



An  
Bord  
Pleanála

## Inspector's Report ABP-305739-19

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<b>Development</b>	10-year permission for the construction of a Battery Energy Storage System (BESS) Facility
<b>Location</b>	Site in the townland of Kilpaddoge, Tarbert, Co. Kerry
<b>Planning Authority</b>	Kerry County Council
<b>Planning Authority Reg. Ref.</b>	18/878
<b>Applicant(s)</b>	Shannon Clean Tech Ltd
<b>Type of Application</b>	Permission
<b>Planning Authority Decision</b>	Grant, subject to 13 conditions
<b>Type of Appeal</b>	Third Party -v- Decision
<b>Appellant(s)</b>	Carmel McCormick
<b>Observer(s)</b>	John O'Sullivan
<b>Date of Site Inspection</b>	5 <sup>th</sup> December 2019
<b>Inspector</b>	Hugh D. Morrison

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## 1.0 Site Location and Description

- 1.1. The site is located 1.3 km to the NW of the centre of Tarbert and 2.2 km to the WSW of the ESB power station on Tarbert Island. This site is accessed off the L-1010 via a new dedicated road to an ESB sub-station to the NW of the site. It lies within a wider area of farmland that rises at gentle to moderate gradients from the River Shannon to the north. Poles and pylons, variously, bear 110 and 220 kV lines cross over this farmland en route to the said power station and the ESB power station at Moneypoint lies in the background on the far side of the River.
- 1.2. The site itself is of roughly regular shape and it extends over an area of 0.6 hectares. This site is the subject of gentle to moderate gradients, which rise in a southerly direction. At present it accommodates the ruins of a building, a cattle crush pen, part of a storage area for baled fodder, which extends further to the south, and two paddocks. The site is bound to the north and to the west by the new dedicated road and to the south and east by, variously, the access track to the storage area and a fence line.

## 2.0 Proposed Development

- 2.1. The applicant seeks a 10-year permission for a proposal that would entail the construction of a 30 MW Battery Energy Storage System (BESS) Facility to provide grid balancing services to the Irish Electrical Grid.
- 2.2. The BESS would include the following elements:
  - Up to 26 self-contained battery container units with associated Heating Ventilation and Air Conditioning (HVAC) Systems,
  - Power Conversion Systems (PCS),
  - Step-up transformers,
  - Control systems and ancillary electrical components,
  - A single storey electricity control building (104.8 sqm),
  - A 110kV ESB sub-station,

- A single storey sub-station control building (178.3 sqm) and associated electrical infrastructure,
- A 110kV Generator Transformer,
- All necessary ground and foundation works,
- Associated compound cabling and ducting,
- Palisade security fencing and lighting,
- CCTV cameras,
- New site access from existing private road,
- Temporary construction compound, and
- All associated ancillary infrastructure and site development works.

2.3. The proposal would also entail earthworks to the site, whereby it would be dug-out to provide a lower and a higher level. The former level would be over the northern and central portions of this site and it would be laid out to accommodate the control buildings and accompanying equipment. The on-site access road would pass on N/S axis through these portions of the site. The latter level would be over the southern portion and it would accommodate the battery containers. A retaining wall would be constructed between these levels and a further one adjacent to the southern boundary of the site.

## **3.0 Planning Authority Decision**

### **3.1. Decision**

Following receipt of clarification of further information, a 10-year permission was granted, subject to 13 conditions, one of which requires that the proposal be de-commissioned after 20-years of operation, unless a further permission has been granted for its continuation.

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

#### **3.2.1. Planning Reports**

Further information was sought with respect to the following:

- A NIS,
- Pre-development archaeological testing, and
- A north/south cross-section.

Clarification (i) of this information was sought with respect to the following:

- A revised NIS.

Clarification (ii) of this information was sought with respect to the following:

- A construction environment management plan,
- A hazard analysis and risk assessment,
- Fire suppression systems,
- Firewater run-off assessment,
- Site layout and fire spread risk, and
- On-site fire-fighting water supplies.

### 3.2.2. Other Technical Reports

Kerry County Council:

- Roads: No objection, subject to conditions.
- Environment: No objection, subject to conditions.
- Biodiversity: Following clarification of further information (ii), no objection.
- Archaeology: Following receipt of further information, no objection.
- Fire: Following clarification of further information (ii), no objection.

## 4.0 Planning History

Site:

- Pre-application consultation occurred on 31<sup>st</sup> July 2018.

