Outline Construction Environmental Management Plan

Ballyross BESS

Ref	05646-9834502

Revision History

Issue	Date	Name	Latest changes
01	13/06/2025	Antonis Poulakis	First Created

Contents

1 Introduction

This Outline Construction Environmental Management Plan (OCEMP) refers to the construction of Ballyross Battery Energy Storage System and will outline the best practice methods for managing the environmental impacts, including mitigation and monitoring, during construction of the Proposed Development.

As the OCEMP is being prepared as part of the planning application, contractors are yet to be appointed to undertake the electrical or civil engineering works. The contractor(s) appointed to construct the Proposed Development will prepare detailed method statements to construct the works which will incorporate the details outlined in this OCEMP.

The OCEMP will be updated and finalised post consent (thereby becoming a CEMP) in line with any relevant planning conditions and in agreement with Antrim and Newtownabbey Borough Council and the environmental agency. Once completed and agreed post-consent, the document will become a CEMP and will no longer be referred to as 'Outline'.

1.1 Aims and Objectives

The purpose of this OCEMP is to provide an overview of potential environmental impacts of the Proposed Development, during its construction phase, and describe the management and mitigation measures that will be implemented to minimise those impacts and to protect the environment and sensitive receptors both on-site and off-site.

In particular, the OCEMP describes how noise, vibration, dust and other airborne pollutants, from construction works will be controlled and mitigated. The plan shall also include monitoring, recording and reporting requirements. The construction of the Proposed Development shall be completed in accordance with the approved plan.

This OCEMP will consider the effects from the traffic movements to and from site and the onsite construction activities, however, further detail on construction traffic is provided within the Transport Statement which is provided as a separate document.

Prior to construction commencing, a Principal Contractor will be appointed, who will be responsible for the construction phase of the Proposed Development. Prior to construction commencing, a CEMP will be produced to ensure that all measures and mitigation identified within the OCEMP are considered and implemented. The Principal Contractor will be responsible for preparing detailed method statements for the construction works.

1.2 Description of the Site

The proposed development will consist of the installation of several battery enclosures, associated foundations, transformers, inverters, electrical infrastructure, security infrastructure, access track, crane hardstanding, storage containers and SuDS infrastructure elements.

The site is located on agricultural land, approximately 1.70 km south of Raloo. The location of the proposed development is within Antrim and Newtownabbey Borough Council and is shown in ***Figure 1***.

