An Bord Pleanála

Inspector's Report ABP-303718-19

Development	Construction of an energy storage facility, comprising battery containers and associated infrastructure.
Location	Horsepasture, Clonmel, Co. Tipperary.
Planning Authority	Tipperary County Council
Planning Authority Reg. Ref.	18/601037
Applicant(s)	WEP Storage Ltd.
Type of Application	Permission
Planning Authority Decision	Grant permission
Type of Appeal	Third Parties
Appellant(s)	- Jim Finn - Suir Valley Environmental Group & Carmel McCormack.
Observer(s)	None
Date of Site Inspection	17th May 2019
Inspector	Michael Dillon

1.0 Site Location and Description

1.1. The site, with a stated area of 2.21ha, is located approximately 3.0km due north of the town of Clonmel, Co. Tipperary. It comprises parts of two grassed fields – on or about the 40m contour. It slopes very gently downhill from south to north. There are rushes growing over the central portion of the battery storage site. There is a 14m wide wayleave, for a buried gas main, through the site – although there is no above-ground visible evidence of this pipeline (stated to have been put in place in 1986). The site is surrounded by agricultural grassland. The northern and northeastern boundaries of the site are defined by a good-quality hedgerow with mature trees. The southeastern boundary is defined by a fair-quality hedgerow. The remaining boundaries are partly defined by electric fencing and partly undefined.

1.2. Access to the site is from a concrete agricultural road through a large complex of farmyard buildings (largely painted grey) – connecting to the L25121 cul de sac county road at a recessed farmgate access. Sight distance at the access is poor in either direction, due to proximity of hedgerows to the carriageway edge. This cul de sac is narrow, and it is not possible to pass two vehicles on the carriageway. It connects with busy county road L2512, some 130m to the south. It is possible to pass two vehicles with care along the section of the L2512 between the junction with the L25121 and the R689 – some 1.75km to the west. The 80kph speed restriction applies in this area: there is no public lighting: and there are no public footpaths. The cul de sac currently serves as access to the farmyard (though which the site will be accessed), other farmland, and seven houses.

1.3. The Doon 110kV sub-station is located some 200m to the southeast of the appeal site entrance – on the opposite side of the L2512. It is largely screened from view by the roadside boundary hedgerow.

2.0 Proposed Development

2.1. Permission sought on 23rd August 2018, for an energy storage facility, comprising the following elements of note-

- 24 no. battery containers (approximately 13.7 x 2.4m, and 2.9m high), to sit on concrete plinths.

- Externally-mounted, air-handling unit for each battery container.
- 24 no. combined power conversion system and transformer units (approximately 12.2 x 2.4m, and 2.9m high).
- Spare parts container (12.2 x 2.4m, and 2.9m high).
- 4m high sub-station ($45m^2$) on 1.7m high stilts.
- Grid connection compound with transformer (6.1m high), lightning mast (10m high, and earthing transformers and arrestors).
- 2 no. auxiliary transformers (approximately 2.0 x 1.6m, and 2.1m high).
- 2 no. grid compliance equipment containers (approximately 4.3 x 3.1m, and 2.7m high).
- Mesh fencing (2.4m high) around the grid compound, and closed-board acoustic fencing (3.0m high), around the site.
- 5 no. CCTV poles on boundary fence – 3.5m high.
- Fire suppression system.

2.1.1. The application was accompanied by the following documentation of note-

- Letter of consent from landowner (Eamon Power) to making of planning application – dated 28th March 2018.
- Series of colour photomontages.
- Planning Statement – dated July 2018.
- Volume 1: Appropriate Assessment Screening – dated 14th June 2018.
- Volume 2: EIA Screening Report – dated 25th June 2018.
- Technical Appendix 1: Landscape and Visual Impact Appraisal – dated 18th June 2018.
- Technical Appendix 2: Ecological Appraisal – dated 3rd July 2018.
- Technical Appendix 3: Archaeology & Architectural Heritage Impact Assessment – dated 20th June 2018.
- Technical Appendix 4: Flood Risk Assessment – dated 14th June 2018.

- Technical Appendix 5: Construction Traffic Management Plan – dated 3rd July 2018.
- Technical Appendix 6: Noise Impact Assessment – dated 20th June 2018.

2.2. Following a request for additional information, revised proposals were received on 19th November 2018, as follows-

- PFRA map for the area in relation to flooding.
- Fire suppression details for each battery unit.
- SuDS design for the site – indicating location of 775m^3 attenuation and connection to drainage ditch to the northwest.
- Potential impact on public water supply sources.
- Lithium ion batteries to be used.
- 100MW storage capacity.
- Land will be reinstated after cessation of development (after 30 years).

2.2.1. The submission was accompanied by the following documentation of note-

- Natura Impact Statement – dated 24th October 2018.
- Revised public notices.

3.0 Planning Authority Decision

By Order dated 21st January 2019, Tipperary County Council issued a Notification of decision to grant planning permission subject to 12 no. conditions – the principal of which can be summarised as follows-

1a. Development shall be in accordance with plans and particulars submitted on 23rd August and 19th November 2018.

1b. Permission for a period of 30 years from the date of commissioning of the energy storage facility.

1c. Permission shall not be construed as any form of consent to a connection to the national grid.

8. Requires submission of a Construction Environmental Management Plan and a Waste Management Plan, prior to commencement of development.

10. Relates to operational noise.

12. Requires payment of a development contribution of €33,895.84.

4.0 Planning History

There is no mention made of any recent relevant planning permissions pertaining to this site. It is, however, located immediately adjacent to a site on which planning permission was received for a solar PV farm (to the west and northwest)-

Ref. 16/601136: 10-year permission granted (subject to conditions) on 25th April 2017, to Grian PV Ltd. for an 11.1MW solar PV farm, on a site of 21.82ha. Condition 3 provided that the development be for a period of 30 years from the date of commissioning. There is no development to date on foot of this permission.

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 RES-E 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. County Development Plan

5.3.1. The relevant document is the South Tipperary County Development Plan 2009, as varied in December 2017. Chapter 8 deals with Climate Change, Energy and Flooding.

5.3.2. Section 8.5 in relation to Access to the Electricity Supply Network, states- "Improvement measures to the national grid are set out under Grid 25 – 'A Strategy for the Development of Ireland's Electricity Grid for a Sustainable and Competitive Future'. Through this investment Eirgrid intend to undertake grid reinforcements. The appropriate expansion of the national grid is important to ensure adequacy of regional connectivity for sustainable economic growth as well as facilitate the development and connectivity of sustainable renewable energy resources. In this respect, the Council will facilitate the sustainable and appropriate development of additional electricity generation capacity throughout the region/county and support the sustainable expansion of the network".

5.3.3. The site is within the River Suir Central Plain (Draft Tipperary County Council Landscape Character Assessment 2016) – LCA No. 4. This is a high-capacity, low-sensitivity landscape. Change or development is generally acceptable

5.3.4. Appendix 4 of the Plan contains Listed Views. V082 & V083 fall partially within the Zone of Theoretical Visibility of the development.

V082: Views of the Commeragh Mountains looking south on the approach road (R688) from Cashel.

V083: Views of the Commeragh Mountains looking south on the approach road (R689) from Fethard.

5.4. Tipperary County Council Renewable Energy Strategy 2016

This document is included as part of the County Development Plan. Section 4.2.3 deals with Energy Storage; and acknowledges the potential of Battery Energy Storage (BES), and states- "This Renewable Energy Strategy supports the objectives of the White Paper for Energy 2015 as they relate to energy storage as an important element of renewable energy systems in the county". This is repeated at SO13 of section 6.12.2 on Renewable Energy Objectives.

