



An  
Bord  
Pleanála

# Inspector's Report

## ABP-315485-23

<b>Development</b>	Demolition of LRP Station (Previously approved ABP ref PL14.125540). Construct and operate and electricity grid services consisting: battery storage system (BESS) and a synchronous condenser (Sync Con). An EIAR and a NIS accompany the application.
<b>Location</b>	Aughamore and Lanesborough, Co. Longford
<b>Planning Authority</b>	Longford County Council
<b>Planning Authority Reg. Ref.</b>	2275
<b>Applicants</b>	Electricity Supply Board
<b>Type of Application</b>	Permission
<b>Planning Authority Decision</b>	Grant Permission
<b>Type of Appeal</b>	Third Party
<b>Appellant</b>	Liam Kelly
<b>Date of Site Inspection</b>	13 <sup>th</sup> April 2023
<b>Inspector</b>	Dolores McCague

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## 1.0 Site Location and Description

- 1.1.1. The site, known as 'Lough Ree Power (LRP) Station', is located at Lanesborough, Co. Longford, in the townlands of Aghamore and Lanesborough, Eircode N37 E180. The site is on the eastern bank of the River Shannon beside the town of Lanesborough and across the river from the settlement of Ballyleague, Co Roscommon. It is a brownfield site, which, up until recently, was in use for electricity generation.
- 1.1.2. The site is north of the N63 which runs in an east – west direction through Lanesborough. There are two access points to the site: the main access is from the N63 at the eastern end of the site, with a secondary access to the west via the street which provides access to the church and school. A church (St Johns Church of Ireland (protected structure)), primary school, engine spares shop and a chilled and frozen food supplier, lie to the south, with Main Street Lanesborough further south. To the west is the River Shannon, on the opposite bank of which (in county Roscommon) is a marina and an 'access for all' boat mooring and café/centre. The eastern site boundary abuts agricultural lands, farmland and residential properties and a car sales outlet, which front onto the N63 and local roads; a Bord na Móna railway is further to the east, and beyond this there is a GAA club playing fields. The land to the north has experienced peat extraction, ash disposal, as well as agricultural activities.
- 1.1.3. Within the site, at the western boundary, are existing (eg 110kV substation) and permitted electrical infrastructure, not affected by the proposed development.
- 1.1.4. The site is flat, mainly at an elevation of 40mOD.
- 1.1.5. It is given as 13.1ha in area.

## 2.0 Proposed Development

- 2.1.1. The proposed development will consist of the demolition of the existing Lough Ree Power (LRP) station (as approved under Longford County Council reg. ref. 01/115 An Bord Pleanála Ref. PL14.125540, and all subsequent permissions) and the development and operation of electricity grid services: a battery energy storage system (BESS) and a Synchronous Condenser (Sync Con).

2.1.2. The development can be divided into two distinct phases of activity: the initial demolition and site reinstatement (Phase 1), following by construction and operation of the new BESS and Sync Con (phase 2).

2.1.3. Phase 1 comprises the demolition of existing site structures, (with a total footprint of c.11.195sq.m. and a total gross floor area of c.20,000 sq.m), including:

- the former LRP station: boiler house, turbine house, bag filter house and associated 80m high stack;
- the intermediate peat storage building and associated fuel management system; and
- ancillary buildings including: electrical building, tippler building and associated control room and office, screening building, lorry unloading building, water treatment plant building, offices building, laboratory building, workshop and maintenance buildings, oil pumphouse, electrics rooms, railway/locomotive service building, cooling water pump house and sewage/foul water treatment facility.

All buildings and structures (including storage tanks and vessels) will be demolished to ground level, with below ground voids filled.

Existing hard standing surfaces (e.g. building ground floor concrete slabs, tarmacadam surfaces, concrete footpaths and road kerbs) will remain in situ; and the site will be reinstated and secured with boundary gates and fences, etc.

Associated with the demolition activity there will be on-site crushing of material using mobile machinery, for the purpose of disposal and/or material re-use.

By the completion of phase 1 the majority of the site will be surfaced with permeable stone. Surface water will largely infiltrate to ground as per greenfield conditions.

Surface water generated on the impermeable elements of the site will be collected in an underground drainage network and conveyed via the existing network to an existing settlement pond which it is proposed will be repurposed to facilitate the new development. Discharge from the site will be at a controlled rate to the River Shannon.

2.1.4. Phase 2 comprises the construction and operation of electricity grid services consisting of a battery storage system (BESS) and a synchronous condenser (Sync Con) and associated site works.

The BESS will comprise a c.75 MW capacity battery storage facility located within a c.1.2ha fenced and gated compound. Subject to detailed design, commercial and technical considerations, it will include:

- (a) up to 19 No. battery storage units incorporating a concrete base, battery modules, associated plant and equipment including transformers and inverters. The battery modules will be c.19m x c.5m x c.3m high, and the adjoining inverters c.10m x c.5m x c.3.8m high sitting on a 500mm concrete plinth;
- (b) a c.240sq.m. single-storey control building;
- (c) ancillary electrical plant including a c.200sq.m. banded transformer and a c.24sq.m. VAR support unit;
- (d) a c.18m high lightning monopole and a c.18m high SCADA communications mast;
- (e) on site services including electrical connections between items of plant and equipment, a diesel generator, car parking, lay down areas, spare parts storage container, CCTV and lighting;
- (f) a 2.6m high chainlink or palisade fence and access gate linking with the existing on-site station roads.

The BESS compound will be served by the pre-existing circuit breaker building located immediately south of the compound.

The Sync Con will comprise a 200 MVA (electrical rating) synchronous condenser located within a c.0.8ha fenced and gated compound and will include:

- (a) a Sync Con building (c.962sq.m., c.14m high) to house equipment including the synchronous condenser, flywheel, lube oil skid, air compressor and pumps;
- (b) supporting items of plant located within the outdoor compound including: outdoor cooling equipment (c.190sq.m.), modular containers housing electrical and control equipment (c.270sq.m.), and items of electrical plant, including a banded transformer (c.15m x c.10m x c.8m high: c.150sq.m, two auxiliary transformers (each c.4.2m x c.5.3m x c.4m high: c.22.5sq.m) and an external circuit breaker (c.9m high, c.66sq.m.), a firefighting water tank (c.7m diameter, c.8m high) and associated plant and equipment including a pumping skid (c.6m x c.3m x c.3m high, c.18sq.m); an above-ground oil separator and collection pit and a dedicated back up diesel generator (c.3m x c.6.5m x c.2.5m high: c.19.5sq.m);

- (c) two c.18m high lightning monopoles;
- (d) connections to existing and proposed site services networks including electrical and water supply networks and an underground surface water attenuation tank connecting to existing surface water drains;
- (e) on site services including electrical connections between items of plant and equipment, car parking, lay down areas, spare parts storage containers (2 No. containers, c.6m x c.11.5m: c.72sq.m. each), CCTV and lighting;
- (f) all other ancillary and miscellaneous site works including site access, internal roads and development of areas of hard standing including a maintenance laydown area, and a c.2.6m high chainlink or palisade fence and access gate linking with the existing on-site station roads.

Associated with the development of both the BESS and Sync Con, site development works will be completed. Both developments will be served by grid connections (comprising underground electrical cables at various voltages connecting the proposed units to the electricity transmission network via existing electrical substations on site); boundary fences and gates, and landscaping. Existing access roads will continue to be used to serve the new development and will not be altered. Site services – such as the existing peat settlement pond, drainage networks, electrical cables, and a 20kV rural supply circuit breaker building (c.18sq.m.), will continue to be used to serve the new development. Permission is sought for the continued use of these elements. The proposed development will not alter or affect existing ESN Network grid infrastructure on the site (including substations, overhead lines and associated support structures).

- 2.1.5. Permission is sought for temporary works serving all phases of development – including works compounds, accessways and site services.
- 2.1.6. Planning permission is sought for a duration of 10 years.
- 2.1.7. The existing LRP Station is licenced by the Environmental Protection Agency under an Industrial Emissions (IE) Licence (Ref. P0610-02), under which (condition 10.2) approval of the Decommissioning Management Plan is required.
- 2.1.8. The proposed demolition is detailed as:
  - Category A – high rise structures
  - Category B – low rise structures

Category C – above ground level reinforced concrete foundation structures and bunds to tanks, plant, transformers, etc.

Category D – large reinforced concrete plinths at ground level for plant support.

Category E – reinforced concrete tall structures e.g exhaust stack, and

Category F – below grade voids.

2.1.9. A methodology for each is set out.

2.1.10. The temporary construction facilities: laydown and storage areas, is indicated.

2.1.11. Cleaning of drains and removal of residues for testing and appropriate offsite disposal, will be undertaken.

2.1.12. Ca. 7000m<sup>3</sup> of concrete will be removed from the site and 7,000m<sup>3</sup> of fill material will be imported, with an estimated 150 inbound and outbound vehicle movements per day, max. Should it be decided to reuse concrete material from demolished structures as fill on site, with EPA approval, these amounts will be reduced accordingly.

2.1.13. The site currently drains to a single outfall to the River Shannon and a single outfall to the Lough Bannow stream. The existing systems, which include oil interceptors and a surface water settlement pond, will remain in place during decommissioning and will be re-used where possible; in addition to the provision of new drainage infrastructure, to provide surface water drainage for phase 2.

2.1.14. As part of the power generation station, cooling water (CW) was taken from the River Shannon at an intake structure and pumped via a culvert to the turbine house basement. The cooling water was returned to the River Shannon downstream at a CW outfall culvert.

2.1.15. It is proposed to remove the existing trash screens in front of the intake and install precast stacked dam beams in their slots. These dam beams will allow for clean water to be pumped out from the works area to the River Shannon, and works to progress in dry conditions. The dam beams will be lined with seals to prevent water re-entering the works area. Once dewatered, prefabricated closing panels will be installed over the intake. The existing intake basement structure will then be made redundant by filling the inlet compartments with concrete. The outfall culvert discharged to a concrete outfall structure to the River Shannon. It is proposed that the outfall structure will be plugged at the interface to the River Shannon to prevent

backflow into the system. CW culverts will also be plugged at the pumphouse and steam turbine building.

#### 2.1.16. Phase 2 will include:

Grid connections: underground cables connecting the proposed units to the electrical transmission network via electrical substations, and from both the BESS and Sync Con developments to the proposed ESNB 110kV GIS substation.

The BESS development – the units are modular and will be arrayed within the site along with the associated transformers and inverters. The dimensions of the unit, typically incorporating a concrete base, battery modules, associated plant and equipment are: c19m by c5m wide by c3m high, with an adjacent inverter, sitting on a c10m by c5m concrete base, with an overall height of c4m. Each BESS unit will be transported to site already built, and the site works required will include installation, connection via cables and commissioning. Inverters and transformers will also be transported to site as complete functional units ready for installation and connection on site. Each substation / control building will be made of prefabricated units, delivered to site and craned into position, or if this is not possible a traditional masonry block, flat roof, single storey building may be constructed for use as substation / control building.

The BESS, which is to store surplus energy generated during low demand and release it when demand is greater, typically for a 2 hour period, will include:

- up to 19 No. battery module assemblies, with 19 associated inverters,
- a control building with a 33kV cable to a step-up transformer located on site with an onwards grid connection export cable to the substation.
- supporting electrical equipment including house transformer and minor electrical plant,
- electrical connections between the batteries and switchgear building, contained in ducting, which will be located either underground or in above ground cable trays,
- an auxiliary transformer and electrical plant including the retention of an existing 10kV circuit breaker building, and
- an emergency back-up diesel generator.

2.1.17. The Sync Con, which is to support the transition system voltage by supplying / absorbing reactive power and providing synchronous inertia, will include:

- generator and flywheel building, to house equipment including the synchronous condenser, flywheel, lube oil skid, air compressor and pumps,
- cooling equipment,
- modular containers housing electrical and control equipment,
- a generator step-up transformer, two auxiliary transformers and electrical plant including an external circuit breaker,
- a firefighting water tank,
- a pump house,
- an above-ground oil separator and collection pit,
- connections to existing and proposed site services including an underground surface water attenuation tank connecting to existing surface water drains,
- an emergency back-up diesel generator,
- a new grid connection: underground cables to the adjacent existing 220kV ESNB substation,
- ancillary and shared services – there are various underground live and redundant services within the site. Some will continue to be used to facilitate phase 2.

Construction of phase 2 will involve excavation and installation of services for the BESS and Sync Con developments including drainage systems, connections to existing water supplies and power, along with the routing of all cable ducting throughout the site within the specified terminal points.

A fire water tank and associated suppression system are proposed for the Sync Con development. In-built fire suppression systems are included in the BESS designs.

The existing surface water management system has hydrocarbon separators which intercept any suspended hydrocarbons in the surface water runoff prior to discharge off site. These will remain in use for the post demolition site, maintained as required to ensure surface runoff from the BESS and Sync Con sites and any potential oil spillages, are treated. The proposed new surface water drainage system, including

full retention oil separators, will tie into the existing surface water drainage system, replicating greenfield discharge conditions where possible.

The facility will be generally unmanned and monitored remotely by a 3<sup>rd</sup> party security firm. There will be weekly visits by a technician. In addition, there will be annual maintenance of approximately 1-2 weeks in duration. During periods of maintenance, potable water will be supplied by a connection to the existing watermain on site.

No on-site disposal of domestic wastewater will take place during the operational phase.

