

Glenlara Power Reserve Energy Storage System Emergency Response Plan

Neoen Renewables Ireland Ltd
Curraduff, Glenlara, Newmarket, Co Cork

FAO	Galetech Energy Services
Company	Neoen Renewables Ireland Ltd
Gexcon Project Number	101333
Technical Note Number	2
Date of Issue	28.05.2026
Revision	00

Revision History

All projects are performed in accordance with the procedures given in Gexcon's Quality Management system that is based on the requirements given in ISO 9001:2015, and is certified according to the ISO standard. One of the main principles of the quality system is based on a three-level check, author QA, quality check by experienced personnel and independent approval by senior personnel, as documented below.

Revision	Date	Author	Checker	Approver	Notes
00	28.05.2026	M Lewis	S Pegg	L Black	First issue for client review

TECHNICAL NOTE

© Gexcon UK Limited. The information contained herein is to be used by the recipient solely for the purpose for which it was supplied. It shall not be disclosed in whole or in part, by any other party without the written permission of Gexcon UK Limited.

Disclaimer:

Gexcon shall not be liable for damages which the assignor, or assignor's clients, vendors, consultants or other third party, suffers when applying or using the results of Gexcon's work, unless there is misconduct or gross negligence on the part of Gexcon or on the part of the persons used by Gexcon to carry out the work.

Table of Contents

Abbreviations	4
1. Purpose and Scope	5
1.1 Purpose	5
1.2 Scope	5
2. Site Description	6
2.1 Site Location	6
2.2 ESS System Overview	6
3. Potential Hazards	9
3.1 Thermal Runaway	9
3.1.1 Toxic and flammable off-gas generation	9
3.1.2 Dangerous Substances – Environmental Hazards	10
3.2 Electrical Hazards	10
3.3 Other Hazardous Substances	10
4. Emergency Response	11
4.1 Distribution of the Emergency Prevention and Response Plan	11
4.2 Alarm Activation	11
4.3 Emergency Systems and Equipment	11
4.3.1 Communication	11
4.3.2 Battery Management System (BMS)	11
4.3.3 Fixed Safety Equipment	12
4.3.4 Supporting Systems for Hazard Identification	15
4.3.5 Provision of Personal Protective Equipment (PPE)	15
4.3.6 Provision of Ancillary Equipment	16
4.4 Site Layout	16
4.5 Site Water, Contaminated Firewater and Drainage Plan	19
4.6 Emergency Command and Control Structure	19
4.6.1 Emergency Roles and Responsibilities	19
4.6.2 Responsibility for Internal Declaration of a Major Incident	20
4.6.3 Facility Emergency Responders and Contact List	20
4.6.4 External Emergency Services, Stakeholders and Contact List	20
4.7 Emergency Categories	21
4.8 Immediate Actions Guide	21
4.8.1 Emergency System Shutdown	22
4.9 Incident Management Strategies	22
4.9.1 Contingency Plan for Fires	22
4.9.2 Contingency Plans for Chemical & Oil Spills	24
4.9.3 Contingency Plan for Severe Weather (Heavy Wind, Storm,)	25
4.9.4 Unauthorized Access to the premises or buildings	26
5. Regular Review and Update of the Emergency Response Plan	27
6. Required Training	28
7. References	29
8. Appendices	30

Abbreviations

Abbreviation	Definition
BMS	Battery Management System
CCTV	Closed Circuit Television
CO	Carbon Monoxide
CO2	Carbon Dioxide
COMAH	Control of Major Accident Hazards
DC	Direct Current
EPA	Environmental Protection Agency
ESS	Energy Storage System
FACP	Fire Alarm Control Panel
HF	Hydrogen Fluoride
HSA	Health and Safety Authority
IEC	International Electrotechnical Commission
LFP	Lithium Iron Phosphate
LEL	Lower Explosive Limit
LV	Low Voltage
MWh	Megawatt-hour
NFCC	National Fire Chiefs Council
OEM	Original Equipment Manufacturer
PPE	Personal Protective Equipment
RDC	Remote Dispatch Centre
RSO	Remote System Operator
SCADA	Supervisory Control and Data Acquisition
SCBA	Self-Contained Breathing Apparatus
SDS	Safety Data Sheet
SEMS	Smart Energy Management System
SIL	Safety Integrity Level
UL9540A	Standard for Test Method for Evaluating Thermal Runaway Fire Propagation in Battery Energy Storage Systems
UPS	Uninterruptible Power Supply
VDC	Volts Direct Current

TECHNICAL NOTE

© Gexcon UK Limited. The information contained herein is to be used by the recipient solely for the purpose for which it was supplied. It shall not be disclosed in whole or in part, by any other party without the written permission of Gexcon UK Limited.

1. Purpose and Scope

1.1 Purpose

The purpose of the Glenlara Power Reserve Energy Storage System (ESS) Emergency Response Plan is to outline how potential site hazards can escalate to hazardous scenarios, and provide organised response to them.

Through training and practice of emergency response to these scenarios, this will prevent and minimise harm towards people, environment and assets, at the facility or surrounding area. Other aims include:

- Contain and control incidents so as to minimise effects and to limit damage to persons, the environment and property.
- Outline a command-and-control structure to ensure response to foreseeable emergencies has organised actions, communication channels, and response procedures.
- Manage information to external sources.
- Maintain effective liaison with emergency services and local stakeholders.

1.2 Scope

This plan applies to all ESS enclosures, inverters, transformers, auxiliary systems and associated infrastructure of the Glenlara ESS Facility.

As this development is still at the planning stage, the details within will be based on best practice, and will be developed further at the later stages of design prior to the construction stage. Formal consultation with emergency services will be held at detailed design stage to finalised and agree the emergency response plan.

TECHNICAL NOTE

© Gexcon UK Limited. The information contained herein is to be used by the recipient solely for the purpose for which it was supplied. It shall not be disclosed in whole or in part, by any other party without the written permission of Gexcon UK Limited.

2. Site Description

2.1 Site Location

Neoen Renewables Ltd propose to construct an ESS facility adjacent to the Glenlara 110kV substation in the townland of Curraduff, Glenlara, Co Cork. The ESS will use Lithium Iron Phosphate (LFP) batteries in containerised units with an overall site capacity of up to 240.72 MWh.

The proposed development is to be located in the rural townland of Curraduff, approximately 2 km southwest of Newmarket, Co. Cork. The surrounding land use is predominately small agricultural holdings and single rural dwellings developed mainly along the local road network.

2.2 ESS System Overview

The development will generally comprise the following:

- 48 no. Huawei LUNA2000-5015-8S containers (or similar) (5.015 MWh capacity per container) installed on concrete plinths measuring 2.9 m high x 2.4 m wide x 6.1 m in length. The containers will be arranged in sets or 'skids' of 6 no. containers (one skid will comprise 6 no. ESS containers);
- Transformer and Inverter Units measuring 2.9 m high x 2.4 m wide x 12.1 m in length installed on concrete plinths. Each skid (6 containers) will have a dedicated transformer unit and inverter unit to alter the type of current and voltage to assist the storage process;
- Smart Energy Management System (SEMS) / Supervisory Control and Data Acquisition ('SCADA') system;
- Underground electrical and communications cabling;
- 2.6 m high palisade fencing and security gate;
- Pole mounted Closed Circuit Television (CCTV) and security lighting; and
- Onsite access track.

The proposed ESS installation will use Lithium Iron Phosphate (LFP) batteries cells which have higher thermal and mechanical stability and therefore a lower tendency for thermal runaway.

The Huawei LUNA2000 system is based on non-walk-in containers which house a total of 48 modules. Eight battery modules are assembled into a single rack, and six racks are housed within one container. The container external and internal view is illustrated in Figure 2-1 and Figure 2-2 respectively.

At operational stage, the site will be generally unmanned and will be operated and controlled by a remote dispatch centre (RDC) via the facility's SCADA system. Site access is generally limited to maintenance personnel only; site visitors will be required to sign a log-in system and be accompanied on site at all times by their approved site contact.

TECHNICAL NOTE

© Gexcon UK Limited. The information contained herein is to be used by the recipient solely for the purpose for which it was supplied. It shall not be disclosed in whole or in part, by any other party without the written permission of Gexcon UK Limited.