5.5. Clonmel & Environs Development Plan 2013

The site is located within the 'Environs' (E), and is zoned- "To protect lands for the future expansion of Clonmel". The Land Use Zoning Matrix lists no use which would approximate to the proposed energy-type use. Section 5.5 states-

Policy INF 9: Renewable Energy

It is the policy of the council to facilitate and encourage sustainable development proposals for alternative energy sources and energy efficient technologies.

5.6. Natural Heritage Designations

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

6.0 The Appeal

6.1. First 3rd Party Grounds of Appeal

6.1.1. The points of note in the appeal from Jim Finn, Doon, Rathcronan, Clonmel, received by An Bord Pleanála on 14th February 2019, can be summarised in bullet point format as follows-

- There is no indication of the amount of energy to be stored in MWh.
- The proposal to use lithium ion batteries was not indicated in the original application.
- There are no details about the connection to the adjacent solar farm.

- A grid connection agreement has not been formalised or even applied for – and so details of the transformer cannot be supplied.
- The operational concept of the scheme is not clear from the drawings submitted. It would appear that there will be two 110kV connections in close proximity. The Single Line Electrical Diagram is essential to show the operation. A full grid connection application has been made for the solar farm – ref. 16/601136.
- The L3204 is a busy local road – a 2.0km stretch of which will be used to connect to the R689. Traffic management plans are inadequate on a busy road such as this one. There is no mention made of a pre-construction survey of the road. Reinstatement costs should not have to be paid by the taxpayer.
- Construction traffic will double if the battery storage is constructed at the same time as the solar farm.

6.1.2. The appeal is accompanied by the following documentation of note-

- Original submissions to TCC from the appellant – dated 26th September and 20th December 2018.
- Annotated documentation submitted by the applicant to TCC.

6.2. Second 3rd Party Grounds of Appeal

6.2.1. The points of note in the appeal from Suir Valley Environmental Group & Carmel McCormack, received by An Bord Pleanála on 18th February 2019, can be summarised in bullet point format as follows-

- The site notice was not fully legible – owing to rain damage.
- The notice failed to mention the types of battery to be installed or the MW capacity.
- There is no mention of the required connection to the national grid.
- The development is on and adjacent to a working farm.
- The scale of the development is unprecedented, and the PA has failed to adequately assess the hazards.

- This is a speculative development, dressed up as a sustainable development.
- There is no confidence in the fire mitigation measures outlined. Gases are dangerous. Different battery storage facilities have different fire suppression measures proposed for them.
- Renewable energy policy has been misleadingly quoted in this application. There will be no renewable energy provided by this development: it has more to do with grid frequency control.
- There are a large number of planning applications for similar-type facilities throughout the country, under different descriptions. There is a total of 500MW proposed battery storage for south Co. Tipperary alone. More than half of the applications have been granted permission. Almost 350MW have been granted certificates to connect to the grid system in 2018. The application needs to be looked at in association with other such applications throughout the country.
- The proposed development involves 'project splitting' and 'project slicing'. It is hoped that the granting of planning permission for one part of the overall development will result in a more favourable assessment of later parts. This project is unable to operate without a grid connection.
- Eirgrid has only recently concluded Draft SEA for grid connection. National and trans-boundary SEA needs to be carried out for these battery storage systems.
- Battery storage is an experimental, untested technology, devoid of any internationally-approved standards for the transport, installation, operation, maintenance, decommissioning and safe waste disposal of large-scale industrial, containerised batteries.
- The development should be assessed under the COMAH Regulations 2015; and be required to conform with Annex II of the EU 2015/830 Regulations. Inadequate fire testing has been carried out for this type of battery.
- There is a risk of toxic contamination of the site, surface water and groundwater in the event of a fire.
- The issue of potential flooding of the site needs to be considered.

- The system will be unmanned and remotely controlled – further adding to security and fire risk concerns.
- The amount of energy that can be stored in these battery systems is hardly worth talking about. The systems are more suited to grid frequency control than electricity storage.
- The risks and hazards on the receiving environment cannot be fully known where the risks and hazards of the technology are unknown.
- The Fire Officer who will have to deal with the application for a Fire Certificate will be an employee of the same local authority which granted permission for the development. There is a concern that LA staff would lack the necessary expertise to deal with a fire. The response time may be too slow, and there may not be adequate fire staff and engines to deal with an incident at this site.
- The PA has not consulted with neighbouring local authorities in relation to fire. A fire at a battery storage unit in Belgium in November 2017, resulted in a toxic cloud spreading 10km. The applicant has quoted examples in the UK but fails to mention Belgium. Many of the UK permissions have not yet been implemented. The UK has a maximum limit of 50MW for any one Battery Energy Storage System. The largest array in the UK is 10MW at present – at Kilroot in Northern Ireland.
- The PA should have sought an EIS from the applicant, in relation to safety. It is open to the PA to request such in the case of sub-threshold development, if it is considered there would be likely significant effects on the environment.
- The precautionary principle should be applied to this development. The cumulative impact of this development will all other approved battery storage facilities needs to be assessed.
- The carbon footprint of the development has not been assessed. No provision has been made for decommissioning. If removal is proved to be too costly, there are environmental impacts of leaving these battery units in place.
- The is no certainty that the operator of this facility will be able to obtain proper insurance cover for all risks at this facility. There is concern that local residents and businesses will lose insurance cover because of the uncertainty

surrounding the technology associated with this development. If this business fails, will the LA be able to obtain insurance for it?

- There will be little by way of job creation with this development, and most of the cost will go to battery manufacturers outside the state. Electricity prices will increase to cover this new technology. It is questioned whether the country can afford such battery storage systems as this one.
- A letter from Gas Networks Ireland was placed on the file, after the decision was made by TCC. The pipeline through the site was installed in 1986. There has been no risk assessment carried out by GNI in relation to a new technology such as this one. GNI seem to be unconcerned at what happens outside the 14m wayleave. GNI itself, through associated companies may be contemplating battery storage facilities.
- Batteries within this facility will be charged with electricity from the national grid – most of it generated by burning of fossil fuels.
- Battery storage is a sticking plaster solution to a problem caused by destabilisation of the system by wind energy inputs.
- Energy is lost in transmission to and from these batteries and within the storage itself, and efficiency will be reduced as batteries age. Additional energy is needed to heat, cool and provide air-conditioning for these units. These systems are not energy-efficient.
- These battery storage facilities would be a terrorist threat – where highly explosive materials are stored.
- The Board should revisit the Appropriate Assessment Screening Report and carry out a revised Appropriate Assessment, given the major risks outlined in this appeal.
- Far more battery storage is being proposed for Ireland than for the USA.
- The only reason there is such a plethora of applications for battery storage, is because developers want to jump on the guaranteed-payments gravy train that would be available for such ancillary services.

6.2.2. The appeal is accompanied by the following documentation of note-

- Hemming Fire Report into managing lithium ion battery fire.
- Slide extracts from Exponent Incorporated presentation on NFPA website.
- Extract from FM Global Electrical Energy Storage Systems Data Fact Sheet.
- Internet article in relation to lithium ion battery safety concerns.
- Article from 'Energy Matters' entitled – 'Beyond the Spin of Green Energy Storage' (accompanied by on-line responses and comments).
- Copy of memorandum from Chief Fire Officer of Longford County Council (dated 8th January 2019) in relation to battery energy storage facility in the county.
- Research paper on 'Research and Development of Fire Extinguishing Technology for Power Lithium Batteries' from 8th International Conference on Fire Science and Fire Protection Engineering – 2017.
- List of currently know proposed Battery Energy Storage System (BESS) in the Republic of Ireland.
- Press release (in French) – 5th February 2019 – from the Sustainable Environment Federation, in relation to pollution from industrial wind turbines.
- Redacted Interim Fire Report V3 (including appendices) – dated 1st October 2018, from Steve Emery, University Fire Officer (at an unidentified university).
- Article on Facebook, entitled 'The Great Battery Conjob Exposed' – relating to battery storage in Australia – 27th January 2019.
- E-mail correspondence between Richard Walsh of the Suir Valley Environmental Group and Gas Networks Ireland.
- Renewable Energy Foundation internet article on 'The Co-location of Battery Storage and Fossil Fuelled Generators in the United Kingdom'.