- 2.1.18. An Environmental Impact Assessment Report (EIAR) and a Natura Impact Statement (NIS) accompanied the application.
  - 2.1.19. The Existing Buildings on the site comprise c20,018sq m. Demolition c20,000sq m with a footprint of c11,195sq m is proposed, c18sq is to be retained. Proposed Building is c1,202sq m.
  - 2.2. The site is an EPA licensed site, managed in accordance with an EPA Industrial Emissions (IE) licence P0610-02 and in accordance with the European Union Emissions Trading Scheme (ETS) and associated Greenhouse Gas Permit (IE\_GHG068\_10379\_3), as administered by the EPA. The station also operated under the Public Service Obligation (PSO) levy, fuelled by peat supplied by Bord na Móna (BnM) Energy Limited and agreed with the EU Commission.
    - 2.2.1. The application was accompanied by:
      - Planning Report
      - Appropriate Assessment Screening & Natura Impact Statement
      - EIAR 3 Volumes: Main Report, Appendices and Non Technical Summary
      - 4 Books of Drawings (Vols 1-4)
- Vol 1**
- Drawing Number and Title
- QP-000047-01-D460-001-001-000 Strategic Site Location Map scale 1:20,000.
- QP-000047-01-D460-002-001-000 Site Location Map scale 1:2,500.
- QP-000047-01-D460-003-001-000 Land Ownership map scale 1:2,500.
- QP-000047-01-D460-004-001-000 Overall existing site layout

QP-000047-01-D460-019-001-000 Overall Proposed Post Demolition (end of Phase 1) site layout  
QP-000047-01-D460-203-001-000 Overall Proposed site layout (end of Phase 2)  
QP-000047-01-D460-005-001/002/003/004-000 Existing site layout sheets 1 – 4  
QP-000047-01-D460-008-001/002/003/004/005-000 Ex. site section 1 sheets 1 - 5  
QP-000047-01-D460-009-001-000 Existing site section 2 – 2  
QP-000047-01-D460-010-001/002-000 Existing site section 3 sheets 1 - 2  
QP-000047-01-D460-025-001-000 Overall Existing Drainage Layout

## **Vol 2**

QP-000047-01-D460-025-001/002/003-000 Existing Drainage Sheets 1 – 3  
QP-000047-01-D460-040-001/002/003/004-000 Ex. Fire Main Layout Sheets 1 – 4  
QP-000047-01-D460-021-001/002/003/004-000 Prop. Demolition Plan Sheets 1 – 4  
QP-000047-01-D460-020-001/002/003/004-000 Prop. Post Demolition (End of Phase 1) Site Layout Sheets 1 – 4  
QP-000047-01-D460-035-001/002-000 Prop. Post Demolition (End of Phase 1) Site Sections  
QP-000047-01-D460-036-001/002-000 Prop. Post Demolition (End of Phase 1) Site Sections  
QP-000047-01-D460-037-001-000 Prop. Post Demolition (End of Phase 1) Site Sections

## **Vol 3**

QP-000047-01-D460-030-001-000 Prop. Overall Post Demolition (End of Phase 1) Drainage Layout  
QP-000047-01-D460-031-001/002/003/004-000 Prop. Post Demolition (End of Phase 1) Drainage  
QP-000047-01-D460-067-001-000 Existing Intermediate Peat Storage Building Floor Plan – for Demolition  
QP-000047-01-D460-068-001-000 Existing Intermediate Peat Storage Building Sections – for Demolition  
QP-000047-01-D460-069-001-000 Existing Intermediate Peat Storage Building Elevations – for Demolition  
QP-000047-01-D460-070-001-000 Existing laboratory Building / Offices Elevations – for Demolition  
QP-000047-01-D460-071-001-000 Existing Screening Building Plan, Elevations and Sections – for Demolition  
QP-000047-01-D460-079-001-000 Existing Maintenance Building Plan, Elevations and Sections – for Demolition  
QP-000047-01-D460-080-001-000 Existing Railway Services Building Plan, Elevations and Sections – for Demolition

QP-000047-01-D460-081-001-000 Existing Rail Tippler Building Plan and Lorry Uploading Building, Plans – for Demolition

QP-000047-01-D460-082-001-000 Existing Rail Tippler Building Plan and Lorry Uploading Building, Elevations – for Demolition

QP-000047-01-D460-083-001-000 Existing Rail Tippler Building Plan and Lorry Uploading Building, Sections – for Demolition

QP-000047-01-D460-084-001-000 Existing Peat Settlement Pond and Elevation Photos – no Change

QP-000047-01-D460-087-001-000 Existing Bottom Ash Silo Plan, Elevations – for Demolition

QP-000047-01-D460-088-001-000 Existing Oil Pump House Plan, Elevations and Sections – for Demolition

QP-000047-01-D460-089/090/091/092/093/094/095/096/097/098/099/010-001-000 Existing Boiler House, Turbine Hall and Bag filter House Floor plans +40.50m, 43.30m, 46.00m, 49.25m, 51.50m, 59.50m, 65.00m, 75.00m, 79.00m, 81.50m, 86.86m, 92.60m, for Demolition

#### **Vol 4**

QP-000047-01-D460-100-001-000 Existing Boiler House, Turbine Hall and Bag Filter House Floor plan level at +92.60m, for Demolition

QP-000047-01-D460-102-001-000 Existing Boiler House, Turbine Hall and Bag filter House Roof plan +40.50m, for Demolition

QP-000047-01-D460-103-001-000 Existing Boiler House, Turbine Hall and Bag filter House North and south elevations, for Demolition

QP-000047-01-D460-104-001-000 Existing Boiler House, Turbine Hall and Bag filter House East elevation, for Demolition

QP-000047-01-D460-105-001-000 Existing Boiler House, Turbine Hall and Bag filter House West elevation, for Demolition

QP-000047-01-D460-106-001/002-000 Existing Boiler House, Turbine Hall and Bag filter House Section E-E, for Demolition

QP-000047-01-D460-050-001-000 Existing CW (cooling water) Intake Structure & Pump House, for Demolition

QP-000047-01-D460-051-001-000 CW Intake Structure Proposed Decommissioning Works

QP-000047-01-D460-052-001-000 Existing CW outlet culvert details

QP-000047-01-D460-210-001/002/003/004-000 Proposed site layout sheets 1 – 4 (end of Phase 2) (4 drawings)

QP-000047-01-D460-213-001/002/003-000 Proposed site sections (end of Phase 2) ~~3 sheets~~

QP-000047-01-D460-204-001-000 Overall Proposed Drainage layout (end of Phase 2)

QP-000047-01-D460-215-001-000 Proposed Typical Development Drainage Details

QP-000047-01-D460-215-002-000 Proposed Typical Development Roads & Stoned Surfaces

QP-000047-01-D460-215-003-000 Proposed Typical Development Palisade Fences

QP-000047-01-D460-215-004-000 Proposed Typical Development Palisade Gates

QP-000047-01-D460-215-005-000 Proposed Typical Development Chainlink fences

QP-000047-01-D460-216-001-000 BESS Buildings and Plant, Typical Battery Container, A/C and Inverter Units

QP-000047-01-D460-216-002-000 BESS Buildings and Plant, Control Building and VAR Support

QP-000047-01-D460-216-003-000 BESS Buildings and Plant, Typical Poles and Mast

QP-000047-01-D460-216-004-000 BESS Buildings and Plant, Transformer and Unit Auxiliary Transformer

QP-000047-01-D460-216-005-000 BESS Buildings and Plant, Spare Parts Storage Container and Diesel Generator

QP-000047-01-D460-217-001-000 Synchronous Condenser Building and Plant Compound Sections

QP-000047-01-D460-217-002-000 Synchronous Condenser Building and Plant Compound Elevations

QP-000047-01-D460-217-003-000 Synchronous Condenser Building and Plant Compound Plan

QP-000047-01-D460-218-001-000 Ancillary Development: 10kV Rural Supply circuit Breaker Building

QP-000047-01-D460-170-001-000 Proposed Crushed Concrete Re-use – Location Plan

QP-000047-01-D460-060-001-000 Proposed Contractor Temporary Site Setup

QP-000047-01-D460-065-001-000 Existing Environmental Sampling Points

## **3.0 Planning Authority (PA) Decision**

### **3.1. Decision**

3.1.1. The Planning Authority decision, dated 12<sup>th</sup> January 2023, was to grant permission subject to 15 conditions:

- 1) Compliance
- 2) 25 year operational period
- 3) Requirements of Roads Section – TIA, abnormal loads etc.
- 4) Requirements of Irish Water (IW)
- 5) Road cleaning during demolition/construction

- 6) Requirements of Environmental Health Officer (EHO)
- 7) Revised Construction and Demolition Management Plan; quarterly progress reports
- 8) Operational noise
- 9) Hours of operation for site development and building works
- 10) Waste management
- 11) Advertising signage
- 12) Lighting
- 13) Surface water
- 14) Nuisance
- 15) Development charge.

3.1.2. The decision was in accordance with the planning recommendation.

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

3.2.1. Planning Reports

3.2.2. The first planning report, 16<sup>th</sup> May 2022, recommending further information on 4 items, includes:

The requirement to demolish the existing LRP station and reinstate the site arises from the disused status of the station, the conditions of the existing grant of permission, and the need to remove the decommissioned station in order to develop new facilities.

Permission ABP,PL14.1255740 for the peat fuelled station, required cessation of use by 31<sup>st</sup> December 2020, (condition no. 2), and reinstatement of the site within two years of that date, (condition no. 8).

A proposal for the continuation of the use of another ESB peat fuelled station in west Offaly, 303108-18, was refused, which the ESB determined set a precedent, and ESB withdrew the LRP application.

The site has a long established history of electricity generating activity and associated services including access roads.

The Longford County Development Plan 2021-2027 includes zoning for Lanesborough. The site is zoned for Industrial / Alternative Energy use.

The site is accessed from one entrance road leading from the N63 Regional Road. It is also served by dedicated private railway operated by Bord na Móna, which connects the peat supply bogs, the ADF (ash disposal facility) and the station.

Pre-application SID screening process, ref 311992, determined that the proposed development does not fall within the scope of section 182A of the Planning and Development Act 2000, as amended, and that a planning application should be made in the first instance to Longford County Council.

Policy is outlined.

Submissions/representations are outlined.

### 3.2.3. Other Technical Reports

3.2.4. Road Design 28<sup>th</sup> April 2022 – recommending conditions: runoff, abnormal loads, construction traffic management plan, secure fencing, no parking queuing of delivery vehicles on the public road; no construction workers parking on the public road; measures to prevent spillages on the public road; and any damage to the public road to be made good at the developer's expense.

### 3.2.5. Chief Fire Officer, 10<sup>th</sup> May 2022 – recommending further information:

Submit the Emergency Response Plan recommended in the Fire Impact Assessment, providing information on:

- Consequence and Dispersion Model for the plant taking into account Fire and Explosion.
- Hazard Analysis for the design, operation and maintenance of the plant to include Fire and Explosion.
- Risk Assessment for the design, operation and maintenance of the plant to include Fire and Explosion.
- Details of the Management of Potentially Explosive Atmospheres to include the Explosion Protection Document and Hazardous Area Classification.

- Evidence of compliance with the ATEX<sup>1</sup> Regulations.
- Ventilation Requirements, if any.
- Details of Fire Suppression Systems to be provided; special extinguishing agents shall be matched to the appropriate hazard.
- How Fire Fighting / Extinguishing agent run off is to be managed; details of bunding systems and storage tanks capacity to be provided; details of drainage mechanism to be confirmed.
- A comprehensive firefighting action plan.
- A fire risk assessment detailing the space separation requirements between the proposed development in terms of fire spread to adjoining lands and buildings.

### **3.3. Prescribed Bodies**

- 3.3.1. TII Transport Infrastructure Ireland, 29<sup>th</sup> April 2022 – development to be undertaken in accordance with the recommendations of the Transport (Traffic Impact) Assessment. Any additional works required as a result of the Assessment should be funded by the developer.
- 3.3.2. DECC, Department of Environment, Climate and Communications, 4<sup>th</sup> May 2022, re. waste: consult with the PA and Regional Waste Management Planning Office.
- 3.3.3. GSI, Geological Survey Ireland, 4<sup>th</sup> May 2022, advising on their datasets.
- 3.3.4. EPA – Environmental Protection Agency - 5<sup>th</sup> May 2022 – outlining their responsibility for the IE licence (register no P0610-03).
- 3.3.5. Irish Water (IW), 5<sup>th</sup> May 2022 – conditions: 1) connection agreement; 2) the proposed development cannot commence until upgrade works to the existing IW supply network are carried out or the applicant can demonstrate that a connection / works agreement has been entered into with IW and temporary alternative treatment has been put in place. The upgrade works are required to provide an alternative water supply in the event that the existing public water supply is temporarily out of service as a result of the proposed works; 3) all EIAR mitigation measures to be

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<sup>1</sup> Two European Directives for controlling explosive atmospheres: Directive 99/92/EC the ATEX workplace directive; and Directive 2014/43/EC the ATEX equipment directive.

implemented; 4) if the existing borehole well is damaged or compromised during the works, IW would require full remediation of the well which could include the drilling of a new well if necessary; 5) in the interests of protecting the existing aquifer and borehole water source, IW require a 10m fenced buffer around the existing well on completion of the works.

- 3.3.6. HSE, Environmental Health Service (EHS), 5<sup>th</sup> May 2022 – satisfied with the EIAR. Local community to be informed; on-going engagement with sensitive receptors; the EHS should be contacted as soon as an alternative water supply is identified and prior to its commissioning as a water supply; noting that an outline CEMP has been provided. It is recommended that a site specific CEMP be submitted for approval prior to commencement of work. The PA should be satisfied that sufficient measures are employed to ensure that any soils disturbed during the proposed development are not contaminated and that a remediation strategy is implemented should soil contamination be identified. Re. surface water monitoring – details of monitoring locations, parameters and frequency of monitoring, to be made available to the PA and IW prior to commencement. Clarification is required regarding existing cooling water pipework and proposals for removing or sealing. Any pipes remaining on completion of decommissioning works should be rendered pest proof.

