as provided for in the manager's order.

#### 3.2.2. Other Technical Reports

The **area engineer** reported no impact on water services, required that no water to drain to road, and that roadside drainage should not be altered by the proposed development.

### 3.3. **Transport Planning Section** recommended a grant of permission.

The planning authority's **Environment Section** sought Further Information in relation to electromagnetic force impacts (EMF), details of fire suppressant systems to be used on site in the event of fire, baseline noise monitoring and an assessment of noise impacts in accordance with EPA Guidelines.

Subsequent to the submission of further information the Environment Section commented that the further information was reasonable, that the closest electrical component was 120m from the public road and no EMF impacts are predicted.

Further details in relation to the firefighting water storage tank and the surface water attenuation tank are acceptable, soiled water from concrete areas will be properly treated. Construction phase suspended solids control measures are acceptable as are the arrangements for preventing hydrocarbon release during refuelling. The Environment Section's report recommended conditions in relation to noise, EMF emissions at the boundary, surface water and firefighting water pollution control (no instream works, a buffer of 5m along the northern boundary, silt fences, prevention of spills to any water course and good construction practice).

3.4. **Irish Water** reported no objection.

**A/Chief Fire Office** sought further information in relation to fire safety within the completed development.

The **Irish Aviation Authority** reported that it had no comments to make.

The **Health Service Executive** reported no objection to the proposed development.

The **Department of Culture, Heritage and the Gaeltacht** reported no comments on the application.

**Inland Fisheries** Recommended requesting further information in relation to the treatment of firefighting water to prevent pollution in the Burren River, prevention of other chemical/oil leaks and controls on the release of suspended solids from the site.

## 4.0 **Planning History**

4.1. There is no relevant planning history for the site.

4.2. The ESB substation on the opposite side of the was granted permission under planning reference 93/139.

## 5.0 **Policy and Context**

### 5.1. **National Policy**

5.1.1. Under the terms of the Paris Agreement (ratified in November 2016) – Ireland has undertaken to reduce greenhouse gas emissions by 20% - as measured between 1990 levels and 2030 levels.

5.1.2. “A Roadmap for Moving to a Competitive Low Carbon Economy in 2050” – is a European Commission document highlighting the need for urgent and significant investment in renewable energy, low carbon technology and grid infrastructure.

5.1.3. The White Paper on “Ireland’s Transition to a Low Carbon Energy Future (2015-2030)” sets out a framework to achieve the statutory targets set out by the EU. The target of 16% of energy consumption from renewable sources by 2020, is included. There are energy-efficiency targets also. Para 161 states - “Electricity storage is

expected to play an important role in facilitating the development of intermittent renewable energy technologies like wind, solar PV and ocean energy. The EU's Energy Roadmap 2050 confirms that storage technologies remain critical and that future integration of renewable energy sources will depend on increased storage capacity. Electricity storage can be deployed in a number of circumstances in Ireland including at grid-scale and at consumer level”.

- 5.1.4. The National Renewable Energy Action Plan details targets for the share of energy from renewable resources to be consumed in transport, electricity and heating & cooling by 2020.
  - 5.1.5. The Eirgrid strategy document Grid 25 (published in 2008), indicates plans for upgrading the transmission grid up to 2025. Battery storage is considered an important element in helping to develop the grid.
  - 5.1.6. The National Planning Framework – Project Ireland 2040, indicates National Strategic Outcome No. 8 to be “Transition to a low carbon and climate resilient society”. At p.147, the document states- “New energy systems and transmission grids will be necessary for a more distributed, more renewables focused energy generation system...The development of onshore and offshore renewable energy is critically dependent on the development of enabling infrastructure including grid facilities”. Under the heading ‘Green Energy’, it is an Objective to- “Reinforce the distribution and transmission network to facilitate planned growth and distribution of a more renewables focused source of energy across the major demand centres”.
- National Policy Objective 54: 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.
- National Policy Objective 55: Promote renewable energy use and generation at appropriate locations within the built and natural environment to meet national objectives towards achieving a low carbon economy by 2050.
- 5.1.7. Under the National Development Plan 2018-2027, some €21.8 billion will be allocated to achieving Strategic Outcome No. 8. Some of this money will be utilised to roll out the New Renewable Electricity Support Scheme.

## 5.2. Regional Planning Guidelines

The South-East Regional Planning Guidelines 2010-2022, state at section 2.3.3- “The Electricity Grid Network is a vital infrastructure network for the region. Eirgrid have produced a Strategic Plan, GRID 25, which sets out the future requirements of the electricity network up to 2025. The Regional Authority supports the development and expansion of the GRID network and future connections to renewable sources of energy”. Chapter 6 supports security of energy supply, renewable energy targets, upgrade of the national grid. Objective PPO 6.5 states- “The Regional Authority supports the sustainable development and expansion of the GRID network and future connections to renewable sources of energy subject to appropriate assessment of all necessary environmental considerations”.