6.3. **Applicant Response to First 3rd Party Appeal**

The response of Bamford & Bonner, Urban Planning Solutions, agent on behalf of the applicant, received by An Bord Pleanála on 19th March 2019, can be summarised in bullet point format as follows-

- The additional information response to TCC of 19th November 2018, indicated that the storage capacity was 100MW.
- It is normal that energy storage facilities would be located adjacent to an energy source – like a solar PV array. There will be no major construction necessary to link them.
- There are no definite proposals for a grid connection. An application will have to be made to ESB Networks in the future. The Board has previously determined an appeal in relation to battery storage, in the absence of any details of a grid connection – ref. ABP-302498-18.
- A Construction Traffic Management Plan indicated the route for construction traffic to the site – connecting to the R689. The construction period is estimated at 12 weeks (rather than 6-8 months for the permitted solar farm). It will be possible to co-ordinate construction traffic for both the solar farm and the battery storage, should both occur at the same time.
- Development contributions have been levied for the solar farm and for the battery storage – which include an element for roads.

6.4. Applicant Response to Second 3rd Party Appeal

The response of Bamford & Bonner, Urban Planning Solutions, agent on behalf of the applicant, received by An Bord Pleanála on 21st March 2019, can be summarised in bullet point format as follows-

- A site notice was erected, and a newspaper notice published. There were two objections to TCC; indicating that interested parties were aware of the application. The development has been adequately described in notices.
- It is in the best interests of the applicant to ensure that equipment is protected against the possibility of fire. The additional information submission of 19th November 2018, provided details in relation to fire.
- The proposed development cannot be considered to be 'project splitting'. Neither the already-permitted solar farm nor the battery storage facility are types of development which are subject to the requirement for EIA. Suites of environmental reports were submitted with the applications to TCC.

- SEA is not required for this development. The Board has previously granted permission for a battery storage facility in Cork.
- The grant of permission does not entitle a developer to carry out a development – particularly if other codes must be adhered to, or where other consents are required. Issues of Health & Safety are for another forum. The planning process relates to planning considerations alone.
- The applicant submitted an NIS with this application for development.
- The reference to a fire at a Belgian facility is an isolated incident out of multiples of sites currently operational throughout Europe.
- A 50MW battery storage facility has been completed in July 2018 near Bishop's Stortford in Hertfordshire, UK in July 2018.
- Battery storage facilities are not included either in Part 1 or Part 2 of Schedule 5 to the Planning and Development Regulations, 2001 (as amended). EIA is not required for this development.
- The proposed development is not a category of development that is governed by the former Seveso Directive or the COMAH Regulations.
- The applicant will liaise the Gas Networks Ireland in relation to the gas main which traverses the appeal site.

6.5. Planning Authority Response

The response of Tipperary County Council, received by An Bord Pleanála on 5th March 2019, can be summarised in bullet point format as follows-

- The PA is satisfied that public notices were correctly erected and adequately described the development.
- Proposals to deal with a fire on the site were addressed in the application documentation.
- The proposal is not a category of development which would require EIA.
- The application was not referred to the Health & Safety Authority, National Parks & Wildlife Service, Inland Fisheries or adjoining local authorities.

- The construction phase will not have a significant impact on public roads.

6.6. Further Responses – First Round

The response of Tipperary County Council was referred by An Bord Pleanála to the other parties to the appeal for comment – on or before 2nd April 2019.

6.6.1. The response of the first 3rd Party appellant, received by An Bord Pleanála on 25th March 2019, can be summarised in bullet point format as follows-

- The site notice was on a cul de sac, which is passed by very few people. It should have been erected on the L3204.
- The site notice did not state the capacity of the of the ESF.
- There is no indication of how the ESF is connected to the solar farm.
- Environmental impacts could not have been assessed, in the absence of complete information on the project.
- If both the solar farm and the battery storage developments proceed at the same time, there will be a doubling of construction traffic on the L3204. Parallel construction should not be allowed for these two developments.
- Based on additional information supplied during the planning process, there is more than 4MW in each container.

6.6.2. The response of Suir Valley Environmental Group & Carmel McCormack, received by An Bord Pleanála on 2nd April 2019, can be summarised in bullet point format as follows-

- The site notice did not meet statutory requirements. Rainwater damaged the site notice, making it illegible. The ink used on the notice was not indelible. In the Alf-A-Bet Promotions Ltd. V Monaghan Co. Council case, deficiencies in the site notice were enough to have the original application declared a nullity.
- It is within the discretion of the PA to require that an EIAR be submitted for a development. The project falls into a category which is likely to have significant effects on the environment. Projects can be considered on a case-by-case basis. There is no record of any reasoning by the PA, as to why it was considered that this development was sub-threshold. It was pointed out

to the PA that hazard risks had occurred in another jurisdiction with a development of a similar nature.

- The Board should request an EIS from the developer.
- This is not a stand-alone project. The energy stored is insignificant in relation to the energy in the national grid. The supply from this battery storage would be very small, as a percentage of the requirement in the national grid. This development makes no economic sense. It is only hoped that developments such as this one will be able to give a quick injection of electricity into the system to maintain the +/-0.5Hz required. The grid connection should have been included in this development. This development needs to be considered in association with other similar-type developments proposed throughout the country. Overarching SEA is required for this type of development.
- The PA should have consulted other Prescribed Bodies in relation to this application.
- TCC has no expertise in relation to use of inert gases to suppress fires where lithium ion batteries are present. The PA did not consult any experts in the field. TCC has recently granted permission for a similar storage facility at Cahir – ref. 18/600187 (ABP-302055-18), where water is to be used for fire suppression. Insurance companies are not satisfied that there is any way to actively control lithium ion battery fires. The PA failed to assess the potential hazards of potential battery fires – particularly where there is a gas main traversing the site.
- E-mail correspondence between Gas Networks Ireland and TCC indicate that mitigation measures may have to be put in place to protect the gas pipeline. Such hazards were never properly assessed by the PA. The PA has not brought to the attention of An Bord Pleanála, the correspondence with Gas Networks Ireland. GNI state- “We will carry out a survey to determine whether the operation of the facility might have an unwanted effect on the Pipeline Cathodic Protection. We may be required to put certain mitigation measures in place. The cost of any such will be chargeable to WEP”. The survey may expose even more hazard risks. TCC indicates that correspondence from GNI was received after the date of decision, and so was not taken into

consideration. This information was not issued to the appellants in time to include it in the original appeal documentation to An Bord Pleanála. Only for the fact that the appellants raised the issue with GNI, it might never have come to light.

- The bigger the installed MW capacity of the facility, the bigger the potential hazard risks. The carbon footprint of the batteries should be assessed – from mining of the raw material right through to final disposal. The batteries are likely to have to be replaced at least six times over the 30-year lifetime of the development. None of this information was included with the application.
- Eirgrid had Draft recommendations for maximum 50MW facilities at the time the decision was made to grant permission for 100MW storage at this facility. Eirgrid have a number of conditions which will be applied to volumes supplied – amongst which is a cap at 50MW per single grid connection point. The proposal, therefore, constitutes over-development, and will not qualify as suitable DS3 ancillary grid service provider – and is entirely speculative.

The response is accompanied by a copy of a Letter from TCC to Suir Valley Environmental Group (dated 14th March 2019), and enclosing an e-mail from Gas Networks Ireland to TCC (dated 1st February 2019).