An inspection of existing interceptors shall be undertaken prior to commencement of works and any necessary works identified to be carried out immediately.

Details to be provided on the type of battery selection and the potential impacts and risks associated with the proposed battery selection and mitigation measures proposed to minimise such impacts on water, soil and air. Further information regarding potential health impacts on the local community associated with any toxic exposure in the event of a fire at the BESS unit.

Air – dust – Lanesborough Primary School to be identified as a dust monitoring location. On appointment, the principal contractor should submit a construction site layout plan to the planning authority indicating the location of site compounds and storage piles. The dust suppression and control measures included in the Dust Management Plan (appendix 10.2 of the EIAR) should be included as conditions.

Specific mitigation measures should be put in place to prevent the contamination of food being delivered, stored and prepared in food business premises in the proximity of the works and to minimise the spread of dust to food premises and the

subsequent contamination of food. This should be by means of communication with the food business operators prior to the commencement of dust generating works.

The contractor should liaise with festivals and events.

Dust monitoring – levels not to exceed 350mg/m<sup>2</sup>/day, averaged over a thirty day period.

Air – noise and vibration - there is a significant difference in potential impacts from the options specified. A detailed construction programme should be provided to the PA prior to the commencement of any works, specifying the chosen option for the use/disposal of construction waste and accompanied by a specific noise impact assessment. Local residents should receive regular updates on the progress of demolition and construction works.

Mitigation measures included in chapter 9.6.2 phase 2 operational phase, should be implemented in full. Mitigation measures in chapter 9.8 should be included in conditions.

Cumulative impacts have been included and assessed.

- 3.3.7. DAU, Department of Housing, Local Government and Heritage, 11<sup>th</sup> May 2022, re nature conservation: survey data older than 3 years is not considered sufficiently up to date. It would be useful to have up to date surveys continuing throughout the several phases of the project. The biodiversity assessments are informed by incidental sightings of wildlife and past ecological surveys, many now at least 5 years old. It is not clear if bird surveys give rise to the record of nesting swifts in summer 2021.

Comments re. bird surveys – for breeding birds, two full years, 2 to 4 surveys between April and July required. For wintering birds 3 surveys in the winter season required.

Comments re. bat surveys – existing survey is 6 years old. A survey should be carried out prior to demolition – at least 2 surveys, at least 2 weeks apart, between May and August, for emergence/entry, on each building.

Consideration could be given to inclusion of bat roosting cavities in the proposed swift nesting tower.

Otter – none recorded, but otter use the River Shannon immediately beside the site and may use the riparian woodland within the site as resting places. An updated otter survey should be carried out and the proposal could include further plans for habitat enhancement.

Mitigation measures:

The mitigation measure of construction of a 20 nest swift tower with a calling system is welcomed. This should be finished before demolition of the peat conveyor belt. Ideally both structures should be in place for a summer season to allow the swifts to investigate the new structure. Consideration could be given to inclusion of bat roosting cavities in the same structure.

The planned biodiversity enhancements and the proposed biodiversity management plan are noted. Further rehabilitation of riverine wetlands, or creation of new wetlands and woodlands within the site, and maintenance of areas of dry meadows, is recommended. The monitoring and reporting of the usage of the swift and bat projects is welcomed.

Watercourses and wetlands - As important areas for biodiversity they should be protected during construction and operation. Any watercourses or wetlands impacted should be surveyed for the presence of protected species

Water Quality Mitigation - There is potential for the accidental release of sediment and / or contaminated water via surface water run-off to the River Shannon during the proposed development. This risk is increased where works will be carried out close to the River Shannon, such as during the demolition of the intake structure. The accidental release of sediment and / or contaminated water during the demolition and construction could result in the deterioration of water quality downstream. Stringent application of the mitigation measures, is recommended. IFI should be consulted.

CEMP - It should contain sufficient detail to avoid any post construction doubt with regard to the implementation of mitigation measures, timings, roles and responsibilities. There can be no lacunae regarding mitigation, pre-commencement surveys and or licensing requirements.

Cumulative and ex-situ impacts – a source-pathway-receptor model should be used.

Artificial Lighting - a lighting plan for the operational phase should be agreed, in accordance with the Dark Sky Ireland recommendations, including:

- Use of warmer spectrum lighting (lower CCT, 2700 kelvins or less / warm white/red/yellow) and a lower blue content, which has less environmental intrusion.
- Low and fully shielded downward pointing lights and trimming (part-night lighting) schemes.
- Lower light levels. In 2019 the EU adopted a new 'Green Public Procurement Policy' on road lighting, which supports limitations on LED emitting white-light and introduces a lighting principle of 'as low as reasonably achievable' (ALARA), in determining levels of illumination.

Conclusion – information inadequate.

### **3.4. Further Information**

3.4.1. A request for further information issued 20<sup>th</sup> May 2023, on 4 points, which includes:

- 1) Items requested by Environmental Health Service,
- 2) Items requested by DAU, Department of Housing, Local Government and Heritage,
- 3) Items based on the report of the Chief Fire Officer,
- 4) Disposal of fire-fighting water.

3.4.2. A further information response was received, 15<sup>th</sup> November 2022, including:

Technical Note

Natura Impact Statement

Construction Environmental Management Plan

Fire Impact Assessment

3.4.3. The Technical Note Re. Zone of Influence Statement for the Proposed Demolition of Lough Ree Power (LRP) and the Construction of a Synchronous Condenser and a BESS Facility, includes:

All potential sources arising from both phase 1 demolition, phase 2 construction and phase 2 operational stages of the proposed development have been identified

according to the five pathways by which they may result in an impact: soils, groundwater, surface water, noise and air. The overall zone of influence (ZOI) for the proposed development is very small and, in most instances, non-existent due to the nature of the proposed development and also the careful design of the project and the mitigation measures which will be in place.

Table 3.1 Summary Zone of Influence (ZOI) Assessment for the Proposed Demolition of Lough Ree Power (LRP) and the Installation of a Synchronous Condenser and a BESS Facility, summarises potential impacts under the headings of: project phase, source, pathway and ZOI.

3.4.4. Identified sources for demolition and construction are:

via soil – contaminated soils; accidental spills/leaks, storage (of demolition and construction materials); vibration, land take (habitat removal for avifauna);

via groundwater – run-off, accidental spills/leaks, storage;

via surface water – run-off, accidental spills/leaks; invasive species;

via noise – demolition / construction machinery, demolition of the power plant structure, possible crushing of concrete on site;

via air – dust.

3.4.5. The sources identified for the operational phase are:

via soil – run off from hardstand, spills/accidents; spill / leak from diesel tank; leaks from BESS/Transformers; firewater run off if ‘extinguish with water’ is used;

via groundwater – run-off from hardstand, spills/accidents; spill / leak from diesel tank;

via groundwater to soils – leaks from BESS/Transformers to soil; firewater run off if ‘extinguish with water’ is used;

via groundwater to ESB-PW1 – firewater run off if ‘extinguish with water’ is used;

via groundwater – leachate from possible infilling of bunker;

via surface water – leaks from BESS/Transformers; firewater run off if ‘extinguish with water’ is used;

via noise – operational equipment; and

via air – BESS fire under a ‘controlled burn scenario’.

3.4.6. For each source the pathway is detailed and the zone of influence is set out.

Construction phase:

3.4.7. Re. impacts via groundwater – run-off – included under this heading it is pointed out that in section 7.3.9 and appendix 7-2 of the EIAr it is stated that the main groundwater discharges for the groundwater body as a whole are inferred by GSI to be to Lough Ree and the River Shannon in the west (within 100-600m downgradient of the proposed site). This groundwater flow pattern is supported by site-specific groundwater mapping, therefore the proposed development is considered to be located towards the downgradient end of the aquifer flow paths and is close to the discharge zone to surface waters. Any potential impacts on groundwater quality are anticipated to be localised in scale and, other than potential vibration-related impacts to the proximate, productive ESB-PW1 public water supply well, no significant impacts on the wider groundwater body are anticipated from the proposed works.

3.4.8. Re. impacts via noise – demolition / construction machinery, demolition of the power plant structure, possible crushing of concrete on site, the ZOI is given as: 300m beyond the site boundary during demolition, concrete crushing on site and site preparation works; 5m beyond the site boundary for steel erection works and 0m beyond the site boundary for the remainder. They refer to BS 5228-1:2009+A1:2004 and best practice, in relation to their proposals for mitigation and monitoring.

Operational phase:

3.4.9. Re. impacts via groundwater – firewater run off if ‘extinguish with water’ is used’, this includes the potential for impacts from the unlikely event of a fire at the proposed BESS facility as assessed in Chapter 16 and appendix 16.1 of the EIAr, groundwater. With respect to potential impacts to soils, control measures detailed in appendix 4.7 of the EIAr and appendix 16.1 of the EIAr are robust. In the event of a fire at one of the BESS inverters, the affected inverter bund can provide firewater retention. If the volume of the bund is insufficient water will be conveyed via the sealed compound drainage network to the impermeable subsurface remote containment tank. A shut-off valve at the tank outlet to the downstream network will be automatically activated in the event of a fire alarm being activated, (appendix 4.7). In the event of a larger fire or a fire arising from other elements of the BESS or Sync Con developments, a shut-off valve from the existing repurposed settlement/attenuation pond will be automatically activated with the pond providing

temporary firewater retention capacity along with the upstream drainage network as necessary, (appendix 4.7). Contaminated firewater collected on site, whether in the remote containment tank or pond, will be characterised (analysed) to determine the options for proper disposal. Consultation with IW will be required, (appendix 4.7).

- 3.4.10. Re. impacts via groundwater, leachate from possible infilling of bunker – this is with regard to the possibility of using crushed concrete to infill some of the bunkers within the subject lands as part of the Phase 1 demolition works. Should the crushed concrete mix interface with groundwater, there is potential for an elevation of the groundwater pH levels. Appendix 4.6 of the EIAr assesses the potential for ground or surface water ingress to mix with groundwater and / or the potential for surface water ingress to create leachate. It is stated in appendix 4.6 of the EIAr that the basement comprises a continuous reinforced concrete structure and was originally designed to prevent the ingress of ground water. The basement housed mechanical and electrical equipment including electrical motors when the plant was operational. The historical performance of the structure has been satisfactory to date with no recorded issues of ground water problems or ground or surface water ingress. A non-porous macadam surface will be applied over the top of the structure as a cover to redirect surface runoff away from the structure which has been backfilled with crushed concrete. When the cooling water culvert pipes in the basement are dismantled, the openings left at their current entry points on the basement wall will be shut off with leak-proof construction. The watertight nature of the structure will be maintained.
- 3.4.11. The construction impacts via noise extend to up to 300m beyond the site boundary and are to be controlled by BS5528. Re. operational impacts via noise, from operational equipment: the results of prediction models are summarised in section 9.5.2 of the EIAr. The ZOI is given as: 110m beyond the site boundary daytime; 55m beyond the site boundary evening; 180m to the north-east and west of the site boundary night time. These areas will experience a slightly noticeable increase in noise. There are no expected sources of vibration associated with the operational phase.
- 3.4.12. Re. operational impacts 'via air, BESS fire under a controlled burn scenario', there is no significant exposure to toxic fumes beyond 2.5m from the BESS unit, per Fire Impact Assessment.

- 3.4.13. Other than the distances mentioned in the foregoing paragraphs, all other ZOI distances are 0m beyond the site boundary.
- 3.4.14. It is stated, in relation to impacts via noise on ecology, that, as outlined in section 6.8 of the EIA and 4.4 of the NIS the noise associated with the demolition / construction phases of the proposed development will not affect qualifying interest species of the Lough Ree SAC or SPA, due to: the screening effect of the riparian zone, the distance, and the expected responses/tolerances of the species involved. Operational phase noise levels have been modelled as lower than the demolition / construction phases, and the same conclusion is therefore reached.
- 3.5. The Fire Impact Assessment includes:
- 3.5.1. The major accidents scenarios that could occur at BESS developments are:
- Battery fire
  - Release of toxic combustion products following fire
  - Vapour Cloud explosion within BESS unit
  - Firewater runoff entering watercourses.
- 3.5.2. Safety features of BESS vary between supplier, however, units typically have internal layers of protection to isolate cells and minimise propagation. Typical safety features include:
- Battery Management System – ensures operation remains within safe limits.
  - Cooling systems (liquid or air),
  - Venting system,
  - Electrical Isolation to prevent thermal runaway,
  - Fire protection,
  - Suppression system (electrical fires only).
- 3.5.3. Battery fires are not strictly fires as no oxygen is required to initiate and sustain a flame. The applicant refers to the Stefan-Boltzmann model which suggests that the thermal radiation fluxes of a battery fire are low beyond a distance of 6m from the unit. There is potential for knock-on effects to neighbouring BESS units, initiating thermal runaway, which could cause additional battery fires. However, in the event of

a fire, the in-built fire systems in the BESS units will likely electrically isolate the neighbouring BESS units, reducing the likelihood of further thermal runaway.

- 3.5.4. Toxic combustion products – toxic dose corresponding to 1% fatality is 85,000 ppm<sup>n</sup>.min. The maximum toxic dose reached following a fire at a BESS unit was for two weather categories 'D5' and 'F2' (described in the report) was 62,570 ppm<sup>n</sup>.min. The F2 weather category, detailed in section 4.1.1 of the report, occurs 20% of the time. The toxic dose corresponding to 1% fatality extends up to 2.5m from a BESS unit. Units will be positioned at least 2.5m from the boundary. It is highly unlikely that there will be any toxic consequences off site.