## 5.3. Development Plan

5.4. The Carlow County Development Plan 2015-2021 is the relevant county development plan for the area. Policy 1 in relation to energy states;

## 5.5. Energy – Policy 1

It is the policy of Carlow County Council to:

- Facilitate, promote and achieve a balance between responding to Central Government policy on renewable energy and enabling energy resources within the plan area to be harnessed in a manner which is in accordance with the principles of proper planning and sustainable development and in accordance with Article 6 of the Habitats Directive
- Facilitate the achievement of a secure and efficient energy supply and storage for County Carlow
- Promote County Carlow as a low carbon county by 2021 as a means of attracting inward investment and to facilitate the development of energy sources which will achieve low carbon outputs

- Raise awareness of the need to reverse fossil fuel dependency, to mitigate the effects of peak oil and reduce carbon emissions, to mitigate the effects of climate change.

## 5.6. Energy – Policy 2

It is the policy of Carlow County Council to:

- Where impacts are inevitable mitigation features have been included proposals for energy infrastructure should be assessed in accordance with the requirements of Article 6 of the Habitats Directive
- Support the sustainable improvement and expansion of the high voltage electricity transmission power lines and distribution network underground, subject to human health, landscape, residential amenity, tourism, equine industry and environmental considerations
- Have regard to the requirements of the service providers in the provision of strategic infrastructure whilst also seeking to ensure that development, including the location of high voltage transmission power lines, is controlled particularly adjoining existing dwellings, except where no other alternative can be shown to exist
- Ensure that the ability of the area to absorb overhead transmission lines is considered with reference to the Landscape Character Assessment in Appendix 6 of this Plan or the Draft National Landscape Strategy for Ireland 2014 – 2024 (DAHG)
- Ensure that the landscape and visual assessment of any proposal shall focus on the potential of the development to impact upon county landscape designations and important designated sites. Proposed overhead lines shall as far as possible seek to avoid areas of sensitivity (e.g. areas of high amenity, high sensitive landscape designations, scenic views, protected structures etc). Where avoidance is not possible full consideration shall be given to undergrounding the lines.



- Protect areas of significant landscape importance from the visual intrusion of largescale telecommunications infrastructure
- Minimise, and avoid where possible, the development of telecommunication structures and antennae within the following areas:
  - Areas within or adjoining the curtilage of protected structure.
  - Areas on or within the setting of archaeological sites.
  - Within Natura 2000 sites.

## 5.7. Natural Heritage Designations

5.8. The site is neither within nor immediately abutting any natural heritage designations.

## 5.9. EIA Screening

- 5.9.1. Battery Energy Storage is not a form of development that is listed in Part 1 or 2 of Schedule 5 of the Planning and Development Regulations 2001, as amended. Schedule 5 (Part 1) refers to energy-related development such as nuclear power plants and associated development, battery store does not arise in that part of the schedule. Schedule 5 (Part 2) Class 3(a) to (j) refers, *inter alia* to the production of electricity, steam or hot water with a heat output of 300mw, wind power and hydroelectric installations, again there is no mention of energy storage.
- 5.10. I am satisfied therefore the proposed development does not fall into a class of development which requires EIA.

## 6.0 The Appeal

### 6.1. Grounds of Appeal

- The proposed development does not comply with County Development Plan policy to comply with EU Water Framework Directive. There is potential for ground and surface water pollution – including where water for firefighting is used.

- The proposed development (a battery energy storage system or BESS) is prone to fires and may endanger public safety. There is insufficient information, including the additional information submitted, that that the proposed firefighting plan is adequate.
- The proposed development is more appropriately located in an industrial area and there is a lack of planning guidelines on these systems.
- There is a stream between the application site and the electricity substation. Therefore, the application site is connected to the Burren River and has a hydrological connection River Barrow and River Nore SAC (002162). The planning authority did not carry out an AA properly.
- The proposed development will impact on fauna outside the SAC, on the application site and on adjoining lands.
- The proposed development poses a risk to the national grid by being within 20m of a 220kV line.
- The proposed development will give rise to electromagnetic forces which will adversely impact on the health of the local community.
- The proposed development will negatively impact on the visual amenity of the area.
- The proposed development will negatively impact on the archaeological potential of the site.

## 6.2. Applicant Response

- National, regional and local policy supports the delivery of electricity infrastructure.
- There is no statutory requirements on the applicant to engage in public consultation in relation to the project nevertheless the community was informed through leaflet drops in the area and the development management process allows for observers to make submissions to the planning authority.