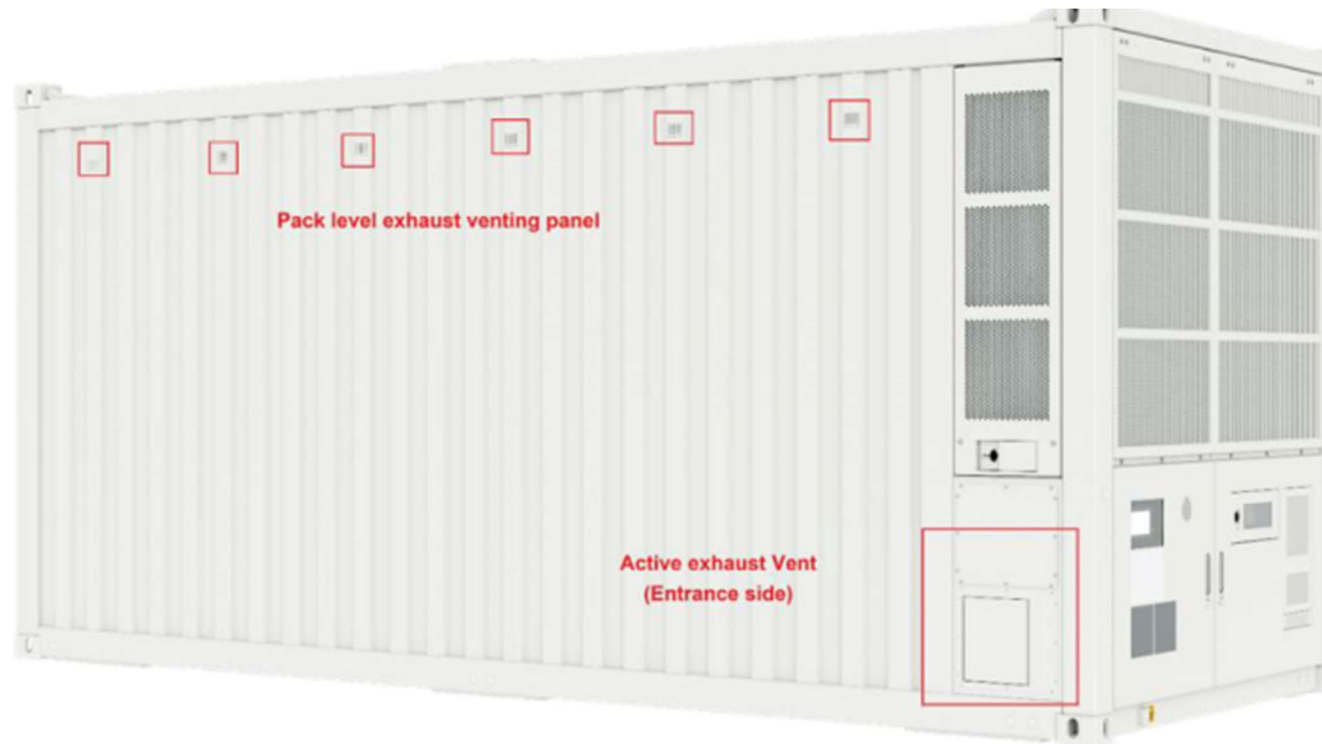


Figure 2-1 Huawei LUNA2000 Container External View

TECHNICAL NOTE

© Gexcon UK Limited. The information contained herein is to be used by the recipient solely for the purpose for which it was supplied. It shall not be disclosed in whole or in part, by any other party without the written permission of Gexcon UK Limited.

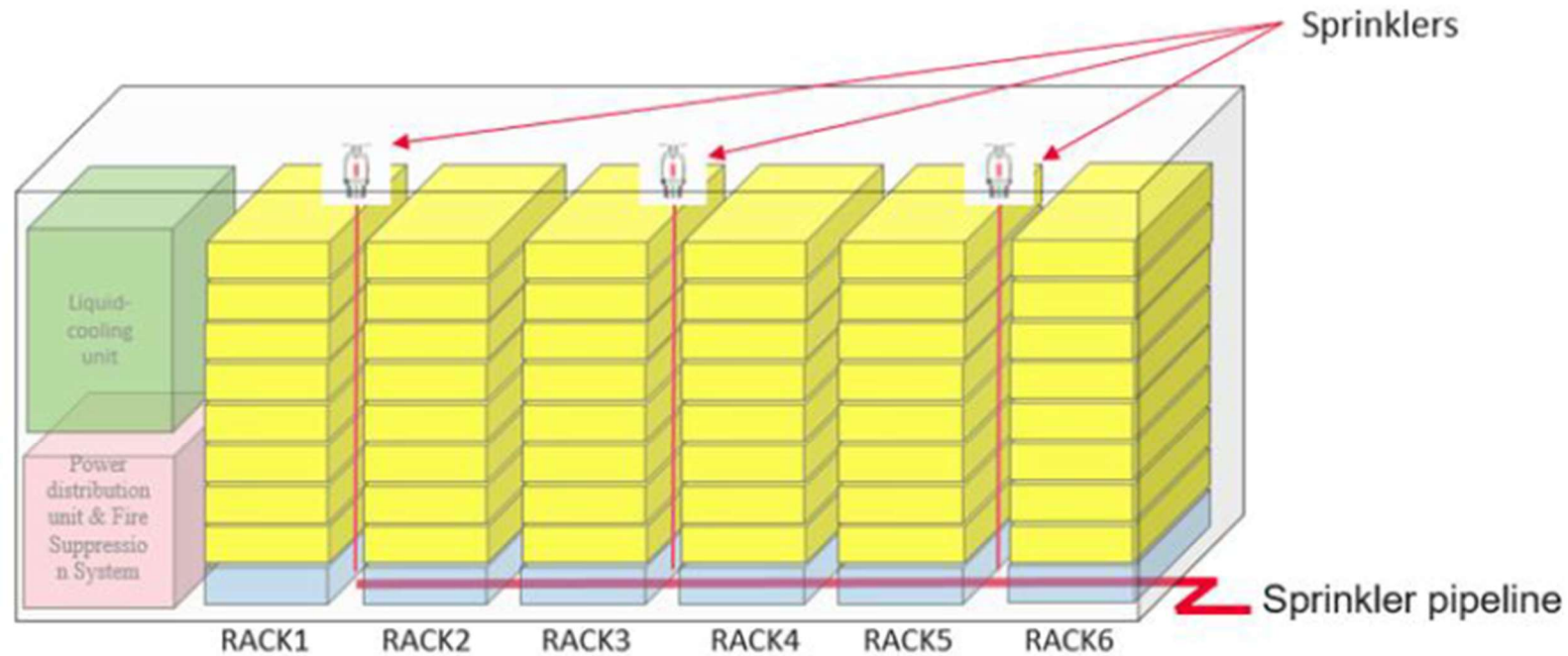


Figure 2-2 Container Internal Layout

TECHNICAL NOTE

© Gexcon UK Limited. The information contained herein is to be used by the recipient solely for the purpose for which it was supplied. It shall not be disclosed in whole or in part, by any other party without the written permission of Gexcon UK Limited.

3. Potential Hazards

The following hazards have been identified for the ESS site:

- Thermal Runaway
 - Toxic Off-Gas Generation
 - Flammable Off-Gas resulting in fire hazards
 - Dangerous Substances – Environmental Hazards
- Electrical Hazards
- Other Hazardous Substances

These are described in more detail in the following sections.

3.1 Thermal Runaway

Thermal runaway is an uncontrolled, self-sustaining exothermic reaction that typically originates in a single battery cell and can rapidly propagate to adjacent cells. Once initiated, it can escalate into a large-scale failure involving heat release, fires, and the emission of hazardous gases.

UL9540A testing has been conducted on the LUNA2000 system at cell, module and rack level. It was concluded that at module and rack level the LUNA2000 system observed no external flames or flying fragments and no module to module or rack to rack propagation in the event of a cell going into thermal runaway. Should a thermal runaway event occur on site, it is expected that the event would be limited to one module and is highly unlikely to spread to neighbouring containers.

3.1.1 Toxic and flammable off-gas generation

In the event of an ESS cell going into thermal runaway, there is potential for harmful off gasses including hydrogen fluoride (HF), carbon monoxide (CO) and carbon dioxide (CO₂), hydrogen, methane and ethylene to be produced. This can lead to jet fire events, dispersion of flammable gas which if ignited could result in explosion events and the dispersion of toxic gas.

Consequence modelling has been completed in line with the Health and Safety Authority (HSA) Guidance on technical land-use planning advice for planning authorities and COMAH establishment operators (HSA, 2023) to determine the distance to flammable and toxic dose levels of concern. The modelling was based on thermal runaway involving one module in keeping with the UL9540A testing results.

It was concluded that toxic dose levels corresponding to 1% fatality outdoors could extend up to 93 m from the container (based on F2 night time weather conditions). Distance to thermal radiation levels corresponding to 1% fatality outdoors from a jet fire event could extend up to 21 m from the container. The distance to thermal radiation and toxic dose endpoints of concern do not reach any off site receptors or normally occupied areas.

In addition to incidents involving the ESS units, there is also the potential for fire events originating from non-battery infrastructure such as transformers and inverters.

TECHNICAL NOTE

3.1.2 Dangerous Substances – Environmental Hazards

Firewater generated in response to a thermal event on site has the potential to be contaminated with the hazardous chemicals indicated above. If not suitably contained, the contaminated firewater has the potential to migrate off site impacting environmental receptors (groundwater, surface water, soils).

3.2 Electrical Hazards

ESS operate with high-voltage electrical equipment, meaning electrocution is an inherent risk for personnel who install, operate, or respond to incidents at these facilities. Electrocution hazards are magnified during fire or failure events as emergency responders may encounter energized components, damaged wiring, or energized enclosures. Fires can compromise insulation, damage control electronics, or cause short circuit; therefore responders must treat compromised systems as potentially energized, even if external power is cut.

The LUNA2000 system has a maximum DC voltage of 1,500 VDC which presents a significant electrocution risk.

3.3 Other Hazardous Substances

Leaks from the ESS cooling system or a release of lithium ion electrolyte has the potential to pose a health risk to personnel and emergency responders. The SDSs for the electrolyte is included in Appendix A herein. The coolant SDS will be provided at detailed design stage.

4. Emergency Response

4.1 Distribution of the Emergency Prevention and Response Plan

Once finalised, printed copies of this emergency response plan will be distributed and communicated to the Fire & Building Control Department of Cork County Council, Cork County Fire Service, Neoen Renewables Ireland Ltd personnel and the Remote System Operators (RSO).

4.2 Alarm Activation

The site is expected to be unmanned, with the exception of 1-2 site visits per month for maintenance and operational reasons. The site will be continuously monitored and controlled by the remote dispatch centre (RDC) via the SCADA system who will initiate the emergency response plan if required. The system will be supplied via LV connection which is backed up by UPS or equivalent battery-backed supply to ensure uninterrupted power to the site. Neoen Renewables Ireland Ltd will have a designated local contact to act as the emergency coordinator and assist in any emergency situation until the emergency responders arrive on site.

Upon detection of an unsafe event, the RDC will contact the designated local contact along with the local fire service.

In the case of an incident occurring while maintenance operations are taking place, maintenance staff will initiate the emergency response plan.

4.3 Emergency Systems and Equipment

4.3.1 Communication

During an emergency, the RDC and the designated local contact will communicate directly with the fire service via telephone. It is expected that the residential neighbours will be informed of the situation and actions to take (for example shutting windows) by the fire service.

4.3.2 Battery Management System (BMS)

Each rack is fitted with a dedicated Battery Management System (BMS) which provides essential functions such as battery safety protection, cell balancing, state monitoring, thermal management system, data acquisition and energy management.