#### Vapour Cloud Explosion

- 3.5.5. A vapour cloud explosion is a plausible scenario for BESS units following thermal runaway and build-up of explosive gases. There was an explosion at a BESS facility in Arizona in 2019. However, unlike Arizona, where the BESS units were located in containers, the proposed BESS units will be located outdoors. Any vented explosive gases are unlikely to accumulate as they will naturally disperse, and it is unlikely that concentrations required for an explosion will ever be reached.
- 3.5.6. Firewater runoff entering watercourses – in the unlikely event of a larger fire or a fire arising from other elements of the BESS development, firewater runoff will be directed to the settlement / attenuation pond by the on-site drainage network and contained pending disposal.
- 3.5.7. Risk Assessment – a site specific risk assessment was completed. Included in chapter 16 of the EIAr, it identifies and quantifies risks, focusing on unplanned, but possible and plausible events occurring due to the proposed development, concluding that the residual risk of the operational phase of a BESS unit is very low.
- 3.5.8. An Emergency Response Plan is recommended; to include:
- Hazards of cascading thermal runaway, including flammable gases,
  - Measures to prevent fire propagation,
  - Management of toxic gases,
  - Controlled entry procedure (to site and/or module) following an event or an incident (by trained competent battery operational personnel).

- 3.5.9. Proprietary monitoring systems are installed within the BESS units to monitor for fire and gas detection. Cell temperatures are constantly measured through permanently installed built-in temperature sensors. If temperatures rise above a nominal threshold the cooling system activates to bring temperatures back down. These proprietary cell monitoring and cooling systems act as a mitigation measure against thermal runaway, by appropriately managing the battery, to prevent it exceeding its design and temperature limitations. These monitoring systems form part of the overall Battery Monitoring System which manages the BESS, ensuring it operates safely and manages and mitigates against all risks including fire.
- 3.5.10. Thermal runaway results in a build-up of pressure in the cell, causing the cell to vent and release flammable and explosive gases to the local atmosphere. If an ignition source is present, an explosion is possible. Typical release gases include: hydrogen, methane, carbon monoxide and ethene. Potential toxic combustion products are listed in table 2 of the report. ATEX regulations do not apply to BESS units and an explosion protection document is not required.
- 3.5.11. Testing of the battery modules to the current industry guidelines is a mitigation measure against thermal runaway. The battery modules are typically tested at a cell level, module level and string level, to determine if a thermal runaway event will occur.

3.6. The Natura Impact Statement includes:

Responding to the DAU comment re. bird surveys – the quoted surveys were carried out within the site as part of a previous planning application, within the last 3 years. These reports were reviewed during the desktop study. Swifts are not a qualifying interest species within any natura site that falls within the scope of the NIS. The suggested methodologies in relation to bird surveys would not be appropriate or proportional for a development of this type. The proposed development will result in the controlled deconstruction of the existing power station infrastructure, and subsequent redevelopment of grid services within the existing power station boundary. This will result in a large reduction in the current building levels within the site and therefore will not affect migratory bird species or bird species travelling between roosting and feeding sites. There will be no removal of habitat suitable to support the bird species listed as qualifying interests of Lough Ree SPA. Subsequent meetings (on-line and on-site) have facilitated recognition that the level and duration

of surveying suggested, is disproportionate to the nature of the project. NPWS have instead suggested that a bird monitoring regime be put in place during the demolition and construction phases. ESB propose that monitoring during the breeding and wintering seasons be included in the responsibility of the Ecological Clerk of Works, with reports on the monitoring observations being submitted annually to LCC and copied to NPWS.

- 3.6.1. Responding to the DAU comment re. bat surveys – bat species do not form part of the qualifying interest for any Natura site that falls within the ZOI of the development. The quoted survey was referenced in the Biodiversity Chapter of the EIAr, prepared for the 2019 biomass conversion planning application. The 2016 bat report was carried out within the site as part of a previous application, within the last 3 years. These reports were reviewed during the desktop survey. Updated visual inspection surveys and assessments of the features within the site to support roosting, foraging and/or commuting bats were carried out as part of this planning application. The external and internal surveys of the structures to be demolished, found no evidence of bat use, and assessed the structures as having no or negligible suitability to support roosting bats. It would not be considered proportionate to carry out additional surveys at the buildings to be demolished. Proposed enhancement measures are discussed in paragraphs 6.175 to 6.178, of the biodiversity chapter of the EIAr. These include the installation of multiple bat boxes within the riparian woodland. Bat boxes have been kept separate from the proposed swift nesting tower to prevent any potential disturbance or other interactions between the different species that could potentially reduce the effectiveness of the respective mitigation and enhancement measures.
- 3.6.2. Responding to the DAU comment re. otter – the proposed development will result in the loss of man-made habitats such as buildings and artificial surfaces and areas of disturbed ground; none otter habitats. Surveys carried out during the preparation of the Biodiversity chapter of the EIAr recorded no evidence of otter activity. Previous records in the area relate to lands outside the site. A supplementary survey along the eastern bank of the Shannon, in immediate proximity to the site boundary, for otter, was undertaken by an ESB staff ecologist on 22<sup>nd</sup> September 2022. This did not record any evidence of holts at the site.

- 3.6.3. Responding to the DAU comment re. mitigation – birds and bats: ESB will endeavour to prioritise the erection of these swift and bat mitigation features in advance of the main demolition phase.
- 3.6.4. Responding to the DAU comment re. watercourses and wetlands - the proposed development will result in the loss of man-made habitats. Mitigation measures, specific to the protection of water quality, are detailed in section 5.1.5 of the NIS. These measures are proven to work and provide certainty that watercourses or wetlands will not be affected as a result of water quality deterioration.
- 3.6.5. Responding to the DAU comment re. cumulative and ex-situ impacts, that a Source Pathway Receptor model should be used, a Source Pathway Receptor table has been submitted in response to the request for further information. The identification of potential impacts and effects on the qualifying interests of Natura 2000 sites is detailed in section 4.4 of the NIS. These were based on ZOI, potential ecological and landscape connectivity, qualifying interests and vulnerabilities of the Natura 2000 site and the nature and scale of the works. The ZOI was determined as 5km.
- 3.6.6. Responding to the DAU comment re. artificial lighting - lighting during construction will be limited to areas within the development footprint. The operational light levels within the site will be comparable to existing levels. Effects on the qualifying interests of Natura 2000 sites is not considered likely. The effects of temporary construction lighting on the local bat population was examined during the preparation of the Biodiversity Chapter of the EIAr. Mitigation measures, with proven effectiveness, as detailed in Section 6.8.6.2 of the EIAr, will ensure that the residual effects on the local bat population will not be significant. ESB commit to consulting the Dark Sky Guidance.
- 3.7. The Construction Environmental Management Plan includes:
- 3.7.1. A temporary drainage system will be installed prior to the commencement of the construction works to collect surface water runoff during construction. Should any discharge of construction water be required during the construction phase, this will be diverted to settlement tanks/bags and will not be allowed to directly discharge to the existing drainage system. Proposed measures include pre-treatment and silt reduction measures (silt or sediment traps, 20m buffer zone between machinery and watercourses, refuelling of machinery off site) and hydrocarbon interceptors. All runoff from car park areas will be channelled to an oil interceptor or an alternative

treatment system prior to discharge. Extensive monitoring will be adopted to ensure that the water is of sufficient quality to discharge to the surface water system.

Interceptors will be inspected prior to the commencement of works on site, and any necessary works identified will be carried out immediately on discovery.

- 3.7.2. It is envisaged that a number of geotextile lined settling basins and temporary mounding's and/or silt fences will be installed to ensure silts do not flow off site during the construction stage. This temporary surface water management facility will throttle runoff and allow suspended solids to be settled out and removed. All inlets to the settling basin will be 'riprapped' (rock armour) to prevent scour and erosion in the vicinity of the inlet.
- 3.7.3. Any temporary storage of spoil, hardcore, crushed concrete or similar material will be stored as far as possible from any surface water drains and also stored in receptacles where possible. Surface water drain gratings in areas near or close to where stockpiles are located will be covered by appropriate durable polyurethane covers or similar. Sediment entrapment facilities will be installed to reduce sediment discharges to downstream properties and receiving waters.
- 3.7.4. Concrete crushing will only occur at the designated location. The mobile concrete crusher, if used, will be located in the former intermediate peat storage zone c350m from the river Shannon. Dust and surface water control systems will be put in place at this location prior to crushing activities. The concrete crusher will be sited at least 200m from the ESB-PW1 well and sited to minimise potential for crushing related vibration to impact the well.
- 3.7.5. Wash-out of concrete ready-mix vehicles will only be allowed to take place in designated areas with an impervious surface, not within 20m of an existing surface water drainage point. No concrete batching will take place on site. Where possible low fluid/ quick setting concrete will be used to minimise generation of alkaline leachates from concrete/cement, especially for pile construction.
- 3.7.6. Best practice protocols for storage and management of chemicals and oil/fuel and for accidental spills and leaks are set out.
- 3.7.7. Monitoring will involve weekly checks and the keeping of a log and an inline turbidity monitor will be installed at ESB-PW1 well, for continuous remote monitoring of turbidity levels.

3.7.8. Installation of BESS units – the mitigation measures to be employed in the final design are set out:

- Best practice technical and operational measures, including fire detection and protection measures.
- Training of all personnel working at the facility, including emergency response training.
- Preparation for emergency cooling of the BESS containers in the event of an onsite fire, in line with UK Energy Institute’s recommendations.
- Completion of a site and facility wide Fire Safety Risk Assessment, to minimise the likelihood of fire, and to mitigate the risk of fire spreading.

3.7.9. In order to prevent environmental damage as a result of a fire involving any raw material stored on site, a number of mitigation measures have been incorporated into the project design to minimise risk of uncontrolled releases of these substances to the environment. These include:

- All chemicals stored on site will be subject to a COSHH (Control of Substances Hazardous to Health) assessment and compliance with the requirements of REACH<sup>2</sup>
- All containers and bunds will be inspected regularly,
- Accidental spillages will be contained and cleaned immediately,
- Spill Kits will be stored throughout the site,
- All potentially polluting substances, including waste, will be stored in designated areas in appropriate containers within bunds, drip trays or spill pallets, as required,
- The site’s Emergency Response Procedures will be updated.

3.7.10. Proposed consultation with local businesses and others is outlined.

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<sup>2</sup> REACH is a European Regulation and is an acronym for the Registration, Evaluation, Authorisation and Restriction of Chemicals. The overall aims of REACH are to: provide a high level of protection of human health and the environment from the use of chemicals; allow free movement of substances on the EU market; enhance innovation and the competitiveness of the EU chemicals industry; and reduce animal testing by promoting the use of alternative methods of assessing chemicals.

### **3.8. Further Reports**

- 3.8.1. Chief Fire Officer, 7<sup>th</sup> December 2022 – conditions.
- 3.8.2. The second planning report, 7<sup>th</sup> December 2022, recommending permission, includes:  
  
satisfied with responses.
- 3.8.3. Chief Fire Officer, 7<sup>th</sup> December 2022 – conditions.

### **3.9. Third Party Observations**

- 3.9.1. Third party observations have been read and noted.

## **4.0 Planning History**

ABP 311992-21 Pre-application consultation regarding an electrical development associated with a proposed battery energy storage system and synchronous condenser; determined not to be a Strategic Infrastructure Development (SID).

PA Reg. Ref. 19201 - development including a new 110 KV GIS substation, granted by Longford County Council in May 2020.

PA Reg. Ref. 19201 - development consisting of the redevelopment of the existing Lanesboro 110kV AIS substation with a new 110 kV Gas Insulated Switchgear (GIS) substation. The 110 kV GIS substation redevelopment will comprise of the following elements: (i) A 110 kV GIS substation contained within a building with a gross floor area of approximately 1,470m<sup>2</sup> (54m x 15m) and a height of 15m. Associated development within the footprint of the GIS substation development will include: 6 no. lightning rods of approximately 3m in height located on the parapet of the GIS Building; a Distribution System Operator (DSO) compound (approximately 30m<sup>2</sup>); an internal circulation road of approximately 245m in length and 5m in width, 12 no. car parking spaces; underground stormwater attenuation tank; underground foul wastewater pumping station and all associated site development and landscaping works. The substation will be bounded by a palisade fence 2.6m in height, and bounded with a property fence 1.4m in height; (ii) The modification of 8 no. existing 110 kV underground circuits which will be re-routed into the new 110 kV GIS substation: Sliabh Bawn-Lanesboro underground circuit, Cloon-Lanesboro

underground circuit, Athlone-Lanesboro underground circuit, Richmond 1-Lanesboro underground circuit, Richmond 2-Lanesboro underground circuit, Lough Ree Power T104-Lanesboro underground circuit, T141-Lanesboro underground circuit and Mullingar-Lanesboro underground circuit. Associated development includes the construction of 3 no. underground joint bays; 1 no. gantry tower (footprint of 30.2m<sup>2</sup> and height of 12.5m); 1 no. Line Cable Interface Mast (footprint of 123m<sup>2</sup> and height of 20.7m) and all associated and ancillary transmission infrastructure. (iii) The construction of a Landowner access road of approximately 91m in length and 6m in width.

PA Reg. Ref 1938, application withdrawn, for development at existing electricity generating station.

PA Reg. Ref. 18139 - refurbishment of the existing Cloon to Lanesboro 110 kV Overhead Line, in County Longford (in total approximately 65 kilometres long: 37km within the functional area of Galway County Council, approximately 27km in County Roscommon and approximately 120 metres in County Longford); granted. (ABP-302597 relates to the Roscommon section).

PA Reg. Ref. 0281 - New 110 KV Station Control Building, including additional control cable ducting, realignment and replacement of the existing compound fence, and replacement of switchgear, within the boundary fence; granted.