6.6.3. The response of Bamford & Bonner, agent on behalf of the applicant, received by An Bord Pleanála on 29th March 2019, can be summarised in bullet point format as follows-

- There are two types of public notice. It is clear that members of the public were aware of the application, notwithstanding the claim that the site notice may have been illegible.
- Details of fire suppression were submitted to TCC.
- The applicant agrees with TCC that the proposed development is not of a class, for the purposes of EIA.
- The applicant concurs with the decision of TCC in relation to circulation of the application to Prescribed Bodies.
- A suite of environmental documents submitted with the application, enabled TCC to assess the environmental impact of the proposed development.

- A Construction Traffic Management Plan was submitted with the application. Operational and decommissioning traffic is also considered within the Plan.
- Battery storage has been determined to be a critical component in securing s sustainable supply of energy. They are part and parcel of a resilient electricity grid. It is located adjacent to a permitted solar farm.

6.7. **Further Responses – Second Round**

The response of the second 3rd Party appellant, to the response of TCC to the 3rd Party appeals, was referred to the other parties to the appeal for comment, on or before 1st May 2019.

6.7.1. The response of the first 3rd Party appellant, received by An Bord Pleanála on 26th April 2019, can be summarised in bullet point format as follows-

- The site notice was erected on a cul de sac, little frequented by people.
- The notice did not state the energy capacity of the development in MWh terms.
- Documents do not show how electricity cables will cross over the gas main through the site. Conditions do not state that the development must comply with the requirements of Gas Networks Ireland.
- If the project is constructed in conjunction with the solar farm, there will be a doubling of construction traffic on the road network. This would have a significant impact.
- Planning documents refer to local road L3204. This is believed to be incorrect: the access road in question is the L25121-0 – connecting to the L2512-0.

6.7.2. The response of Bamford & Bonner, agent on behalf of the applicant, received by An Bord Pleanála on 1st May 2019, can be summarised in bullet point format as follows-

- The matter of the site notice has been addressed comprehensively in submissions from Bamford & Bonner to An Bord Pleanála. Reference to the judgement in relation to Monaghan UDC v. Alf-A-Bet is incorrectly quoted by the appellant – as the development has been correctly described in public

notices. Members of the public have been adequately advised of the application. This is evidenced by the volume of the submissions which objectors have made. Ink on site notices had not washed out.

- An EIS Screening Report accompanied the planning application, which determined that an EIAR was not required. The appellants acknowledge at the outset that the development is not of a class for the purposes of EIA. The information submitted by the applicant is consistent with the requirements of Schedule 7A of the Planning and Development Regulations, 2001 (as amended). EIA only applies to the effects of 'certain public and private projects'. There is no provision in legislation to require an EIA of the proposed development.
- The applicant has clearly set out proposals for dealing with fire. The fact that another similar-type facility in Co. Tipperary proposes to use water for fire purposes is indicative that there can be more than one way to suppress a fire. The applicant will operate the facility using the best available technology and fire prevention measures, and if better technology becomes available during the lifetime of the application, it will be considered.
- The Board is now in possession of correspondence between GNI and TCC. There are extensive gas networks throughout the country. The development is subject to separate legislative protocols – amongst which are those dealing with gas mains. Gas Networks Ireland is not a Prescribed Body under the Act or Regulations – reflecting the separate legislative context that applies to gas.
- The reference to 50MW cap on facilities such as this one has been misconstrued. The current auction process that has commenced is seeking a total of 140MW with no one facility providing more than 50MW; but this does not mean that there will not be future opportunities for significantly more storage or that all future auctions will be capped at 50MW per single connection. Only those facilities with a grant of permission will be eligible to take part in the current auction.

The response is accompanied by the following documentation of note-

- Gas Transmission pipeline map through the site.

- Code of Practice for: Working in the Vicinity of the Transmission Network – issued by Gas Networks Ireland in October 2015.
- DS3 System Services Proven Technologies List from Eirgrid/Soni – which includes Storage (Solid State Batteries e.g. Lithium Ion.

6.7.3. There was no response received from Tipperary County Council.

6.8. Observations

None received.

6.9. Board Circulates Appeal

6.9.1. By letters dated 4th April 2019, An Bord Pleanála circulated the appeal to the following Prescribed Bodies, for comment on or before 1st May 2019-

- Development Applications Unit of the Department of Culture, Heritage and the Gaeltacht.
- An Taisce.
- The Heritage Council.
- Commission for Regulation of Utilities.
- Department of Communications, Climate Action and Environment.

6.9.2. There were no responses received within the appropriate period.

7.0 Assessment

The principal issues of this appeal relate to sustainable energy policy, drainage, noise and construction traffic.

7.1. Development Plan & Other Guidance

7.1.1. There are no national guidelines in relation to battery storage facilities such as the one proposed. This is not a reason to refuse permission for such a development. The appellants list a considerable number of applications/permissions for similar-type facilities throughout the country – some of which have been granted on appeal.

7.1.2. Under the terms of the Paris Agreement, Ireland has undertaken to reduce greenhouse gas emissions by 20% – as measured between 1990 levels and 2030 levels. "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. 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 RES-E 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". 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. The National Planning Framework – Project Ireland 2040, indicates, under the heading 'Green Energy', that 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".

7.1.3. The appellants point out that the proposed facility is not an alternative energy generator, but rather an inefficient means of storing energy. The facility will more likely to be used to regulate the frequency in the national grid – to maintain the frequency to within +/-0.5Hz: this is a matter of opinion. I would not hold with the arguments of the appellants that Strategic Environmental Assessment may be required – arising from the potentially national function, which this development (and others of its type) might perform in regulating the frequency in the national grid. The appellants argue that the proposed 100MW storage is a large fraction of the 140MW, identified by Eirgrid as being needed nationally from this type of facility. It is also argued that the maximum requirement from Eirgrid from any one facility of this type, would be 50MW of storage. I would note that the development could be carried out in discrete sections. The applicant points out that Eirgrid may require more battery

storage in the future. There is no requirement on Eirgrid to utilise the proposed privately-developed facility. The application is located adjacent to a permitted solar PV farm, with the idea of storing excess energy from the solar farm, to be released into the grid at short notice. I am satisfied that the proposed development is in accordance with national policy in relation to renewable energy.

7.1.4. Section 8.5 of the County Development Plan, relating to Access to the Electricity Supply Network, states- "Improvement measures to the national grid are set out under Grid 25 – 'A Strategy for the Development of Ireland's Electricity Grid for a Sustainable and Competitive Future'. Through this investment Eirgrid intend to undertake grid reinforcements. The appropriate expansion of the national grid is important to ensure adequacy of regional connectivity for sustainable economic growth as well as facilitate the development and connectivity of sustainable renewable energy resources. In this respect, the Council will facilitate the sustainable and appropriate development of additional electricity generation capacity throughout the region/county and support the sustainable expansion of the network".

7.1.5. The Tipperary County Council Renewable Energy Strategy 2016, is included as part of the County Development Plan. Section 4.2.3 deals with Energy Storage; and acknowledges the potential of Battery Energy Storage (BES), and states- "This Renewable Energy Strategy supports the objectives of the White Paper for Energy 2015 as they relate to energy storage as an important element of renewable energy systems in the county". This is repeated at SO13 of section 6.12.2 on Renewable Energy Objectives.

7.1.6. The Clonmel & Environs Development Plan 2013, indicates that the site is located within the 'Environs' (E), and is zoned- "To protect lands for the future expansion of Clonmel". The development could be seen as part of the infrastructure/utilities of the town, and so part of its expansion. The Land Use Zoning Matrix lists no use which would approximate to the proposed energy-type use, and so the development must be assessed on its merits. Policy INF 9 relating to Renewable Energy states- "It is the policy of the council to facilitate and encourage sustainable development proposals for alternative energy sources and energy efficient technologies".

