



Mey Battery Energy Storage System (BESS)

Supporting Environmental Information Report

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Abbreviations

Term	Definition
AA	Appropriate Assessment
AWI	Ancient Woodland Inventory
BESS	Battery Energy Storage System
BNG	Biodiversity Net Gain
BoCC	Birds of Conservation Concern
BoP	Balance of Plant
CaSPlan	Caithness and Sutherland's Local Development Plan
CCTV	Closed Circuit Television
CEMP	Construction Environmental Management Plan
CIEEM	Chartered Institute of Ecology and Environmental Management
CTMP	Construction Traffic Management Plan
EclA	Ecological Impact Assessment
ECoW	Ecological Clerk of Works
ECU	Energy Consents Unit
EIA	Environmental Impact Assessment
FRDA	Flood Risk and Drainage Assessment
GDL	Gardens and Designed Landscape
HEDBA	Historic Environment Desk-Based Appraisal
HET	Historic Environment Team
HGV	Heavy Goods Vehicle
HIA	Heritage Impact Assessment
HRA	Habitats Regulations Assessment
HwLDP	Highland-wide Local Development Plan
LCT	Landscape Character Type
LGV	Large Goods Vehicle
LVA	Landscape and Visual Appraisal
NCR	National Cycle Route
NPF4	National Planning Framework4
NSR	Noise-Sensitive Receptor
oBEMP	Outline Biodiversity Enhancement and Management Plan
PAC	Pre-Application Consultation
PCU	Power Conditioning Unit
PEA	Preliminary Ecological Appraisal
PRA	Preliminary Bat Roost Assessment



RDP	Restoration and Decommissioning Plan
SAC	Special Area of Conservation
SEI Report	Supporting Environmental Information Report
SEPA	Scottish Environment Protection Agency
SPA	Special Protection Area
SPP	Species Protection Plan
SSSI	Site of Special Scientific Interest
SQE	Suitably Qualified Ecologist
SuDS	Sustainable Drainage System
SWMP	Site Waste Management Plan
THC	The Highland Council
WSI	Written Scheme of Investigation
ZTV	Zone of Theoretical Visibility



1. Introduction

Mey Energy Storage Limited (hereafter referred to as 'the Applicant') is seeking to obtain Section 36 consent for the proposed installation of a battery energy storage system (BESS) (the 'Proposed Development') at Phillips Mains Farm near Mey, Caithness (the 'Site'). This Supporting Environmental Information Report (SEI Report) provides an assessment of the potential effects the Proposed Development may have on a range of environmental and technical issues.



2. Requirement for Environmental Impact Assessment

The Proposed Development will have a generating capacity of over 50 MW and therefore is the subject of a Section 36 application to Scottish Ministers under the Electricity Act 1989. Since it is classified as an industrial installation for the production of electricity with an area of development exceeding 0.5 ha, the Proposed Development falls under Schedule 2 of the EIA Regulations¹ and thus may require an Environmental Impact Assessment (EIA). However, for a Schedule 2 development to require an EIA, there must be potential for significant environmental effects.

Schedule 3 of the EIA Regulations outlines the selection criteria for determining whether a development will have significant environmental effects, including consideration of the size and location of the development and the types and characteristics of the potential impacts.

A formal EIA Screening Opinion was requested from the Energy Consents Unit (ECU), acting on behalf of Scottish Ministers, in June 2023. A Screening Opinion was received from the ECU on 11th December 2023 and confirmed that the application would not require to be accompanied by an EIA (**Annex 2**).

Although a full EIA has not been undertaken, it is recognised that assessment of potential environmental impacts, and identification of appropriate measures to mitigate such impacts, is an important part of the planning process. This SEI Report has therefore been prepared to provide sufficient information regarding the potential impacts of the Proposed Development, in order to allow the ECU to consider the application in full and with due consideration of planning policy.

¹ The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (as amended)



3. Site Description

3.1 Overview of the Site and its Surroundings

The Site is situated in Caithness approximately 0.5 km southeast of the small village of Mey, at grid reference BNG 329608 972340 (**Figure 3.1**). The Site covers an area of 10.66 hectares (ha) and is flat agricultural land.

The Site comprises a low quality arable agricultural field, principally of indicative Class 6.2 agricultural capability (i.e. low quality), with a pocket of better quality land of indicative Class 3.1 in the northeast corner. A field drain runs east-west through part of the Site, as shown on **Figure 3.1**. There is no peat present on the Site.

The Site is visually screened from the west, south and east by a combination of landform and forestry plantation.

There are 26 potential residential properties identified within a 1 km of the Site. The closest residential properties are at Phillips Mains Farm which are located 280 m to the south of the Site boundary and are owned by the Site landowner.

There are no operational BESS developments within 5 km of the Proposed Development. The consented SSE Gills Bay switching station will form part of the 'future baseline' of the Site and therefore is not considered to be a cumulative development. The Proposed Development is contingent on the development of the switching station.

3.2 Environmental Designations

Figure 3.2 shows the key environmental constraints within 5 km of the Proposed Development. A brief summary of these is provided below with full descriptions provided in the relevant technical chapters of this SEI Report.

The following ecological designations are situated within 5 km of the Proposed Development (distances below are from the Site boundary to the designation at its nearest point):

- Phillips Mains Mire Site of Special Scientific Interest (SSSI), designated for its nationally important blanket bog – c.1.4 km southeast;
- Loch of Mey SSSI, Caithness Lochs Special Protection Area (SPA) and Ramsar site (all overlapping), designated for various over-wintering bird species including whooper swan – c.2.1 km northwest;
- Stroupster Peatlands SSSI, Caithness and Sutherland Peatlands SPA, Special Area of Conservation (SAC) and Ramsar site, designated for its upland blanket bog habitat, clear-water lochs and various bird species including dunlin, common scoter and golden eagle – c.3.5 km southeast;
- North Caithness Cliffs SPA, designated for fulmar, kittiwake, guillemot and peregrine – c.3.3 km northeast;
- Loch Heilen SSSI, Caithness Lochs SPA and Ramsar site, designated for its mesotrophic loch, Greenland white-fronted goose, greylag goose and whooper swan – c.4.8 km southwest;
- Ancient woodland areas – c.640 m, 1.2 km and 1.3 km north.

There are four designated heritage assets within 2 km of the Site:

- The Category A Listed Castle of Mey and associated Garden and Designed Landscape and Category B Listed gate lodge, each c.1.2 km north; and
- The Scheduled Mey coastal battery, c.2 km north-east.



4. Proposed Development

4.1 Description of the Development

The Proposed Development layout, including associated infrastructure, is provided in **Figure 4.1**. The Proposed Development would comprise:

- Approximately 352 containerised battery units with a total export storage capacity of up to 300MW with associated inverters, switchgear units, closed loop cooling units, control units and associated electrical infrastructure mounted on concrete piers (typical elevation shown in **Figure 4.2**);
- Approximately 88 Power Conditioning Units (PCUs) mounted on concrete piers (typical elevation shown in **Figure 4.3**)
- A 132 kV transformer (typical elevation shown in **Figure 4.4**) either housed in a building or fenced;
- A building of around 2.5m height to house a Low voltage board (typical elevation shown in **Figure 4.4**)
- A substation (typical elevation shown in **Figure 4.5**);
- Security palisade fencing around the substation and battery compound with vehicular access gates to the compound entrance (typical elevation shown in **Figure 4.6**);
- Pole-mounted CCTV cameras (typical elevation shown in **Figure 4.7**);
- Laying out of a hard surfaced site access tracks connecting all parts of the site and providing access from the local road network;
- Car parking bays;
- Uncompacted gravel as a surface cover between the containerised units and equipment;
- Sustainable Drainage System (SuDS) attenuation pond and infrastructure;
- Landscaping and ecological enhancement (refer to **Section 7.4**);
- Temporary construction compound;
- Welfare units (typical elevation shown in **Figure 4.8**); and
- Spares and communications container (typical elevation shown in **Figure 4.9**).