The BMS will communicate alarms and status of each rack to a control subsystem in order to detect abnormal conditions such as undervoltage, overdischarge, overvoltage, overtemperature, and overcurrent in advance and initiate remedial action. The BMS shall electrically isolate the components of the ESS or place it in a safe conditions in the event that limits are exceeded or an internal fault is detected.

4.3.3 Fixed Safety Equipment

ESS Containers

Fire detection and suppression is via the Fire Safety System (FSS) which mitigates the risk of thermal runaway within the ESS containers through advanced detection and extinguishing capabilities, especially minimizing damage in the event of a fire.

The FSS system consists of the following elements per container (Huawei, 2024):

- 2 x smoke detectors (within the battery compartment);
- 2 x heat detectors;
- 2 x Combustible gas detectors (H_2 and CO);
- Fire alarm control panel (FACP);
- Fire alarm strobe/horn;
- External manual alarm;
- Aerosol based suppression systems (32 kg NOVEC 1230);
- Dryrise pipe system;
- Smoke exhaust ventilation system;

A general arrangement of the fire detection and suppression system within a container is illustrated in below.

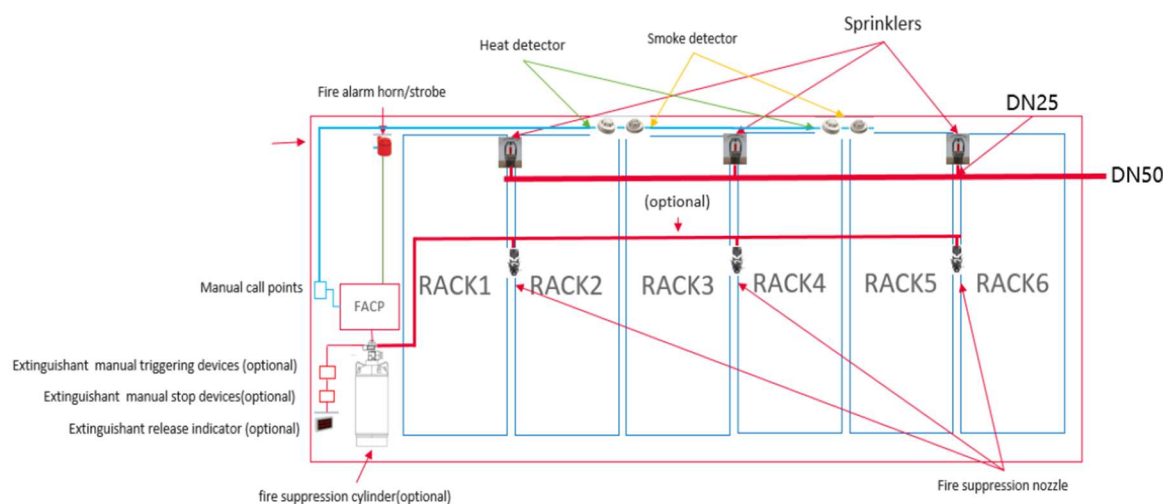


Figure 4-1 ESS Container Internal Fire Detection and Suppression System Layout

The extinguishing system is automatically controlled based on the alarm system.

When a smoke detector or a heat detector detects a fire signal, or the Manual Call Point is manually pressed, it sends the alarm signal to FACP of the fire suppression system. After receiving the signal, FACP initiates the Level-1 fire alarm.

If two or more detectors detect fire signals, or one detector detect fire signals and Manual Call Point is pressed, or Emergency Manual Triggering Device is pressed, the signals are transmitted to FACP. The FACP then initiates the Level-2 fire alarm, starts the horn strobe, and starts the pre-discharge

TECHNICAL NOTE

countdown, which does not exceed 30s. During this countdown, non-fire-fighting power supply such as the liquid cooling unit and the exhaust system are shut down. When the countdown ends, the cylinder electrical actuator actuates, NOVEC1230 gas is released, and the extinguishant release indicator turns on. The fixed locations of the aerosols are illustrated in Figure 4-1.

Dry Risers

In addition to the aerosol system, the ESS containers are fitted with a dry riser system which if necessary, firefighters can manually initiate the water sprinkler system in order to cool down the ESS container preventing the spread of fire to adjacent containers. The nozzle flow rate is designed for 81 L/min and the system flow rate is designed for 244 L/min (based on 3 nozzles) (Huawei, 2024). Note: the current expectation is that the fire service will allow the compromised batteries to burn out and will not apply water directly on to the batteries.

Smoke Exhaust Ventilation System

The containers are fitted with an exhaust system which will reduce the concentration of combustible gas (less than 25% LEL) in the event of thermal runaway. The exhaust controller (CMU) receives instructions from the combustible gas detector to start or stop the fans. The exhaust fans activate when the hydrogen concentration at the detector reaches 600 ppm or the CO concentration reaches 200 ppm for 3 seconds (Huawei, 2024).



Figure 4-2 Location of Pack-Level and Container-Level Exhaust Venting

E-stops

Each ESS container is fitted with an E-Stop (ESS abort) button on the door allowing the container to be powered off in case of an emergency. Location of E-Stop is illustrated below.

TECHNICAL NOTE

© Gexcon UK Limited. The information contained herein is to be used by the recipient solely for the purpose for which it was supplied. It shall not be disclosed in whole or in part, by any other party without the written permission of Gexcon UK Limited.

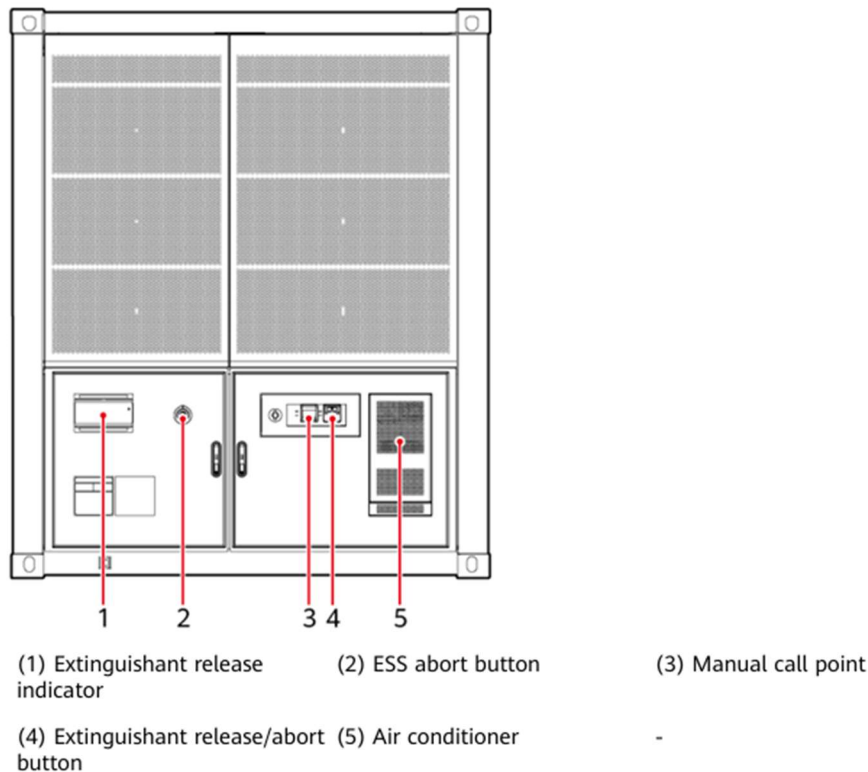


Figure 4-3 Control Unit Cabin Layout

Fire Hydrants, Hose Boxes and extinguishers

There will be 2 fire hydrants on site the location of which is shown in the layout plans in section 4.4. The requirement for hose reels and hand extinguishers on site will be determined at later design stages.

Evacuation and Central Assembly Areas

The site is expected to be mainly unmanned during normal operation with the exception of maintenance activities. In the event of a hazardous incident on site, any personnel on site will alerted by the horn and strobe activation on the container and will evacuate to a designated muster point. The exact locations of the muster points will be determined at later design stages but will likely include the site entrance along with an alternative location depending on the wind direction to minimise exposure to harmful off gasses.

Means of Escape

The ESS containers have been suitably spaced to allow ease of movement on site in the event of a hazardous incident. The substation (to be subject to future planning approval) will follow the Building Regulations Fire Safety Technical Guidance Document B (Department of Housing, 2024).

4.3.4 Supporting Systems for Hazard Identification

A wind sock will be available on site to aid on site personnel and emergency services.

4.3.5 Provision of Personal Protective Equipment (PPE)

Appropriate PPE will be available on site including insulated gloves and shoes, protective masks, insulated tool, insulation meters and multimeters. The requirement for handheld gas detectors will be determined at later design stage.

TECHNICAL NOTE

15

© Gexcon UK Limited. The information contained herein is to be used by the recipient solely for the purpose for which it was supplied. It shall not be disclosed in whole or in part, by any other party without the written permission of Gexcon UK Limited.

4.3.6 Provision of Ancillary Equipment

The requirement for ancillary equipment which may be required during the emergency response is still under consideration during design phase. Discussion around any ancillary equipment will be included in the detail design.

4.4 Site Layout

Figure 4-4 below shows the site location and access routes for emergency responders. Figure 4-5 illustrates the site layout. Within the site boundary, the layout has been designed in accordance with Building Regulations Fire Safety Technical Guidance Document B (Department of Housing, 2024) to ensure there is sufficient access for emergency vehicles to navigate internally around the site.