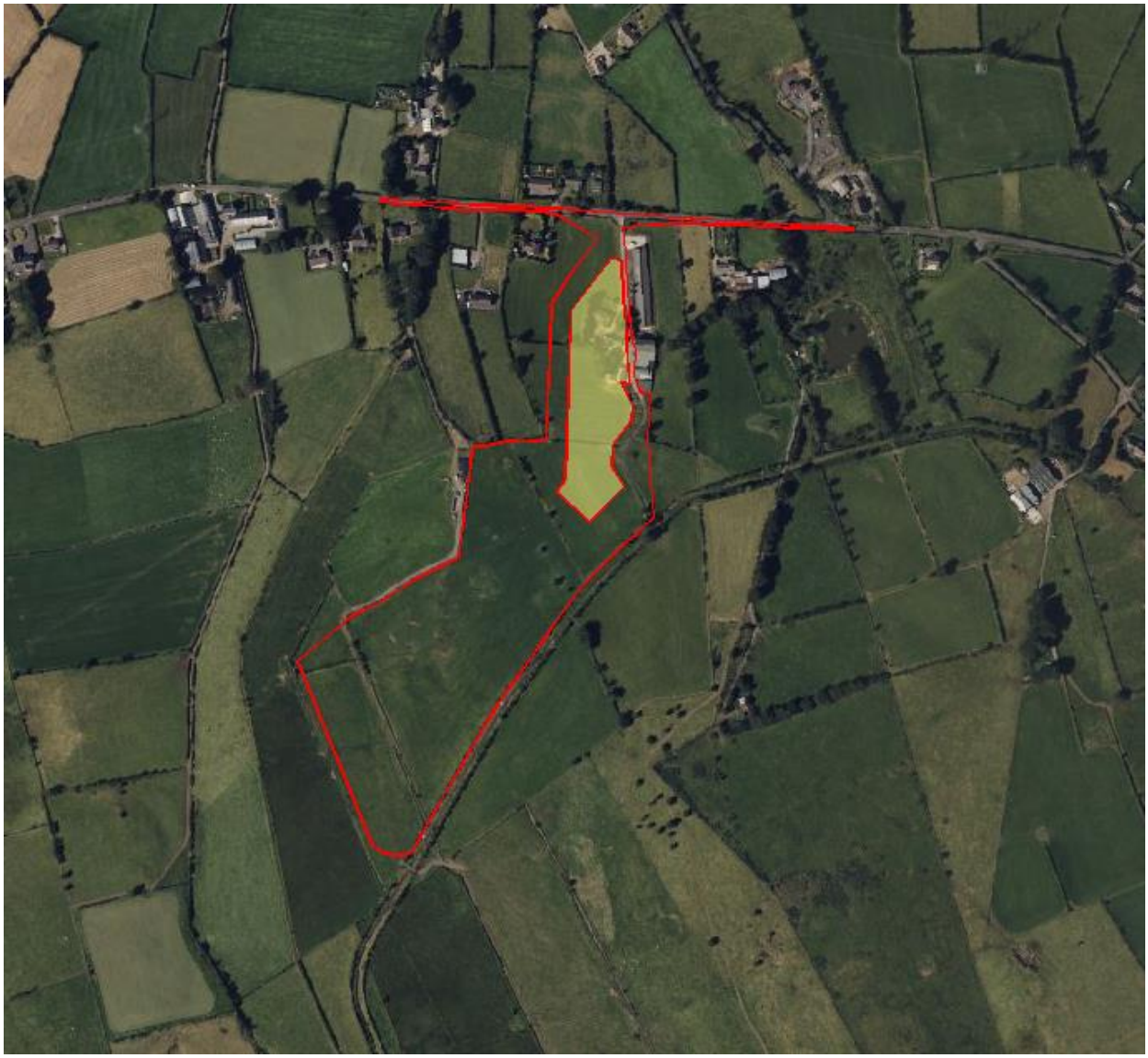

Figure 1: Site Location (yellow area is excluded)

During construction and commissioning, temporary works would include a construction compound with car parking and welfare facilities.

1.3 Community Liaison

Throughout the construction period of the Proposed Development, an open dialogue will be maintained with local residents, stakeholders and all other interested parties. The local community will be provided with regular updates on construction progress and upcoming activities through appropriate channels.

There will be a nominated point of contact for local residents in connection with any issues that may be raised during construction, operation and decommissioning of the Proposed Development.

Any change to the appointed person shall be communicated to the planning authority and the local community representatives as required.

2 Site Management

2.1 Site Compound

A temporary construction compound will be established on-site. This will house temporary portable cabin structures to be used as the main site office and welfare facilities, including toilets, kitchen and provision for sealed waste storage and removal. The area will also be used for the storage of large plant and materials, parking for vehicles, containerised storage for tools and small parts and oil and fuel storage. As the permanent works progress, the position of these facilities may vary.

2.2 Temporary Security Fencing & Lighting

The compound will not be accessible by the public. The compound will be secured with fencing and a locked gate for the duration of the operation until decommissioning. During construction, until the permanent fence is erected, a temporary security fence will be installed around the perimeter of the main site. Size and type yet to be confirmed. Statutory health and safety signage shall be displayed at the site entrance, together with the contact details of the Principal Contractor. No decorative displays will be used during the construction phase and there shall be no viewing areas for the public.