7.1.7. I would be satisfied that the proposed development is in accordance with the the County Development Plan, the Tipperary County Council Renewable Energy Strategy and the Clonmel & Environs Development Plan.

7.2. Design & Layout

7.2.1. The site is accessed through an existing farmyard complex. This large complex of buildings will serve to screen the development from view from part of the access road. The site chosen is next to a permitted solar PV farm – not yet constructed. Whilst the two sites will be connected by cabling – the precise nature of this cabling has not been indicated. The battery storage units and associated plant are spread over the site. The battery storage area will be surrounded by a 3.0m high acoustic timber fence. Within the compound, the grid connection area in the eastern extremity, will be surrounded by 2.4m high metal mesh fencing for security purposes. A total of 5 no. pole-mounted CCTV cameras will be erected on the battery storage boundary, for security purposes.

7.2.2. Drawings submitted indicate that containers, cabinets and the sub-station building are limited in size and area – none being higher than 5.7m. This development would be limited in relation to the size of the adjoining farmyard complex of buildings to the southeast, and in relation to the proposed solar PV farm to the west and northwest. There is no signage indicated as part of the proposed development.

7.2.3. There is a gas main traversing this site – clearly indicated on drawings submitted. Documentation submitted with the application and appeal indicates that it is in place since 1986. A 7m wayleave has been preserved on either side of this gas main. The applicant is aware of its existence and of the Code of Practice for: 'Working in the Vicinity of the Transmission Network' – issued by Gas Networks Ireland in October 2015 [a copy of which was submitted to An Bord Pleanála by the applicant, by way of response to grounds of appeal]. The applicant points out that the developer will be required to comply with any applicable codes in relation to gas mains. Any necessary alterations to the gas main will have to be carried out with the consent of GNI and may be chargeable to the developer.

7.2.4. The design and layout of the proposed development is considered to be acceptable.

7.3. **Access & Traffic**

7.3.1. Construction Traffic

The application is accompanied by a Construction Traffic Management Plan – dated 3rd July 2018. The construction phase is estimated to last 6-8 months (elsewhere indicated as 12 weeks) – with an average of 5 HGV movements per day, and a maximum of 15 HGV deliveries on any day (30 HGV movements). Working hours are indicated as 0800-1800 Monday to Friday and 0800-1600 on Saturdays. The identified access route from the National road network is the same as for the Solar PV farm development – the L2512 as far as the R689 to the west; and then south to the N24 route through Clonmel. The L2512 is wide enough for two vehicles to pass with care. The cul de sac access to the site (L25121) is narrow, and would not permit of two vehicles passing. However, the distance between the site entrance and the junction with the L2512 is only 130m, and this could be appropriately managed by linesmen or scheduling of deliveries/departures. The applicant states that the construction of the solar PV farm and the battery storage facility will not proceed in tandem – although this is contradicted elsewhere in submissions from the applicant. It is noted that the grid transformer transportation may require a permit from the local authority, owing to its weight. Mitigation measures proposed include the following-

- Limitations on working times and HGV scheduling.
- Site security and signage.
- Measures to control emissions of dust on haul routes and local roads: amongst others- water spraying in dry periods, wheel-washing, covering of stockpiles in dry periods, and covering of HGV loads in dry periods.
- On-site parking for 25 staff, within the construction compound.

I would see no difficulty with the proposed construction access arrangements, even if the battery storage facility and the solar PV farm are constructed at the same time.

7.3.2. Access

Access to the site is from an existing, recessed farmyard entrance. Sight distance to the north and south at this entrance is restricted by hedgerows on either side. This

sight distance could be improved through cutting back of the hedgerows. The cul de sac is lightly trafficked – serving a total of seven houses and adjoining farmland. Whilst the 80kph maximum speed restriction applies in this area – in practice traffic speeds would be much lower, owing to the narrowness of the carriageway, road surfacing, the short length of the cul de sac, alignment of the cul de sac, and the proximity with the junction of the L2512 to the south. I note that condition no. 12 of the solar PV farm permission granted at this site, required sight distance at the entrance to be improved – for 70m clear sightlines in either direction. It would be possible to attach a condition to this effect to any grant of permission to issue from the Board. Swept path analysis was undertaken for HGV access to the site: and no enabling works are required.

7.3.3. Operational Traffic

The site will be remotely monitored, and there will be infrequent visits for maintenance. There will be no operational traffic impacts on the area.

7.3.4. Decommissioning Phase

The decommissioning phase traffic is estimated to be slightly higher than the construction phase traffic. The same mitigation measures will be put in place as for the construction phase.

7.3.5. Conclusion

The Roads Section of TCC was satisfied with the access and traffic arrangements. I would be satisfied that the access arrangements are acceptable, that the development will not have any significant impact on the carrying capacity of the local road network at construction/decommissioning stages, and that the proposed development will not constitute a traffic hazard.

7.4. **Water & Drainage**

7.4.1. Water

The report of the Acting Senior Executive Engineer for TCC (dated 24th September 2018), states that the site is located just outside the limits of the Brackford Bridge Source Protection Area. Irish Water expressed concerns in relation to potential impact on public supply boreholes at Brackford Bridge and Temple-etney. The

additional information submission of 19th November 2018, addressed this issue. The Brackford Bridge borehole is located 1.6km to the east of the site, and the Templetney boreholes is located 3.5km to the east of the site. The site was acknowledged to be within the Source Protection Zone (SPZ) of the Brackford Bridge borehole. The bedrock aquifer is locally important. The groundwater vulnerability is mostly 'High'. The risk of pollution from the site is deemed to be low. A SuDS scheme is proposed for the site, which would capture any pollutants accidentally released. A gas-based fire suppression system is proposed, so as to limit the possibility of groundwater contamination, if water was used to suppress a fire. A Construction Environmental Management Plan will be drawn up prior to commencement of construction. Pollution prevention measures will include-

- Storage of plant and equipment on hard-stand areas within a dedicated construction compound.
- All plant and equipment will use biodegradable hydraulic oil.
- Spill kits will be available on site.
- Diesel will be stored in a bunded bowser.
- Refuelling/maintenance will take place within designated hard-stand areas.
- Chemicals will be stored within a dedicated bunded area.
- Wastewater from staff toilets will be tankered off-site, to a licensed facility.
- Staff will be instructed in pollution-prevention control measures.

Irish Water indicated that it was satisfied with the further information response, subject to the surface water drainage scheme meeting best practice design. There will be no permanent staff on site, and so there is no provision for sanitary accommodation. There is, therefore, no need for a water supply to the site. The proposed development would not have any significant impact on groundwater.

7.4.2. Drainage

The application identified a need for 775m^3 storage of surface water within the site – to deal with a one-in-one-hundred rainfall event (plus 20% for climate change). The greenfield run-off rate is calculated at 9.9 l/s. Ultimate discharge is to a dry ditch, some 100m to the northwest of the area within which the batteries and associated

equipment are to be placed. The additional information submission of 19th November 2018, clarified proposals, and indicated the location of the underground attenuation area, discharge pipe, throttling mechanism, cut-off swale/drain and discharge point to a dry ditch to the northwest of the site – via a 375mm diameter pipe. This dry ditch connects with an existing watercourse (Ballyclerihan Stream), approximately 400m to the northwest. These arrangements were satisfactory to the Senior Executive Engineer of TCC, and I would be satisfied that they would be effective in dealing with surface water on this greenfield site.