ABP-PL14,125540 PA Reg Ref 01/115, peat fired electrical power generation station and ash disposal facility, granted by the Board on foot of the PA's decision to grant. Condition no. 2 limited the period of operation to 31<sup>st</sup> December 2020.

## **5.0 Policy Context**

- 5.1.1. The policy context at national and local level is generally favourable to grid developments which facilitate renewable energy. This is referred in section 4.3 of the planning report accompanying the application and section 4 of the planning authority report.

## **5.2. Development Plan**

- 5.2.1. Longford County Development Plan 2021-2027 is the operative plan. The plan for Lanesborough, included in Volume 2, the appendix to the plan, includes land use zoning. The zoning objective attached to the subject land is:

### Industrial/Alternative Energy:

To primarily provide for industrial/workshop, warehouse and commercial or business development including compatible uses such as offices and distribution and to allow for the expansion of existing energy infrastructure.

To facilitate the transition from peat burning to renewable energy sources, the zoning also provides for the expansion of green and alternative energy production facilities including biomass/biofuels, solar, wind and geothermal sourced energies.

Manufacturing, servicing and research and development linked activities will also be considered.

## **5.3. Natural Heritage Designations**

- 5.3.1. The Lough Ree SAC and Lough Ree SPA, 200m distant, are the nearest Natura sites.

## **6.0 The Appeal**

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

- 6.1.1. The appellant, Liam Kelly, submitted grounds of appeal, including:
- Insufficient information provided in relation to the types of batteries intended to be used in the BESS.
  - In the case of fire the batteries emit heavy metals into the atmosphere, owing to its close proximity to the towns of Lanesborough and Ballyleague, this could have a detrimental effect on the local population.
  - The inability of the local fire service to quench a fire, if it does break out in one of the units or spreads to one or more of the other units,
  - Concern that, in the case of a fire, the spill off from the extinguishing agent used to quench / subdue the fire could contaminate the groundwater; as the local town water supply is part of the overall site.

### **6.2. Applicant Response**

- 6.2.1. The applicant has responded to the grounds of appeal, including:

- Sufficient information has been provided: in the EIAR para 4.8.1, in the planning report para 2.3.2.1, and in the response to the request for further information (RFI) para 3.1, where detailed descriptions of the proposed batteries are set out: their chemical composition, physical form, construction and operation. The decision to grant permission should be upheld.
- Potential impact on air quality associated with fire – these are detailed in the EIAR. Impacts on public health were assessed in Chapters 5 and 10. The EIAR concluded that the proposed development would not give rise to significant impacts on air quality. Additional assessments were provided in relation to fire risk and fire management in the response to RFI. A revised Fire Impact Assessment (FIA) was submitted. It demonstrated that in the unlikely event that a fire occurs and allowing for all scenarios for fire management: extinguish with water and controlled burn, any impacts would not extend beyond the site boundary.
- Fire risk and emergency response – this concern is unfounded as set out in the response to RFI para 3.1(b) and 3.3. The applicant has provided a detailed impact assessment relating to major accidents, EIAR chapter 16 and RFI response Annex I. These assessments consider the two scenarios for fire management, assess all risks, and identify appropriate mitigation strategies. In the worst case scenario, a thermal runaway situation, the assessment confirms that the risks are classified as ‘very low’, and in the highly unlikely event that a major accident occurs, it would not have any consequences beyond the site.

The applicant has confirmed the requirement, identified by the FIA, to develop an Emergency Response Plan in agreement with Longford County Council’s Fire Department prior to the BESS facility becoming operational. The legal requirement for the fire certification at the appropriate time is noted. The applicant refers to the Board’s decision in ABP 303611-10 (LCC Reg Ref 18/157) where fire risk had been referenced as a ground for refusal. The Board referred to the parallel consenting and regulatory processes, and fire certification being more appropriate for the consideration and resolution of such matters. The applicant submits that this provides precedence for this approach.

The applicant considers that following the carrying out of a rigorous assessment of the likelihood and significance of major accidents occurring, and the requirements for both Fire Certification and the development of an Emergency Response Plan before the facility becomes operational, they are confident that the ability of the Fire Services to respond has been considered in detail and the decision to grant permission should be upheld.

- Potential impacts on public water supply – this concern is unfounded. As set out in the response to RFI para 3.1(b) and 3.3, a detailed impact assessment relating to major accidents, EIAR chapter 16, and detailed RFI response Annex I, have been provided. The RFI response notes that a BESS fire cannot be extinguished in the conventional sense, so the emphasis in fire management is placed upon the best way to manage the fire until the chemical reactions have ceased. It can be managed with either a controlled burn or an extinguish with water approach. Both options have been assessed in the application and are possible within the design of the proposed development.

In the extinguish with water scenario, any firewater runoff is held within a sealed system. There is no potential for run-off into the Lanesborough Public Water Supply or to the River Shannon.

As a separate issue, it is noted that protection of public water, particularly during phase 1 demolition works, was a key consideration for the applicant, who engaged in consultation with Longford County Council and Irish Water. Irish Water recommended the imposition of a condition requiring the completion of network upgrades, in advance of development works commencing. They did not raise any concerns about risks during the operation of the batteries.

- Given the planning history of this site, the non-operational status of the station, the importance of grid services in supporting the decarbonisation of the electricity sector, the public policy statements that support such developments and the comprehensive nature of the planning application, the decision of Longford County Council is in line with the proper planning and sustainable development of the area and should be upheld. They request the

attachment of a condition allowing 10 years to complete, and seek prioritisation of this file.

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

6.3.1. The planning authority has not responded to the grounds of appeal.

## **7.0 Assessment**

7.1.1. I consider that the main issues which arise in relation to this appeal fall under the headings of appropriate assessment and environmental impact assessment, and the following assessment is dealt with under those headings.

## **8.0 Appropriate Assessment**

8.1.1. A document titled 'Natura Impact Statement' (NIS) was submitted with the application. It includes an appropriate assessment screening report. A document titled 'Natura Impact Statement Response' was submitted in response to the further information request. In addition, information in the EIA; in the document titled 'Technical Note re 'Zone of Influence Statement for the Proposed Demolition of Lough Ree Power Plant (LRP) and the Construction of a Synchronous Condenser and a BESS facility'; in the 'Construction Environmental Management Plan'; and in the 'Fire Impact Assessment for Battery Energy Storage Site at Lough Ree Power Station' assist in carrying out appropriate assessment. I am satisfied that the Board has before it sufficient information to enable it to carry out appropriate assessment.

### Description of the Development

8.1.2. The applicant provides a description of the project in section 3 of the NIS, as previously outlined in section 2 of this report.

### Appropriate Assessment - Screening

8.1.3. The following Natura sites are within a possible zone of influence of the proposed development by virtue of their proximity or location downstream via a hydrological connection:

Ballykenny-Fisherstown Bog SPA (site code 004101),  
Lough Forbes Complex SAC (site code 001818),

Brown Bog SAC (site code 002346),  
Mount Jessop Bog SAC (site code 002202),  
Corbo Bog SAC (site code 002349),  
Fortwilliam Turlough SAC (site code 000448),  
Lough Ree SAC (site code 000440),  
Lough Ree SPA (site code 004064),

8.1.4. I am satisfied that no other protected sites need to be considered.

## 8.2. Potential Impacts of the Proposed Development

There is potential for contaminants to enter surface water and to impact protected downstream sites.

There is potential for contaminants to enter groundwater and to impact protected sites.

There is potential for disturbance to qualifying interest species.

There is potential for introduction of invasive aquatic species or the movement of invasive aquatic species, during works carried out within waterways.

## 8.3. The Likely Significant Effects on the Conservation Objectives of Natura Sites

8.3.1. The conservation objective for Ballykenny-Fisherstown Bog SPA is to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA: Greenland White-fronted Goose. Ballykenny-Fisherstown Bog is a terrestrial habitat upstream of the subject site. There is no suitable habitat in or close to the subject site and therefore ex-situ impacts can be excluded. The likelihood for any significant effects can be excluded with confidence.

8.3.2. The site-specific conservation objectives of the Lough Forbes Complex SAC are to maintain or restore the favourable conservation status of habitats and species of community interest:

Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation,

Active raised bogs (priority habitat),

Degraded raised bogs still capable of natural regeneration,

Depressions on peat substrates of the Rhynchosporion,

Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (priority habitat).

The natural eutrophic lake is a water dependent habitat upstream of the subject site. The other habitats are terrestrial habitats upstream of the subject site. The likelihood for any significant effects can be excluded with confidence.

- 8.3.3. The site-specific conservation objectives of the Brown Bog SAC are to maintain or restore the favourable conservation status of habitats and species of community interest: Active raised bogs (priority habitat), Degraded raised bogs still capable of natural regeneration, Depressions on peat substrates of the Rhynchosporion. These are terrestrial habitats, not hydraulically connected to the subject site. The likelihood for any significant effects can be excluded with confidence.
- 8.3.4. The conservation objectives of Mount Jessop Bog SAC are to maintain or restore the favourable conservation condition of the Annex I habitats and/or the Annex II species for which the SAC has been selected: 'degraded raised bogs still capable of natural regeneration', and 'bog woodland' a priority habitat. These are terrestrial habitats, not hydraulically connected to the subject site. The likelihood for any significant effects can be excluded with confidence.
- 8.3.5. The site-specific conservation objectives of the Corbo Bog SAC are to maintain or restore the favourable conservation status of habitats and species of community interest: active raised bogs (priority habitat), degraded raised bogs still capable of natural regeneration, depressions on peat substrates of the Rhynchosporion. These are terrestrial habitats, not hydraulically connected to the subject site. The likelihood for any significant effects can be excluded with confidence.
- 8.3.6. The site-specific conservation objective of the Fortwilliam Turlough SAC is to maintain the favourable conservation condition of Turloughs (a priority habitat). The possibility of a groundwater connection between the subject site and the protected site (both in the Funshinagh groundwater body) can be excluded based on the discharge of the groundwater body as a whole west to Lough Ree and the River Shannon (within 100-600m downgradient of the proposed site) such that any potential impacts on groundwater quality are anticipated to be local and no significant impacts on the wider groundwater body are anticipated from the proposed works. The likelihood for any significant effects can be excluded with confidence.
- 8.3.7. The site-specific conservation objectives of Lough Ree SAC are to maintain the habitats and species, for which the SAC has been designated at favourable conservation condition. Many of the qualifying interests are water dependent and the

protected site is downstream of the subject site, therefore there is potential for impact. The likelihood of significant effects cannot be excluded. Appropriate Assessment, stage 2, is therefore required.

- 8.3.8. The site-specific conservation objectives of Lough Ree SPA are to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA (Little Grebe, Whooper Swan, Wigeon, Teal, Mallard, Shoveler, Tufted Duck, Common Scoter, Goldeneye, Coot, Golden Plover, Lapwing and Common Tern); and to maintain or restore the favourable conservation condition of the wetland habitat at Lough Ree SPA as a resource for the regularly-occurring migratory waterbirds that utilise it. The protected site is close to the subject site (and downstream), therefore there is potential for impact. The likelihood of significant effects cannot be excluded. Appropriate Assessment, stage 2, is therefore required.

Table 1 Screening summary

European Site	Site Code	Relevant QI & SCI	Distance	Potential for significant effects on conservation objectives
Ballykenny-Fisherstown Bog SPA	004101	Greenland White-fronted Goose	7.5km SL distance to north-east	No. Terrestrial species, no suitable habitat within the subject site
Lough Forbes Complex SAC	001818	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation Active raised bogs Degraded raised bogs still capable of natural regeneration Depressions on peat substrates of the Rhynchosporion Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i>	7.5km SL distance to north-east	No. Protected site is upstream

Brown Bog SAC	002346	Active raised bogs (priority habitat), Degraded raised bogs still capable of natural regeneration, Depressions on peat substrates of the Rhynchosporion.	10km	No. Not hydraulically connected
Mount Jessop Bog SAC	002202	Degraded raised bogs still capable of natural regeneration, and bog woodland, a priority habitat	11.5 km to east	No. Not hydraulically connected
Corbo Bog SAC	002349	Active raised bogs (priority habitat) Degraded raised bogs still capable of natural regeneration Depressions on peat substrates of the Rhynchosporion	5km (west of the R Shannon)	No. Not hydraulically connected
Fortwilliam Turlough SAC	000448	Turloughs	5km south east SL distance Turloughs	No Groundwater connection can be excluded based on groundwater flow westwards..
Lough Ree SAC	000440	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation Semi-natural dry grasslands and scrubland facies on calcareous substrates* Active raised bogs Degraded raised bogs still capable of natural regeneration Alkaline fens Limestone pavements Bog woodland Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i>	200m	Yes. Proximity and hydraulically connected.

		Otter		
Lough Ree SPA	004064	Little Grebe Whooper Swan Wigeon Teal Mallard Shoveler Tufted Duck Common Scoter Goldeneye Coot Golden Plover Lapwing Common Tern Wetland and Waterbirds	200m	Yes. Hydraulically connected.

#### 8.4. Screening Conclusion

8.4.1. Having carried out AA Screening I am satisfied that in the absence of mitigation the potential for significant effects cannot be excluded for Lough Ree SAC & SPA and that AA is required, no additional sites need to be brought forward for inclusion in the AA.

#### 8.5. Appropriate Assessment of Implications of the Proposed Development:

#### 8.6. Appropriate Assessment

8.6.1. The main issues identified through AA screening is that:

the development may result in decreased water quality,

there is potential for disturbance to qualifying interest species; and

there is potential for the introduction of invasive aquatic species or the movement of invasive aquatic species, during works carried out within waterways.

8.6.2. Protective measures are required to ensure that the risk of adverse effects on the conservation objectives of Lough Ree SAC & SPA are excluded.