At this stage, the detailed design of the Proposed Development has not been fully developed. The precise layout and specific technology selection will be refined and determined by the appointed contractor.

As shown indicatively on **Figure 4.1**, part of the Site would be set aside for the potential future construction of a 132kV transformer associated with the Applicant's nearby MeyGen tidal energy project. That transformer will be subject to a separate planning application and does not form part of the proposals for which this application for Section 36 consent is being made.

4.2 Site Selection and Design Iteration

4.2.1 Site Selection

The Site was identified as an area which would be appropriate for BESS development through initial feasibility work which considered the following key issues:

- Topography;
- Environmental and heritage designations;
- Visual impact;
- Agricultural land use; and



➤ Grid connection

The location of the Proposed Development has been chosen to avoid any notable ridgelines or visually prominent sections of skyline. Instead, the Site is located in a relatively low-lying elevation and benefits from screening via surrounding tree cover and landform. This provides a high degree of visual containment to the west, south and east, meaning that potential views of the Proposed Development would be restricted to localised areas. In addition, the Site is located in close proximity to the consented Gills Bay 132kV Switching Station.

The above process confirmed the Site has good potential for a BESS development and with minimal environmental impacts.

4.2.2 Iterative Site Design

The scheme layout was developed following the completion of baseline studies, surveys and consultations. The aim was to maximise storage capacity while avoiding environmental and technical constraints, ensuring no significant adverse environmental effects.

The following summarises the design changes that have been made during this iterative process:

- Inclusion of a 3 m no-build buffer on either side of the existing drainage ditch in the east of the Site;
- Locating the site access sufficiently distant from the existing forestry plantation to ensure appropriate visibility splays at the junction;
- Addition of mixed native species woodland and hedge planting along the north and east side of the Site to help visually screen the site and provide ecological enhancement;
- Adjusting the layout to ensure access tracks around the perimeter of the Site; and
- Location of water tanks included to consider firewater management within the site design.

The final design iteration which has been taken forward for inclusion in the Section 36 application is shown in **Figure 4.1**.

4.3 Grid Connection

The Proposed Development will have a connection to the National Grid at the recently consented SSE Gills Bay switching station to be built directly adjacent to the west of the Site. The consented SSE Gills Bay switching station will form part of the 'future baseline' of the Site.

4.4 Construction

It is estimated that the Proposed Development will be constructed over a period of approximately 9 months, with construction anticipated to commence in Q2 2025.

A detailed construction programme will be developed as part of the detailed design phase and would be provided to Highland Council within a Construction Environmental Management Plan (CEMP) prior to commencement of construction.

Normal construction hours are expected to be between 07:00 and 19:00 Monday to Friday and 09:00 and 13:00 on Saturdays. These times have been chosen to minimise disturbance to local residents. It must, however, be noted that out of necessity due to weather conditions or health and safety requirements, some generally quiet activities may occur outside the specified hours stated.

The construction access would be via the site access shown on **Figure 4.1**.

4.5 Operation and Maintenance

The lifetime of the Proposed Development is envisaged to be 30 years from the final commissioning to commencement of decommissioning.



Once the BESS is fully operational, it will require minimal maintenance. Maintenance is expected to consist mostly of routine Site inspections by technicians, as well as some unscheduled visits when required. Routine cleaning is occasional as rainwater will generally suffice.

4.6 Decommissioning

At the end of the Proposed Development's operational lifetime of 30 years, it will be decommissioned, unless further consent is sought to extend the operational lifetime. Decommissioning is a relatively straightforward process and similar to the construction process, with the majority of structures and equipment able to be disassembled and removed in a straightforward manner (with inverters etc. being containerised and simply able to be detached from the piles they are placed on and the solar arrays disassembled and piles pulled up). In brief, the substation, transformers and storage containers would be dismantled and removed via the same access as will be used for construction.

Prior to decommissioning, a Restoration and Decommissioning Plan (RDP) will be produced to reflect the current legislation and policy at that point in time and will be agreed with the relevant statutory authorities.

4.7 Environmental Management

4.7.1 Construction Environmental Management Plan (CEMP)

The Applicant expects that a CEMP will be produced in line with an appropriately worded condition to any Section 36 consent. The CEMP will outline the appropriate measures to reduce and control the potential environmental impacts associated with the construction phase of the Proposed Development.

The CEMP shall be developed in accordance with good practice guidance. It shall describe how the Applicant will ensure suitable management of the following environmental issues during construction of the Proposed Development:

- waste;
- water quality;
- dust and noise;
- surface water drainage and groundwater;
- ecology (including protection of habitats and species);
- agriculture (including protection of livestock and land);
- archaeological protection;
- pollution incidence response (for both land and water); and
- site operations (including maintenance of the construction compounds, working hours and safety of the public).

4.7.2 Pollution Prevention and Health and Safety

Prior to commencement of construction activities, a Pollution Prevention and Mitigation Plan, contained within the CEMP, will be agreed to ensure that appropriate measures are put in place to protect watercourses and the surrounding environment.

As with any development, during the construction stage there is the potential for threats to the quality of the water environment in waterbodies, watercourses and local ditches. These mostly arise from poor site practice so careful attention will be paid to the appropriate guidance and policies to reduce the potential for these to occur.

High standards of health and safety will be established and maintained. At all times, all activities will be undertaken in a manner compliant with applicable health and safety legislation and with relevant good practice, as defined under applicable statutory approved codes of practice and guidance.



4.7.3 Waste Management

In accordance with industry best practice, a Site Waste Management Plan (SWMP) would be provided as part of the CEMP. The SWMP would provide details on how waste reduction would be implemented at the site and how this would be monitored throughout the construction phase. The Contractor would nominate a site representative who would take responsibility for implementation and monitoring of the SWMP.

The Contractor would provide details of their proposed waste contractors (carriers, transfer station, waste recipient etc) as part of the SWMP, according to the provisions of the contract.

The requirements of the SWMP would be communicated to all site operatives during their induction. Furthermore, all operatives on-site would attend waste reduction toolbox talks to increase awareness of recycling/waste reduction.

The Contractor would provide adequate numbers of separate bins within the site compound (e.g., for paper, cans/plastic, kitchen waste etc) and skips / waste containers (e.g. for wood, metal, hazardous waste, general waste) to facilitate waste segregation and recycling. The Contractor would also provide a site plan showing all waste disposal and recycling locations.

The Contractor's environmental site representative would be responsible for regular checks on compliance with the SWMP and highlight any non-compliance.

4.7.4 Anticipated Waste Streams

A number of different waste streams would arise during construction of the Proposed Development. The Contractor would identify all waste streams and provide an estimate of expected waste volumes for each waste type generated within the waste stream. Possible waste streams arising from the site include food waste, paper, plastics, glass and other typically domestic refuse and sewage, concrete, waste chemicals, fuel and oils, packaging, e.g., paper, plastics and wood, polluted water from vehicle and wheel washes. The contractor will determine how this will be managed prior to the commencement of construction.