Surrounding sites:

- To the N: 13/138: Electricity Peaker Power Generating Plant incorporating 52 diesel reciprocating engines + access road: Permitted.
- To the NW: 15/005: Alterations to Kilpaddoge 220kV station: Permitted.
- To the NE: 19/115: Alterations to 13/138, which is under construction, decision awaited.

## **5.0 Policy and Context**

### **5.1. Development Plan**

Under the Kerry County Development Plan 2015 – 2021 (CDP), the site is shown as lying within an area that is zoned for industry and that forms part of the Tarbert/Ballylongford Industrial Landbank.

### **5.2. Natural Heritage Designations**

- Lower River Shannon SAC (002165)
- River Shannon and River Fergus Estuaries SPA (004077)

### **5.3. EIA Screening**

The proposal would not come within the ambit of any of the types of development set out under Part 1 and 2 of Schedule 5 to Article 93 of the Planning and Development Regulations 2001 – 2018. Accordingly, the possibility of it being sub-threshold for the purposes of EIA does not arise.

## **6.0 The Appeal**

### **6.1. Grounds of Appeal**

1. Attention is drawn to comparable proposals, which have been the subject of appeal and which the appellant has made submissions on. The Board is invited to consider these submissions, too.
2. Clarity is needed on the performance of the proposed batteries.

3. Clarity is needed on the chemistry of the proposed batteries.
4. Clarity is needed on the technical specification of the proposed batteries.
5. Clarity is needed on the proposed installed capacity.
6. Information on toxic hazardous chemicals and the amount of which would be released in the event of a fire/explosion.
7. Information on fire/explosion events involving the proposed battery type.
8. Information on the cumulative effect of any fire/explosion at the site.
9. The proposed Battery Energy Storage System (BESS) should be assessed as part of a wider Distributed Energy Storage System (DESS). To do otherwise is to project split. In this respect, the submitted NIS is deficient.
10. The National Fire Protection Association (NFPA) in the USA classifies battery storage facilities as high risk.
11. The DoHPLG considers battery storage facilities to be high risk. Planning officials err when they say that this risk is not properly a matter for the planning system.
12. The responsibility for assessing fire/explosion risks lies with local authorities, fire services, and the HSE.
13. The Chief Fire Officer has expressed the view that, as the proposal would not be a permanent structure, it would be exempt from needing a fire safety certificate.
14. The Ministerial view is that the proposal would require building regulation approval and fire safety certification.
15. BESS proposals are outside the HSE's remit.
16. The thoroughness of the Planning Authority's assessment is questioned. Reference in this respect is made to the EU's COMAH 2015 Regulations and the preparation of Pre-Incident Plans (PIPs) at the post-construction stage.
17. The preparedness of the local fire service for the advent of the proposal is questioned.

18. The timing of the preparation of the relevant PIP is challenged on the basis that an incident occurred at Drogenbos, Belgium during the installation of a BESS.
19. The existence of standards for the construction and operational stages of BESSs is contested.
20. Attention is drawn to the request by the Planning Authority that the applicant for a similar proposal (19/115) in the vicinity of the site should be the subject of a fire and explosion risk assessment and the itemisation of firefighting facilities. This request should have been made of the current applicant, too.
21. The efficacy of BESSs is questioned in terms of the amount of electricity that they can supply and the speed at which this occurs.
22. The efficacy of BESSs is further questioned in terms of their sustainability, e.g. the Carbon footprint generated by their manufacture and delivery, the leakage of electricity as it is stored and subsequently released, and de-commissioning issues.
23. Concern is expressed over the risk that BESSs pose to fire fighters.
24. Examples of lithium ion battery fires/explosions are cited and the ensuing difficulties of dealing with these incidents.
25. An example of a BESS that utilises used electric car batteries is cited to illustrate the cross over from the latter to the former facility.
26. The risks associated with damp climates and unstable electricity grid frequencies are highlighted and examples of fires/explosions at sea involving batteries are cited.
27. An array of critiques of BESSs is presented and the risks that they pose.
28. Missing.
29. The applicant submits a figure that indicates a 50% loss of electricity as it passes through a BESS, i.e. such systems are inefficient/wasteful.
30. The Board is requested to adopt the precautionary principle and refuse the current proposal.