7.4.3. Flooding

The application is accompanied by a Flood Risk Assessment – dated 14th June 2018. The central portion of the site has rushes growing over it – indicating poor drainage. This is a low-lying area relative to surrounding lands – and there are no watercourses to drain the area. The closest such is the Ballyclerihan Stream – some 380m due north of the battery storage site. The additional information submission, of 19th November 2018, indicated that 775m^3 of surface water attenuation was to be provided within the boundary of the site, to deal with a one-in-one-hundred rainfall event; and that a swale was to be constructed to intercept overland drainage flows from the south and west of the site. Drawings submitted with the application included a Draft Office of Public Works PRFA map, which indicated that the site was not subject to fluvial or any other type of flooding. It was argued, cogently, by the applicant, that the PRFA flood mapping was more accurate than flood mapping undertaken for the Clonmel & Environs Development Plan; and its use in the Horsepasture area was questioned – as it seemed to be based on the 40m contour, rather than the 35m contour in the PRFA flood mapping. I would be satisfied that the proposed development will not result in flooding on this site or on any adjoining lands, which are not in the control of the landowner.

7.5. Landscape and Visual Impact

7.5.1. The application was accompanied by a Landscape and Visual Impact Appraisal – dated 18th June 2018. This document includes six photograph viewpoints of the site and three photomontages. The site comprises improved agricultural grassland – with fields in the area divided by hedges and/or electric fences. There are a number of one-off houses flanking local roads in the vicinity. A 5km radius study zone was

adopted. The site is located within the River Suir Central Plain Landscape Character Area (LCA4) – identified in the Draft Tipperary County Council Landscape Character Assessment 2016. This LCA has a medium-compatibility for industrial-type projects. In general, this is a high-capacity, low-sensitivity landscape. There are no proposals to alter the topography of the area.

7.5.2. There are no protected/listed views in immediate proximity to the site (the closest such being V083 – views of the Commeragh Mountains from the R689 to the west – on the approach road to Clonmel). The development will not impact on this or any other listed views/prospects within Co. Tipperary or Co. Waterford to the south. Permission has already been granted for a solar PV farm on lands to the west and northwest. This solar PV farm will have a greater impact on the visual amenity of the area than the battery storage facility, which is located on slightly lower ground. The visual impact of the development will be limited to 30 years from the date of commissioning, at which stage the above-ground elements will have to be removed – unless permission is granted for their further retention.

7.5.3. The low height of the proposed structures, the set-back from roads, the relatively flat topography of the immediate area, and the retention of all hedgerows; will ensure that the visual impact of the development will be limited. The 3m high acoustic fence will serve to further screen the development from view. There is no landscaping plan accompanying this development. Drawings submitted indicate hedgerow and tree planting on the southern and western boundaries of the battery storage area. It would be possible to attach a condition requiring the planting of an hedgerow of native species along the southern and western boundaries of the battery storage area – and requiring retention of all other hedgerow boundaries. I would be satisfied that the construction-, operational- and decommissioning-phases of this development will not have any significant impact on the visual amenities of the area.

7.6. **Appropriate Assessment**

7.6.1. <u>General Comment</u>

A Stage 1 Appropriate Assessment Screening was undertaken by the developer and submitted with the application (dated 14th June 2018). Following a request for additional information, an NIS was submitted by the applicant on 19th November

2018. The site is located neither within nor immediately adjacent to any European site. The closest such is the Lower River Suir SAC (Site code 002137) – located some 1.7km due east of the site. There are no watercourses either within or bounding the site. There are dry ditches running along the northern and northeastern boundaries of the site, which ultimately connect to a dry ditch to the northwest of the site; which in turn connects to the Ballyclerihan Stream to the north; which in turn discharges to the Anner River to the east; which in turn discharges to the Suir River to the south. The appeal site is not in hydrological connectivity with this European site. The proposed development is not directly connected with or necessary for the management of an European site.

7.6.2. To firstly carry out screening for appropriate assessment, six steps will be followed-

Step 1 – Identify European Sites which could potentially be affected by the development (source-pathway-receptor model)

The closest such is the Lower River Suir SAC (Site code 002137) – located some 1.7km to the east of the field in which the battery units are to be located. There is no hydrological connectivity with this European site. There is a dry ditch located to the northwest of the site – to which it is proposed to discharge surface water, some 0.1km from the site for the batteries. This dry ditch connects some 0.4km to the northwest, into the fast-flowing Ballyclerihan Stream. This watercourse discharges into the aforementioned SAC, some 2.5km downstream. The separation from the SAC, via potential pathway is 3.0km – assuming there is water flowing in ditches.

Step 2 – Identify the Conservation Objectives of the relevant site(s)

The qualifying interests of the Lower River Suir SAC are as follows-

- Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*).
- Mediterranean salt meadows (*Juncetalia maritimi*).
- Water courses of plain to montane levels with the *Ranunculion fluitantis* and Callitricho-Batrachion vegetation.
- Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels.

- 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*) [Annex I].
- *Taxus baccata* woods of the British Isles [Annex I].
- *Margaritifera margaritifera* (Freshwater Pearl Mussel).
- *Austropotamobius pallipes* (White-clawed Crayfish).
- *Petromyzon marinus* (Sea Lamprey).
- *Lampetra planeri* (Brook Lamprey).
- *Lampetra fluviatilis* (River Lamprey).
- *Alosa fallax fallax* (Twaite Shad).
- *Salmo salar* (Salmon).
- *Lutra lutra* (Otter).

The conservation objectives for the 7,097ha site are:- to maintain the favourable conservation condition of- Water courses of plane to montane levels, Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels, White-clawed crayfish, and Otter; and to restore the favourable conservation condition of- Atlantic salt meadows, Mediterranean salt meadows, Old sessile oak woods, Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior*, *Taxus baccata* woods, Freshwater pearl mussel, Sea lamprey, Brook lamprey, River lamprey, Twaite shad, and Atlantic salmon.

Step 3 – Identify the potential- a) likely, and b) significant, effects of the project with reference to the site's Conservation Objectives, in light of best scientific knowledge

The principal impacts which may occur (both negative and positive), largely relate to water quality and impact on aquatic or aquatic-dependent species, such as Brook lamprey, River lamprey, Atlantic salmon, Twaite shad, White-clawed crayfish, Otter: and include the following-

- Accidental spillages of hydrocarbons or lubricants, entering groundwater during the construction/operational/decommissioning phases.
- Discharge of suspended solids to surface waters during construction phase.
- Change in pH of waters arising from discharge of concrete/'Readymix' to watercourses during the construction phase.
- Discharge of contaminated waters to watercourses in the event of a fire at the facility – during the operational phase.

None of the habitats, which constitute conservation interests of the SAC, are located within the zone of influence of the application site – being located a significant distance downstream of the proposed development.

Step 4 – As above, but considering in-combination effects with other plans or projects

The only other project of consideration in the area, is the proposed solar PV farm on adjoining lands to the west and northwest (21.82ha). There are no likely in-combination impacts with this development, as it is stated that construction of the two projects will likely proceed at the same time. The battery storage facility is located adjacent the wider red-line site boundary of the solar PV farm application; and shares a vehicular access. There will be no in-combination operational phase impacts on the SAC.

Step 5 – Identify any construction/operational practices which may be put in place/undertaken to reduce/lessen likely significant impacts on hydrology and ecology of the area

Best practices to be undertaken during construction, operational and decommissioning phases-

- Construction practices to include-
    - Storage of plant and equipment on hard-stand areas within a dedicated construction compound.
    - All plant and equipment will use biodegradable hydraulic oil.

- Spill kits will be available on site.
- Diesel will be stored in a bunded bowser.
- Refuelling and maintenance will take place within designated refuelling areas of hard-stand.
- Chemicals will be stored within a dedicated bunded area.
- Wastewater from staff toilets will be tankered off-site to a licensed disposal facility.
- Staff will be instructed in pollution prevention control measures.
- A filter drain will be constructed along the northern boundary, which will connect to a settlement pond for silt.