4.7.5 Pre-Construction Surveys

Pre-construction surveys will be undertaken to validate the ecological and ornithological baseline and to perform detailed topographical surveys. Further details of these are provided in the relevant technical sections of this SEI Report.

The Applicant will engage an Ecological Clerk of Works (ECoW) onsite during the construction phase. The ECoW will be responsible for pre-construction surveys and will monitor the construction process, providing advice and support to the Contractor on the implementation of the CEMP.



5. Consultation

5.1 Introduction

Consultation with relevant regulators and stakeholders was undertaken throughout the design and pre-planning process. The sections below summarise the consultation feedback and how it has been taken into account.

5.2 The Highland Council

A pre-application consultation meeting took place with The Highland Council (THC) and NatureScot on 18th April 2023 and feedback from the meeting has guided the subsequent design and assessment of the Proposed Development. The slide presentation prepared for the pre-application meeting and the pre-application advice pack provided by THC are provided in **Annex 1**.

Following the pre-application consultation meeting, an EIA Screening request was submitted to the ECU on 22nd June 2023 proposing that an EIA is not required for the Proposed Development. The EIA Screening request provided information on the proposed environmental assessments which would accompany the application for consent. It proposed the following technical studies and reports to be provided within the application for consent:

- Ecological Impact Assessment (EclA), informed by
 - Preliminary Ecological Appraisal (PEA) report incorporating an extended UK Habitats survey and Preliminary (Bat) Roost Assessment (PRA) of the Site and immediate surroundings;
 - Shadow Habitats Regulations Assessment (HRA);
 - Outline Biodiversity and Enhancement Plan including biodiversity net gain (BNG) assessment.
- Flood Risk Assessment and Outline Surface Water Drainage Strategy;
- Landscape and Visual Appraisal;
- Transport and Access Study;
- Historic Environment Desk-Based Appraisal (HEDBA) and archaeological walkover survey; and
- Noise Impact Assessment.

The reports of these assessments are provided as annexes to this SEI Report and are summarised in the subsequent technical sections.

The ECU provided its Screening Opinion in an email dated 11th December 2023, concluding that an EIA is not required for the Proposed Development but that the application should include sufficient information to allow the Scottish Ministers to assess the impact of the Proposed Development.

5.3 Public Engagement

A consultation letter was issued to the Dunnet & Canisbay Community Council and local ward councillors on 15th September 2023 to inform them of the Proposed Development. Their feedback was requested on the local community's views of the Proposed Development including any specific potential local issues to be considered in the final design for the Section 36 application.

Further details of the communication with local communities can be found in the Pre-Application Consultation (PAC) Report which accompanies this SEI Report.



6. Planning Policy

6.1 Overview

The summary of planning policy provided within this SEI Report has taken into consideration the following national and local planning documents:

- National Planning Framework4 (2023) (NPF4)
- Highland-wide Local Development Plan (Adopted 2012) (HwLDP)
- Caithness and Sutherland's Local Development Plan (2018) (CaSPlan)

Reference should be made to the Planning Statement which accompanies this SEI Report.

6.2 NPF4

On 13th February 2023, the National Planning Framework 4 (NPF4) for Scotland was adopted (Scottish Government 2023). This document replaces Scottish Planning Policy (2014).

NPF4 supports the expansion of and investment in renewable energy developments. Demand for green energy will increase over the coming decades as the Scottish Government's decarbonisation plans aim to achieve its legally binding target net zero greenhouse gas emissions by 2045. NPF4 now forms part of the national development plan and confirms in Policy 1 that significant weight will now be given to the global climate and nature crises when considering all development proposals. The most relevant NPF4 policy introduced for the Proposed Development is Policy 11 Energy which states:

*'To encourage, promote and facilitate all forms of renewable energy development onshore and offshore. This includes energy generation, **storage** [our emphasis], new and replacement transmission and distribution infrastructure and emerging low-carbon and zero emissions technologies including hydrogen and carbon capture utilisation and storage (CCUS).'*

The policy outcome is: *"Expansion of renewable, low-carbon and zero emissions technologies."*

Policy 11 is supportive of all forms of renewable energy developments including battery storage and provides detailed criteria for the assessment of renewable energy proposals.

The Proposed Development is also supported by the National Energy Strategy, published in 2018, which supports new energy storage capacity. It states that the Scottish Government will continue to support innovation and deployment in storage and to work to accelerate its penetration across Scotland.



7. Landscape and Visual

7.1 Introduction

This section considers the potential for landscape and visual effects as a result of the Proposed Development. The full Landscape and Visual Appraisal (LVA), with accompanying figures and visualisations, can be found in **Annex 3**. The key findings are summarised below.

7.2 Study Area

A 3 km radius Study Area has been adopted from the Proposed Development for the assessment of landscape and visual effects. This has been informed by analysis of Zone of Theoretical Visibility (ZTV) maps and an early appraisal of potential effects for a Proposed Development of this scale. Any notable landscape or visual effects would be confined within this geographical area.

7.3 Baseline

The landscape within the Study Area comprises relatively open, rolling farmland, with localised parcels of woodland and forestry. Fields are of moderate-to-large size, regularly shaped, and bound by a mix of low stone walls, hedgerows and post-and-wire fencing. At a local level, the landscape is delineated by parcels of forestry (including an extensive plantation centred on Hollandmey Moss), occasional shelterbelts, and various watercourses that meander through the undulating landform. In combination with the expansive areas of forestry to the west, south and southeast, this results in the visual containment of the Site on most sides.

Whilst the Study Area is predominantly rural in character, the local environment is also influenced by existing infrastructure.

The Proposed Development would be located in the Farmed Lowland Plains Landscape Character Type (LCT), adjacent to an area of existing forestry. The Site is not located within any protected landscape designation. The Castle of Mey Gardens and Designed Landscape (GDL) is located ~1.2 km to the north of the Site and represents the only landscape-related designation within the Study Area. The Castle of Mey GDL comprises parkland, woodland, and formal / walled gardens around the castle.

Visual receptors within the Study Area include a number of small hamlets, several isolated dwellings and farmsteads, users of the A836, and the following recreational routes and outdoor destinations/attractions:

- National Cycle Route 1 (NCR 1), extending along the minor road between Barrock and Gills, along the northern boundary of the Site at the closest point;
- North Coast 500, extending along the A836, ~500 m to the north of the Site at the closest point;
- Core Path network, extending ~520 m to the northwest of the Site at the closest point; and
- Castle of Mey, ~1.2 km to the north.

7.4 Landscape Mitigation

In terms of design, the submitted proposals incorporate a comprehensive mitigation strategy that seeks to integrate the Proposed Development into the surrounding landscape. The Proposed Development has been designed to achieve the following landscape objectives:

- Land clearance and occupation would be limited to necessary areas only to minimise the geographic spread of the infrastructure and limit the potential impact on the local landscape fabric.
- With the exception of isolated security columns, the tallest element of proposed built form would be 3.0 m in height, which would be set back behind the 2.4 m high perimeter fence. Surrounding tree cover and landform would limit potential visibility from wider areas.