Temporary flood lighting may be used during the construction process, to deal with hours of reduced light in the winter months. All temporary lighting installations will be downward facing, and all lights will be switched off during daylight hours.

2.3 Health and Safety Management

All work will be carried out in accordance with:

- Health and Safety at Work (Northern Ireland) Order 1978.
- Construction (Design and Management) Regulations (Northern Ireland) 2016 (CDM NI 2016).
- The Management of Health and Safety at Work Regulations (Northern Ireland) 2000.

Any incident will be immediately reported to the site manager.

2.4 Working Hours

The proposed normal construction working hours, including traffic movements, are anticipated to be prescribed as part of the planning conditions, however as a guide the following times are suggested for audible activities:

- Monday to Friday: 08:00 to 18:00 inclusive; and
- Saturday: 08:00 to 13:00 inclusive.

There are no works and traffic movement anticipated on Sundays or Bank or National Holidays unless otherwise agreed in advance with Antrim and Newtownabbey Borough Council.

3 Construction Traffic Management

3.1 Transport Route

It is proposed that all equipment and construction material deliveries may approach the site from B58 via Watch Hill Road, Ballyvallagh Road and the wider trunk road network beyond. Vehicles will approach the proposed main site entrance travelling in east along Ballyvallagh Road, turning right into the site, as appropriate.

In the event of any road closures on the proposed delivery route, all vehicles will follow the designated diversion route.

Further information on the transport route can be found in the Transport Statement submitted as separately document for the planning application.

3.2 Vehicle Movements

Throughout the construction phase there will be a combination of HGVs (for the component and material deliveries) and cars/vans (for construction staff), attending site. The grid transformer shall be delivered in several parts due to its size and then assembled on site and may require abnormal loads being delivered subject to supplier confirmation. Should the need for an abnormal load or STGO vehicle(s) be identified during the development of the final delivery solution and confirmation of the final supplier, the route will be fully assessed, and suitable measures implemented eg the use of escort vehicles, as required by law.

HGV movements are expected to be most intense throughout the first few weeks of construction. Car/van movements are expected to be constant throughout the construction period. Estimated numbers of deliveries and traffic movements for the main infrastructure can be found in the Transport Statement submitted as part of this application; the numbers provided should be treated as a guideline only as these are based on broad assumptions and subject to factors such as detailed design, construction planning and site / weather conditions encountered.

The daily commute of workers in cars, vans and small trucks will form a large proportion of the site traffic. However, all subcontractors, labours and tradespeople will be encouraged to car / van share for their journeys to and from the site to reduce the number of vehicle movements involved. Parking for the workforce will be fully accommodated on site. Parking on, or near to, the adopted highway will not be required or permitted.

Vehicles will drive into the site forwards, turn around on site and exit forwards. Measures shall be in place to manage the timing of the delivery of material and plant to the site; if the site has insufficient space to accommodate a delivery (eg, due to an ongoing delivery or obstructive site works), the delivery vehicle will be instructed to wait in a safe location, remote from site, if necessary, until suitable space is available.

It is proposed that temporary signage would be used to highlight the entrance to the site from the west to direct construction traffic to the site via the local and regional roads.

Sufficient time will be provided between deliveries to allow for any delays (such as loading / unloading taking longer than expected) and to avoid any vehicles waiting.

3.3 Other Standard Mitigation

The impact of the development has been identified as temporary in nature and associated with short construction and decommissioning stages only. It is still important that any impact is minimised as far as possible and, in light of this, the following mitigation measures have been considered:

- A dedicated person will be appointed for the management of deliveries. It will be this person's duty to make sure haulage companies use the chosen haul route.
- During the construction phase, clear construction warning signs and junction proximity signage will be implemented in accordance with Chapter 8 of the Traffic Signs Manual. The site entrance will also be appropriately signed. Access to the construction site will be controlled by onsite personnel and all visitors will be asked to sign in and out of the site by security/site personnel. Site visitors will receive a suitable Safety and Health site induction and Personal Protective Equipment ("PPE") will be worn when necessary.
- Once construction of the development is completed, all temporary cabins, machinery and equipment will be removed from site.
- Consultation with relevant roads authority on all transport issues to ensure that deliveries do not conflict with other public road activities.