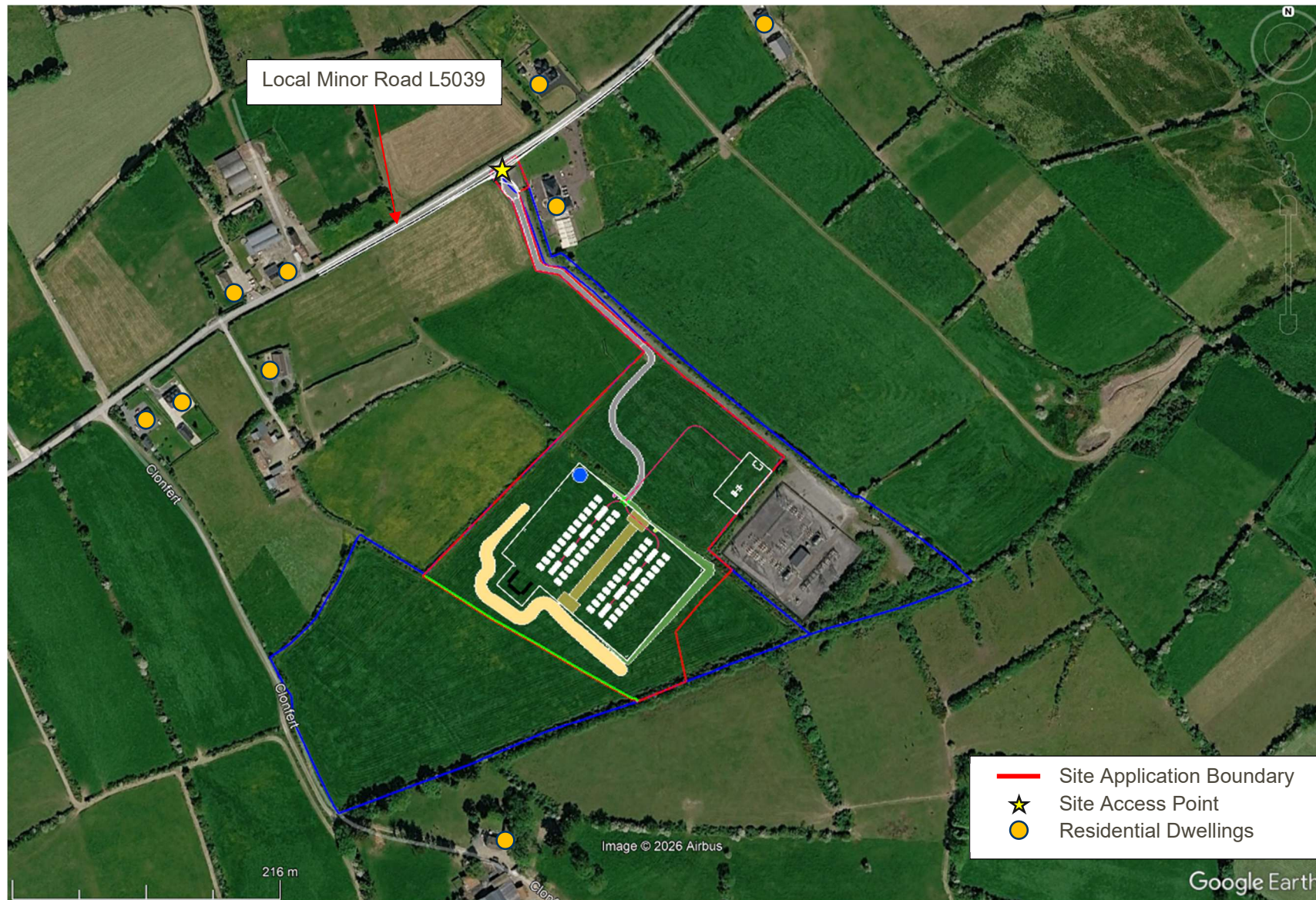


Figure 4-4 Site Location and Access Points

TECHNICAL NOTE

© Gexcon UK Limited. The information contained herein is to be used by the recipient solely for the purpose for which it was supplied. It shall not be disclosed in whole or in part, by any other party without the written permission of Gexcon UK Limited.

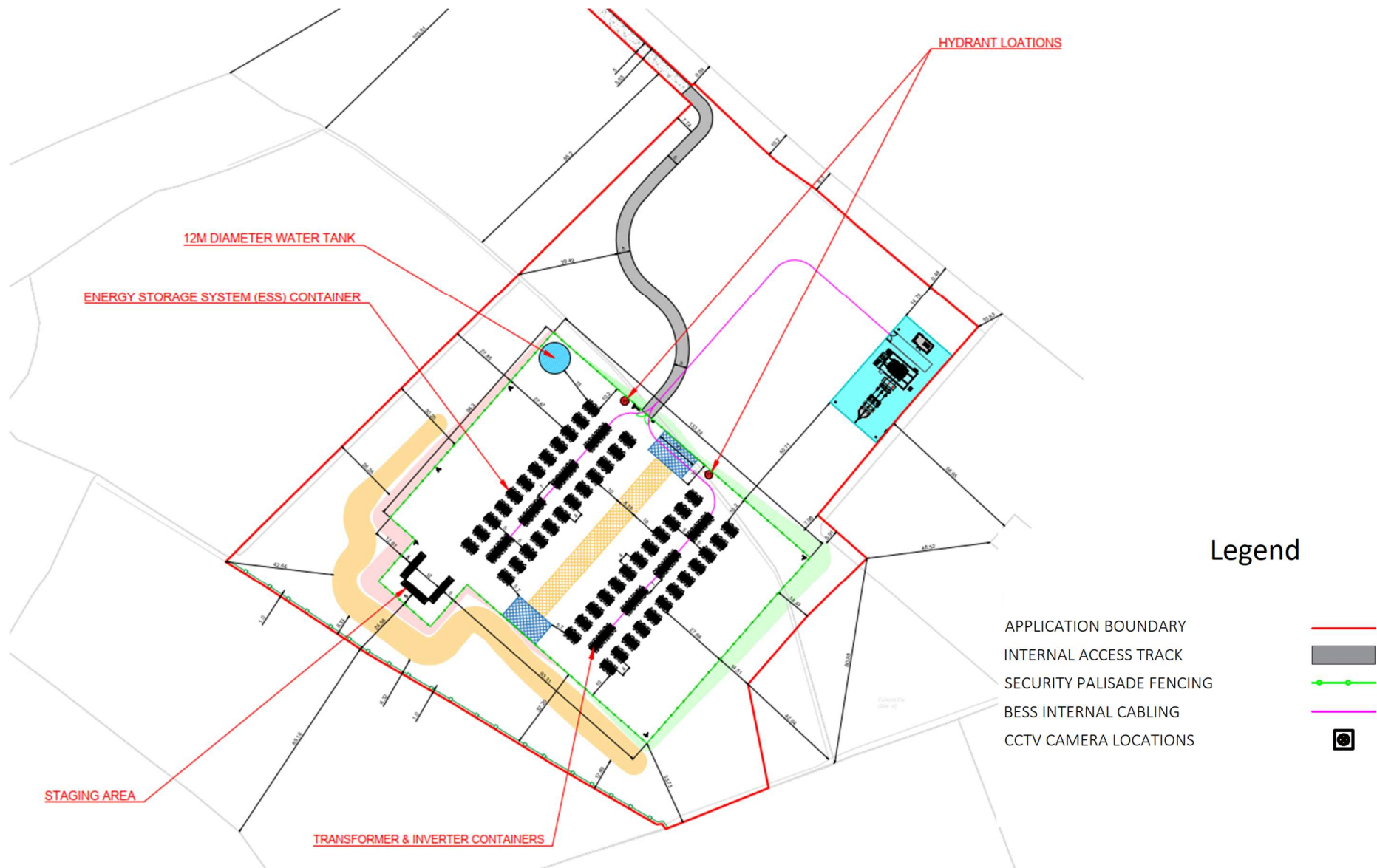


Figure 4-5 ESS Platform Layout

TECHNICAL NOTE

© Gexcon UK Limited. The information contained herein is to be used by the recipient solely for the purpose for which it was supplied. It shall not be disclosed in whole or in part, by any other party without the written permission of Gexcon UK Limited.

4.5 Site Water, Contaminated Firewater and Drainage Plan

The site drainage plan is included in Appendix B. Surface water from the ESS compound will flow to a lined basin via a filter drain which ultimately discharges to an unnamed water course to the south of the site. Runoff from the substation (to be subject to future planning application) will flow via gullies to a bypass separator before passing through a filter drain to a dedicated attenuation basin before being release to the existing land drainage.

The firefighting strategy for the Glenlara site has been designed in accordance with NFCC guidance. Firefighting water is supplied via a 271 m³ capacity water supply tank which will feed two hydrants on site which can be used by local fire service for the cooling of adjacent containers. This is considered to be sufficient to meet the full NFCC firefighting demand with no requirement for external water supply except for replenishment of the water tank. Note: the current expectation is that the fire service will allow the compromised batteries to burn out and will not apply water directly on to the batteries.

Containment of contaminated fire water generated in a fire event is based on the storage of water within the lined attenuation basin and the top layer of the ESS subbase with infiltration to ground or loss to the surface water prevented by the installation of an impermeable geomembrane at the formation level of the ESS subbase and basin. Contaminated water will preferentially follow lateral drainage pathways within the site drainage network and be directed to the lined attenuation basin, the outflow of which is controlled by an emergency shut off isolation valve. The pollution control valve will be interlocked with the fire alarm system on site, closing automatically on activation of the alarm.

The contaminated firewater will remain onsite until it can be removed by a licenced waste management company.

A total storage volume of 1,183 m³ is available in the lined gravel subbases and attenuation basins exceeding the minimum requirement of 180 m³ (based on flowrate of 25 litre/s for 120 minutes) for boundary cooling as set out in the UK National Fire Chiefs Council (NFCC) guidance.

These capacities ensure sufficient containment until contaminated water can be removed and disposed of safely.

4.6 Emergency Command and Control Structure

4.6.1 Emergency Roles and Responsibilities

Facility Manager (Neoen Renewables Ireland Limited)

The Neoen Renewable Ireland Facility Manager for the Glenlara site will assume responsibility for the development and maintenance of the site emergency plan. They will be responsible for contacting the emergency services and other regulatory stakeholders (EPA and HSA) in the event of a reportable emergency. They will ensure the site has sufficient resources in place to prevent and mitigate the hazards identified for the site. They will ensure that an incident undergoes an incident investigation.