- In terms of colour and materials, the perimeter fencing would be painted with a recessive colour (RAL6003: Olive Green, or similar approved) to soften the appearance of the Proposed Development and screen potential views of infrastructure within central parts of the Site. The BESS Substation, Comms Building, and Welfare Facilities would be finished in the same recessive colour.
- Proposed landscape works would incorporate the creation of native hedgerow and woodland edge tree planting around peripheral parts of the Site. The planting approach would be based on mixed native species to provide visual containment and screening of the proposed built form (including the perimeter fencing) and create a soft, green frontage to the development.
- In addition, species-rich wildflower meadow would be introduced around peripheral parts of the Site to further soften the appearance of the Proposed Development and provide enhancement to local biodiversity. This includes dedicated areas of wet meadow mix in the locality of the proposed sustainable drainage system (SuDS) feature in the northern part of the Site, providing a range of habitat types.

7.5 Construction Stage Effects

7.5.1 Overview

Temporary effects at the construction stage would also occur based on the following operations:

- Erection of temporary perimeter fencing;
- Installation of temporary construction compound (including office and welfare facilities);
- Creation of temporary laydown areas;
- Site clearance and excavation works for foundations;
- Increased vehicular movement within the Site;
- Gradual introduction of proposed buildings; and
- Reinstatement works, including the removal of the temporary accommodation.

7.5.2 Effects on Landscape

The works detailed above would give rise to some landscape and visual effects. The potential influence of construction activities on the local landscape would be limited by the lack of distinct landscape features within the Site, in combination with the containing influence of the surrounding ground cover and forestry. Accordingly, the construction effects on landscape fabric and landscape character would not be notable.

7.5.3 Effects on Visual Amenity

The visual effects would also be localised, based on the low-lying nature of the construction activities in combination with the screening influence of the surrounding landform and forestry. Notable effects would be experienced by receptors in closest proximity to the Site, comprising residents at Phillips Mains and East Lodge. These effects would be temporary.

7.6 Operational Effects

7.6.1 Effects on Landscape

The limited height of the Proposed Development, combined with the visually containing influence of surrounding forestry and landform, means that landscape effects would be localised. The key effects would be focused within approximately 400-500m of the Site. This would result in notable effects across localised parts of the Farmed Lowland Plains LCT in closest proximity to the Proposed Development. This would account for a small part of the LCT. The effects on the LCT as a whole would be very limited. The effects on landscape character would diminish further over time in accordance with the steady establishment of mitigation planting around the perimeter of the Site, which would largely contain potential views of the Proposed Development from surrounding areas.



There would be no notable effects on any other LCTs or any landscape designations.

7.6.2 Effects on Visual Amenity

The visual effects of the Proposed Development would also be limited based on its vertical scale and location adjacent to forestry, which would screen views of the proposed infrastructure across the wider area. In more open views, the muted colours of the proposed infrastructure would typically blend with the surrounding landscape.

There would be no notable effects on views from any settlements. Notable effects on views would be experienced by residents within isolated dwellings at Nos. 2-3 Phillips Mains (to the south of the Site) and at East Lodge (to the northeast). In each case the level of effect would steadily reduce in accordance with the establishment of proposed hedgerow and woodland edge planting along the Site boundary. As such, by Year 10, the effects would not be notable. Potential views from all other dwellings would be restricted by intervening landform and / or vegetation.

Notable effects would also be experienced by recreational cyclists on localised parts of NCR 1, which extends past the northern Site boundary. This would account for a short section of the route, 200m to 850m in length, dependent on the direction of travel. The Proposed Development would be fully screened from all other parts of the route, hence the effects on the route as a whole would not be notable. By Year 10, the establishment of hedgerow and woodland edge planting along the Site boundary would predominantly screen the Proposed Development from view.

There would be no notable effects on views from any other recreational route / attraction, or road.

7.7 Summary

In conclusion, it is assessed that the Proposed Development could be accommodated at the Site with limited and localised effects on landscape character and visual amenity.

The full LVA report is presented in **Annex 3**, including figures and visualisations.



8. Ecology and Biodiversity

8.1 Introduction

This section assesses the likely effects on ecology and ornithology from the construction and operation of the Proposed Development, with a particular focus on Important Ecological and Ornithological Features (IEFs and IOFs respectively). The full Ecological Impact Assessment (EclA) is provided in **Annex 4** to the SEI Report.

8.2 Assessment Methodology

8.2.1 Desk Study

An ecology desk study was carried out in 2023 (**Annex 4**, Appendix 1) to identify statutory nature conservation designations within the local area. This included all national designations within 5 km. Only ecological (biological) features were considered relevant to the present study. Any non-statutory designations were also identified within 2 km of the Site boundary.

Existing records for protected or otherwise notable species were identified with a 2 km distance of the centre point of the Site (BNG 329608 972340).

Ornithological data, including wintering data for Greenland white-fronted goose, greylag goose and whooper swan were identified with 2 km of the Site boundary. Data for these species were gathered because they are qualifying species for nearby designated ecological sites (refer below for more detail).

8.2.2 Field Studies

Baseline surveys included an extended UK Habitat Classification survey and a Preliminary Bat Roost Assessment carried out in May 2023. Targeted surveys for bats, badger, otter and water vole were undertaken. A breeding bird walkover survey was also carried out in April 2023, however, in consultation with NatureScot, it was agreed that a full breeding bird survey (comprising four survey visits) was not required due to the nature of the development and habitats within the Site being likely to support only common farmland bird species.

8.3 Baseline

Habitats within the Site and surrounding area include arable land used for crop production, modified grassland used for grazing sheep and cattle, with degraded blanket bog and coniferous plantation also noted in the wider survey buffer outwith the Site boundary. Due to their highly managed nature and low associated species diversity, habitats within the footprint of works are considered to be of low ecological value. No evidence of protected species was found during the baseline surveys.

A total of three designated sites (five designations) of international importance (Caithness Loch Special Protection Area (SPA) / Ramsar, Caithness and Sutherland Peatlands SPA / Ramsar / Special Area of Conservation (SAC) and North Caithness Cliffs SPA) and their constituent Sites of Special Scientific Interest (SSSIs) (Loch Mey SSSI, Loch Heilen SSSI and Stoupster Peatlands SSSI) and Phillips Mains Mire SSSI lie within 5 km of the Site. Three areas of woodland on the Ancient Woodland Inventory (AWI) lie within 2 km of the Site boundary. Due to the separation distance and nature of the Proposed Development significant effects on Phillips Mains Mire SSSI and the AWI woodlands are considered unlikely and are screened-out of further assessment.

8.4 Potential Effects

8.4.1 Habitats Regulations Appraisal (HRA)

Given the proximity of the Caithness Lochs SPA and Ramsar, Caithness and Sutherland Peatlands SPA, SAC and Ramsar and the North Caithness Lochs SPA, a shadow Habitats Regulation Appraisal (HRA), screening



stage and Appropriate Assessment (AA), has been completed informed by the Ecology Desk Study and in consultation with NatureScot. Through this process, the Caithness and Sutherland Peatlands SPA, SAC and Ramsar and the North Caithness Lochs SPA designations were screened out of further assessment as no impact pathways were identified due to the separation distance and nature of the Proposed Development.

Caithness Lochs SPA and Ramsar were screened in to be taken forward for AA as the Ecology Desk Study indicated that greylag geese have been recorded within the Site and Greenland white-fronted geese and whooper swan have been recorded within the surrounding area. Potential effects on greylag geese considered within the assessment were loss of foraging habitat and temporary disturbance and displacement during the construction phase. As whooper swan and Greenland white-fronted geese have not been recording foraging within the Site, potential effects were limited to temporary disturbance and displacement. The assessment has concluded that with the application of standard mitigation as detailed within the HRA (**Annex 4**, Appendix 4) the predicted effects, including cumulative, on all three species are considered to be negligible adverse and not significant.