- The application was accompanied by an archaeological assessment, this assessment did not identify any remains on site and concluded that the proposed development would not impact on any archaeological remains.
- A NIS was submitted with the application. There is a drainage ditch on the northern boundary of the application site which forms part of a local network of which enters the SAC 12kms from the site. There is no potential for adverse impact on surface water quality. The NIS concluded that the proposed development will not adversely affect the integrity of any European Site.
- The NIS was submitted which referenced the judgement in People Over Wind/Peter Sweetman v Coillte Teoranta. The application has properly mitigated against any impact on water quality.
- In the unlikely event of a fire on site the application sets out measures to manage the emission of firefighting water.
- Full mitigation measures are set out in the section in the Environmental Management and Drainage section of the response to the request for further information. Water courses will be protected during construction phase and mitigation measures are set out in the application.
- Species of concern outside the SAC are otter, barn owl and aquatic species in the Burren River (Atlantic salmon, crayfish, lamprey). No signs of otters were identified on site. The application has provided details of best practice environmental control measures to prevent water pollution and therefore there will be no impacts on aquatic species. The site holds no suitable nesting structures for barn owls and the does not necessitate loss of hedgerows. There are no predicted impacts on bats.
- There are no national standards for exposure to electromagnetic fields. However, The International Commission on Non-ionising Radiation Protection (ICNIRP) does set exposure limits which have been used as an assessment tool in Ireland. Applying this standard of assessment there will be no electromagnetic impacts outside the site.

- Noise impacts were assessed in the submitted noise impact assessment. 12 reference points around the site were chosen and the noise impacts predicted with and without mitigation. In each case the predicted noise impact fell below the EPA Guidance on Noise Limits.
- The application included a landscape plan which will minimise visual impacts.
- A fire risk assessment was submitted as part of the application. The planning authority's Fire Officer reported no objection to this proposal on fire safety grounds. The proposed development meets the requirements of Part B of the Building Regulations (Fire Safety). No evidence has been put forward of a fire risk arising from the proposed development and this issue is not significant.
- The absence of national guidance on battery storage facilities is not a matter for this application.

### **6.3. Planning Authority Response**

- Any grant of permission should include an archaeological monitoring condition.
- The County Development Plan supports the development of the electricity transmission infrastructure.
- The proposed landscape plan will mitigate visual impact.
- The site adjoins a site already accommodating electricity infrastructure.
- Emissions were assessed by the fire department and environment sections of the planning authority who recommended a grant of permission.

### **6.4. Observations**

Observations were received from Jennifer Murnane O'Connor, Paul Rooney, Scoil Phadraig, Carmel McCormack and Peter Sweetman. The observations may be summarized as follows;

- Eirgrid has stated that they will not accept battery storage facilities of more than 50mw. This development could be constructed in 1 year and the proposal is accordingly speculative.

- Energy storage batteries are an unsustainable form of development because of the high carbon footprint caused by their manufacture and by the loss of almost ½ of the energy input when converting it to chemical storage.
- There are several other battery storage applications with the Board ABP-303718-19, ABP 302397-18, ABP 302055-18, ABP 303611-19.
- The planning authority did not carry out an appropriate assessment.
- The NIS calculates the distance to the nearest European Site incorrectly, there is no assessment of the potential for pollution arising from a fire within the proposed development.
- There is no assessment of the potential construction phase pollution risk.

6.5. The Department of Culture, Heritage and the Gaeltacht commented that;

- Any grant of planning permission should be subject to a condition referencing the protection of archaeology on site.
- The case C323/17 is relevant whereby mitigation measures may not be used to screen out development and avoid submission of a NIS.

## 6.6. Further Responses

None

## 7.0 Assessment

7.1. The principal planning issues in this case are;

1. planning policy,
2. water pollution,
3. ecological impacts,
4. health Impacts/Electromagnetic Fields,
5. Health Impacts/Noise,
6. fire safety,
7. visual impacts,

## 8. Appropriate Assessment.

### 7.2. Planning Policy

The appeal makes the related points that there is a lack of planning policy in relation to this form of development and that the proposed development would be more appropriately located in on land zoned for industry.

- 7.3. There is a general recognition within the planning hierarchy that new forms of development related to the energy sector will arise in the coming period. The NPF states that new energy systems and transmission grids will be necessary for a new renewable focussed energy system. The Framework specifically (objective number 55) supports renewable energy use and generation at appropriate locations. The South East Regional Planning Guidelines supports the sustainable development and expansion of the electricity network and future connections to renewable sources of energy where environmental standards can be satisfactorily met.
- 7.4. The Country Development Plan sets out a policy to promote renewable energy production and transmission as part of a strategy to achieve secure and efficient energy supply for the county. Other factors such as impacts on landscape, residential amenity, human health and environmental standards will be considered in the development management process.
- 7.5. It is the case, as referred to in the submissions received by the Board, that the proposed development is sited on lands which are not zoned for industrial development. This type of development may be site specific and in the present case the location is, at least in part, related to its proximity to the adjoining ESB substation for which it is proposed to provide electricity storage capacity. Having regard to the National, regional and County Development Plan policies in relation to facilitating renewable energy and the adjacent electricity substation I conclude that the proposed location does not materially contravene the County Development Plan objectives.