Remote Systems Operator

As described in section 4.2, the site will be monitored and controlled by the RDC who will initiate the emergency response plan if required. On development of a hazardous situation the RDC will contact the designated local contact and inform the local fire service. The RDC will assist the Emergency Coordinator as required.

Site Incident Coordinator

Neoen Renewables Ireland Ltd will have a designated local contact to act as the Site Incident Controller and assist in any emergency situation until the emergency responders arrive on site.

The Site Incident Controller will liaise with the local fire services and provide any available information and resources.

4.6.2 Responsibility for Internal Declaration of a Major Incident

The level of emergency will be determined at the time of the incident by the Site Incident Controller. They will do this in conjunction with the RDC. If there is any doubt, the Site Incident Controller will nonetheless trigger emergency procedures within the Emergency Response Plan immediately and then contact the appropriate level of command.

4.6.3 Facility Emergency Responders and Contact List

The facility emergency responders and their roles will be further developed at later design stages and will be included in the table below.

Name	Function	Emergency Role	Crisis Intervention Team	Contact Details
<i>Full name</i>	Facility Manager	The Facility Manager has the central steering responsibility in case of an emergency to organise emergency response and mitigation actions. In case of absence, the <i>(insert function 1, insert function 2)</i> takes the leader role as proxy	Leader	<i>Landline work Mobile work Landline private Mobile private</i>
<i>Full name</i>	Local Contact	Media Liaison, central contact person for press, media and family members of employee, contractors and visitors	Media	<i>Landline work Mobile work Landline private Mobile private</i>

4.6.4 External Emergency Services, Stakeholders and Contact List

External emergency services and stakeholders will be identified at later design stage and included in the table below, including their contact details.

External Service and Company Name	Description	Contact Name	Contact Details
Fire Brigade	Emergency services		<i>Landline</i>
Police	Emergency services		<i>Landline</i>
Hospital	Medical facilities		<i>Landline</i>
Health and Safety Authority	Competent Authority		<i>Landline</i>
Fire & Building Control Department of Cork County Council	Local government		

External Service and Company Name	Description	Contact Name	Contact Details
Environmental Agency	Environmental pollution incident centre		Landline
Environmental Waste Management Specialist	Hazardous spill response service		Landline
Employer's Liability Insurance Association	Health & Safety issues		Landline
Electricity Supplier	Supply issues		Landline
Neighbour 1	Potential Hazard for neighbours		Landline
Neighbour 2	Potential Hazard for neighbours		Landline
Neighbour 3	Potential Hazard for neighbours		Landline

4.7 Emergency Categories

Emergencies on site will be classified as either Minor, Serious or Major where Minor emergencies are expected to be managed by site personnel and Serious to Major will require external emergency services.

Minor Emergency

A minor emergency is any event where there is no immediate danger to personnel on site and a low risk of damage to environment, property or plant.

Serious Emergency

A Serious emergency is any event that has the potential for causing serious injury, endangering lives on or off site or causing significant damage to environment, plant or property.

Major Emergency

A Major emergency is any event that has the potential for causing serious injury, endangering lives on or off site or causing significant damage to environment, plant or property and **may not be controlled by location** emergency responders and therefore **demands immediate assistance from external** emergency services.

4.8 Immediate Actions Guide

The below emergency services call-in process flow should be the first step in an incident to determine where the emergency services should be contacted immediately. The incident action cards will be developed at later design stage.

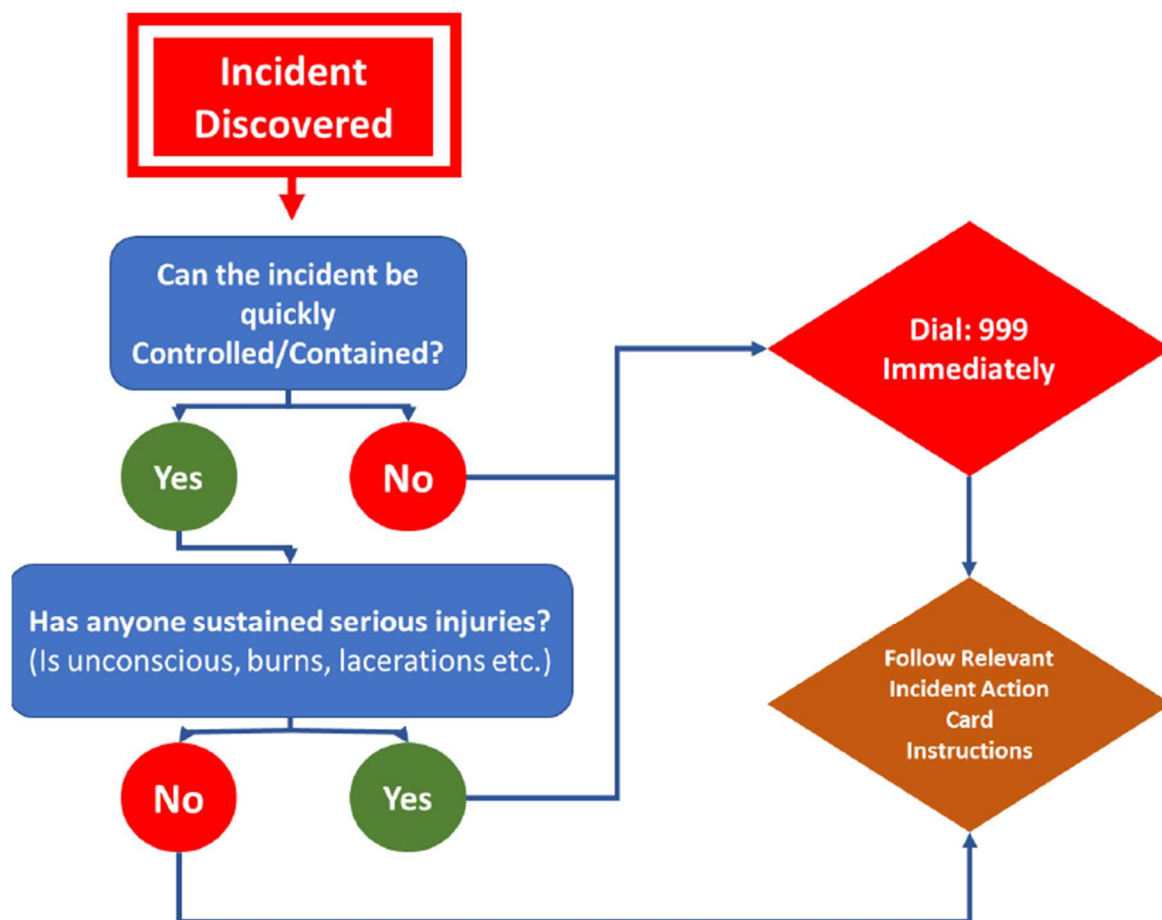


Figure 4-6 Immediate Action Guide Flowchart

4.8.1 Emergency System Shutdown

In the event of an emergency on site, the ESS systems can be shut down locally or remotely to electrically isolate the battery containers and halt battery charging or discharging.

It is important to understand that the system shutdown will not completely de-energize the battery rack, nor will it guarantee that a fault or thermal runaway event has been stopped.

4.9 Incident Management Strategies

The following incident are covered but not limited to the following list. It is worth noting that some incidents may by consequence result in a combination of the definitions given below.

4.9.1 Contingency Plan for Fires

Scope

This action plan deals with all fire emergencies on site, to ensure that all fires that occur are dealt with in a safe, controlled, efficient manner. The final decision with regard to categorisation of an emergency always lies with the designated incident controller based on their assessment of the scene.

In assessing any emergency, an evaluation of the risk or exposure to adjoining areas should be considered. Because of the potential for escalation, fires should always be categorized as serious or major emergencies.

TECHNICAL NOTE

© Gexcon UK Limited. The information contained herein is to be used by the recipient solely for the purpose for which it was supplied. It shall not be disclosed in whole or in part, by any other party without the written permission of Gexcon UK Limited.

When sensors within the ESS enclosures detect conditions that indicate a fire, an audible alarm will sound, and a visual strobe will flash on the enclosure exterior. Smoke and/or flame may or may not be visible from the outside of the ESS enclosure. Fire growth can be slow, fast, or explosive in nature.

Summary Actions

The general action plan for dealing with all fires will be the same initially: However, all fires will be categorized as a Serious or Major emergency, see escalation flow chart section 4.8.

Serious

All fires (and fire alarms)

Major

Any fire not under control after 5 minutes of onsite personnel action or involving any of the following:

- Fuel oil storage or gas
- Structural cladding

Types of fire can be classified as, but not limited to

- Gas or fire from runaway event
- Fire near ESS Containers
- Transformer fires
- Electrical fires

In the event of a major emergency being declared, the external Fire Services must be called immediately.

Procedure

1. Activate the fire alarm.
2. Do not under any circumstances attempt to tackle major fires or bring yourself in danger.
3. Contact the Remote Dispatch Centre (RDC) and explain the details of the fire.
4. Site Incident Coordinator should then marshal the incident. If they is injured or unavailable the Facility Manager should be informed immediately who will delegate the marshal duties to another suitably responsible staff member.
5. Site Incident Coordinator should call 999 and report the fire and explain any further details to the operator.
6. It will be necessary to contact the environment agency if significant quantities of fire water enter the drainage system and /or any open water.
7. Further access to the site will not be permitted until the 'all-clear' is given.

External Emergency Services

1. The Incident Coordinator should provide emergency services with site plans, isolation & kill cards and any further relevant information in this document upon arrival at site.
2. Where there is no immediate threat to life safety, the fires service should allow the ESS to burn in a controlled fashion until all fuel sources inside are depleted.
3. Fire service can use the onsite firewater for cooling of adjacent containers following consultation with the RDC or Incident Coordinator.

Continuous monitoring of gas levels in and around the incident area shall be maintained, and mechanical ventilation may be used to control and reduce gas concentrations. Full firefighter PPE and

Self-Contained Breathing Apparatus (SCBA) must be worn until gas levels are verified as safe. A fire watch shall be conducted for at least 24 hours following any fire incident.