8.4.2 Breeding Waders

The breeding bird survey in April 2023 identified curlew, dunlin, lapwing and snipe within the study area though only curlew was recorded as displaying breeding activity in the wider survey buffer. Curlew, lapwing and dunlin are Birds of Conservation Concern 5 (BoCC) Red list species and snipe is a BoCC Amber list species and it is considered a possibility that construction of the Proposed Development, if completed in the breeding season, may cause disturbance to breeding waders. Breeding waders were therefore taken forward for assessment. In line with the current Chartered Institute of Ecology and Environmental Management (CIEEM) guidelines² the impact assessment assumes the application of standard mitigation. The following good practice and standard mitigation measures will be applied and set out in a CEMP:

- The Applicant will appoint a suitably qualified Ecological Clerk of Works (ECoW) prior to commencement of any construction activities. The ECoW will be present on a regular basis to oversee Site clearance and construction activities, provide toolbox talks to Site personnel with regards to protected/ priority species and habitats, and undertake monitoring works, as appropriate.
- All vegetation clearance will occur outside the bird breeding season (i.e. between September – March, inclusive), to ensure that no active nests are damaged or destroyed by the proposed works. If work is required after March 31st, the ECoW will search areas of clearance in advance of works and buffer active nests as appropriate.
- To protect woodland habitats bordering the Site and other areas of scrub to be retained within the Site, working methods will proceed in line 'BS 5837 (2012) – Trees in relation to Design, Demolition and Construction.
- Full details of construction mitigation measures will be provided in a detailed CEMP to be agreed with the Planning Authority, in consultation with NatureScot and SEPA, post-consent but prior to the construction phase of the Proposed Development commencing.

With these measures in place, predicted effects including cumulative effects, are considered to be negligible adverse and therefore not significant.

8.5 Additional Mitigation and Enhancement

An outline Biodiversity Enhancement and Management Plan (oBEMP) has been prepared and is presented in **Annex 4**, Appendix 4. It sets out measures for enhancing the biodiversity of the Proposed Development Site through actions including landscape planting (species-rich grassland, hedgerows, and woodland) and provision of boxes for bats, pine marten, barn owl, and birds and habitat boxes.

² CIEEM (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine.



The oBEMP aims to enhance plant and invertebrate species diversity, which will provide benefits to various species known to be present at the site. The oBEMP also aims to create and enhance wildlife corridors within and beyond the Proposed Development Site.

8.6 Summary

Given that no likely significant effects are anticipated as a result of the construction, operational or decommissioning phases of the Proposed Development the residual effect to ecology and ornithology is expected to be negligible adverse and not significant.

Through the delivery of the Final BEMP, the Proposed Development is expected to deliver a significantly enhanced level of biodiversity from the baseline conditions (as detailed in **Annex 4**, Appendix 4), which represents a moderate beneficial and significant effect.



9. Cultural Heritage and Archaeology

9.1 Introduction

This section assesses the potential for cultural heritage receptors, both within the site and in the wider area, to experience direct and/or indirect impacts as a result of the Proposed Development.

The full Heritage Impact Assessment (HIA) report, with accompanying graphics, can be found in **Annex 5**. Key findings are summarised below.

9.2 Study Area

The purpose of this assessment is to map the nature, character, extent, quality and value of the historic environment resource within the Site and surrounding area and to assess the potential for direct impacts upon the archaeological resource from the Proposed Development as well as to assess the potential for impacts upon the setting of designated heritage assets within 2 km of the Site. This was done by examining a variety of evidence for upstanding and buried remains of heritage interest including designated and non-designated heritage assets within a defined 1 km and 2 km Study Areas surrounding the Site.

9.3 Baseline

Previous desk-based assessment and walkover surveys, and this assessment, have identified a total of nine non-designated heritage assets (Assets 27-32, 34, 36 and 37) within the Site, generally comprising post-medieval agricultural remains such as boundary walls, flagstone dyke, ditches and rig and furrow cultivation (see **Annex 5**, Figure 2). These assets are considered to be of Negligible to Low importance, but a previous walkover survey identified a large mound (Asset 30) under turf that may be older and more significant. Further non-designated assets within the 1km Study Area comprise post-medieval and modern farmsteads with associated agricultural remains, buildings associated with the village of Mey, and a lodge associated with the Castle of Mey.

Designated assets within 2 km of the Site include a Scheduled coastal battery (Asset 1), the Category A Listed Castle of Mey (Asset 3) and associated Garden and Designed Landscape (Asset 2) and Category B Listed gate lodge (Asset 4). No World Heritage Sites, Inventory Battlefields or Conservation Areas have been identified within 2 km of the Site.

9.4 Evaluation

9.4.1 Archaeological and Historical Evidence

Within the Site the assessment has established that there is likely a Low potential for archaeological remains of early historic, medieval and modern date, a Low potential for remains of prehistoric date, and a High potential for archaeological remains of post-medieval date. Post-medieval remains would likely relate to agricultural practices and would likely be of Negligible to Low importance.

9.4.2 Direct Impacts

The Proposed Development has the potential to have a high direct adverse impact on any archaeological remains surviving at a sub-surface level. A programme of archaeological work will be required in advance of any development, as per the May 2023 pre-application advice issued by the Highland Council (Planning Reference 23/00635/PREMAJ). This could take the form of a geophysical survey or trial trench evaluation, or a combination thereof. The results of this would inform the need for any further works or mitigation.

9.4.3 Setting Impacts

It is considered that the Proposed Development would have a Neutral impact on the Scheduled Mey battery (Asset 1), the Category A Listed Castle of Mey (Asset 3) and associated Garden and Designed Landscape



(Asset 2) and Category B Listed gate lodge (Asset 4). This is predominantly due to the screening effect of the designed landscape's woodland and hedges, along with a belt of woodland along the A836 that intervenes between the Site and the designed landscape, and in the case of the Scheduled battery (Asset 1) intervening topography also screens views. Embedded mitigation within the Proposed Development's design includes the installation of a hedgerow along the Site's western and northeastern periphery, intervening with the Site and this asset cluster. No further mitigation regarding setting impacts is considered necessary.

9.5 Summary

The overall archaeological potential of the Site appears to be Negligible to Low. Site visits undertaken for this assessment found that the Site has limited intervisibility with designated heritage assets within the 2 km Study Area. This assessment has concluded that the Proposed Development would result in Neutral impacts on the setting of the designated assets and no further mitigation measures for setting impacts are considered necessary.

The assessment has established high potential for remains of post-medieval date. Direct impacts on such remains could result in a High adverse impact on the archaeological resource. A programme of archaeological works in advance of development will be required to investigate the sub-surface deposits on the Site.



10. Flood Risk and Drainage

10.1 Introduction

This section assesses potential flood risk to the Proposed Development from all possible sources in accordance with best practice and in accordance with guidance presented within the National Planning Framework for Scotland 4 (NPF4). The full Flood Risk and Drainage Assessment (FRDA) is provided in **Annex 6**. The FRDA also provides the relevant design information for the proposed site surface water drainage / SuDS scheme.