**7.6. Water Pollution.**

7.7. The appeal and submissions made to the Board make the point that the proposed development will give rise to pollution of nearby water courses and thereby negatively impact on aquatic species.

7.8. There are four aspects to the risk of water pollution; instream works in the bed of the drainage ditch along the northern boundary, construction phase surface water management and operational phase surface water management and firefighting water management. The potential for water pollution is addressed specifically in the Flood Risk Assessment and the outline Construction Environmental Management Plan submitted with the original application, the NIS (appendix 6) and Drainage Design Report (appendix 7) in the Response to the request for further information and in the applicant's response to the appeal.

7.9. Significantly there are no in-stream works proposed for the drainage ditch along the northern boundary of the site. This will avoid releasing silt or suspended solids into the water courses which discharge into the Burren river and eventually into the River Barrow and River Nore SAC (002162).

7.10. The outline Construction Environmental Management Plan makes the points that;

- All fuels, oils and chemicals on site will be kept in bunded areas with 110% capacity, stored in correct marked containers, 20m buffer from any water course will be maintained and spill kits will be retained on site.
- Construction phase refuelling will be undertaken outside water course buffers, properly managed and, where appropriate, take place on an impermeable surface.
- Concrete will not be allowed to enter water courses and concrete wash water will be contained in an impermeable/lined area.
- Disturbed soil will be reused on-site or managed in accordance with the Waste Management Regulations for the Extractive Industry.
- Waste water from staff facilities will be removed from the site.

7.11. I consider that these overall measures (augmented by the further detail in the application) will adequately address construction phase surface water management.

The planning authority raised additional points in the request for additional information. The planning authority considered that there was potential for fire water to escape the site in the event of a fire. The applicant included an additional drainage design report (see appendix 7 in the FI submission 16<sup>th</sup> November 2019). The revised surface water drainage layout provided for separate surface water systems; for operational phase water management and firefighting water management within the site. One system will deal with clean surface water which will drain to an attenuation tank from where clean surface water will be released at greenfield rates to the ephemeral stream on the northern site boundary. A second system will collect soiled surface water from the concerted areas within the development where firefighting water will be collected and this soiled water will be directed to a holding tank which will be pumped out/emptied, and the soiled water treated off-site.

7.12. The planning authority's environmental section reviewed the additional information and considered that the measures proposed are adequate to prevent contaminated run off both in normal times and in the event of fire. I agree with the point made by the applicant that fire outbreaks should be very rare occurrences. In summary, having regard to the material submitted with the application and appeal, the reports of the planning authority and the submissions made to the Board I conclude that the measures proposed to avoid water pollution; avoiding in-stream works and separating clean and soiled surface water are adequate to prevent water pollution.

7.13. **Ecological impacts.**

7.14. The appeals and submissions made to the Board state that the proposed development may impact negatively on aquatic species in nearby streams and rivers, on bats and barn owls and otters. The matter of ecological impacts on aquatic, avian and terrestrial species was raised in the further information request from the planning authority and in the submission to the planning authority.

7.15. The original planning application included an Ecological Assessment report (see report received by the PA on 1<sup>st</sup> February 2018), the further information response addressed the issue and the applicant's response to the appeals addresses the issue.

7.16. The application makes the point that the site comprises grassland/pasture grazed by cows. The field survey provided no evidence of badgers or otters on site. There are



mature trees on the hedgerows which may be suitable for roosting, but no bats were recorded on site. The application concluded that the footprint of the proposed battery storage development on the grassland field will not negatively impact on badgers or bats. In relation to birds the application made the point that the habitat type – improved grassland – which will be lost to the footprint of the proposed development is abundant in the area and that field hedgerows which may provide nesting/foraging areas will not be impacted by the proposed development. No suitable nesting habitats for Barn Owls exist on site.

- 7.17. Otters were not identified on site although the application recognises that the probably exist outside the site in local water ways. Subject to the protection of water quality no impacts on otters are anticipated.
- 7.18. Having inspected the application site and, in particular the drainage ditch along the northern site boundary, I agree with the application that these aspects of the application site are of limited ecological value. I note furthermore that no hedges will be removed to facilitate the development and having regard to these factors and the material submitted with the application and appeal, that the proposed development will not have unacceptable ecological impacts.
- 7.19. **Health Impacts/Electromagnetic Fields.**
- 7.20. The appeal makes the point that the proposed development has the potential to give rise to electromagnetic fields (EMFs) which can be hazardous to public health. This matter was raised at point number 3 of the planning authority's request for further information.
- 7.21. The applicant makes the point that there is no Irish guidance on acceptable levels of EMFs but that there are international guidelines from the International Commission on Non-ionising Radiation Protection (I note that the guidance from this body is referenced as authoritative in the DOE document Telecommunications Antennae and Support Structures Guidelines for Planning Authorities 1996). The application states that the nearest dwelling house is 178m from the any electrical equipment and that no electrical field would be detectable at this distance. Even standing beside any of the elements of the application the applicant makes the point that the individual would experience a magnetic field well within the guideline limits for exposure.