## 8.7. Submissions and Observations

8.7.1. Concerns in relation to water quality have been raised in the grounds of appeal and were raised in submissions to the planning authority.

## 8.8. Mitigation measures.

### Construction Phase

## 8.9. Water Quality

8.9.1. Likely significant effects and mitigation measures during the construction phase to avoid impact on water quality are set out in the NIS and other documents.

8.9.2. Measures include:

Dust suppression – using water misters during any activity likely to generate large amounts of dust, such as demolition / concrete crushing; keeping hard surfaced roads swept, and minimising traffic on un-surfaced roads; use of a wheel wash; and use of tarpaulin covering for trucks. The mobile crusher will be located in the former intermediate peat storage zone c300m from the River Shannon at the closest point. Additional dust and surface water control systems will be put in place at this location prior to crushing activities. Should short-term stockpiles be required they will be located at least 50m from any watercourse. Slopes will be made stable and regularly checked. Stockpiles will be stored on impermeable surfaces and covered using tarpaulin. Sediment barriers, such as silt fencing, will be used in areas where works take place within 10m of watercourses, such as the demolition of the CW intake structure.

Best practice management of fuel and machinery.

Crushing of concrete will only occur at the designated location.

The existing surface water management system will be confirmed to be in suitable working order before works commence. A surface water management system, incorporating the existing system on site, will ensure that surface water arising during construction, including runoff from dust suppression, will be treated prior to discharge. All surface water will be directed through this system. There will be regular monitoring and prompt maintenance.

In the existing development, below ground structures were sealed to prevent ingress of water. In the proposed development, these structures will be filled with either

crushed concrete (if approval is received) or aggregate, or a combination of both. In the case of the 'tippler house' the lower areas will be filled with aggregate.

- 8.9.3. These measures will ensure that the likely significant effects on the conservation objectives of Natura sites, from deterioration in surface water and groundwater during the construction phase, will be avoided.

#### 8.10. Disturbance

- 8.10.1. Likely significant effects and mitigation measures during the construction phase to avoid disturbance to qualifying interest species are set out in the NIS.

Disturbance arising from increase in noise from demolition and construction works is a potential impact. Annual noise monitoring has been carried out at the site as part of the industrial emissions licence. The limits set for day, evening and night time are 55dB, 50dB and 45dB LAeq respectively. The noise levels will continue to apply during decommissioning and installation, and operation of grid services; which will continue to comply with the conditions of the industrial emissions licence.

The main part of the site is c200m from the SPA/SAC boundary and c100m-200m from the River Shannon. The River Shannon is separated from the main part of the site by grassland, scrub and riparian woodland along most of the western site boundary. At the closest point the riparian zone is c30m wide and provides screening and a buffer between the Natura sites and the site.

Otter have been previously recorded outside the site to the north-west. This species is known to tolerate and habituate to noise associated with human activities. This, in addition to the buffer provided by the riparian zone, means that noise associated with the proposed development is not likely to affect otter using the River Shannon / SAC.

A published noise disturbance threshold for waterbirds is cited as 55-72dB in highly disturbed areas such as industrial areas. Noise below this threshold is not considered to cause more than low levels effects. The noise assessment modelling carried out as part of the application, determined that the proposed development will not result in noise levels above this threshold, at the closest receptor to the River Shannon, c200m north of Lough Ree SPA/SAC.

- 8.10.2. These measures will ensure that the likely significant effects on the conservation objectives of Natura sites, from disturbance during the construction phase, will be avoided.

## 8.11. Biosecurity

8.11.1. Likely significant effects and mitigation measures during the construction phase to avoid impacts to qualifying interest species arising from invasive species are set out in the NIS.

A 'check, clean, dry' policy will be used, when using any equipment on or in the water.

Check boats, equipment, clothing and footwear for living plants or animals before arriving to site. Pay particular attention to areas that are damp or hard to inspect.

Clean and wash all equipment, footwear and clothes thoroughly before arriving to site. If you do come across any plants and animals, leave them at the water body where you found them.

Dry all equipment and clothing for at least 48 hours before arriving to site – some species can live for many days or weeks in moist conditions. Make sure you don't transfer water elsewhere.

All equipment that has come into contact with the water must be visually inspected for evidence of attached plant or animal material, or adherent mud or debris. This should be done before arriving to and leaving the site.

Should attached animal or plant material be found it will be removed and safely disposed of before arriving to site.

All water will be drained from boats, live wells and other water retaining compartments, outboard motors, tanks and other equipment before transportation to and off site.

Equipment and vehicles, including trailers will be cleaned using a 1% solution of Virkon (or another proprietary disinfectant). Alternatively larger equipment can be power-hosed using heated (60°C) water.

Ensure that all water is drained from boats, live wells and other water retaining compartments, outboard motors, tanks and other equipment before transportation elsewhere.

Where an outboard motor is used the cooling system will be flushed using the disinfectant solution.

8.11.2. These measures will ensure that ensure biosecurity is maintained and the likelihood of significant effects on the conservation objectives of Natura sites, from invasive species during the construction phase, will be avoided.

#### Operational Phase

#### 8.12. Water Quality

8.12.1. The likely significant effects on water quality during the operational phase are contaminated runoff from the BESS and Sync Con, and contaminated runoff of fire water.

8.12.2. All operational areas will drain to the surface water management system, which will ensure that surface water arising during operation will be treated prior to discharge.

8.12.3. In the unlikely event of water being used to manage/quench a fire all water will be contained within the site.

#### 8.13. Disturbance

8.13.1. There will be limited activity on the site and limited noise generation (predicted impact on noise sensitive receptors 'not significant' to 'slight'), such that there is no likelihood of significant effects on the conservation objectives of Natura sites from disturbance.

#### 8.14. Biosecurity

8.14.1. The operational phase of the proposes development does not involve any works within a watercourse, such that there is no likelihood of significant effects on the conservation objectives of Natura sites from biosecurity.

#### 8.15. Conclusion

8.15.1. I am satisfied that the implementation of the proposed mitigation measures referred to above will ensure that the potential for the project to impact on surface water and groundwater, such as to have adverse effects on the qualifying interests of the downstream protected sites is excluded; and with the implementation of the proposed mitigation measures potential disturbance to qualifying interest species is excluded. With the application of the proposed measures, the proposed development will not affect the attainment of the conservation objectives of these protected sites: Lough Ree SAC & Lough Ree SPA, or any other European site, and adverse effects on site integrity can be excluded with confidence.

## 8.16. In-Combination Effects

### 8.17. Construction Phase

- 8.17.1. Potential cumulative effects with the minor accommodation works to the existing 110kV substation and the development of a new 110kV substation on existing built land will not result in emissions to air or water. These small-scale developments include their own surface water management systems. No cumulative effects are likely to occur.
- 8.17.2. Cumulative noise impacts during the construction phase can be expected if the development adjoining takes place at the same time, and will need to be managed to limit the duration and magnitude of potential cumulative impacts. Cumulative noise impacts are expected to be short-term and not significant.

### 8.18. Operational Phase

- 8.18.1. Cumulative impacts during the operational phase, may elevate the noise level such that the impact increases from 'not significant' to 'slight'. Since disturbance impacts from human activity is unlikely, cumulative disturbance impact from human activity is also unlikely.
- 8.18.2. No cumulative impacts on biosecurity are likely during the operational phase.
- 8.18.3. When other projects are considered along with the proposed development there will not be any in-combination effect on European sites.

### 8.19. Conclusion and Appropriate Assessment Determination:

- 8.19.1. Having carried out screening for Appropriate Assessment of the project, it was concluded that in the absence of mitigation the development may have a significant effect on European sites. Consequently, an Appropriate Assessment was required of the implications of the project on the qualifying features of these sites in light of their conservation objectives.
- 8.19.2. Following an Appropriate Assessment, it has been ascertained that the proposed development, individually or in combination with other plans or projects would not adversely affect the integrity of the European site No, 000440 Lough Ree SAC or European site No 004064 Lough Ree SPA or any other European site, in view of the sites' Conservation Objectives.

8.19.3. This conclusion is based on a complete assessment of all aspects of the proposed project and there is no reasonable doubt as to the absence of adverse effects.

8.19.4. This conclusion is based on:

- the location outside of a European site,
- a full and detailed assessment of all aspects of the proposed project including proposed mitigation measures,
- detailed assessment of in-combination effects with other plans and projects,
- no reasonable scientific doubt as to the absence of adverse effects on the integrity of Lough Ree SAC or Lough Ree SPA.

## 9.0 Environmental Impact Assessment

9.1.1. The applicant submits that due to proximity to the River Shannon and the scale and magnitude of phase 1, the development falls within class 15 of Part 2 of Schedule 5 of the Planning and Development Regulations 2001, as amended:

Any project listed in this Part which does not exceed a quantity, area or other limit specified in this Part in respect of the relevant class of development but which would be likely to have significant effects on the environment, having regard to the criteria set out in Schedule 7.

It is submitted that it requires EIA and an EIAR has been provided.

9.1.2. The EIAR includes a non-technical summary, to provide a summary of the EIS in non-technical language.

9.1.3. The consideration of alternatives (chapter 3) was based on the applicant's objectives for the development, stated as:

Objective 1 - To support Ireland's transition to low carbon clean electricity through the provision of important grid support services thereby directly supporting the decarbonisation of the energy generation sector as a whole in line with national and EU policy.

Objective 2 - To initiate the development of new electricity generating technology hub that will utilise the existing grid infrastructure and the accommodation of future,

additional low carbon energy developments in line with ESB's low carbon future strategy

Objective 3 - To facilitate the new development of renewable generation technologies across the Midlands regions enabling future industrial development and regional grid security, which complements ESB's 2040 strategy to build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation.

9.1.4. Alternative generation technologies, that have potential for development on the site post demolition, include a peaking plant, BESS, solar power, Synchronous Condensers and Wind Power.

9.1.5. A gas peaking plant would require a connection of significant scale to the national gas grid: the construction of a c30km gas pipeline from Ballinasloe; and the overall output capacity would be minor. Solar power is not a viable option and Wind Power has not been explored as an option.

9.1.6. The Main Report is set out under the chapter headings:

Chapter 1 Introduction

Chapter 2 Need

Chapter 3 Alternatives

Chapter 4 Description

Chapter 5 Population and Human Health

Chapter 6 Biodiversity

Chapter 7 Land, Soils, Geology & Hydrogeology

Chapter 8 Hydrology

Chapter 9 Noise & Vibration

Chapter 10 Air Quality & Climate

Chapter 11 Material Assets

Chapter 12 Waste Management

Chapter 13 Traffic & Transportation

Chapter 14 Archaeology, Architectural and Cultural Heritage

Chapter 15 Landscape & Visual Impact

Chapter 16 Interaction of Impacts & Major Accidents

9.1.7. The Appendices (vol 2) comprise:

4.1 Phase 1 – Engineering Report for Demolition,

4.3 Phase 2 Construction Methodology Report,

4.5 Outline Construction Environmental Management Plan,

4.6 Phase 1 – Proposed Crushed Concrete Reuse, and

4.7 Drainage and Services Report.

9.1.8. The development has been described in section 2 of this report.

## **9.2. Adequacy of the EIS**

9.2.1. I am satisfied that the EIAR has been prepared by competent experts to ensure its completeness and quality, and that the information contained in the EIAR and supplementary information provided by the developer, adequately identify and describe the direct, indirect and cumulative effects of the proposed development on the environment and complies with article 94 of the Planning and Development Regulations 2000, as amended.

9.2.2. I consider that the information available to the Board, which includes: information submitted with the application, information in written submissions, and various other sources of information, such as the NPWS web site, is adequate for the carrying out of Environmental Impact Assessment in this case.

9.2.3. Issues are addressed below under the relevant headings, and as appropriate in the reasoned conclusion and recommendation, including conditions.

## **9.3. Population and Human Health**

The grounds of appeal includes that there is insufficient information provided in relation to the types of batteries intended to be used in the BESS. The applicant has responded that there are detailed descriptions of the proposed batteries in the EIAR at para. 4.8.1 and in the response to the request for further information: their chemical composition, physical form, construction and operation. It is stated in the

CEMP that lithium-ion batteries is the technology choice, influenced by a range of considerations including fire risk, and that these batteries are not classified as dangerous substances under the COMAH (Control of Major Accident Hazards) regulations.

- 9.3.1. The main impacts on population and human health are beneficial impacts: of providing grid support services to facilitate the integration of regional renewable generation technologies, providing security of supply, facilitating the de-carbonisation of the energy generation sector; and providing grid stability and security on the network.
- 9.3.2. There is potential for short term positive impact on the economy and employment in the area, during the demolition and construction phases (chapter 5).
- 9.3.3. There is potential for short term, negative impacts on human health, from dust and noise. In the absence of mitigation, impacts on nearby sensitive receptors, are likely to be not-significant to slight. Mitigation measures to minimise and monitor dust and noise are set out, mainly in chapters 9 and 10 of the EIAr.

#### 9.4. Noise (chapter 9)

- 9.4.1. Annual noise monitoring was carried out between 2015 and 2020 as part of the EPA licence, at three receptors: a dwelling opposite the primary school to the south of the site (power station audible as a low-level broadband hum), a dwelling on the N63 directly to the south (dominant noise - traffic) and another dwelling on the N63 to the east (dominant noise - traffic). No significant sources of vibration were noted.
- 9.4.2. Additional surveys were carried out in November 2021, given in table 9.9 at three locations: at the bank of the River Shannon, near the rear of noise sensitive locations to the south, and at the northern end of the site.
- 9.4.3. The likely daytime demolition / construction noise levels are set out in table 9.13, at 17 noise sensitive receptors at locations surrounding the site (shown in figure 9.4). Predicted impacts (table 9.12 and 9.13) are slight or not significant. Significant vibration effects are not expected.
- 9.4.4. The predicted operational noise levels, shown in tabular form for the noise sensitive receptors (table 9.16), and as contours (figure 9.6) and are reviewed against the

criteria<sup>3</sup> for daytime, evening and night, and are not significant for daytime and evening impact in all cases. For night time impact there is one instance of moderate and one of slight (marina to the west). Predicted noise levels (operational) along the River Shannon, the ecologically sensitive area (35dB L<sub>Aeq,T</sub>) is comfortably within criteria, (9.5.2.3).