10.2 Flood Risk

There are a number of potential sources of flooding which should be evaluated in accordance with best practice and NPF4 such as:

- Flooding from rivers or fluvial flooding;
- Flooding from the sea or tidal / coastal flooding;
- Flooding from land;
- Flooding from groundwater;
- Flooding from sewers; and
- Flooding from reservoirs, canals, and other artificial sources.

A 'screening assessment' was undertaken to confirm if any potential sources of flood risk sources require a more detailed analysis and specification of bespoke mitigation measures.

The Screening Assessment confirms that all potential sources of flooding are considered to have 'No' or 'Low' risk of flooding to the site and therefore no further assessment or bespoke mitigations measures are required.

10.3 Drainage

To satisfy the requirements of current national and local flood risk and surface water management guidance, SuDS are required to be incorporated into the design proposals to manage, attenuate, and treat surface water runoff before discharging from the Site. The proposed drainage / SuDS scheme for the Proposed Development will comprise the management of surface water runoff from the proposed infrastructure areas and site tracks.

The Proposed Development will be drained via a herringbone drainage system conveying flows to a SuDS attenuation basin. The development area and site tracks will be constructed with semipermeable materials to allow rainwater to infiltrate into the underlying makeup where it will be intercepted by the perforated pipework. The attenuation basin will provide suitable treatment and attenuation prior to discharge to the adjacent minor drain at the northeast corner of the Site.

Given the siting of the Proposed Development, there is a risk of runoff from the upgradient undeveloped catchment impacting the Development. As such it is proposed to capture these flows via an upgradient cut-off ditch that will discharge to the minor drain to the northeast of the Site boundary. This approach mimics the existing hydrological regime of the Site area albeit in a more formalised manner. Further details on the drainage design are provided in **Annex 6** and illustrated in **Annex 6, Drawing FRDA-003**.

10.4 Summary

In accordance with national planning policy and guidance, all potential sources of flooding to the Site have been considered. The Flood Risk Screening confirms that the Site is overall of 'low risk' or lower from flooding from all sources and thus no bespoke flood mitigation measures are required.



A surface water management strategy has been proposed to manage potential increase in surface water runoff attributed to the Proposed Development. The strategy is in accordance with sustainable drainage principles and allows the Site to remain free of flooding during design storm events, whilst ensuring no increase of flood risk to offsite receptors and ensures no deterioration of the water environment.



11. Noise

11.1 Introduction

This section considers the potential noise impacts with operation of the Proposed Development. The section summarises an assessment of operational noise impacts, fully reported in **Annex 7**.

Noise associated with the construction of the BESS will be of relatively short duration (~9 months), and will not require substantial groundworks, which are typically the noisiest stage of construction projects. Noise impacts during construction will be controlled by implementation of best practice and appropriate working hours. These processes will be formalised in a CEMP. Noise from construction has therefore been scoped out.

As noted in **Annex 7** with regard to operational noise:

- BESSs typically operate a limited number of charge/discharge cycles during any 24-hour period;
- The batteries are restricted in the number of daily cycles to preserve battery health and reach their design life of approximately 20 years;
- Charging cycles often occur during the middle of the night (i.e. between 02:00 and 06:00) at times of low demand/low cost and discharge cycles often occur during the early evening (i.e. between 17:00 and 19:00) at times of high demand/high cost;
- While typical operation will often fall into these periods, the BESS will require the ability to operate at any time of day or night, depending on the particular role it fulfils;
- The duration of individual operational events will vary; however, these are likely to be in the region of 30 minutes to 2 hours; and
- When not charging/discharging, the BESS will produce little or no noise.

11.2 Scope

The scope of the assessment comprised the following:

- Consultation with The Highland Council (THC) to agree the scope and approach of the assessment;
- Characterisation of baseline noise environment by undertaking a baseline noise survey at a location representative of the closest Noise-Sensitive Receptors (NSRs);
- Modelling prediction of operational noise using proprietary software CadnaA;
- Evaluation of predicted noise levels in accordance with British Standard BS4142:2014+A1 2019 Methods for rating and assessing industrial and commercial sound; and
- Specification of mitigation, where required.

11.3 Study Area

The study area and noise sensitive receptors (NSRs) considered in the assessment are provided in Table 11-1 and shown on **Annex 7, Drawing 1**.

Table 11-1 NSRs considered in this assessment

NSR ID	NSR Type	Distance and direction from BESS
NSR1	Cluster of residential properties (Nos. 1, 2 and 3 Phillips Mains)	300 m to the south-east of the BESS
NSR2	Residential property (West Lodge)	500 m to the west of the BESS



NSR ID	NSR Type	Distance and direction from BESS
NSR3	Residential property (Mey Hall Cottage)	460 m to the west of the BESS
NSR4	Residential property (East Lodge)	400 m to the north-east of the BESS

11.4 Method of Assessment

Noise impacts from operation of the BESS were evaluated in accordance with relevant guidance, comprising BS4142³ and PAN1/2011⁴, as summarised in Section 2 of **Annex 7**.

Noise levels associated with operation of the proposed BESS were predicted and evaluated against criteria derived from measured baseline noise levels, in accordance with the requirements of the guidance. The methods used are detailed in Section 3 of **Annex 7**.

11.5 Findings

The baseline noise environment was found to be variable; background noise levels were primarily influenced by wind speed. Representative baseline noise levels were determined under appropriate weather conditions and used to derive evaluation criteria.

Predicted operational noise levels at all NSRs were found to meet criteria derived using BS4142, resulting in, at worst, a low adverse impact during the daytime and night-time periods.

The significance of noise impacts was derived using PAN1/2011 and was found to be of slight/moderate significance during the daytime and night-time periods at all NSRs. Noise impacts associated with the proposed BESS were therefore determined to be not significant.

While no specific mitigation is required, outline mitigation options are provided in **Annex 7** to further reduce the noise impacts, should the candidate technology at the time of construction be different to that currently proposed (assuming the selected technology is noisier). It is reasonable to assume that the technology available at the time of construction will be quieter than current models, however.

11.6 Summary

The noise assessment has determined appropriate noise criteria (noise limits) for the proposed BESS, relative to the prevailing baseline noise environment.

Noise predictions for the operational BESS have been determined to meet the adopted criteria, and noise impacts have been determined to be not significant. Therefore, no specific mitigation is proposed.

³ BS4142:2014+A12019 Methods for Rating and Assessing Industrial and Commercial Sound (2019). The British Standards Institution. 2019.

⁴ Planning Advice Note PAN1/2011: Planning and Noise. Scottish Government, 2011. Assessment of noise: technical advice note. Scottish Government, 2011.



12. Transport and Access

12.1 Introduction

This section provides information on the Proposed Development in relation to construction and operational traffic, assesses the anticipated impact of the Proposed Development on the road network within the local area and sets out the proposed mitigation measures for use at the Site.

A combined Transport Statement and Construction Traffic Management Plan (CTMP) has been prepared by Pell Frischmann which is included in **Annex 8**. Key findings are summarised below.

12.2 Access

Access to the Proposed Development is to be made via a new site access junction on the adjacent minor road (C1033). The junction has been designed to accommodate the proposed construction traffic deliveries and would provide construction and operational access.

The nearest trunk road to the site is the A9, linking Stirling to Thurso via Inverness. Access to the Proposed Development from the A9 would be achievable via the A836. The A836 provides connections across the north coast is part of the tourist North Coast 500 route. The A836 between Thurso and Gills Bay is of local distributor road standard.