- 7.22. The HSE commented on the application stating that it has no submission to make and the planning authority's environmental section reviewed the application and concluded that there are no foreseeable EMF impact arising from the proposed development.
- 7.23. Having regard to the material set out in the application and appeal including the reports from the planning authority's environment section and the comment from the HSE, and to the separation distance between the proposed development and the nearest dwelling houses I conclude that the proposed development will not endanger public health and safety in a manner to require refusal of planning permission.
- 7.24. **Health Impacts/Noise.**
- 7.25. The appeal/submissions made to the Board raise the issue of adverse impact on nearby residents from noise emissions.
- 7.26. The issue was identified in the planning authority's environment section's report and a detailed noise assessment including reference to noise sensitive receptors and have regard to the EPA Guidance Note for Noise: Licence Applications, Surveys and Assessments in relation to Scheduled Activities was sought.
- 7.27. Appendix 4 of the response to the request for further information sets out a noise study, assessment of predicted impacts and conclusion. Figure 2 in the study illustrates 12 noise sensitive receptors – all residential houses – around the application site. The baseline average noise levels in the area for are 35dB 7am to 7pm, 34dB 7pm to 11pm and 30dB 11pm to 7am. The EPA Guidance recommends limits of 45dB 7am to 7pm, 40dB 7pm to 11pm and 35dB 11pm to 7am. Table 8 sets out the predicted noise levels for the noise sensitive receptors when mitigation is factored in and all receptors at all times are below the guideline figures. The main mitigation measure for the operational phase is a 3m high perimeter barrier. The barrier will have a design lifetime of 20 years and Figure 3 in the noise report illustrates the location of the noise barrier.
- 7.28. Construction phase noise is addressed in the report. Mitigation measures are set out in section 5 and particular working times are restricted to day time hours and up to 1pm on Saturdays.
- 7.29. The planning authority's environment section reviewed the additional information and raised no further questions in relation to the proposed development. Having regard

to the existing noise levels in the area, to the separation distances between the proposed development and noise sensitive receptors, to the predicted noise levels following completion of the works and subject to the conditions set out in the draft order below I consider that the proposed development will not seriously injure the residential amenity of property in the vicinity.

**7.30. Fire Safety**

7.31. The appeal makes the point that the proposed development is prone to fire.

7.32. The application was accompanied by a fire risk assessment. The battery units and ancillary items will be fitted with a fire detection system which will automatically shut the units down and/or trigger the fire suppression systems. These may also be manually operated. On-site staff and local fire services will be given the appropriate level of training.

7.33. The A/Chief Fire Officer reported no objection in principle on fire safety grounds.

7.34. Having regard to the material submitted with the application and appeal and to the reports on file, to the remoteness of the application site from centres of population (Carlow, Tullow and Rathoe), and individual houses in the area (Figure 2 in Appendix 4 of the response to the FI request has mapped these individual houses) I am satisfied that the proposed development does not pose an unacceptable risk to human health and safety from fire.

**7.35. Visual Impact.**

7.36. The appeal makes the point that the proposed development will give rise to negative visual impact in the area.

7.37. The County Development Plan includes in appendix 6 a landscape character assessment which maps the County for its visual sensitivity to new development proposals and records the scenic routes in the County.

7.38. The application site is in the 'central lowlands' in Figure 5 in appendix 6 and the appendix goes on to state that this character area is deemed to be moderately sensitive to development. It has capacity to absorb most types of development subject to the implementation of appropriate mitigation measures. The site is not in or close to any protected views or designated scenic routes.

7.39. The mitigation measures set out in the application include both soft landscaping in the form of tree planting and the 3m high screen fence which doubles as an acoustic barrier. The application included photomontages which demonstrate the visual impact of the proposed development.

7.40. Having regard to the relatively low lying landscape in the area, the absence of any designated views, prospects or scenic routes in the area and the mitigation measures proposed in the application I conclude that the proposed development will not seriously injure the visual amenity of the area.

**7.41. Archaeology**

7.42. The appeal makes the point that the proposed development may impact on archaeological remains.

7.43. The application was accompanied by an archaeological assessment which was carried out on foot of a desk study of documentary sources and a site inspection. The submitted study concluded that the proposed development had negligible potential to impact on archaeological remains.

7.44. I carried out a walkover/visual inspection of the site and can confirm that there is no obvious above ground archaeological remains within the site. Having regard to this site inspection and the material submitted with the application and appeal and subject to a condition that the proposed development works be monitored for discovery of archaeological remains I consider that the matter may be dealt with by condition as set out in the draft order below.