The following checks will be carried out pre-construction:

- An assessment of overhead lines to ensure there is adequate height clearance.
- An assessment of overhanging vegetation to ensure there is an adequate delivery corridor. If obstructions are found, then vegetation trimming should be undertaken in consultation with the relevant roads' authority.
- An assessment of weight limits along the proposed route to ensure there are no restrictions for the heavier components.

4 Construction Works

4.1 Earthworks

The following mitigation measures will be implemented in relation to earthworks:

- Stripping of topsoil will occur as close as reasonably practicable to the period of excavation or other earthworks activities to avoid risks associated with run-off or dust generation.
- Drop heights from excavators to vehicles involved in the transport of excavated material will be kept to the minimum practicable to control dust generation associated with the fall of materials.
- All deposited materials will be compacted, with the exception of peat and topsoil, as soon as possible after deposition.
- Soiling, seeding, planting or sealing of completed earthworks will be undertaken as soon as reasonably practicable following completion of the earthworks.

4.2 Civil Works

Following vegetation strip and clearance, drainage features will be installed, and a compacted layer of granular material will be laid across the whole site. Once the infrastructure has been installed areas of gravel / asphalt will be added as necessary.

4.3 Electrical Works

Electrical works will comprise installation of buried electrical, earthing, and communication cables across the site, connection of the batteries, PCSs and other electrical equipment, and testing and commissioning of the site, including construction of concrete upstands to support electrical equipment.

All electrical works shall be performed by suitably skilled, experienced and trained personnel in supervised site conditions.

4.4 Battery Storage Enclosures, PCS and Substation

The PCS's, MV skids, grid transformer and substation units will be predominantly prefabricated offsite and delivered to site as complete units. All units will be lifted into position by crane, telehandler or jacks and skids. The grid transformer shall be delivered in more than one section due to its size and shall then be constructed on site.

The battery storage enclosures will be delivered as complete units to site with batteries pre-installed, minimising the number of deliveries to site and waste associated with packaging.

5 Pollution Prevention

5.1 Best Practice

This OCEMP identifies elements of the development which are potentially capable of giving rise to pollution and identifies pollution prevention and mitigation measures.

The associated infrastructure will require earthworks, including the foundation construction for the accompanying electrical infrastructure and trench excavation for cables.

SuDS will be constructed prior to or at the same time as the access tracks and the site compound. Interim measures such as the placement of silt fences around works areas will be installed prior to relevant works proceeding. Refer to section 6 for more details.

Protection measures will include:

- Plant and equipment will be stored on dedicated hardstanding within the construction compound. This will minimise the risk of pollution caused by leakages occurring out of hours. Drip trays will be used where appropriate.
- All plant and equipment will utilise biodegradable hydraulic oil where available.
- Spill kits will be readily available to all personnel. The spill kits will be of an appropriate size and type for the materials held on site.
- Diesel fuel will be stored in a bunded diesel bowser which will be located within a fenced off area in the construction compound.
- Refuelling and maintenance of vehicles and plant will take place in designated areas of hardstanding.
- All other chemicals will be stored within a storage container with accompanying COSHH datasheets.
- Wastewater from the temporary staff toilets and washing facilities will be discharged to sealed containment systems and removed from site via licensed contractors.
- Toolbox talks on specialised topics shall take place at regular intervals. The toolbox talks shall be used to highlight issues of concerns, new information or responsibilities. They will also be used as a tool to provide basic environmental training to the staff.