- 9.4.5. Mitigation proposed includes restricting hours of operation, plant selection and maintenance, communication with local authority and residents, and monitoring.
- 9.4.6. Cumulative impacts during the construction phase can be expected if the development adjoining takes place at the same time and will need to be managed to limit the duration and magnitude of potential cumulative impacts. Cumulative noise impacts are expected to be short-term and not significant. Cumulative impacts during the operational phase, may elevate the noise level such that the impact increases from 'not significant' to 'slight'.

## 9.5. Fire Risk

- 9.5.1. The grounds of appeal includes that, in the case of fire, the batteries emit heavy metals into the atmosphere, owing to its close proximity to the towns of Lanesborough and Ballyleague, this could have a detrimental effect on the local population. The Technical Note and the Fire Impact Assessment (3.3 to 4.4 inclusive) submitted in response to the request for further information, acknowledges that a fire at a BESS unit, would release toxic gases and shows that impact would not extend beyond the site. Under a controlled burn scenario, no significant exposure to toxic fumes is likely beyond 2.5m from a BESS unit. The BESS units and the Sync Con equipment will be situated within secure perimeter fencing to be provided around each of the two development areas, well in excess of 2.5m from the boundary. In the event of an emergency, the site will be evacuated and made secure and the Emergency Response Plan will be invoked. An explosion is not likely as the units are outdoor and a gas build-up will not occur.

## 9.6. Public Water Supply

- 9.6.1. The possibility of vibration-related impacts to the public water supply well, in the control of Irish Water (IW), ESB-PW1, as occurred previously during works at the site, has been considered, and IW is satisfied with the proposed mitigation.

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<sup>3</sup> EPA Industrial Emissions Licence Reg No P0610-03

#### 9.6.2. Cumulative Impacts

9.6.3. Other developments, existing and proposed, in the immediate vicinity of the site, are shown in Figure 4.7 and detailed in chapter 4 of the EIAr. These include the existing substation, the permitted substation and a proposed solar grid connection. Already constructed development is part of the existing environment and will not contribute to any potential cumulative impact with the proposed demolition/construction phase or operational phase of the proposed development. The construction of the permitted substation is likely to coincide with the demolition and construction stages of the proposed development. The operational stage of the permitted substation is likely to coincide with the operational stage of the proposed development. Cumulative impact is likely to be neutral and not significant.

9.6.4. I am satisfied that with mitigation, as proposed, there will be no significant residual effects on population and human health from the proposed development.

### **9.7. Biodiversity**

9.7.1. Potential impacts on biodiversity are detailed in chapter 6 of the EIAr. The development area comprises a brownfield site. A managed drainage system connects the site downstream with the River Shannon and Lough Ree, an SAC and SPA. The site bounds the River Shannon, for a short distance, where the cooling water intake and outlet structures, which served the de-commissioned power station, will be infilled as part of the proposed development. The methodology for carrying out this work as set out in the CEMP, will ensure that there is no impact on the River Shannon and Lough Ree.

9.7.2. Bird species recorded on the site are common and widespread species, except for swift which was observed nesting in the peat conveyor belt in 2021. Alternative nesting habitat for swift will be provided on site, prior to the demolition of the peat conveyor belt. A nest tower specifically designed for swifts, incorporating a calling system, will be installed within the site. Suitable locations have been identified as: the grassland along the southern boundary of the site, the grassland immediately east of the conveyor belt, and the CW intake compound on the western boundary of the site, adjacent to the River Shannon. The nests will be positioned at least 7m from the ground with no obstacles in front or below the box, of a design to discourage occupation by other species, and with a capacity to support a minimum of 20 nests.

- 9.7.3. Bats – structures to be demolished have no or negligible suitability to support roosting bats. Temporary lighting during construction could potentially affect commuting habitat along the riparian woodland on the western border of the site and prevent access to foraging and or roosting habitat in the local area. As mitigation it is proposed that if temporary lighting is required during the winter months it will consist of the lowest lumen lighting possible while also maintaining a safe working environment, fitted with directional cowls to prevent light spill to the surrounding area, and directed only at the works area. This will ensure that there is no overspill to suitable commuting and foraging habitat such as the River Shannon or woodland.
- 9.7.4. Operational lighting will be limited to areas within the development footprint and will be comparable to existing light levels. There will be no impact on the local bat population. Proposed biodiversity enhancements include the installation of 6 bat boxes: 3 on the woodland edge west of the building and 3 on the woodland edge east of the building, at a minimum height of 4m, on mature trees, with a clear flightpath, oriented south-west, south, south-east or east. Three will be suitable for crevice roosting species (eg. soprano and common pipistrelle) and 3 will have a larger void (eg, for long eared bat).
- 9.7.5. Otter has been referred to in the previous section on appropriate assessment.
- 9.7.6. Measures to be taken in relation to biosecurity have been referred to in the previous section on appropriate assessment.
- 9.7.7. The main mitigation measure which will ensure no impact on biodiversity during both the demolition / construction phase and the operational phase, is the surface water drainage system. This has been referred to in the previous section on appropriate assessment.
- 9.7.8. Cumulative Effects – the minor accommodation works to the existing 110kV substation and the development of a new 110kV substation on existing built land will not result in emissions to air or water. These small-scale developments include their own surface water management systems. No cumulative effects are likely to occur.
- 9.7.9. Monitoring – the bat boxes and swift boxes will be inspected and cleaned annually by an ecologist, and evidence of use will be made available to NPWS on request. A Biodiversity Management Plan will be developed, with site specific measures for species enhancement, which will result in long-term positive impacts on biodiversity.

9.7.10. I am satisfied that with mitigation, as proposed there will be no significant residual effects on biodiversity from the proposed development.

## **9.8. Land, soil, water, air and climate**

9.8.1. Land, soils and geology and hydrogeology are considered in chapter 7 of the EIAR. Hydrology is considered in chapter 8.

9.8.2. The site overlies a regionally important karstified (conduit) aquifer of 'high' vulnerability.

9.8.3. The existing borehole well, ESB-PW1, adjoining, supplies almost 65% of total Lanesborough public water supply of 2,500m<sup>3</sup>/day. It has previously shown transient water quality impacts in terms of elevated turbidity and microbial parameters, some of which have been related to activities at the power station sites, including piling at the LRP site during construction in 2004. A review of potential risks to the underlying aquifer indicates that the water supply would be very vulnerable to demolition and construction works and would necessitate careful mitigation measures. Once mitigation measures are employed, the risk to the production well is considered low. The review confirmed that there is no hydrogeological risk to the River Shannon or Lough Ree.

9.8.4. The groundwater body, Funshinagh, is classified by the EPA, under the Water Framework Directive, as at risk of not achieving good status. At the proposed development site and surrounding area it is currently classified as good status. The main groundwater discharges for the groundwater body as a whole, are inferred by GSI to be to Lough Ree and the River Shannon in the west (within 100-600m downgradient of the proposed site). Any potential impacts on groundwater quality are anticipated to be localised in scale. Other than potential vibration-related impacts to the proximate, productive ESB-PW1 public water supply well, no significant impacts on the wider groundwater body are anticipated from the proposed works.

9.8.5. The Annual Environmental Reports to the EPA in compliance with the IE licence show that the groundwater quality is unimpacted from previous site activities and is of good quality.

9.8.6. ESB-PW1 has shown elevated dissolved iron and manganese and ammoniacal nitrogen, which have been related to its peatland recharge area to the north and east

and considered to be naturally-occurring. The well is treated by on-site ultra violet (UV) disinfection and chlorination only.

- 9.8.7. A report on the well in 2020 (by Hydro Environmental Services (HES)) notes the previous impacts from piling for the LRP, commissioned in 2004. This piling impacted the well via mobilisation of fine sediment, causing elevated turbidity during active piling works over a period of approximately one month, and was addressed by only pumping the well at night, when piling was not active, to maintain supply. Despite this they classify piling as low risk, but suggest using only bored or augured piles, not driven (percussive) piling.
- 9.8.8. A conceptual site model is presented as cross sections NE-SW and E-W in figures 7.8 and 7.9, and detailed in bullet points in paragraph 7.3.15. GSI classifies the aquifer vulnerability as high, signifying a depth to bedrock of 3-5m bgl. HES have reported depth to bedrock of 6.5m to 7.5m bgl.
- 9.9. The importance of the hydrogeological features at this site is rated as extremely high importance, based on high-quality significance or value on a national scale: regionally important aquifer widely used for public water supply. In addition there is direct hydrogeological and hydrological connection between the site and the nearby protected sites (Lough Ree SAC/SPA).
  - 9.9.1. Demolition / Construction
  - 9.9.2. Upon completion of the decommissioning phase of phase 1 (per IED licence) demolition works will commence to remove all built structures.
  - 9.9.3. The overarching demolition concept for the plant is to maximise the recycling of appropriate waste products. It is envisaged that certain plant / equipment, primarily structural steelwork and secondary steelwork and cladding are items which will be dismantled using appropriate techniques to ensure salvage value.
  - 9.9.4. The overarching principles applying to the demolition sequence will be the safe dismantling of the plant aligned with the freeing up of working space for the direct and the ancillary demolition activities.
  - 9.9.5. The demolition will be completed in two stages. The demolition plan is set out in appendix 4.1.
  - 9.9.6. Due to the existing development at the site the risk of contaminated soils being present onsite is high due to the presence of storage tanks across the site. Such

material which is exported from site will require correct management and handling on-site and offsite, to avoid negative impact on human beings, water and soil environments. The majority of the excavated soil will be disposed of offsite, should opportunity arise for re-use, this will be considered where appropriate.

Re-use of crushed concrete:

9.9.7. Crushed concrete can be used as an aggregate with a variety of potential uses including backfilling of existing underground voids that are required to be made safe.

There are 4 main areas where re-used concrete is proposed to be used:

- Turbine Hall Substructure
- IPS (intermediate peat storage) Building Substructure
- Existing redundant pump house
- Tippler Substructure.

9.9.8. Crushed concrete may potentially leach cementitious products if placed in locations where it is in direct contact with mobile water eg. rainwater or groundwater. This leachate could result in elevated pH levels in the water over time. It is proposed to use crushed concrete in locations where there is a low risk of contact with water, therefore these infilled voids will not intercept the underlying groundwater. There is no pathway for the crushed concrete to enter the underlying groundwater body and the potential environmental risk is low.

9.9.9. Contaminated water which arises from construction sites can pose a significant short-term risk to groundwater quality if allowed to percolate to the aquifer. Sources of accidental spillages: suspended solids, cement/concrete, hydrocarbons and wastewater, if not mitigated, may result in localised contamination of soils and groundwater.

9.9.10. Protecting Groundwater supply – there is currently no alternative to ESB-PW1 within the public supply in the event of its failure. ESB have given an undertaking not to commence demolition of construction works until such time as an alternate water supply is in place to the satisfaction of IW and Longford County Council.

9.9.11. The BESS development will be situated on the footprint of the existing retained foundation and the reinforced concrete ground slab of the demolished power station. The synchronous condenser development has been located away from the existing

foundations (to avoid the need to demolish them) and is therefore likely to require piling to rock, to meet the exacting foundation requirements for the generator, flywheel and transformer equipment.

- 9.9.12. A number of mitigation measures will reduce the risks from excavation and piling during site investigation, construction, demolition or remedial works, to lessen the risk: modified building foundations design; avoidance of percussive rock-breaking, excavation or piling techniques; use of quick set concrete; and use of concrete cutting rather than rock breaker or jack hammer. However, without mitigation, the demolition works are unlikely to be able to avoid generating significant ground vibration. This could lead to collapse of either the abstraction well or deterioration of water quality or blockage of key fractures feeding the well, and compromise the public water supply.
- 9.9.13. The voids to be filled with compacted crushed concrete are watertight and will be retained intact during the demolition (turbine hall basement area 1,000m<sup>3</sup>, intermediate peat storage - 3,400m<sup>3</sup>, pump houses – 160m<sup>3</sup>, and tippler structure – 2,440m<sup>3</sup>). The tops of these voids are above local groundwater and anticipated flood levels and will be sealed using an impermeable cover.
- 9.9.14. The Plant and Conveyor heads for the tippler structure are housed in a deep basement, reinforced concrete structure. The void goes from ground level to a depth of 12m bgl. The volume of concrete generated by the demolition process and available for re-use for backfilling this void is much less than the total amount of fill materials required. It is proposed to infill the lower part of the void with imported clean stone aggregate and the upper part with crushed concrete aggregate.
- 9.9.15. The potential for environmental impact from release of high pH leachates or leachable metals is considered to be low.
- 9.9.16. Vibration monitoring and groundwater quality monitoring will commence in advance of works. The risk to the public supply well is short-term and low.
- 9.9.17. Operational – there is little increase in hardstand, with negligible change in recharge. Design measures will protect against accidental discharges to ground, with neutral and imperceptible impact. Cumulative impacts to soil and water are neutral and imperceptible.
- 9.9.18. The residual impact on the public supply well is short-term, slight-neutral.