Traffic would then turn off the A836 on to the U1633 East Lodge Road, an unclassified road that connects the A836 and the C1033. The road is a single carriageway with passing places and is maintained by THC. Traffic would then turn onto the C1033 and enter the Site via the access junction.

12.3 Construction

A review of the traffic impact of the construction traffic on the road network has been undertaken. The main sources of construction traffic will be:

- Import of Plant and Machinery;
- Site Establishment Clearance Loads;
- Import of Bulk Materials;
- Import of Ready-Mix Concrete;
- Import of General Building Supplies;
- Delivery of HV Electrical Components;
- Delivery of batteries;
- Delivery of general site materials and supplies;
- Grid and electrical connection works; and
- Arrival and departure of construction and commissioning staff at the site.

Construction of the Proposed Development will generate approximately 144 movements vehicle movements per day at the peak of construction. It is expected that during the peak month of construction (Month three), 118 two-way HGV movements per day will occur per day. A further 26 car / LGV trips would be created by construction staff travelling to and from the site.

The impact of this number of HGV movements on the study area road network can be managed by a CTMP to ensure that any disruption and disturbance can be kept to a minimum.

A series of road enhancement works are proposed on the C1033 and U1633 to improve access and safety for all road users.



12.4 Operation

Traffic associated with the operational phase will be minor in nature and restricted to occasional visits for maintenance, servicing and security reviews. It is anticipated that traffic flows associated with this phase of the development will be restricted to up to ten vehicle movements (five inbound and five outbound) per month.

This level of traffic is not considered to be significant and, as such, no further assessment is proposed.

12.5 Summary

A review of the type and volume of vehicles associated with the construction programme has been provided and the peak of construction activities identified. This peak in traffic has been used to review the likely impact that construction activities would have. Traffic management procedures have been proposed within **Annex 8** which would ensure the safe operation of the approach route to the Site during construction. Determination of the final details of these traffic management measures will occur once the contractor has been appointed.

As the Proposed Development will not be manned, operational traffic is expected to be minimal and would be conducted by smaller vehicles. The impact of this on the wider road network will be negligible.



13. Summary of Mitigation and Enhancement

This section contains a summary of the mitigation measures proposed to address any potential effects identified. Enhancement measures proposed are also summarised. Individual technical assessments provided within the annexes to this SEI Report should be referred to for full details of the potential effects, mitigation and enhancement measures.



Topic Area	Mitigation	Timing
Project Design		
Infrastructure	Embedded (design) mitigation: Siting has been chosen to avoid any notable ridgelines or visually prominent sections of skyline. Instead, the Site is located in a relatively low-lying elevation and benefits from screening via surrounding tree cover and landform. In addition, the Site is located in close proximity to the consented Gills Bay 132kV Switching Station. This close proximity negates the spread of infrastructure across wider parts of the landscape.	Pre-construction (design)
Construction Hours	Normal construction hours are expected to be between 07:00 and 19:00 Monday to Friday and 09:00 and 13:00 on Saturdays.	Construction
Construction Environmental Management Plan (CEMP)	As part of the construction contract, the contractor responsible for undertaking the construction works (the Contractor) shall sign up to producing, and adhering to, a CEMP. The CEMP will be drafted and agreed prior to commencement of construction and shall be amended and improved as required throughout the construction and decommissioning period.	Pre-construction
	The CEMP shall be developed in accordance with good practice guidance. It shall describe how the Applicant will ensure suitable management of the following environmental issues during construction of the Proposed Development: <ul style="list-style-type: none"> ➤ waste; ➤ water quality; ➤ dust and noise; ➤ surface water drainage and groundwater; ➤ ecology (including protection of habitats and species); ➤ agriculture (including protection of livestock and land); ➤ archaeological protection; ➤ pollution incidence response (for both land and water); and 	Pre-construction



Topic Area	Mitigation	Timing
	<ul style="list-style-type: none"> ➤ site operations (including maintenance of the construction compounds, working hours, monitoring of construction procedures and safety of the public). 	
Landscape and Visual		
Landscape Planting	Implementation of landscape works which would incorporate the creation of native hedgerow and woodland edge tree planting around the peripheral parts of the Site. This would be augmented by woodland edge planting within the northern and eastern parts of the Site, which are currently most open / visible from surrounding areas. The planting approach would be based on mixed native species to provide visual containment and screening of the proposed built form (including the perimeter fencing) and create a soft, green frontage to the development.	Construction, Post-Construction
Fencing and ancillary buildings	In terms of colour and materials, the perimeter fencing would be painted with a recessive colour (olive green or similar) to soften the appearance of the Proposed Development and screen potential views of infrastructure within central parts of the Site. The BESS Substation, Comms Building, and Welfare Facilities would be finished in the same recessive colour where possible.	Pre-construction (design)
Ecology and Ornithology		
Design Mitigation	<p>The Proposed Development has been positioned within areas of modified grassland and arable land, minimising the loss of habitats of higher ecological value (e.g. woodland and scrub).</p> <p>Infrastructure has been placed at least 3 m from any drainage ditches and woodland, and 3 m from any areas of retained scrub.</p>	Pre-construction (design)
Tree Protection	To protect woodland habitats bordering the Site and other areas of scrub to be retained within the Site, working methods will proceed in line BS 5837 (2012) – Trees in relation to Design, Demolition and Construction e.g., temporary fencing. The fencing would be erected prior to commencement of construction works and there would be no works, vehicular over-run, or storage of materials within the extents of the tree protection fencing area.	Pre-construction, Construction
Preconstruction Surveys	Preconstruction protected species surveys (for otter, water vole, badger, pine marten and bats) will be undertaken in advance of works commencing on Site. The Ecological Clerk of	Pre-construction



Topic Area	Mitigation	Timing
	<p>Works (ECoW) will survey the footprint of works and an appropriate buffer to update the baseline survey results and identify any new ecological constraints. If evidence or a high likelihood of protected species presence is identified following the preconstruction surveys, additional mitigation may be identified and implemented to prevent impacts on individuals. This will be secured through Species Protection Plan(s) (SPPs).</p> <p>The SPPs will be produced and agreed prior to construction commences and then implemented during the construction period. The SPP will detail measures to safeguard protected species known to be in the area and will include for pre-construction surveys for protected species (complimenting the seasonality of the construction start date) as well as ensuring the use of Best Practice measures during all construction activities (such as sensitive lighting, ramps exiting open excavations, etc.). The SPP will describe the process to be followed in the case that new protected species are recorded on Site that will therefore also need to be protected during construction works, as well ensuring the implementation of effective toolbox talks to raise awareness of Site personnel to sensitive ecological receptors on Site.</p>	
Ecological Clerk of Works	The Applicant will appoint a suitably qualified ECoW prior to the commencement of any construction activities. The ECoW will be present on a regular basis to oversee Site clearance and construction activities, provide toolbox talks to Site personnel with regards to protected/ priority species and habitats, and undertake monitoring works, as appropriate.	Construction
Breeding bird nests	Protection of breeding bird nests from damage and/or destruction during the breeding season will need to be ensured. Wherever possible, all vegetation clearance will occur outside the bird breeding season (i.e. between September – March, inclusive), to ensure that no active nests are damaged or destroyed by the proposed works. If work is required after March 31st, the ECoW will search areas of clearance in advance of works and buffer active nests as appropriate. This would include any areas of clearance and vegetation removal for access tracks, compounds or laydown areas due to the populations of ground nesting birds on and around the Site.	Construction
Pollution prevention (watercourses)	In order to prevent pollution of watercourses within the Site (with particulate matter or other pollutants such as fuel), best practice techniques will be employed and will include:	Construction; Post-construction