Note: re-ignition risk will remain for several hours and potentially days following a thermal runaway event. Therefore, caution should be taken before approaching the containers and the commencement of clean-up activities should only be taken when safe to do so. Where necessary, advice should be sought from the Original Equipment manufacturer (OEM) or integrator on decommissioning, removal of damaged equipment, and proper disposal in accordance with local regulations.

4.9.2 Contingency Plans for Chemical & Oil Spills

Scope

Although spills are unlikely from normal operations on site, this action plan has been determined to deal with oil or hazardous material spills on site. It categorises the types of emergencies that can occur as minor, serious or major and describes action plans for dealing with these.

Generally these materials may be:

- Flammable
- Toxic
- Corrosive
- Cause an environmental problem.

First Aid

The general recommended first aid for these materials is:

- If eyes are affected, immediately wash with water for at least fifteen minutes.
- Remove contaminated clothing and drench skin with plenty of water.
- Seek medical attention for anyone affected by inhalation, skin or eye contact.

Minor:

- No immediate danger for personnel in other areas.
- No requirement for EA (Environment Agency) or external resources.
- Handle within the facility.
- Only small spills or leaks resulting in volumes of less than 100 litres.

Serious:

- Probable danger for personnel within facility.
- Possible environmental effects
- Any significant leak - leaks on oil storage containers greater than 1000 litres. Nevertheless, spillages of these materials would not normally constitute a major emergency

Major:

- Probable danger for personnel on site.
- Probable environmental effects. Significant oil leaks
- Requirement of specialist, emergency crew resources and outside services.

A 24-hour emergency response agreement with suitably qualified contractors will be in place for spill response and recovery and remediate work following an incident on site.

Summary Actions

- Use suitable protective clothing (seek further guidance if unsure)
- Isolate leak if possible

TECHNICAL NOTE

- Inform management and incident controller
- Close pollution control valve if necessary
- Prevent liquid from entering surface water drains using drain covers and spill products.

Procedure

Minor:

- Deal with using spill response resources.

Serious and Major:

- If necessary, call in fire services and environmental waste management contractor
- Activate alarm system via call point if necessary
- Proceed to Muster area(s) and do a role call.

4.9.3 Contingency Plan for Severe Weather (Heavy Wind, Storm,)

Scope

The following information describes the method of obtaining the necessary information in order to pre-empt the imminent occurrence of severe weather conditions. The Facility Manager and RDC should regularly monitor current weather warnings. If severe weather conditions are likely, they should relay this information all site staff. During out of hours the RDC will be responsible for monitoring latest severe weather warnings as listed on the Met Éireann website ([Met Éireann - The Irish Meteorological Service](#)).

Minor

- Winds up to and including gale force 9 and heavy rains

Serious / Major

- Imminent Storms, hurricanes, tornados and associated flooding from storms

Summary Actions

Live weather information is available at the ([Met Éireann - The Irish Meteorological Service](#)) as well as a classification of actions to take depending on severity.

The following actions should be taken

- Remote Dispatch Centre will monitor information from the Met Eireann.
- Prepare for possible power outages.
- Prepare for disruption of fire protection systems.
- Complete a walk down to secure any loose debris or equipment that could become a projectile hazard during the weather event.
- Keep the gate securely closed and locked.
- Look for loose container sidings or loose cable tray covers and secure.
- Make sure there is nothing that would obstruct the free flow of water off the site.
- Ensure there is adequate portable lighting available – ensure flashlights are charged and spare batteries are available.
- Inspect roof-mounted equipment and secure if necessary.

The following actions should be taken following a storm:

- Survey damage including, broken equipment, flooded electrical equipment. Leaking chemicals, damage to fire suppression/detection systems.
- Assess potential hazards and if necessary contact external emergency services for assistance.

4.9.4 Unauthorized Access to the premises or buildings

The site is secured via a 2.6 m high palisade fencing and is monitored 24/7 by the CCTV circuit. On detection of any unauthorised persons on site, the RDC will contact the local police service and notify the designated site contact.

5. Regular Review and Update of the Emergency Response Plan

This plan needs to be regularly reviewed at least every 36 months to check its applicability to the facility's requirements. If installation or process changes are implemented, the emergency plan needs to be reviewed and updated if required.

6. Required Training

All employees and contractors at the site should be trained with regards to the content of this Emergency Response Plan as part of the site induction process. Re-training is required if the emergency response plan is changed or after 3 years. Visitors need to receive a summary of the most important parts when they enter the facility. The preventive measures and the response scenarios need to be trained on a regular basis, according to the definition at each scenario. A record of each training is required to be established in the facility's learning management system.

7. References

- Department of Housing. (2024). *Building Regulations Technical Guidance Document B*. Government of Ireland.
- HSA. (2023, February). *Guidance on technical land-use planning advice For planning authorities and COMAH establishment operators*. Retrieved January 15, 2026, from [guidance_on_technical_land_use_planning_feb23.pdf \(hsa.ie\)](#)
- Huawei. (2024). *LUNA2000-4472-2S Safety Design Introduction*.
- Huawei. (2024). *Smart String ESS Design Scheme of Water Sprinkler System*.

8. Appendices

Appendix A-1 Battery SDS
Appendix B-1 Site Drainage Plan

Safety Data Sheets (SDSs)

Product Name: Smart String ESS (contain Lithium ion batteries)

Commissioner: Huawei Technologies Co., Ltd.

CVC Testing Technology Co., Ltd.



Safety Data Sheets (SDSs)

Ref. No.: RZUN2024-5907-DS2/R1

Page 2 of 10 Pages

Name of Product	Smart String ESS (contain Lithium ion batteries)
Type/Model	LUNA2000-4472-2S 1331.2Vdc 3360Ah 4472kWh
Commissioned by	Huawei Technologies Co., Ltd.
Commissioner address	Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, Guangdong, 518129, China
Supplier	Huawei Technologies Co., Ltd.
Supplier address	Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, Guangdong, 518129, China
Inspection according to	GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS, Rev.10)
Emergency telephone number	400-822-9999
Remarks	This report replaces the report No.RZUN2024-5907-DS2 after issuance.
检测技术有限公司 Seal of CVC 检测专用章 Date of issue: 2024-10-21	

Approved by: Zhang Siyao

Zhang siyao

Reviewed by: Liu Zhen

liuzhen

Tested by:

Lin Qingyuan

Lin Qingyuan

Safety Data Sheets (SDSs)

Ref. No.: RZUN2024-5907-DS2/R1

Page 3 of 10 Pages

SECTION 1: Product and company identification

Product Identifier:

Product name: Smart String ESS (contain Lithium ion batteries)

Model: LUNA2000-4472-2S

Other means of identification:

Synonyms: None

Relevant identified use of Product and uses advised against:

Recommended Use: Energy storage use

Uses advised against: /

Details of the Supplier of the safety data sheet:

Name: Huawei Technologies Co., Ltd.

Address: Administration Building, Headquarters of Huawei Technologies Co., Ltd.,
Bantian, Longgang District, Shenzhen, Guangdong, 518129, China

Telephone: 400-822-9999

Fax: -

Postcode: -

E-mail address: support_e@huawei.com

Emergency telephone number:

Company Emergency Phone Number: 400-822-9999

SECTION 2: Hazard identification

Classification:

The watt-hour rate of the product is 4472kWh, it is belong to the class 9 dangerous goods.

The product is tested according to Section 38.3 of the Manual of Tests and Criteria, the test report number is: RZUN2024-5907/R1.

Other information

Caution! Avoid short circuit place in high temperature environment, put into water, or damage the shell.

SECTION 3: Composition/information on ingredients

Chemical characterization: Mixtures

Description: Chemical power supply based on nonaqueous electrolyte. Composed by positive electrode, negative electrode, diaphragm, electrolyte and shell.

Hazardous ingredients:

Common Chemical Name	Chemical Formula	Concentration (%)	CAS No.	EC No.
Lithium iron	FeLiO ₄ P	35-40	15365-14-7	921-062-3

Safety Data Sheets (SDSs)

Ref. No.: RZUN2024-5907-DS2/R1

Page 4 of 10 Pages

phosphate				
Lithium hexafluorophosphate	LiPF ₆	3.0-5.5	21324-40-3	244-334-7
Graphite	C	18.0-22.0	7782-42-5	231-955-3
Aluminum	Al	8.0-15.0	7429-90-5	231-072-3
Copper	Cu	9.0-12.0	7440-50-8	231-159-6
Polypropylene	(C ₂ H ₄) _n	4.5-8.0	9002-88-4	618-339-3
1,1,1,2-Tetrafluoroethane	C ₂ H ₂ F ₄	<1‰	811-97-2	212-377-0
Ethylene glyco	(CH ₂ OH) ₂	<1‰	107-21-1	203-473-3
Perfluoro(2-methyl-3-pentanone)	C ₆ F ₁₂ O	<1‰	756-13-8	436-710-6

Note: N/A=Not apply.

SECTION 4: First-aid measures

First aid measures:

Eye Contact: Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a physician.

Skin Contact: Remove contaminated clothing and shoes. Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.

Inhalation: Move to fresh air. If symptoms persist, call a physician.

Ingestion: Do NOT induce vomiting. Drink plenty of water. If symptoms persist, call a physician.

Swallowing: Do not induce vomiting. Get medical attention.

Most Important Symptoms/Effects:

No information available.

Indication of any immediate medical attention and special treatment needed:

Inform physician. Treat symptomatically.

SECTION 5: Fire-fighting measures

Suitable Extinguishing Media:

CO₂, dry chemical powder, wet sand, plenty of water (for cooling).

Unsuitable Extinguishing Media: No information available.

Protective Equipment and Precautions for Firefighters:

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. For example: Wear self-contained respiratory protective device. Wear suitable protective clothing and eye/face protection.