## 6.2. Applicant Response

1. The other submissions referred to are not relevant to the current proposal.
2. Appendix 1 of the applicant's response sets out the performance of the batteries under the headings of nominal, mechanical, and electrical characteristics, and operating conditions.
3. Section 3 of Appendix 2 of the applicant's response sets out the requested on the chemistry of the batteries, which would include Lithium Iron Phosphate.
4. The aforementioned Appendices are referred to and the total number of battery cells, i.e. 112,500, all of which would be new.
5. The proposed installed capacity would be 50 MWh @ AC 400V useable.
6. A breakdown of the composition of the gas that would be produced in the unlikely event of a fire/explosion.
7. Notwithstanding the widespread use of the proposed battery type, there have been no reports of it catching fire or exploding in battery storage facilities.
8. The manufacturer has prioritised safety and the proposed battery type has been certified in the USA, where stringent standards apply. The applicant, too, has prioritised safety as is evidenced by its Construction Environment Management Plan (CEMP).
9. Attention is drawn to the CEMP and the thorough assessment of the proposal that was undertaken by the Planning Authority and its consultees.
10. In this respect, the proposal would comply with NFPA 72 & 2001.
11. The DoHPLG's alleged position on battery storage facilities is contested. Again, the CEMP and the Appendices attached to this response are referred to as evidence that the applicant has addressed safety concerns.
12. The track record of the proposed battery type is reiterated.
13. Under Appendix 2 of the CEMP, a Design Stage Fire Risk Assessment (DSFRA) has been submitted by the applicant, which includes a list of regulations and standards that the proposal would need to comply with. These include making an application for a fire safety certificate.

14. For ease of reference, the applicant lists the standards that its proposal would be compliant with.
15. Attention is again drawn to the DSFRA.
16. The Planning Authority did undertake a thorough assessment and the question of the said Regulations is addressed under Section 3.4.14 of the DSFRA.
17. During the preparation of the DSFRA, the fire service evidenced considerable awareness of the type of development in prospect and it attended the site with the applicant.
18. The applicant's response to item 17 is essentially reiterated.
19. Attention is again drawn to the DSFRA and the standards that the proposal would comply with.
20. The applicant insists that its proposal should be considered on its own merits and that it is materially different from the one cited. This proposal was thoroughly assessed as is evidenced from the further information exercises that were undertaken at the application stage.
21. BESSs complement e.g. solar farms in storing electricity until it is needed and then supplying such electricity speedily.
22. The applicant does not accept any aspect of this critique, i.e. BESS is efficient both in terms of being good value for money and in its ability to capture renewable energy until such time as it is needed, leakage is limited, and batteries are returned to the manufacturer for recycling.
23. The applicant's response to item 17 is essentially reiterated.
24. The proposal would be distinguishable from the examples cited. Safety considerations are prioritised in the design of the proposed batteries and once in-situ they would be the subject of four layers of protection, which are set out in Appendices 3 & 4 attached to the applicant's response.
25. Such cross over is not in prospect under the proposal.

26. The Irish electricity grid system is not “unstable” and its management would be enhanced further by the availability of BESS. Again, the type of battery proposed is distinguishable from the sea borne examples cited.
27. The applicant lists the documentation that it has submitted to allay safety concerns over the proposal.
28. Missing.
29. The main factor with respect to inefficiency is that of the Power Convert System (PCS). Under the proposal, the PCS would be 98.7% efficient. The beauty of a BESS is that it can store electricity when it is generated during low demand periods for release during high demand periods, wastage is thus averted.
30. The need for the proposal is outlined in the light of Eirgrid’s Delivering a Secure Sustainable System (DS3) Programme, under which the intermittent nature of renewable energy requires to be managed to ensure that its role in meeting EU targets can be met. Electricity storage is a key component of such management.

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

Reference is made to the advice received from the Biodiversity and Fire Officers in making the decision to grant permission.

### 6.4. **Observations**

- Attention is drawn to phrase in the Board’s mission statement on “the protection of the environment”.
- Notwithstanding the landscape character assessment of the site within its context, this site is included within a search area for wind farms, even though 275 turbines have been permitted in North Kerry.
- It is unsatisfactory that there are no national planning guidelines on BESS.

- The Planning Authority has already permitted 186 individual batteries, of which 76 would be sited in the locality of the subject site and thus within proximity of a comprehensive school in Tarbert.
- The current proposal is the third of its kind for Kilpadogue: Does this indicate project splitting?
- Concern is expressed over the fire risk posed and corresponding evacuation procedures within the surrounding locality.
- What gases are emitted during normal operations?