5.2 Mud Prevention Measures

During the works, measures shall be in place to ensure that mud and debris is not spread onto the adjacent public highway. The site gate person will be responsible for ensuring no vehicles leave the site until wheels are cleaned to a suitable standard. The public highway will be regularly inspected, and any deposited debris or mud will be dealt with immediately by means of a road sweeper.

5.3 Noise and Vibration

The British Standard which gives guidance on noise and vibration from construction and mineral working sites is BS 5228 'Code of practice for noise and vibration control on construction and open sites'. This document provides guidance on appropriate construction noise and vibration levels as well as the steps that can be taken to minimise potential noise and vibration effects. The 'best practicable means', as defined in the Control of Pollution Act 1974 (Scotland, Wales & England) and Pollution Control and Local Government (Northern Ireland) Order 1978, to reduce emissions of noise and vibration will be applied throughout the construction phase. This will incorporate the use of working methods that result in minimum noise and vibration effects compatible with normal construction working practices.

Noise generated by construction activities may be perceptible to residents in the vicinity but will be below typical threshold levels. The majority of construction activities will occur at distances greater than 150 m from neighbouring properties, will be temporary and standard or typical 'best practicable means' mitigation measures to reduce levels will be implemented in any case.

Vibration resulting from the most potentially impactful construction plant eg the use of vibratory rollers and excavators will be considered significant when in close proximity and given the large setback distances to dwellings and sensitive structures, it is highly unlikely to cause issues in terms of perceptibility and no concern in terms of potential cosmetic damage to buildings or otherwise.

Operating plant will be kept within the time periods and standards dictated for the site. Any non-complying plant will be stopped and stood down until it can be rectified and/or removed from site.

Reasonable mitigating measures are as follows:

- Consideration shall be given to noise emissions when selecting or modifying the plant and equipment used on site with quieter variants given preference.
- Where practicable, plant will be located as far from noise sensitive receptors as possible and shall utilise all reasonable noise barriers / screening where necessary to reduce the level of construction noise at these receptors.
- Plant known to emit intense unidirectional noise shall, whenever possible, be orientated so that the noise is directed away from noise sensitive areas. Where noise cannot be avoided close to sensitive receptors, specific noise control mitigation measures will be identified, such as the use of barriers.
- Where possible, all mobile plant will be fitted with low noise or 'white spectrum' reversing alarms to minimise the annoyance to local residents.
- Where practical, the stockpiling of site materials, soil or spoil shall be located where it can provide some additional screening.
- Plant shall be used and maintained in accordance with the manufacturer's instructions.
- Vehicles and machinery shall be switched off when not in use.
- Avoiding revving of engines.
- Vehicles shall not wait or queue with engines idling.

- All personnel shall be instructed on best practice measures to reduce noise and vibration as part of their induction training and followed up by 'toolbox' talks. On-site training will enable site personnel to understand how their actions will interact with the environment and potentially impact sensitive receptors close to their work area.
- Excavation, cutting and compaction activities will be staggered in time.
- Standard drop heights of materials from lorries and other plant will be used.
- Normal traffic movements shall be limited to the working hours defined in section 2.4.
- Good community liaison shall be maintained, as noise and vibration levels are more tolerable if they are expected.

Where relatively intense construction activities are expected and/or are to be undertaken near neighbouring residences, [particularly during the construction of the access routes, HDD works, piling and trenching,] specific attention to potential for enhanced mitigation measures to reduce the level of sound and vibration from these activities will be considered as and when necessary.

Any noise complaints will be immediately directed to the Site Manager. Depending on the nature of the complaint, the initial response could be to immediately cease the activity until suitable mitigation measures have been put in place and agreed with the affected party. Any noise complaints will be logged, and the records will include date and time, nature of complaint, locality of complaint, name of complainant (if available), a summary of investigation and actions taken and outcome.