Special hazards arising from the substance or mixture:

Safety Data Sheets (SDSs)

Ref. No.: RZUN2024-5907-DS2/R1

Page 5 of 10 Pages

Battery may burst and release hazardous decomposition products when exposed to a fire situation. Lithium batteries contain flammable ingredients that may vent, ignite and produce sparks when subjected to high temperature (>150°C), When damaged or abused (e.g. mechanical damage or electrical overcharging); may burn rapidly with flare-burning effect; may ignite other batteries in close proximity.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Personal Precautions Avoid contact with eyes.

Refer to section 8 for personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition.

Evacuate personnel to safe areas.

Environmental precautions:

Environmental Precautions Refer to protective measures listed in Sections 7 and 8.

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Methods and material for containment and cleaning up:

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning up Use personal protective equipment. Dam up. Cover liquid spill with sand, earth or other Non-combustible absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.

SECTION 7: Handling and storage

Precautions for safe handling:

Keep away from ignition sources, heat and flame. Such batteries must be packed in inner packages in such a manner as to effectively prevent short circuits and to prevent movement which could lead to short circuits. Avoid mechanical or electrical abuse.

More than a momentary short circuit will generally reduce the battery service life. Avoid reversing battery polarity within the battery assembly. In case of a battery unintentionally be crushed, rubber gloves must be used to handle all battery components. Avoid contact with eyes, skin. Avoid inhalation. No smoking at working site. Materials to Avoid: Strong oxidizing agents, Corrosives.

Conditions for safe storage, including any incompatibilities:

Store in a cool, well-ventilated area. Keep away from ignition sources, heat and flame. Such batteries must be packed in inner packages in such a manner as to effectively prevent short circuits and to prevent movement which could lead to short-circuits. Materials to Avoid: Strong oxidizing agents, Corrosives.

SECTION 8: Exposure controls/personal protection

Safety Data Sheets (SDSs)

Ref. No.: RZUN2024-5907-DS2/R1

Page 6 of 10 Pages

Engineering Controls:

Use ventilation equipment if available. Safety shower and eye bath.

Personal Protective Equipment:

Respiratory System: Not necessary under conditions of normal use.

Eyes: Not necessary under conditions of normal use.

Clothing: Wear appropriate protective clothing.

Hand: Safety gloves.

Other Protect:

No smoking, drinking and eating at working site. Wash thoroughly after handling.

SECTION 9: Physical and chemical properties

PhysicalState	Form: prismatic	
	Color: White	
	Odour: Odourless	
	Odor Threshold: No information available	
Change in condition:		
pH, with indication of the concentration		Not determined.
Melting point/freezing point		Not determined.
Initial boiling point and Boiling range:		Not determined.
Flash Point		Not determined.
Flammability (solid, gas)		Not determined.
Upper/lower flammability or explosive limits		Not determined.
Auto-ignition temperature		Product is not self-igniting.
Decomposition temperature		Not determined.
Other Information		No further relevant information available.

SECTION 10: Stability and reactivity

Reactivity: Stable under recommended storage and handling conditions (see section 7).

Chemical stability: Stable under normal conditions of use, storage and transport.

Thermal decomposition/conditions to be avoided: No decomposition if used according to specifications.

Possibility of Hazardous Reactions: None under normal processing.

Hazardous Polymerization: Hazardous polymerization does not occur.

Conditions to avoid: Strong heating, fire, Incompatible materials.

Safety Data Sheets (SDSs)

Ref. No.: RZUN2024-5907-DS2/R1

Page 7 of 10 Pages

Incompatible materials: Strong oxidizing agents. Strong acids.

Hazardous Decomposition Products: Carbon oxides, other irritating and toxic gases.

SECTION 11: Toxicological information

Acute toxicity: No data available.

Skin corrosion/irritation: No irritant effect.

Serious eye damage/irritation: Cause serious eye irritation.

Respiratory or skin sensitization: No sensitizing effects known.

Specific target organ system toxicity: No information available.

Note: The internal battery materials may cause irritation to eyes and skin.

SECTION 12: Ecological information

Toxicity: No further relevant information available.

Persistence and degradability: No further relevant information available.

Bioaccumulative potential: No further relevant information available.

Mobility in soil: No further relevant information available.

Results of PBT and vPvB assessment:

PBT: Not applicable.

vPvB: Not applicable.

Other adverse effects: No information available.

SECTION 13: Disposal considerations

Waste treatment methods:

Recommendation: Lithium batteries are best disposed of as a non-hazardous waste when fully or mostly discharged. Contact a licensed professional waste disposal service to dispose of large quantities materials.

Other disposal recommendations:

Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

The product had been tested according to the requirements of the UN manual of tests and Criteria, Part III, subsection 38.3 (see section 2)

EmS No: F-A, S-I

Marine pollutant: No

Environmental hazards: Not applicable.

Special precautions for user: Not applicable.

Safety Data Sheets (SDSs)

Ref. No.: RZUN2024-5907-DS2/R1

Page 8 of 10 Pages

Proper Shipping name: lithium batteries installed in cargo transport unit

Hazard Class: Class 9

UN/ID Number: UN3536

Packaging Group: N/A

Maritime transport:

Label for conveyance: Class 9 hazard label

The goods are complied with the requirements of Special Provisions SP389 of IMDG CODE (Amdt. 41-22) (2022 Edition).

Land transport:

Label for conveyance: Class 9 hazard label

The goods are complied with the requirements of Special Provisions SP389 of 《Recommendations on the TRANSPORT OF DANGEROUS GOODS Model Regulations》 (Rev.23).

Land transport:

Label for conveyance: Class 9 hazard label

The goods are complied with the requirements of Special Provisions SP389 of Agreement concerning the International Carriage of Dangerous Goods by Road (ADR 2023).

SECTION 15: Regulatory information

International Regulation:

GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS)

Recommendations on the TRANSPORT OF DANGEROUS GOODS Model Regulations

IATA Dangerous Goods Regulations (DGR)

INTERNATIONAL MARITIME DANGEROUS GOODS CODE (IMDG CODE)

EU Regulation:

Regulation (EU) 2020/878: Revised Requirements for EU Safety Data Sheets

EU regulation (EC) 1272/2008 on "Classification, Labeling and Packaging of Substances and Mixtures" (CLP)

Registration, Evaluation and Authorization of Chemicals (REACH)

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)

US Regulation:

American National Standard for Hazardous Workplace Chemicals – Hazard Evaluation and Safety Data Sheet and Precautionary Labeling Preparation

US DOT, Code of Federal Regulations, Title 49, Transportation, PT. 100-185

SECTION 16: Other information

Safety Data Sheets (SDSs)

Ref. No.: RZUN2024-5907-DS2/R1

Page 9 of 10 Pages

This file is only effective to the batteries(LUNA2000-4472-2S) provided by commissioner Huawei Technologies Co., Ltd.. The commissioner provides the composition information of batteries, and promises its integrity and accuracy. Users should read this file carefully, and use the batteries in correct method. CVC Testing Technology Co., Ltd. (CVC) doesn't assume responsibility for any damage or loss because of misuse of batteries.

Important

1. The test report is invalid without the official seal of CVC.
2. Nobody is allowed to photocopy or partly photocopy this test report without written permission of CVC.
3. The test report is invalid without the signatures of Ratifier, Reviewer and Testing engineer.
4. The test report is invalid if altered.
5. Objections to the test report must be submitted to CVC within 15 days.
6. This report is valid for the samples provided by commissioner only.

**The test data and test results given in this test report should only be used for purposes of scientific research, teaching and internal quality control when the CMA symbol is not presented. **

Address: No.3, Tiantai 1st Road, Kaitai Avenue, Science City, Guangzhou, Guangdong, China.

Tel: 020 32293888

FAX: 020 32293889

Post Code: 510663

E-mail: office@cvc.org.cn

<http://www.cvc.org.cn>



GENERAL NOTES

- DO NOT SCALE FROM THIS DRAWING. ALL DIMENSIONS TO BE CHECKED ON SITE. COPYRIGHT PROTECTED.

LEGEND

- SITE BOUNDARY
- ATTENUATION BASIN
- EXTENT OF IMPERMEABLE LINER
- PROPOSED FILTER DRAIN
- PROPOSED SWALE
- PROPOSED CARRIER PIPE
- PROPOSED TRACK PIPE
- WATERCOURSE
- EXISTING FIELD DRAIN
- PROPOSED CULVERT
- PROPOSED MAINS WATER SUPPLY
- PROPOSED COLLECTOR DRAIN

2	IB	DKS	06/05/26	INCLUSION OF SECTION
01	IB	DKS	30/04/26	ORIGINAL FOR REVIEW
ISSUE	DRN	APP	DATE	NOTES / DESCRIPTION

FOR REVIEW

McCloy
Consulting

T: +353 (0)1 5138963
E: info@mccloyconsulting.ie
W: www.mccloyconsulting.ie

Unit 12, The Bear Centre
Stephentown Industrial Estate
Ballyragan
Co. Dublin, K32 K497