## 6.5. Further Responses

The applicant has responded to the observer as follows:

- Noted.
- Not relevant.
- For the Government to address.
- The current proposal is not connected to other ones that have already been permitted.
- The applicant has not made any other applications in the vicinity of the site and so the question of project splitting does not arise.
- The safety concerns raised are addressed under the applicant's CEMP and DSFRA.
- No gases would be emitted.

The appellant supports the observer's remarks.

The appellant responds to the applicant's response to her grounds of appeal. She makes the following points not previously summarised:

- Governmental Departments are to prepare Standard Operational Guidelines for BESSs.
- The Government's Chief Scientific Adviser has accepted in a public interview that lithium is "unstable", and he has indicated that the use of zinc holds out promise for future battery types.

- A further incident in the USA is reported upon.

## 7.0 Assessment

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

- (i) Land use, landscape, and visual amenity,
- (ii) Fire safety,
- (iii) Traffic and access,
- (iv) Environmental impacts, and
- (v) Appropriate Assessment.

### **(i) Land use, landscape, and visual amenity**

- 7.2. Under the CDP, the site is shown as lying within an area that is zoned for industry and forms part of the 390-hectare Tarbert/Ballylongford Industrial Landbank. Section 4.7 of this Plan discusses this landbank, which is envisaged as being developed for marine-related industry and compatible or complementary industries and enterprises that require deep water access. Planning permissions for a liquefied natural gas regasification terminal and a combined heat and power plant are cited.
- 7.3. The proposal is for a 30 MW Battery Energy Storage System (BESS) Facility, which would contribute to the security and stability of the grid by storing electricity generated by intermittent renewable sources so that it can be released during times of heavy demand. This Facility would thus complement the existing and proposed energy and industrial uses in the landbank (cf. Table 7 of the applicant's Planning and Environmental Report (PER)).
- 7.4. Under the Kerry Renewable Energy Strategy (RES) 2012, the site is shown as lying within the Landscape Character Area (LCA) known as Tarbert Pastures. While this LCA is deemed to be a landscape sensitive area, for the purposes of wind turbines, it is regarded as being "open to consideration".

- 7.5. During my site visit, I observed that the site and its context “read” as a working landscape. Thus, immediately to the NE and the NW of the site, i.e. between it and the River Shannon, lie the Electricity Peaker Power Plant, incorporating 52 diesel reciprocating engines, and the Kilpaddoge 220 kV ESB Sub-station and to the ENE at some remove lie the NORA Oil Reserve Terminal and the ESB’s Tarbert Power Station. The dedicated road, which serves the facilities to the NE and the NW and which also serves the site, is crossed by 110 kV and 220 kV electricity lines mounted on poles and pylons, respectively. Within this context, the proposal would appear as an extension of the existing cluster of energy-related facilities on the southern slopes of the River Shannon.
- 7.6. Under the proposal, the sloping site would be re-graded to achieve two level platforms, one higher and one lower, upon which the various items comprised in this proposal would be laid out. Consequently, it would “sit into” the host landscape and so a degree of visual containment would be achieved. The visual impact of the size and utilitarian appearance of the proposal would thereby be eased. Furthermore, under the applicant’s PER, supplementary hedgerow planting is proposed for the NE of the site, which I understand to be the northern and eastern road frontages of the site. In time such planting would provide appreciable screening of the proposal.
- 7.7. The applicant has stated that, while the grid connection for the proposal is not the subject of this application, it is envisaged that it would take the form of an underground link to the adjacent Kilpaddoge 220 kV ESB Sub-station and so no visual impact would arise.
- 7.8. In the light of the CDP’s zoning and Kerry’s RES landscape commentary, existing and proposed facilities for the landbank and the resulting working feel of the landscape, and the siting and layout of the proposal, I conclude that it would be an appropriate land use, which would be compatible with the landscape character and visual amenities of the area.

**(ii) Fire safety**

- 7.9. The appellant and the observer express multiple concerns over the safety of the proposal especially the risk that the use of lithium batteries would pose if they were to catch fire or explode.