**7.45. Appropriate Assessment.**

**7.46. Initial Screening Exercise**

7.47. The applicant screened for Appropriate Assessment and concluded that there is a hydrological connection between the site River Barrow and River Nore SAC (002162) but that mitigation measures would overcome any potential adverse impact. The planning authority reviewed the screening report and commented that the screening report had not properly considered the potential impacts arising from discharge of firefighting water and had not provided detailed mitigation measures relation to the aquatic environment. I agree with the planning authority's screening exercise and conclude that on the basis of the information provided with the original

application that it would not be possible to exclude the potential for significant effects on a European site.

7.48. As part of the response to the planning authority's request for further information the applicant submitted a NIS. The NIS identified three European sites within a 15kms radius of the application; the Slaney River Valley SAC (4.3kms distant), the River Barrow and River Nore SAC (9.4kms) distant and the Blackstairs Mountains (SAC (14.4kms) distant.

#### 7.49. **Second Screening Exercise**

7.50. The Slaney River Valley SAC (000781) was screened out because of the separation distance between the application site and the SAC and the absence of a hydrological connection between the two sites. The conservation objective for the site is the maintenance of habitats and species within Natura 2000 sites at favourable conservation condition which will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. The qualifying interests of the SAC are; Freshwater Pearl Mussel *Margaritifera margaritifera*, Sea Lamprey *Petromyzon marinus*, Brook Lamprey *Lampetra planeri*, River Lamprey *Lampetra fluviatilis*, Twaites Shad *Alosa fallax*, Atlantic Salmon *Salmo salar* (only in fresh water), Estuaries, Mudflats and sandflats not covered by seawater at low tide, Otter *Lutra lutra*, Harbour Seal *Phoca vitulina*, Water courses of plain to montane levels with the *Ranunculus fluitans* and *Callitriche-Batrachion* vegetation, Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles and Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*). Having regard to the nature of these habitats and species as generally being aquatic habitats and species dependent of aquatic environments, the separation distance from the application site to the European site and the absence of a hydrological connection between the two sites and applying the source-pathway-receptor model of assessment I conclude on the basis of the information on the file, including the additional material submitted as additional information and the appeals, observers' submissions and responses to the appeals, 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 Slaney River Valley SAC in view of the site's Conservation

Objectives, and a Stage 2 Appropriate Assessment in relation to this site is not therefore required.

7.51. Blackstairs Mountains SAC (000770) was screened out because of the separation distance between the application site and the SAC and the absence of a hydrological connection between the two sites. The conservation objective for the SAC is to maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected. The conservation interests of the site are Northern Atlantic wet heaths with *Erica tetralix* and European dry heaths. Having regard to the nature of these habitats, the separation distance from the application site to the European site and the absence of a hydrological connection between the two sites and applying the source-pathway-receptor model of assessment I conclude on the basis of the information on the file, including the additional material submitted as additional information and the appeals, observers' submissions and responses to the appeal, 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 the Blackstairs Mountains SAC (000770) in view of the site's Conservation Objectives, and a Stage 2 Appropriate Assessment in relation to this site is not therefore required.

#### 7.52. **Appropriate Assessment**

7.53. The River Barrow and River Nore SAC (002162) was 'screened in' in the NIS. The NPWS has set out site specific conservation objectives for this site in addition to the general conservation objective which is the maintenance of habitats and species within Natura 2000 sites at favourable conservation condition which will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. The qualifying interests for this site are Desmoulin's whorl snail *Vertigo moulinsiana*, Freshwater pearl mussel *Margaritifera margaritifera*, White-clawed crayfish *Austropotamobius pallipes*, Sea lamprey *Petromyzon marinus*, Brook lamprey *Lampetra planeri*, River lamprey *Lampetra fluviatilis*, Twaite shad *Alosa fallax*, Atlantic salmon (*Salmo salar*) (only in fresh water), Estuaries, Mudflats and sandflats not covered by seawater at low tide, *Salicornia* and other annuals colonizing mud and sand, Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*), Otter *Lutra lutra*, Mediterranean salt meadows (*Juncetalia maritimi*),

Killarney fern *Trichomanes speciosum*, Nore freshwater pearl mussel *Margaritifera durrovensis*, Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitriche-Batrachion* vegetation, European dry heaths, Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels, Petrifying springs with tufa formation (*Cratoneurion*)\*, Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles, Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*)\*. (Where \* indicates a priority habitat).