- Operational practices to include-
  - Surface water attenuation and discharge control.
  - Interceptor swale and drain on southern and western boundaries of the battery storage area – to intercept overland flows.
  - Inert gas-based suppression system for potential battery fires.
  - Containment of any fire-contaminated water within the drainage system of the site for decontamination or tankering off-site for disposal at a licensed facility.
- Decommissioning practices to include-
  - Same precautions as for the construction phase. [The Notification of decision to grant planning permission indicated a 30-year lifespan for the development – from the date of commissioning].

Step 6 – Determine whether likely significant effects, either individually or in combination with other plans or projects, on European sites, can reasonably be discounted, on the basis of objective scientific information

The original Appropriate Assessment Screening Report submitted by the applicant, concluded that the energy storage facility would not have any potential for significant adverse impacts on European sites, given the small-scale footprint of the

development and the separation distance from the SAC; and I would concur with that assessment. The PA, by way of additional information request, sought submission of a Natura Impact Statement. The applicant complied with this request; and submitted an NIS on 19th November 2018. I would consider that the request for, and submission of, an NIS, arose from an excess of caution on the part of the PA and the applicant. I am satisfied that Stage 1 screening for appropriate assessment can screen out the need for Stage 2 appropriate assessment.

7.6.3. It is reasonable to conclude that, on the basis of the information on the file, which I consider adequate in order to issue a screening determination, that the proposed development, individually or in combination with other plans or projects would not be likely to have a significant effect on European site no. 002137, or any other European site, in view of the site's Conservation Objectives, and a Stage 2 Appropriate Assessment is not, therefore, required.

7.7. **Other Issues**

7.7.1. <u>Noise</u>

The application is accompanied by a Noise Impact Assessment – dated 20th June 2018. No baseline monitoring was undertaken – modelling being compared to a typical rural night-time setting of 35dB. Ten of the closest noise-sensitive receptors (all occupied houses), were identified in the vicinity of the development. The closest sensitive receptor is a residence – some 130m due northeast of the site. The cumulative impact of operation with the adjoining solar PV farm (inverter stations, and their internal cooling fans) was considered, and a modelled cumulative contour noise map was produced. The operational phase of the development would be what could give rise to concern. Noise could issue from cooling fans for the inverters, air-conditioning for the 24 no. battery units, and the site transformer. Battery units will not be operational for the whole year – only 10-15% of it, and cooling fans will be operational approximately 40% of the year. Mitigation in the form of a 3m high acoustic-grade fence (illustrated on Drg. No. NE1011-242.1 of the A3 booklet of drawings which accompany the planning application) and sound attenuators on the inverter huts, is recommended. With mitigation measures in place, the noise levels at each of the identified receptors would be less than 40dB – as set out in World Health Organisation Night-time Guidelines. Condition 10 of the Notification of

decision to grant permission related to noise. It would be appropriate to attach a condition relating to operational noise to any grant of permission to issue from the Board. The condition should also refer to the implementation of the mitigation measures outlined in the Noise Impact Assessment.

7.7.2. Floodlighting & CCTV

The additional information submission, of 19th November 2018, indicated that floodlighting would not be required. CCTV cameras would use infra-red technology for night-time.

7.7.3. Development Contribution

Condition 12 of the Notification of decision to grant planning permission, required payment of a development contribution of €33,895.84. This condition was not appealed by the developer. A similarly-worded condition should be attached to any grant of permission to issue from the Board.

7.7.4. Grid Connection

The additional information submission of 19th November 2018, indicates that the grid connection is exempted development under Classes 26 & 27 of the Planning and Development Regulations, 2001 (as amended). No connection agreement has been finalised or applied for. Any reference to 33kV in documentation is indicated as being a typographical error; and should read 38kV. This application does not include a provision for connection to the grid – although the likely connection would be to the Doon 110kV sub-station, located a short distance to the southeast. There are high tension ESB cables traversing the landholding of the landowner – a short distance to the south of the proposed solar PV farm. There is no requirement to indicate the location of the future grid connection. The environmental impact of the grid connection could be assessed when the route and manner of connection was known, and any implications for European sites could be assessed at that stage also – in combination with other plans or projects in the area.

7.7.5. Ecology & Biodiversity

The application is accompanied by an Ecological Appraisal – dated 3rd July 2018. An habitat survey was undertaken on 5th May 2018. The site largely comprises improved agricultural grassland (part of two fields) with dry ditches and hedgerows

on field boundaries. Field signs for fauna were noted. Mature trees on the northeastern boundary are suitable for roosting bats. No badger sett was encountered within the site – although an outlier sett was noted some 36m from the site boundary. The Ballyclerihan Stream, some 380m due north of the battery storage site, in turn flows into the Anner River and from thence to the Suir River. There are no nature conservation designations either within or immediately adjacent to the site. I have elsewhere in this report made comments in relation to European sites, and it is not proposed to repeat these in this section. There is no proposal for hedgerow removal with this application – and there will be approximately 230m of new hedgerow, planted along the southern and western boundaries – an improvement in biodiversity for the area. The loss of a small area of improved agricultural grassland will not be significant in terms of the quantum of such habitat surrounding the site. Mitigation measures outlined include-

- 30m buffer zone around the identified badger sett.
- Pre-construction badger survey to check if badger activity has altered.
- Pre-construction survey for ground-nesting birds will be undertaken.
- No interference with hedgerows on site boundaries.
- Planting new hedgerow on southern and western boundaries of battery storage area.
- 10cm gap at bottom of boundary fence, to allow penetration of the site by small mammals.

I would be satisfied that short-term disturbance to habitats and species during the construction phase will not be significant, if the mitigation measures are implemented. The operational phase will not have any significant impact on biodiversity in the context of a busy working farm.

7.7.6. Environmental Impact Assessment

The development is not of a class which would require EIA. It does not fall within any of the Classes set out in Parts 1 and 2 of Schedule 5 of the Planning and Development Regulations, 2001 (as amended). Accordingly, the possibility of it being sub-threshold for the purposes of EIA does not arise. Nevertheless, the applicant has carried out a screening exercise [Screening Report – dated 25th June

2018] – particularly in relation to cumulative impact with the adjoining proposed solar PV farm to the west and northwest. The screening deals with the areas of policy; landscape; biodiversity; cultural heritage & archaeology; water; noise; traffic. These issues are addressed elsewhere in this Inspector's Report. The location of the site was chosen, so as to limit impacts on residential receptors, and to be close to the existing Doon 110kV sub-station. The only identified impact on human beings was noise, and specific mitigation measures have been put forward to deal with this issue. Appellants argue that it is open to the PA, or the Board, to seek the submission of an EIAR, if it is considered that the development would be likely to have significant impacts on the environment – even if it is sub-threshold. I would be satisfied that the applicant has addressed the potential impacts of the development on the surrounding area; and I am satisfied that the submission of an EIAR would not be warranted in this instance.

7.7.7. Fire & Terrorist Threat

Appellants have referred to possible environmental damage arising from a fire at the premises. The code relating to fire, is not strictly a planning issue. Reference by appellants to the Fire Officer, who will have to grant a Fire Certificate for this development, being an employee of TCC, is not a relevant planning consideration. Consultation with neighbouring local authorities in relation to fire, is a matter for the local authority, and is not relevant to this appeal. The appellants contend that the Fire Department of TCC does not have the technical expertise to deal with a fire in a facility such as this one: this is not a planning consideration. Additional information in relation to the issue of fire was submitted on 19th November 2018. Each battery unit will be fitted with a fire suppression system (inert gas-based). The units are spaced, so as to contain any possible spread of a fire in one unit. The gas main through this site is buried. The required 7m wayleave on either side of this main has been observed in the layout of the development. The application was referred to Gas Networks Ireland for comment, by TCC. The appellants point out that the response of GNI was received after the Notification of decision to grant permission issued from TCC. The appellants point out that batteries may be the object of a terrorist threat/attack, arising from the explosive nature of lithium ion batteries. This is not a relevant planning consideration. The Chemicals Act (Control of Major Accident Hazards involving Dangerous Substances) Regulations, 2015 [COMAH

Regulations], do not apply to a development of the nature proposed – it not being an 'establishment' for the purposes of the Regulations.