- 7.10. At the application stage, the Planning Authority sought to address these concerns by means of further information requests. Thus, the applicant submitted a Construction Environmental Management Plan (CEMP), which addresses the construction phase, and, in Appendix 2 to this Plan, a Design Stage Fire Risk Assessment (DSFRA), which addresses the operational phase. Following his examination of the DSFRA in particular, the County Fire Officer raised no objection to the proposal.
- 7.11. The DSFRA comments on the regulatory environment for BESSs that pertains at present. Reference is thus made to the National Fire Protection Agency's draft Standard for the Installation of Energy Storage Systems (NFPA 855). This Standard is projected to be introduced in 2020 and it addresses the design, construction, installation, commissioning, operation, maintenance, and decommissioning of, amongst other facilities, BESS facilities such as that which is currently proposed for the subject site.
- 7.12. The DSFRA also lists extant standards and regulations that were consulted in its preparation.
- 7.13. The Development Management Guidelines advise on the ambit of the planning system. These Guidelines emphasize that duplication with other regulatory codes is to be avoided. They advise on fire safety considerations that may come within the said ambit, as follows:
- *The location of proposed development in relation to existing industrial or other hazards;*
  - *The historic fabric and contents of protected structures;*
  - *Fire service access for proposed development;*
  - *Water supplies for fire-fighting.*
- 7.14. If the proposal were to be the subject of an EIAR, then under Item (e)(i) of Schedule 6 to Article 94 of the Planning and Development Regulations, 2001 – 2019, the applicant would be required to describe the likely significant effects on the environment of the proposal resulting from (IV) the risks to human health, cultural heritage or the environment (e.g. due to accidents or disasters). The EIA undertaken by the Planning Authority would thus consider these effects. However, as BESSs are not EIA projects under either Part 1 or Part 2 of Schedule 5 to Article 93 of the

aforementioned Regulations, the requirement that the proposal be the subject of an EIAR does not arise and so the EIA process is not activated.

- 7.15. In the light of the foregoing paragraph, the fire safety considerations cited by the Development Management Guidelines are the ones that are of relevance to this planning assessment and so I will assess the proposal in the light of the same.
- 7.16. In relation to the first consideration, the proposed battery containers would be sited in the southern portion of the site. They would thus lie a minimum distance of 55m away from the northern boundary of the site, which in turn is c. 150 away from Kilpaddoge 220 kV ESB Sub-station and c. 200m away from the Electricity Peaker Power Plant.
- 7.17. In relation to the second consideration, the proposal does not involve the fabric of a protected structure and so this one is not relevant.
- 7.18. In relation to the third consideration, the site is served by a new dedicated road of two-lane width and modern form and construction. This road is accessed off the L-1010, which runs westwards from Tarbert. Under Section 3.4.6 of the DSFRA, the site access would be designed to ensure that it would afford adequate access to emergency service vehicles in accordance with Section 5.2 of Part B of the Building Regulations 2006.
- 7.19. In relation to the fourth consideration, under Section 3.4.5 of the DSFRA, the following water supply is specified: "An external fire hydrant located within 100m of the BESS containers...The water supply should be able to provide a minimum of 1900 litres per minute for at least 2 hours."
- 7.20. I note that both the completed application forms and the PER state that a water supply would not be required for either the construction or operation of the proposal. I note, too, the specification of the DSFRA that a water supply be available within the vicinity of the site, which would afford the requisite level of provision.
- 7.21. The applicant has not shown how the aforementioned specification would be met. In this respect, the blue edge on the submitted location plan both abuts the shoreline of the River Shannon and encapsulates the dedicated road to the site from the L-1010. Thus, options for the provision of the needed water supply would appear to exist.



7.22. I conclude that, insofar as fire safety is a material planning consideration, the proposal would be located at appropriate distances from other facilities within its vicinity, it would be satisfactorily accessed, and it would *prima facie* be capable of being served by an adequate water supply.

**(iii) Traffic and access**

7.23. The applicant's PER addresses traffic generation during the construction phase of the proposal. Projected traffic movements are set out in Table 6, which shows that based on a 5-day working week and a 6-month construction period, the average daily number of round trips to the site would be 17 involving both construction traffic and commuter traffic. Clearly, subsumed in this average are peaks and troughs in the daily number of round trips.

7.24. As outlined under the second heading of my assessment, the site is served by a recently constructed dedicated road to the adjacent facilities to the north. This road is accessed off the L-1010, which in turn connects with the R551 and the N69 in the nearby village of Tarbert. The combination of these roads means that access to the site is good.

7.25. Traffic generated by the proposal would be capable of being accommodated satisfactorily on the public road network. The applicant undertakes to consult locally in advance of any peak periods of traffic flow and any overlap in the timing of the anticipated construction period with that of other projects in the wider area would be addressed by means of a Construction Traffic Management Plan (CTMP).

7.26. Traffic generated during the operational phase of the proposal is not addressed. However, I anticipate that this would be minimal.