- 7.54. The NIS states that there is a small drainage ditch along the northern boundary which is part of a localised drainage network which eventually enters a tributary of the Burren River which joins the River Barrow/Nore 12kms downstream. Surface water will discharge to this drainage ditch at greenfield rates. For the purposes of surface water drainage control the site will be divided into two sections; an uncontaminated section where clean surface water originates and drains to a clean surface water attenuation tank (430m<sup>3</sup>) and then to the drainage ditch on the site boundary. A second, bunded area, around the battery storage units and concrete areas where water used for firefighting will be collected and from where it will drain to a firefighting storage tank (90m<sup>3</sup>) from where it will be removed off-site. The clean surface water attenuation tank and soiled/firefighting water holding tank and associated drainage network are illustrated on the drawings attached to the NIS (see especially Langan Consulting Engineers Drainage layout drawing number 18080).
- 7.55. The planning authority's Environment Section (report dated 25<sup>th</sup> January 2019) reviewed the additional information and raised no further questions.
- 7.56. I carried out a walkover site inspection and noted that the site had no ponding and that the drainage ditch was reduced to puddles without flowing water. I note the material submitted with the application and appeals. I am satisfied that clean uncontaminated surface water within the site may be allowed to either infiltrate the soil or be collected and safely discharged to the drainage ditch through the attenuation tank. The firefighting water, if it arises, from the battery containers and the concreted areas can be managed either automatically or manually to discharge to the holding tank and from where it can be removed off site. The direction of flow of the ground water is to the Burren River to the northeast (see figures 2.2 and 2.3 included in the drainage design report submitted with the FI response) but given the separation distance of about 12km from the site to the SAC and the environmental

control measures set out in the application I am satisfied that there is no potential for adverse effects on the SAC through ground water flow. There are no other identifiable emissions likely to arise from the proposed development.

- 7.57. In relation to *in combination effects* the NIS lists decisions by Carlow County Council and the Board in relation to planning applications around the site and concludes that there are no in combination/cumulative effects for any European site resulting from the subject and identified developments. In relation to the potential for in-combination effects with the grid connection to the adjoining substation the NIS (see 4.1, page 15) states that this grid connection will be small-scale, that the habitats are similar to those on the current application site and that there are no water courses which would link to the SAC. The first two points of this rationale are reasonable (the grid connection will be very short, and the habitats will be similar). In the absence of any other information I conclude that the underground cabling will be laid by directional drilling which can be managed to avoid any in-stream works.
- 7.58. An observer points out that paragraph 5.4 in the NIS is incorrect in referring to the River Boyne and River Blackwater SAC and the River Boyne and River Blackwater SPA. I recognise that this is an error, but I note the NIS overall refers correctly to the River Barrow and River Nore SAC. It may be noted that Map 7 produced by the NPWS and attached to the SAC Conservation Objectives where the location of the conservation interests are mapped that the Nore Freshwater Pearl Mussel does not arise in the River Barrow but only in the River Nore at locations which are up-stream of the application site. White clawed crawfish are more evenly dispersed. Finally and having particular regard to the measures set out in the application to prevent escape of contaminants from the site in the construction phase, in the operational phase and in the event of fire I consider it 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 or projects would not adversely affect the integrity of the European site, the River Barrow and River Nore SAC (002162), or any other European site, in view of the sites' Conservation Objectives.



## 8.0 Recommendation

8.1. I recommend a grant of permission.

## 9.0 Reasons and Considerations

10.0 Having regard to the provisions of national policy objectives in relation to renewable energy, the provisions of the Carlow County Development Plan 2015 – 2021, the nature and scale of the proposed development, the landscape character and the site layout, it is considered that, subject to compliance with the conditions set out below, the proposed development, would support national and regional renewable energy policy objectives, would not conflict with the provisions of the Development Plan, would not have unacceptable impacts on the visual amenities of the area, would not unduly detract from the amenities of the area and would not pose a serious risk to public health and safety, would be acceptable in terms of traffic safety and convenience, and would, therefore, be in accordance with the proper planning and sustainable development of the area.

## 11.0 Conditions

1.	The development shall be carried out and completed in accordance with the plans and particulars lodged with the application as amended by the further plans and particulars submitted on the 16 <sup>th</sup> day of November 2018 and on the 28 <sup>th</sup> day of November 2018, except as may otherwise be required in order to comply with the following conditions. Where such conditions require details to be agreed with the planning authority, the developer shall agree such details in writing with the planning authority prior to commencement of development and the development shall be carried out and completed in accordance with the agreed particulars.
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	<b>Reason:</b> 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.  <b>Reason:</b> In the interest of clarity
3.	<p>The permission shall be for a period of 25 years from the date of commissioning of the battery energy storage system and the following conditions shall be adhered to the following:</p> <p>(a) All structures including foundations hereby authorised shall be removed not later than 25 years from the date of commissioning of the development, and the site reinstated unless planning permission has been granted for their retention for a further period prior to that date.</p> <p>(b) Prior to commencement of development, a detailed restoration plan for return to an agricultural field and providing for the removal of the Battery Energy Storage System (BESS), including all containers, foundations, inverter/transformer stations, substation, CCTV cameras, fencing and site access to a specific timescale, shall be submitted to, and agreed in writing with, the planning authority. On full or partial decommissioning of the BESS, or if the BESS ceases operation for a period of more than one year, the containers, 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><b>Reason:</b> To enable the planning authority to review the operation of the energy storage system over the stated time period, having regard to the circumstances then prevailing, and in the interest of orderly development.</p>
4.	This permission shall not be construed as any form of consent or agreement to a connection to the national grid or to the routing or nature of any such connection.