- 9.9.19. Long term residual operational impacts are imperceptible-neutral.
- 9.9.20. Proposals for monitoring of the demolition / construction stages is detailed in paragraph 7.8.1. There will be no requirement for groundwater monitoring during the operational stage, as the site will no longer be classed as an EPA licenced site, should the licence be successfully surrendered following demolition and exit audits.
- 9.9.21. Other developments will be required to incorporate measures to protect soil and water quality, therefore there is minimal cumulative potential for impacts during demolition/construction; and similarly during operation.
- 9.9.22. The AECOM 2022 report 'Review of Potential Risks to Aquifer Water Quality', is attached as appendix 7.2 to the EIAR.
- 9.9.23. A stage 1 & 2 Flood Risk Assessment (FRA) is attached as appendix 8.2 to chapter 8 of the EIAR. There is no significant risk of flooding to the demolition and proposed development works. Areas close to the northern boundary are vulnerable to flooding; the CFRAMS map is attached as Annex E to the FRA.
- 9.9.24. No foul water generation is associated with the operational phase of the proposed development. Firefighting water of approximately 27,000 litres capacity will be provided for both the BESS and Sync Con developments.
- 9.9.25. Impermeable surfaces constitute 0.63ha of 21% of the total site. Surface water will be collected in an underground pipe network, conveyed via the existing drainage network on site to a settlement/attenuation pond prior to discharging to the Lough Bannow waterbody. The proposed surface water network is connected to the existing drainage network through a number of manhole connections. 300mm PVC land drains are proposed around both compounds and the intermediate peat storage area slab, that is to remain following Phase 1 demolition. It is proposed to raise the perimeter wall of the settlement pond above the OPW projected 1 in 100 year flood level of 37.41mOD: from 36.8mOD to 37.45mOD, to ameliorate the risk of exceptional floodwaters flowing overland into the pond and backing up the drainage network. Due to the low level of the pond, water will need to be discharged by pumping. Petrol interceptors are to be installed in development areas, (paragraph 8.77).
- 9.9.26. Any discharge of demolition/construction water during demolition / construction phase will be discharged to the foul sewer, to be decommissioned following

completion of phase 2 construction. Pre-treatment and silt reduction measures will include silt fencing, settlement measures, and a 20m buffer zone between machinery and watercourses / drainage ditches, refuelling off-site, hydrocarbon interceptors and if a concrete crusher is used on site, it will be located a minimum of 200m from the ESB-PW1 public water supply well.

9.9.27. Mitigation measures will ensure that predicted impacts on the hydrological environment do not occur during the demolition/construction phases or the operational phase.

9.9.28. Proposed monitoring is set out in paragraph 8.118.

9.9.29. Cumulative impacts, with other developments, which are required to incorporate measures to protect water quality, will be minimal.

#### 9.10. Air Quality and Climate

9.10.1. Air and Climate are considered in Chapter 10 of the EIAR.

9.10.2. Dust emissions from demolition, earthworks, construction, trackout (movement of material), and traffic emissions are set out as levels of risk. From demolition, risk of dust nuisance and risk to humans is high; from earthworks dust nuisance is high risk and risk to humans is medium risk; from construction both risks are medium; from trackout dust nuisance is high risk and risk to humans is medium risk.

9.10.3. Consistent implementation of good dust minimisation practices will ensure that the demolition / construction phase impact from dust, is localised, reversible and not significant.

9.10.4. Climate – using the TII Carbon Tool (TII 2020) the applicant has calculated the carbon emissions for the demolition / construction phase and presents the results in table 10.13 as tonnes of CO<sub>2eq</sub> broken down by activities. Annualised it represents 0.0036% of Irelands national GHG (green house gas) emissions in 2020 or 0.005% of Irelands non-ETS (emissions trading system) 2030 target.

9.10.5. Operational Phase - no significant air quality impacts will arise. Operational climate impacts are positive.

9.10.6. Mitigation measures to reduce dust are set out in paragraph 10.6.1.1 and in appendix 10.2.

- 9.10.7. Cumulative impacts – there is potential for impact with the permitted adjoining development during the construction phase. Provided mitigation measures are implemented, cumulative impact from dust will not occur. Cumulative impact to climate are imperceptible. Cumulative operational impacts will be long-term, neutral and imperceptible.
- 9.10.8. Residual Impacts. Construction - with the implementation of dust minimisation measures, dust will be a short-term, negative and not significant impact on nearby receptors. Embodied carbon emissions will represent a long-term, negative and significant impact on climate. Residual operational impacts on air quality will be long-term, neutral and imperceptible, and on climate - long-term, positive and significant.
- 9.10.9. Monitoring of construction dust deposition will be carried out (10.8.3). No monitoring of dust is required during the operational phase.

#### **9.11. Material assets, cultural heritage and the landscape**

- 9.11.1. Chapter 11 of the EIAR deals with Material Assets; Chapter 13 deals with Traffic and Transportation; Chapter 13 deals with Archaeological, Architectural & Cultural Heritage, and Chapter 15 deals with Landscape & Visual Impact.
- 9.11.2. The site access is from a speed limited section of a national road. No significant impact is likely to arise from traffic during the demolition or construction phases. Incidental abnormal loads will require notification and the procurement of permits.
- 9.11.3. The closest protected structure is St John's Church or Ireland Church, and its historic setting to the south. As an important crossing point on the River Shannon, Lanesborough is itself an historic place. A previous archaeological investigation at the site revealed a burnt pit.
- 9.11.4. No impacts on archaeological, architectural or cultural heritage are associated with the proposed development, during demolition, construction or operational phases.
- 9.11.5. Landscape & Visual Assessment – the River Shannon is the dominant landscape and visual feature in the area. The river is a major tourist asset and visitor attraction. The river is also the setting for a number of riverside amenities and recreational areas. The bulk, height and scale of the LRP station currently dominates views of the east bank of the river, especially views from the river, the bridge and the west bank. Thirteen photoviews are presented in the assessment. The phase 1 demolition

impact is stated to be significant, positive and short-term. It nevertheless involves the loss of prominent visual features which have become familiar in the landscape. The phase 1 construction impact is stated to be moderate, negative and temporary to short-term. Operational impact is stated to be slight, negative and long-term.

9.12. Mitigation proposed includes retaining and protecting existing trees, hedgerows and vegetation during the demolition / construction phases; and managing and maintaining the areas bounding the River Shannon in accordance with best ecological and landscape practice during the operational phase. Additional planting will be provided within the existing landscape areas retained within the southern and eastern areas, to reduce the visual impact of the proposed development from adjoining areas of Lanesborough.

9.13. Residual impacts are stated to be slight, neutral and long term.

9.14. Cumulative impacts are stated to be slight, neutral and temporary/short term, during the demolition phase; none are expected during the construction or operational phases.

#### **9.15. The interaction between the above factors, & major accidents.**

9.15.1. Chapter 16 of the EIAR deals with interactions & also with major accidents. interactions are listed as positive, neutral and negative. The only negative interaction is between 'land, soils, biology and hydrology' and 'noise', which can be mitigated.

9.15.2. Major Accidents is set out as a subsection of this chapter. The HSA does not currently consider either the Synchronous Condenser or the Battery Energy Storage Solution (BESS) to be a COMAH facility. Risks of major accidents and consequences are set out in table 16-4. It is stated that the proposed development has been designed in line with good industry practice and mitigation is embedded through the design; mitigation is set out in table 16-5.

9.15.3. Cumulative Effects – there is no possibility of a thermal event at the proposed BESS facility triggering a thermal event at the nearby permitted sites. The site is not located within a consultation area under the COMAH regulations. All risk scenarios can be mitigated. No significant cumulative impacts are predicted.

9.15.4. Residual Effects are given as a risk matrix, figure 16.2.

9.15.5. The Fire Impact Assessment submitted in response to the further information request supplements the information in the EIAr. This has been referred to in section 3.5 of this report. It includes details of the design of yet to be selected units which prevent fire and fire spread. The consequences of a thermal event, releasing toxic fumes, with associated airborne risk, are detailed. Impact would dissipate beyond 2.5m of the bounded development, where access would be restricted to trained, authorised personnel. In the event of a fire, firewater would be contained within the bund. In the event of a larger fire or a fire arising from other elements of the BESS development, firewater runoff will be directed to the settlement/attenuation pond by the on-site drainage network and contained pending decision on disposal.

## **9.16. Reasoned Conclusion.**

9.16.1. Having regard to the examination of environmental information contained above, and in particular to the EIAr and supplementary information provided by the developer, and the submissions from the planning authority, prescribed bodies, appellants, and observers in the course of the application, it is considered that the main significant direct and indirect effects of the proposed development on the environment are, and will be mitigated as follows:

Impact on waters and water dependent habitats and species from polluted water, which will be mitigated by the measures set out in the EIAr and NIS in relation to bunding, surface water containment, treatment and discharge, and firewater containment, treatment and discharge.

Impact on waters and water dependent habitats and species from invasive species which will be mitigated by the measures set out in the EIAr and NIS on biosecurity.

Impact from noise during demolition and construction which will be mitigated by the measures set out in the EIAr and the Construction Environmental Management Plan.

Impact from dust during demolition and construction which will be mitigated by the measures set out in the EIAr and the Construction Environmental Management Plan.

Fire risk which will be mitigated by the design of the BESS units and the siting and layout of the development.

Impact on the borehole well of the public water supply which will be mitigated by measures to be agreed with Irish Water prior to commencement of development.

9.16.2. I am, therefore, satisfied that the proposed development would not have any unacceptable direct or indirect effects on the environment.

## 10.0 Recommendation

10.1.1. In accordance with the foregoing I recommend that the proposed development be permitted, for the following reasons and considerations, in accordance with the following conditions.

## 11.0 Reasons and Considerations

The proposed development comprising the demolition of the existing Lough Ree Power station and the development and operation of electricity grid services, comprising a battery energy storage system (BESS) and a Synchronous Condenser (Sync Con), would not unduly impact on the natural environment or the amenities of the area, would align with national policy to transition to carbon neutral energy, would comply with the zoning objectives for the site and would be in accordance with the proper planning and sustainable development of the area.

## 12.0 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 15<sup>th</sup> November 2022, 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>
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2.	<p>The development hereby permitted shall be carried out within 10 years of the date of this permission.</p> <p><b>Reason:</b> In the interest of clarity.</p>
3.	<p>The battery energy storage system (BESS) and Synchronous Condenser (Sync Con) facilities hereby permitted shall be removed from the site before the end of the period of 25 years from their commissioning, unless the period has been extended by a further permission, and site shall be restored within 12 months of decommissioning.</p> <p><b>Reason:</b> In the interests of the proper planning and development of the area and to facilitate a review of the facilities at that time.</p>
4.	<p>The applicant shall be responsible for any damage to the public road.</p> <p><b>Reason:</b> In the interest of clarity.</p>
5.	<p>Prior to commencement of development, the developer shall enter into a water connection agreement with Irish Water.</p> <p>The development shall not commence until Irish Water and the planning authority are satisfied that arrangements are in place for the provision of an alternate public water supply, in the event that the existing public water supply well is impacted by proposed development.</p> <p><b>Reason:</b> In the interest of public health.</p>
6.	<p>a) Once the battery supplier has been selected, and prior to their installation, the full safety details of the battery storage units shall be agreed with the Fire Authority.</p>

	<p>b) A comprehensive and detailed emergency response plan, shall be submitted, to the written satisfaction of Fire Authority, prior to battery installation.</p> <p>c) Vehicular access for the Fire Brigade shall be provided in accordance with Table 5.2 of Technical Guidance Document B of the Building Regulations, 2000.</p> <p>d) Details of water provision for fire-fighting shall be agreed with the Fire Authority prior to battery installation.</p> <p><b>Reason:</b> In the interest of public safety.</p>
7.	<p>Site development and building works shall be carried out only between the hours of 08.00 and 19.00 from Monday to Friday inclusive, between the hours of 08.00 and 14.00 on Saturdays, and not at all on Sundays, Bank or Public Holidays. Deviation from these times will only be allowed in exceptional circumstances where written approval has been received from the planning authority.</p> <p><b>Reason:</b> In the interest of amenity.</p>
8.	<p>Construction and demolition waste shall be managed in accordance with a construction waste and demolition management plan, which shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. This plan shall be prepared in accordance with the “Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects”, published by the Department of the Environment, Heritage and Local Government in July 2006. The plan shall include details of waste to be generated during site clearance and construction phases, and details of the methods and locations to be employed for the prevention, minimisation, recovery and disposal of this material in accordance with the provision of the Waste Management Plan for the Region in which the site is situated.</p>

	<p><b>Reason:</b> In the interest of sustainable waste management.</p>
9.	<p>All of the measures proposed in the EIAr and NIS to mitigate environmental impacts shall be implemented in full.</p> <p><b>Reason:</b> In the interest of protecting the environment and the amenities of the area.</p>
10.	<p>The developer shall pay to the planning authority a financial contribution in respect of public infrastructure and facilities benefiting development in the area of the planning authority that is provided or intended to be provided by or on behalf of the authority in accordance with the terms of the Development Contribution Scheme made under section 48 of the Planning and Development Act 2000, as amended. The contribution shall be paid prior to the 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 the Board to determine the proper application of the terms of the Scheme.</p> <p><b>Reason:</b> It is a requirement of the Planning and Development Act 2000 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>

Having reviewed the case assigned to me, I hereby declare that to the best of my knowledge I am satisfied that I do not have a conflict of interest in relation to this case and that I am in compliance with the Board's code of conduct.

I confirm that this report represents my professional planning assessment, judgement and opinion on the matter assigned to me and that no person has influenced or sought to influence, directly or indirectly, the exercise of my professional judgement in an improper or inappropriate way.

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Planning Inspector

22<sup>nd</sup> May 2023

**Appendices:**

Appendix 1 Photographs

Appendix 2 Longford County Development Plan 2021-2027, extracts.