7.27. I conclude that traffic generated by the proposal would be capable of being accommodated on the public road network and beyond this network the site access arrangements would be satisfactory.

**(iv) Environmental impacts**

7.28. The applicant's PER addresses a series of environmental topics. Thus, the ecology, soils and geology, hydrology, and archaeology of the site and the impacts of the proposal on these topics and the human environment are discussed.

- 7.29. In relation to ecology, the applicant undertook field surveys of the habitats comprised in the site and the flora and fauna. Its assessment is that the site is of low biodiversity value and, given the presence of similar habitats in the vicinity, its development would not have a significant impact upon ecology.
- 7.30. In relation to soils and geology, the site is composed of clayey soil which is underlain by shale and sandstone till. Under the proposal, there would be the opportunity to reuse some of the soil that is displaced by earthworks involved in the laying out of the site. No geological interest attaches to the underlying till.
- 7.31. In relation to hydrology, the site slopes northwards and, insofar as surface water run-off occurs, as distinct from infiltration into the ground, a roadside ditch is in-situ along the northern boundary. Under the proposal, this ditch would be utilised as the point of discharge for the on-site surface water drainage system.
- 7.32. During the construction phase, standard construction methodologies set out in the applicant's CEMP would be employed to address the risk of polluted surface water run-off from the site. During the operational phase, while no measures in this respect are proposed, the applicant's DSFRA does undertake to "carry out a risk assessment to determine if the activity should have a fire-water retention facility."
- 7.33. In relation to archaeology, under further information, the applicant submitted an Archaeological Impact Assessment, which reports on the findings of test trenches that were dug across the central portion of the site. No archaeological features or artefacts were unearthed. Given the disturbance of the northern and southern portions of the site by recent and more distant building works, no further archaeological investigation is recommended. The County Archaeologist concurs with this recommendation.
- 7.34. In relation to the human environment, the PER addresses human health, noise and vibration, electromagnetic interference, and local employment and socio-economic factors. Given the location of the site, local topography, and separation distances from the nearest dwelling houses, no significant issues are identified under these headings for either the construction or operational phases. (The subject of fire safety is addressed as a separate topic above under the second heading of my assessment).

7.35. I conclude that, subject to a risk assessment with respect to fire water, the environmental impacts arising from the proposal would not be significant.

**(v) Appropriate Assessment**

7.36. Under clarification of further information, the applicant submitted a Stage 1 Screening Report and Stage 2 Natura Impact Statement for the proposal. I will draw upon this Report and Statement, the NPWS's website, and my own site visit in undertaking a Stage 1 Screening Exercise and a Stage 2 Appropriate Assessment.

**(a) Stage 1 Screening Exercise**

7.37. While the site is not in a Natura 2000 site, it is located on a southerly slope to the River Shannon at a point where this River is designated both the Lower Shannon SAC (002165) and the River Shannon and River Fergus Estuaries SPA (004077). Insofar as surface water run-off occurs on site, some of it would be intercepted by a ditch along its northern boundary and some would pass onto the road itself. This ditch runs alongside the dedicated road to the Electricity Peaker Power Generating Plant to the NE of the site from where it ultimately discharges to the River Shannon. The road also serves the Kilpaddoge 220 kV ESB Sub-station from where surface water run-off would be likely to enter the Sub-station's drainage system, which, presumably, too discharges to the River Shannon. There are thus potential source/pathway/receptor routes between the site and the said Natura 2000 sites.

7.38. During the construction phase of the proposal, it is possible that pollutants from the site could be borne from it to the River Shannon by means of the aforementioned source/pathway/receptor routes, thereby affecting water quality. During the operational phase, the risk of pollutants would recede to that of the remote possibility of contaminated fire water run-off.

7.39. Of the Qualifying Interests in the SAC, the following habitat and species would have the potential for their Conservation Objectives to be significantly affected by a loss of water quality: Estuaries, Bottlenose Dolphin, and European Otter. For Estuaries and Bottlenose Dolphin, the Conservation Objective is to maintain their favourable conservation condition, while for European Otter it is to restore their favourable conservation condition.

7.40. Of the Qualifying Interests in the SPA, the following species, which frequent the inter-tidal shoreline, would have the potential for their Conservation Objectives to be

significantly affected by a loss of water quality: Cormorant, Ringed Plover, Dunlin, Curlew, Redshank, Black-headed Gull, and Wetlands and Waterbirds. For all of these bird species, the Conservation Objective is to maintain their favourable conservation condition.