	<b>Reason:</b> In the interest of clarity.
5.	<p>The landscaping proposals shall be carried out within the first planting season following commencement of development. All existing hedgerows (except at access track openings) shall be retained where practicable. The landscaping and screening shall be maintained at regular intervals. Any trees or shrubs planted in accordance with this condition which are removed, die, become seriously damaged or diseased within two years of planting shall be replaced by trees or shrubs of similar size and species to those originally required to be planted.</p> <p><b>Reason:</b> To assist in screening the proposed development from view and to blend it into its surroundings in the interest of visual amenity.</p>
6.	<p>The inverter/transformer stations, storage module and all fencing shall be dark green in colour. The external walls of the proposed structures shall be finished in a neutral colour such as light grey or off-white; the roof shall be of black tiles/slates.</p> <p><b>Reason:</b> In the interest of the visual amenity of the area.</p>
7.	<p>The construction of the development shall be managed in accordance with a Construction Management Plan, which shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. This plan shall provide details of intended construction practice for the development, including:</p> <ul style="list-style-type: none"> <li>(a) Location of the site and materials compound(s) including area(s) identified for the storage of construction refuse;</li> <li>(b) Location of areas for construction site offices and staff facilities;</li> <li>(c) Details of site security fencing and hoardings;</li> <li>(d) Details of on-site car parking facilities for site workers during the course of construction;</li> </ul>

	<p>(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;</p> <p>(f) Measures to prevent the spillage or deposit of clay, rubble or other debris on the public road network;</p> <p>(g) Details of appropriate mitigation measures for noise, dust and vibration, and monitoring of such levels;</p> <p>(h) Containment of all construction-related fuel and oil within specially constructed bunds, to ensure that fuel spillages are fully contained. Such bunds shall be roofed to exclude rainwater;</p> <p>(i) Off-site disposal of construction waste, and details of how it is proposed to manage excavated soil;</p> <p>(j) Means to ensure that surface water run-off is controlled, such that no silt or other pollutants enter local surface water drains; and</p> <p>(k) 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><b>Reason:</b> In the interests of amenities, public health and safety.</p>
8.	<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><b>Reason:</b> In the interest of environmental protection and public health.</p>
9.	<p>(a) No 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) Each fencing panel shall be erected such that for a minimum of 300 millimetres of its length, its bottom edge is no less than 150 millimetres from ground level.</p> <p>(d) Cables within the site shall be located underground.</p> <p><b>Reason:</b> In the interest of visual and residential amenity, to allow wildlife to continue to have access to and through the site and to minimise impacts on drainage patterns.</p>
10.	<p>Construction traffic to/from the site shall be managed in accordance with 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, amongst other things, specify details of advance warning signs with respect to the proposed site entrance.</p> <p><b>Reason:</b> In the interests of good traffic management and road safety.</p>
11.	<p>Site development and building works shall be carried out only between the hours of 0700 and 1900 from Mondays to Fridays inclusive, between 0800 and 1400 hours on Saturdays and not at all on Sundays and public holidays. Deviation from these times will only be allowed in exceptional circumstances, where prior written approval has been received from the planning authority.</p> <p><b>Reason:</b> In order to safeguard the residential amenities of property in the vicinity.</p>
12.	<p>The mitigation measures outlined in the Noise Impact Assessment, received by the planning authority with the planning application, shall be implemented in association with the commissioning of the development, and shall be maintained throughout the lifetime of the development.</p>

	<p>(a) During the operational phase of the proposed development, the noise level arising from the development, as measured at the nearest noise sensitive locations, shall not exceed:-</p> <p>(i) 55 dB(A) (30-minute LAR) during the period 0700 to 1900 hours.</p> <p>(ii) 50 dB(A) (30-minute LAR) during the period 1900 to 2300 hours.</p> <p>(iii) 45dB(A) (15-minute Leq) during the period 2300 to 0700 hours.</p> <p>(b) All sound measurement shall be carried out in accordance with ISO Recommendations 1996-2007: Acoustics – Description and Measurement of Environmental Noise.</p> <p><b>Reason:</b> To protect the residential amenities of property in the vicinity of the site</p>
13.	<p>The developer shall facilitate the preservation, recording and protection of archaeological materials or features that may exist within the site. In this regard, the developer shall -</p> <p>(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,</p> <p>(b) employ a suitably-qualified archaeologist who shall monitor all site investigations and other excavation works, and</p> <p>(c) provide arrangements, acceptable to the planning authority, for the recording and for the removal of any archaeological material which the authority considers appropriate to remove.</p> <p>In default of agreement on any of these requirements, the matter shall be referred to An Bord Pleanála for determination.</p> <p><b>Reason:</b> In order to conserve any archaeological heritage of the site, and to secure the preservation and protection of any remains that may exist within the site.</p>

14.	<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><b>Reason:</b> 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>
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Hugh Mannion  
Senior Planning Inspector

28<sup>th</sup> August 2019