5.4 Dust and Other Airborne Pollutants

Good practice measures will be adopted during construction to control the generation and dispersion of dust such that significant impacts on neighbouring residents and roads will not occur. The hierarchy for mitigation will be prevention, suppression then containment. The following measures will be implemented to restrict and control the movement of dust and other airborne pollutants within the site:

- Excavation and earthworks areas will be stripped as required in order to minimise exposed areas.
- During excavation works, drop heights from buckets will be minimised to control the fall of materials reducing dust escape.
- Temporary sheeting may be used to cover earthworks if necessary, and completed earthworks, stockpiles and other exposed areas will be covered with topsoil and re-vegetated as soon as it is practical in order to stabilise surfaces.
- During stockpiling of loose materials, stockpiles shall exist for the shortest possible time.
- Temporary material stockpiles will be sited to account for the predominant wind direction and the location of sensitive receptors.
- Water bowsers will be available on-site and utilised for dust suppression when and where required.

- Where dust is mobilised, it will pass through and will be contained within the water quality and treatment system serving the tracks and hardstands.
- Regular visual inspections will be undertaken to assess need for use of water bowsers.
- Regular visual inspections will be undertaken to assess the condition of the junction of the site track with Ballyvallagh Rd.
- During windy conditions, any dust generating activities will be avoided or minimised, where practical.
- Drivers will adopt driving practices that minimise dust generation including an appropriate internal site speed limit.
- Excessive exhaust emissions will be controlled by ensuring that all plant is correctly adjusted and checked as being in good working order prior to use and is adequately maintained.

Water needed for dust suppression on the site during periods of dry weather will be clean water. Clean water may be obtained from re-circulated clean or treated drainage waters.

6 Surface and Ground Water Management

6.1 Flood Risk Assessment

The DFI Rivers flood maps have been reviewed for the Application Site and the outputs are described below.

- **Fluvial Flooding Risk**: the site is not at risk of fluvial flooding.
- **Coastal Flooding Risk**: The site is located significantly above sea level and approximately 5km inland from the coast, confirming that it is not at risk of coastal flooding.
- **Surface Water Flooding Risk**: the access track has a spot of very low likelihood of surface water flooding. This has been resolved and incorporated into the sustainable drainage strategy of the project.

Overall, the site is assessed to have a very low risk of flooding from all sources.

6.2 Drainage Management

A Sustainable Drainage System (SuDS) will be implemented to provide surface water management techniques to mitigate any adverse impact on the hydrology within the Proposed Development Area. The SuDS will be constructed prior to or at the same time as the access tracks and the site compound. Interim measures include the placement of silt fences across the site around areas likely to have runoff with high silt loads (ie spoil heaps, excavations and engineered fill). Interim measures will be retained in place until after the completion of high silt generating activities (eg track and hardstanding construction) and until the SuDS are established and providing sufficient silt removal. The SuDS water pollution principles will be followed as described below.

- Reduce the generation of pollutants by managing potential sources.
- Slow water flow to allow sediments and pollutants to settle before discharge.
- Ensure runoff is cleaned before it enters natural water bodies.
- Prevent soil erosion to reduce sediment transport.
- Ensure proper use, regular inspections, and maintenance of SuDS to sustain functionality.

A sustainable drainage strategy report has been submitted as part of this application where more details of drainage strategy and SuDS can be found.

7 Monitoring, Recording and Reporting

It shall be the responsibility of the Site and visiting Managers to monitor and control the Construction Environmental Management Plan and ensure its implementation. However, all Contractors must ensure that they are familiar with and observe this plan. Communication methods will include site inductions, toolbox talks, daily briefings and regular review meetings.

All personnel must report an environmental incident to the Site Manager immediately. Any incident will be assessed to determine if it has the potential for environmental contamination of surface water, groundwater or poses an environmental threat to land or air. The cause of the incident will be investigated, and any corrective or preventative action will be taken as necessary. The implementation of any measures will be monitored to ensure it is being carried out fully and working successfully.

A log of any incidents and associated monitoring will be kept on site.