7.7.8. Archaeology

The application is accompanied by an Archaeology & Architectural Heritage Impact Assessment – dated 20th June 2018. The preparation of this document involved a site visit on 28th March 2018. There are no items of architectural heritage, either within or immediately abutting the site. There are no Recorded Monuments either within or immediately abutting the site. Archaeological deposits in this area, if any exist, will have been disturbed when the gas main was laid through the site. The PA did not attach any condition relating to archaeological monitoring to the Notification of decision to grant permission. Arising from the large extent of the site (2.21ha) it would be prudent to attach an archaeological monitoring condition to any grant of permission which might issue from the Board.

7.7.9. Insurance

Appellants claim that the operator may not be able to obtain insurance cover for the development: this is not a relevant planning consideration. Appellants claim that a dangerous facility such as this one may impact on the ability of neighbouring properties to obtain insurance: no evidence to substantiate this claim has been submitted.

7.7.10. Decommissioning

Appellants have argued that if decommissioning proves to be too expensive, equipment and batteries may be left on the site to slowly deteriorate. I recommend that a 30-year lifetime be granted for this development, after which all above-ground plant and buildings should be removed from the site. I note that TCC did not require a bond for decommissioning, and neither has it been the practice of the Board to require such.

7.7.11. Job Creation & Materials

The appellants correctly point out that there will be little by way of job creation at this facility, and that most of the components of construction will have to be imported. There is no requirement for developments to create jobs or to utilise Irish manufactures.

7.7.12. Impact on Farming

The appellants claim that the development will have an impact on adjacent farming – without specifying just what the impact would be. The site is separated from adjoining farmland to the northeast, not in the ownership of the landowner on whose lands the application is made, by an hedgerow with mature trees. Discharge of surface water from the development will be to a dry ditch on the landowner's side of the common boundary hedgerow (to the northwest). The proposed development will not have any significant impact on farming in the area.

7.7.13. Public Notices

Appellants claim that the original site notice erected was not fully legible. TCC was satisfied that the public notices for this development met with the requirements of the Planning and Development Regulations, 2001 (as amended). A revised site notice was erected on the site, as part of the additional information submission to the PA on 19th November 2018. This site notice was still in evidence, and legible, on the date of site inspection by this Planning Inspector, on 17th May 2019. The appellants have lodged substantial submissions with both TCC and An Bord Pleanála in relation to this application/appeal. The capacity of the battery storage, and the type of battery to be used, was indicated in the additional information submission. I am satisfied that the public notices adequately describe the nature of the proposed development.

7.7.14. Permission Lifetime

Condition 1b of the Notification of decision to grant planning permission indicated that the permission was for a period of 30 years from the date of commissioning. This ties in with the 30-year lifetime of the adjoining solar PV grant of permission. In granting permission for other similar-type developments, the Board has applied a 25-year lifetime. A condition relating to a 30-year lifetime should be attached to any grant of permission to issue from the Board, for this battery storage facility, in the interests of consistency.

8.0 **Recommendation**

I recommend that permission be granted for the Reasons and Considerations set out below, and subject to the attached Conditions.

9.0 **Reasons and Considerations**

Having regard to-

a) policies/objectives for energy storage in the Tipperary County Council Renewable Energy Strategy 2016;

b) policy in relation to access to the electricity supply network in the South Tipperary County Development Plan 2009 (as extended);

c) the location, nature and scale of the proposed development, and;

d) the pattern of existing development in the area:

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

10.0 **Conditions**

1. The development shall be carried out and completed in accordance with the plans and particulars lodged with the application, as amended by the further plans and particulars submitted the 19th 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.

   Reason: In the interest of clarity.

2. This permission shall be for a period of 30 years from the date of commissioning of the battery facility. De-commissioning of the battery facility and the removal of all structures from the site, shall occur within the

said 30-year period, unless a further planning permission for its longer duration on site is granted.

Reason: To enable the planning authority to review the operation of the proposed development in the light of the circumstances then prevailing.

3. All existing hedgerows on the northern, northeastern and southeastern site boundaries shall be retained in full, and shall be protected from damage during the construction phase. In addition, an hedgerow of native species shall be planted along the southern and western boundaries of the battery storage area, within the first planting season following construction of the development.

   Reason: In the interest of visual amenity and biodiversity.

4. Prior to commencement of development, the sightlines to the north and south of the proposed access to the site shown on Drg. No. NEO00402_0091_A Figure 5.4, shall be provided and, thereafter, no structure or vegetation over one metre in height shall be placed in or allowed to grow within these sightlines.

   Reason: In the interest of road safety.

5. HGV traffic movements to and from the site shall only be undertaken via that portion of local road L2512, between the junction with the L25121 Local Road and the junction with the R689 Regional Road to the west.

   Reason: In the interests of good traffic management and road safety.

6. The construction of the development shall be managed in accordance with a Construction Management Plan, which shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. This plan shall provide details of intended construction practice for the development, including:

   (a) Location of the site and materials compound(s) including area(s) identified for the storage of construction refuse;

   (b) Location of areas for construction site offices and staff facilities;

   (c) Details of site security fencing and hoardings;

(d) Details of on-site car parking facilities for site workers during the course of construction;

(e) Details of the timing and routing of construction traffic to and from the construction site and associated directional signage, to include proposals to facilitate the delivery of abnormal loads to the site;

(f) Measures to prevent the spillage or deposit of clay, rubble or other debris on the public road network;

(g) Details of appropriate mitigation measures for noise, dust and vibration, and monitoring of such levels;

(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;

(i) Off-site disposal of construction waste, and details of how it is proposed to manage excavated soil;

(j) Means to ensure that surface water run-off is controlled, such that no silt or other pollutants enter local surface water drains; and

(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.

Reason: In the interests of amenities, public health and safety.

7. 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.

   Reason: In the interests of good traffic management and road safety.

8. 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.

Reason: In order to safeguard the residential amenities of property in the vicinity.

9. 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.

(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:-

(i) 55 dB(A) (30-minute LAR) during the period 0700 to 1900 hours.

(ii) 50 dB(A) (30-minute LAR) during the period 1900 to 2300 hours.

(iii) 45dB(A) (15-minute Leq) during the period 2300 to 0700 hours.

(b) All sound measurement shall be carried out in accordance with ISO Recommendations 1996-2007: Acoustics – Description and Measurement of Environmental Noise.

Reason: To protect the residential amenities of property in the vicinity of the site

10. 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 -

(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,

(b) employ a suitably-qualified archaeologist who shall monitor all site investigations and other excavation works, and

(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.

In default of agreement on any of these requirements, the matter shall be referred to An Bord Pleanála for determination.

Reason: In order to conserve any archaeological heritage of the site, and to secure the preservation and protection of any remains that may exist within the site.

11. The developer shall pay to the planning authority a financial contribution in respect of public infrastructure and facilities benefiting development in the area of the planning authority that is provided or intended to be provided by or on behalf of the authority in accordance with the terms of the Development Contribution Scheme made under section 48 of the Planning and Development Act 2000, as amended. The contribution shall be paid prior to commencement of development or in such phased payments as the planning authority may facilitate and shall be subject to any applicable indexation provisions of the Scheme at the time of payment. Details of the application of the terms of the Scheme shall be agreed between the planning authority and the developer or, in default of such agreement, the matter shall be referred to An Bord Pleanála to determine the proper application of the terms of the Scheme.

Reason: It is a requirement of the Planning and Development Act 2000, as amended, that a condition requiring a contribution in accordance with the Development Contribution Scheme made under section 48 of the Act be applied to the permission.

Michael Dillon,
Planning Inspectorate.

24th May 2019.