7.41. I consider then that the following factors are of relevance in this Screening Exercise:

- The potential for pollutants to be conveyed off-site in surface water run-off during the construction phase of the proposal, and
- The potential source/pathway/receptor routes between the site and the said Natura 2000 sites. These sites are the only ones that would potentially be affected by the proposal.

7.42. The ensuing likely effect on the water quality of the River Shannon is uncertain. Given that the Conservation Objectives of the identified habitat and species pertain to either the maintenance of the favourable conservation condition of these qualifying features or, in one case, the restoration of such favourable condition, I consider that, in accordance with the precautionary principle, a Stage 2 Appropriate Assessment should be undertaken.

### **(b) Appropriate Assessment**

7.43. I have reviewed the applicant's NIS and I consider that it contains sufficient relevant scientific information for me to make a recommendation to the Board.

7.44. During the construction phase, the potential likely significant effect identified at the Screening Stage is that of pollutants, e.g. silt, being conveyed by surface water run-off through the existing roadside drainage network and the road itself to the River Shannon, at a point where it is designated a SAC and a SPA. The water quality of this River could thereby be adversely affected to the detriment of the Conservation Objectives attendant upon a habitat and species identified, again, at the Screening Stage.

7.45. The applicant has responded to the aforementioned threat to water quality by proposing mitigation measures, which are outlined in its CEMP. These measures envisage the capture of surface water run-off. The key measure in this respect is cited under Item 5 of the CEMP:

*Site surface drainage and silt control measures shall be established prior to the commencement of the earthworks. Run-off from the site or areas of exposed soil shall be channelled and intercepted at regular intervals for discharge to silt-traps or settlement ponds with overflows directed to land rather than drainage ditch.*

I consider that these measures would effectively mitigate the threat posed.

- 7.46. Based on the said mitigation measures there would be no in-combination impacts with the surface water run-off from the Electricity Peaker Power Generating Plant and the Kilpaddock 220 kV ESB Sub-station to the River Shannon.
- 7.47. Following mitigation there would be no residual effects.
- 7.48. During the operational phase, the potential significant effect identified at the Screening Stage is that of pollutants, e.g. contaminated fire water, being conveyed by surface water run-off through the existing roadside drainage network and the road itself to the River Shannon, at a point where it is designated a SAC and a SPA.
- 7.49. The appellant has expressed concern over the risk of a fire posed by the proposal. To this end, she has submitted information pertaining to incidents that have occurred worldwide, wherein lithium batteries have caught fire. The applicant has responded to this information by questioning its relevance on the basis that the incidences cited did not involve the type of lithium batteries that would be installed in the proposal.
- 7.50. Furthermore, the applicant has submitted, at the application stage, a Design Stage Fire Risk Assessment and, at the appeal stage, documents entitled “Design Specification for Safety of Energy Storage System” and “ESS System Safety Design”. This Assessment and these documents outline the four-layers of fire protection that would be installed in the containers that house the batteries. In the event of a battery igniting, a gas would be discharged to extinguish the fire. Furthermore, the containers would be insulated with fire retardant materials that would contain any fire for a period of time.
- 7.51. Given the foregoing paragraph, I consider that the likelihood of a fire extending beyond a container is remote and so the scenario wherein fire water would be used to extinguish a blaze is unlikely. Accordingly, the risk of contaminated fire water run-off from the site occurring is too remote to trigger the need to address it under this Appropriate Assessment.

7.52. 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 proposal, individually or in combination with other plans or projects would not adversely affect the integrity of the European Sites Nos. 002165 and 004077, in view of the Sites' Conservation Objectives.

## 8.0 Recommendation

8.1. That permission be granted.

## 9.0 Reasons and Considerations

Having regard to the Development Management Guidelines and Kerry County Development Plan 2015 – 2021, the site lies within the Tarbert/Ballylongford Industrial Landbank and its development as proposed would lead to the introduction of a complementary use to the other existing and proposed energy and industrial uses in this Landbank. Within the context of adjacent existing facilities and in the light of the siting and design of the proposal, its landscape and visual impacts would be compatible with the landscape character and visual amenity of the area. Under the aforementioned Guidelines, the proposal would be compatible with the threat to public safety posed by its attendant fire risk. Proposed mitigation measures would ensure that environmental impacts would not be significant. The proposal would thus accord with the proper planning and sustainable development of the area.