PROJECT
GLENLARA POWER
RESERVE CO. CORK

CLIENT
NEOEN RENEWABLES
IRELAND LTD

DRAWING TITLE
PROPOSED DRAINAGE LAYOUT
GENERAL ARRANGEMENT

SCALE
AS SHOWN

ORIGINAL SHEET SIZE
A1

PROJECT NO.
M02206-08

DRAWING NO.
CE 201-02

MAP 2
SCALE: 1:1250

MAP 1
SCALE: 1:500

KEY PLAN
SCALE: 1:2500

MAP 2
SCALE: 1:1250

MAP 1
SCALE: 1:500

PRELIMINARY - FOR PLANNING

UNBOUND SURFACES TO DRAIN VIA
PERMEABLE SURFACE. RUNOFF TO
DISCHARGE LATERALLY IN SUBBASE AND
BY SURFACE OVERFLOW

SUBBASE UNDERLAID BY IMPERMEABLE
MEMBRANE

GROUNDWATER COLLECTOR DRAIN

WATER TANK TO BE
FILLED/TOPPED UP BY MAINS,
SUBJECT TO UE CONSENT

TRACKPIPE
SWALE TO CONVEY AND
ATTENUATE RUN-OFF FROM
ACCESS LANE

ONSITE TANK
FILLED BY MAINS
OR ABSTRACTION
TO PROVIDE
FIREWATER

SA1-1350#
CL: 205.000
IL: 204.370

SA8-1350#
CL: 205.000
IL: 204.145

HYDRANT TO
PROVIDE FIRE
WATER ONSITE.
FED BY WATER
TANK

EXISTING FIELD DRAIN TO BE CULVERTED
TO ALLOW FOR ACCESS
MIN CULVERT DIA: 900mm

RUN-OFF FROM ACCESS TRACK
CONVEYED AND ATTENUATED BY SWALE
WITH CHECK DAM,
DISCHARGE TO EXISTING FIELD DRAIN

SA2-1350#
CL: 205.000
IL: 204.085

HYDRANT TO
PROVIDE FIRE
WATER ONSITE.
FED BY WATER
TANK

SA15-1350#
CL: 202.000
IL: 201.154

SA18-1350#
CL: 202.000
IL: 201.201

SB2-1350#
CL: 197.000
IL: 195.635

ATTENUATION BASIN
TO PROVIDE 34m3
OF STORAGE
WEIR LEVEL:
197.760
CL: 197.760
IL: 200.834

SB1-1350#
CL: 197.000
IL: 195.801

DRAINAGE FROM SUBSTATION COMPOUND
TO DISCHARGE VIA BYPASS SEPARATOR
TO SUIT DESIGN FLOW PER KLARGESTOR
NSBP003 OR SIMILAR TO MITIGATE
POTENTIAL POLLUTION FROM LUBRICANTS
OR FUEL ASSOCIATED WITH
TRANSFORMERS OR GENERATOR -
SUBJECT TO FUTURE DESIGN

SB3-1350#
HYDROBRAKE MANHOLE TO LIMIT
FLOW TO 1.2LPS
REF:
MD-SHE-0056-1200-0660-1200
DESIGN HEAD: 0.66
CL: 196.266
IL: 195.600

OUTFALL TO FIELD DRAIN
ALTHON HEADWALL OR SIMILAR
IG: 195.454
SA16-1350#
CL: 202.000
IL: 200.954

SA20-1350#
CL: 202.000
IL: 201.023

LINED ATTENUATION BASIN TO PROVIDE 952m3 OF
STORAGE

FIRE SUPPRESSION ATTENUATION VOLUME (MINIMUM
RECOMMENDED VOLUME OF 180 CU.m AS PER
NFCC GRID SCALE BATTERY ENERGY STORAGE
SYSTEM PLANNING - GUIDANCE FOR FRs) TO BE
PROVIDED BY BASIN IN CASE OF EMERGENCY

WEIR LEVEL:
CL: 197.163
IL: 195.5

SA7 - 1350#
HYDROBRAKE MANHOLE TO
LIMIT FLOW TO 14.5LPS
REF:
MD-SHE-0165-1450-1500-1450
DESIGN HEAD: 1.5
CL: 197.163
IL: 195.500

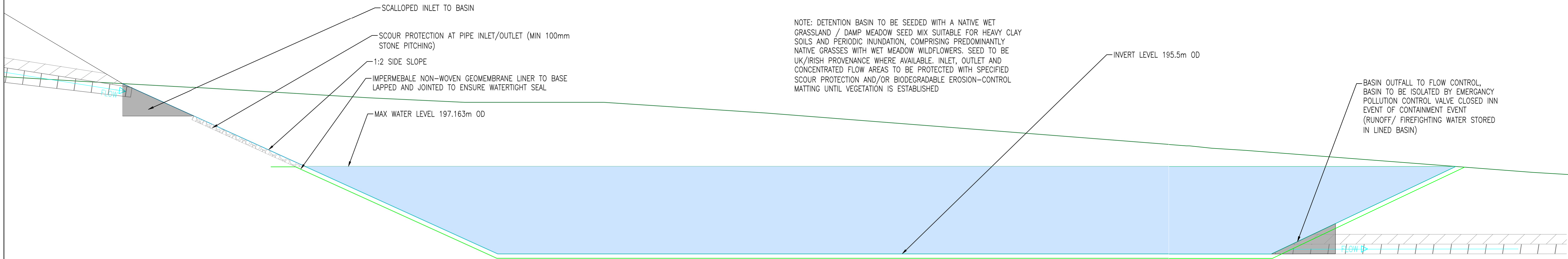
EMERGENCY POLLUTION CONTROL VALVE (PENSTOCK OR
SIMILAR) TO BE LOCATED IN MH. VALVE TO BE CLOSED
IN EVENT OF CONTAINMENT EVENT (RUNOFF /
FIREFIGHTING WATER STORED IN LINED BASIN)

OUTFALL TO WATERCOURSE
ALTHON HEADWALL OR SIMILAR
IL: 195.4

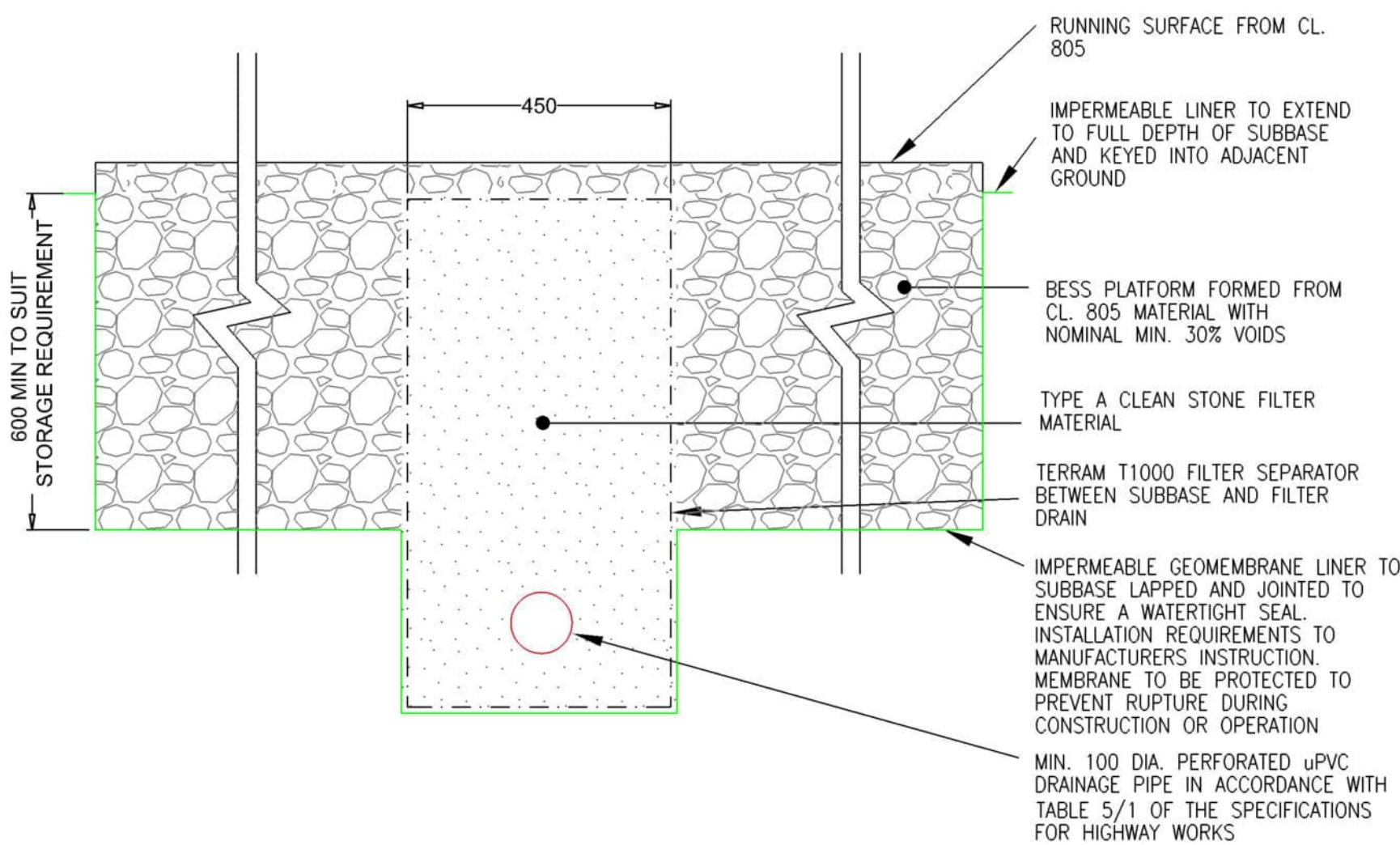


GENERAL NOTES

1. DO NOT SCALE FROM THIS DRAWING. ALL DIMENSIONS TO BE CHECKED ON SITE. COPYRIGHT PROTECTED.



SECTION A:A CROSS SECTION OF ATTENUATION BASIN.
SCALE: 1:50



TYPICAL SECTION : BESS PLATFORM
WITH IMPERMEABLE MEMBRANE AND
FILTER DRAIN
SCALE: NTS

PRELIMINARY - FOR PLANNING

01	IB	DKS	05/05/26	ORIGINAL FOR REVIEW
ISSUE	DRN	APP	DATE	NOTES / DESCRIPTION
FOR REVIEW				
 M^cCloy Consulting T: +353 (0)1 5138963 E: info@mccloyconsulting.ie W: www.mccloyconsulting.ie Unit 12, The Bear Centre Stephentown Industrial Estate Ballinacorney Co. Dublin, K32 K497				
PROJECT				
GLENLARA POWER RESERVE CO. CORK				
CLIENT				
NEOEN RENEWABLES IRELAND LTD				
DRAWING TITLE				
PROPOSED DRAINAGE LAYOUT CROSS SECTIONS				
SCALE	AS SHOWN	ORIGINAL SHEET SIZE	A1	PROJECT NO. M02206-08
DRAWING NO. CE 202-01				