The Board having considered the Screening Report for Appropriate Assessment, the Natura Impact Assessment, and all other relevant submissions carried out both an appropriate assessment screening exercise and an appropriate assessment in relation to the potential effects of the proposed development on designated European Sites, namely, the Lower River Shannon Special Area of Conservation (site code number 002165), and River Shannon and River Fergus Estuaries Special Protection Area (site code number 004077), in view of the sites' Conservation Objectives. The Board considered that the information before it was adequate to allow the carrying out of an appropriate assessment.

In completing the Appropriate Assessment, the Board considered, in particular, the following:

- (i) The likely direct and indirect impacts arising from the proposed development both individually or in combination with other plans or projects,
- (ii) The mitigation measures which are included as part of the current proposal, and
- (iii) The Conservation Objectives for the European Sites.

In completing the Appropriate Assessment, the Board accepted and adopted the Appropriate Assessment carried out in the Inspector's report in respect of the potential effects of the proposed development on the aforementioned European Sites, having regard to the Sites' Conservation Objectives.

In overall conclusion, the Board was satisfied that the proposed development, by itself or in combination with other plans or projects, would not adversely affect the integrity of the European Sites, in view of the Sites' Conservation Objectives.

## 10.0 Conditions

1.	<p>The development shall be carried out and completed in accordance with the plans and particulars lodged with the application, as amended by the further plans and particulars submitted on the 10<sup>th</sup> day of September 2018, 21<sup>st</sup> day of January 2019, 16<sup>th</sup> day of April 2019, and 30<sup>th</sup> day of July 2019 and by the further plans and particulars received by An Bord Pleanala on 20<sup>th</sup> day of November 2019, except as may otherwise be required in order to comply with the following conditions. Where such conditions require details to be agreed with the planning authority, the developer shall agree such details in writing with the planning authority prior to commencement of development and the development shall be carried out and completed in accordance with the agreed particulars.</p> <p><b>Reason:</b> In the interest of clarity.</p>
2.	<p>The period during which the development hereby permitted may be carried out shall be 10 years from the date of this order.</p> <p><b>Reason:</b> Having regard to the nature of the development, the Board considers it appropriate to specify a period of validity of this permission in</p>

	excess of five years.
3.	<p>This permission shall be for a period of 20 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 20-year period, unless a further planning permission for its longer duration on site is granted.</p> <p><b>Reason:</b> To enable the planning authority to review its operation in the light of the circumstances then prevailing.</p>
4.	<p>Prior to the commencement of development, a colour scheme for the proposal shall be submitted to and agreed in writing with the Planning Authority.</p> <p><b>Reason:</b> In the interest of visual amenity.</p>
5.	<p>The site shall be landscaped in accordance with a comprehensive scheme of landscaping, details of which shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. This scheme shall include the following:</p> <p>(a) A plan to scale of not less than 1:500 showing –</p> <p>(i) The species, variety, number, size and locations of all proposed trees and shrubs, which shall comprise predominantly native species such as mountain ash, birch, willow, sycamore, pine, oak, hawthorn, holly, hazel, beech or alder.</p> <p>(ii) Hard landscaping works, specifying surfacing materials and finished levels.</p> <p>(b) Specifications for mounding, levelling, cultivation and other operations associated with plant and grass establishment.</p> <p>(c) A timescale for implementation.</p> <p>All planting shall be adequately protected from damage until established.</p> <p>Any plants which die, are removed or become seriously damaged or diseased, within a period of five years from the completion of the</p>



	<p>development, shall be replaced within the next planting season with others of similar size and species, unless otherwise agreed in writing with the planning authority.</p> <p><b>Reason:</b> In the interest of residential and visual amenity.</p>
6.	<p>The measures outlined in the Construction Environmental Management Plan and the Design Stage Fire Risk Assessment shall be fully implemented, unless otherwise agreed in writing with the Planning Authority.</p> <p><b>Reason:</b> In order to avoid pollution.</p>
7.	<p>Construction traffic in attendance at 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.</p> <p><b>Reason:</b> In the interests of good traffic management and road safety.</p>
8.	<p>The developer shall pay to the planning authority a financial contribution of €14,165 (fourteen thousand one hundred and sixty-five euro) 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. The application of any indexation required by this condition shall be agreed between the planning authority and the developer or, in default of such agreement, the matter shall be referred to An Bord Pleanála to determine.</p> <p><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 D. Morrison  
Planning Inspector

20<sup>th</sup> January 2020