Topic Area	Mitigation	Timing
	<ul style="list-style-type: none"> ➤ For any water crossings: buffer strips around sections of workings adjacent to watercourse crossing and bund and embankment features to be implemented; ➤ For any temporary tracks, parking areas, and compounds: camber in track or ground design; drains, e.g. infiltration trenches with check dams; ➤ 3 m buffer to be maintained around all drainage channels, within which there is to be no works or storage of plant and materials; and ➤ General drainage: no direct discharges of water from works areas to existing drainage channels; drainage will be directed to infiltration trenches or settlement swales. 	
Habitats Disturbance	<p>Excavations will be covered at the end of each working day or a wooden plank placed inside to allow protected faunal species to escape, should they become trapped. Any temporarily exposed open pipe system will be capped in such a way as to prevent wildlife gaining access.</p>	Construction
	<p>Where appropriate and safe to do so, all construction working areas with potentially suitable open habitats for herptiles will initially be cut during the active season for herptiles (April to October), under the guidance of the ECoW (e.g., using a brush cutter), to reduce the height of vegetation and make it less attractive for herptiles habitation. The ECoW would move any potential refugia or hibernacula from working areas by hand. Working areas would then be kept unsuitable for herptiles through regular cutting until construction in that location commences</p>	Construction
Mammals	<p>The fencing around the site will be an effective security measure, however it has the potential to restrict animals from accessing the foraging resource contained within the site as well as passage as part of active commuting corridors. Therefore, it is recommended that a gap of 20 cm at the base of the fenceline is maintained. If this is not possible, then mammal gates should be installed with guidance from a Suitably Qualified Ecologist (SQE) to allow continued passage of mammals across the Site.</p>	Operation
Habitat creation and enhancement	<p>Implementation of a landscaping plan and Biodiversity Enhancement and Management Plan (BEMP). This includes additional landscape planting (species-rich grassland, hedgerows, and native woodland), and provision of barn owl, pine marten, bat, bird and habitat boxes. The</p>	Post-construction; Operation



Topic Area	Mitigation	Timing
	<p>aims are to enhance plant and invertebrate species diversity, which will provide benefits to various species known to be present at the site.</p> <p>The planting of hedgerows and tree species will create additional nesting habitat for a number of species as well as providing additional foraging resource. The reseeded of the open areas of the site will create improved breeding habitat for ground nesting species.</p>	
Cultural Heritage		
Archaeological Programme of Works	<p>A programme of archaeological works in advance of development will be undertaken. This could take the form of a geophysical survey or trial trench evaluation, or a combination thereof. This would allow for a cursory evaluation to investigate the sub-surface deposits on the Site, and the results could inform further mitigation strategies.</p> <p>Depending on the results of the evaluation, further archaeological works such as archaeological monitoring and post-excavation works may be required</p>	Construction
Written Scheme of Investigation	A Written Scheme of Investigation (WSI) will lay out the scope of any archaeological works, the content of which will be prepared in consultation with the Historic Environment Team (HET) acting as the advisors to the Highland Council.	Pre-construction
Flood Risk and Drainage		
Surface Water Drainage Strategy	A Drainage Strategy has been prepared which includes provision of sustainable drainage measures to manage surface water runoff from the development in terms of quantity and quality. The Drainage Strategy ensures no increase in flood risk to off-site receptors as well as meeting the water quality criteria set out in the Sustainable Drainage Systems (SuDS) Manual.	Construction; Operation
Noise		
Noise assessment of final site design	The Applicant will undertake a noise assessment of the final site iteration, considering the chosen battery and inverter technology and the number of units, and will confirm compliance with the criteria derived using BS4142.	Pre-Construction



Topic Area	Mitigation	Timing
Transport		
<p>Construction Traffic Management Plan (CTMP)</p>	<p>The Applicant will ensure that the construction vehicles will be routed as agreed with THC. The following measures will be implemented through a CTMP during the construction phase:</p> <ul style="list-style-type: none"> ➤ Contractual requirement in the Balance of Plant (BoP) contract that contractors will only use the agreed access routes; ➤ Direction signage signposting traffic on the agreed access routes; ➤ Identification numbers of HGV and vans to allow easy recognition; ➤ Providing the public with details of how to report use of unapproved routes or driving issues of concern; ➤ Using GPS trackers to allow the monitoring of bulk delivery vehicle movements; ➤ Setting out site staff disciplinary measures for those who ignore the agreed access routes and enforcing these throughout the construction period; ➤ All site vehicles will feature “white noise” reversing warning devices to reduce noise disruption when on site; ➤ All materials delivery lorries (dry materials) will be sheeted to reduce dust and stop spillage on public roads; ➤ Specific training and disciplinary measures will be established to ensure the highest standards are maintained to prevent construction vehicles from carrying mud and debris onto the carriageway; ➤ Wheel cleaning facilities will be established at the site entrance. A road sweeper would also be provided at site to ensure that the public road to the north of the Site (the C1033) is kept clean at the site access junction during the development platform works; and ➤ Site induction for all staff instructing them on what route to site they can use to enter and exit the site and obtaining their acknowledgement that there is only one approved access route: The induction would include: 	<p>Construction</p>




Topic Area	Mitigation	Timing
	<ul style="list-style-type: none"> ○ A tool box talk safety briefing; ○ The need for appropriate care and speed control; ○ A briefing on driver speed reduction agreements (to slow site traffic at sensitive locations on the A836 such as at Castletown); and ○ Identification of the required access routes and access junction operation and the controls to ensure no departure from these routes. 	
Wear and Tear Agreement	<p>An agreement is suggested to cover the cost of any abnormal wear and tear on the U1366 and C1033 roads. This would be agreed with the Council subject to the granting of planning approval. The wear & tear agreement will address concerns about possible damage to the public road, verges and structures. It will be based upon condition surveys of the road to ensure that the condition of the road does not deteriorate as a result of the construction works.</p>	Construction
Turning facilities and site access	<p>For safety reasons both onsite and for other road users, the Site has been designed so all vehicles can enter and exit the site in a forward gear. No vehicle shall reverse onto unmanaged public roads and shall only enter / exit the Site using forward gear only.</p>	Construction
	<p>A banksman will be provided at the Site access to help guide traffic within the Site and to ensure health and safety access for the Site. The banksman will be in radio contact with the wider Site compound to advise of movements to and from the Site.</p>	Construction
	<p>Upon completion of construction works, a gate will be provided on the access track at its junction into the Proposed Development. The gate will be set back from the public road to ensure that any future HGV vehicles can stop at the gate without blocking back onto the track.</p>	Operation

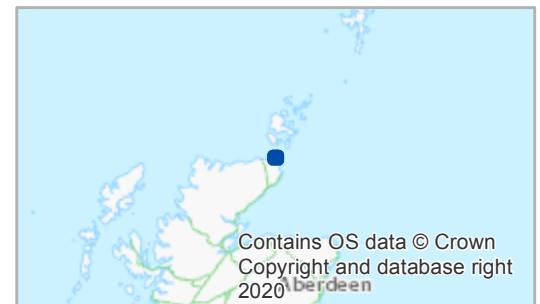


Figures





KEY
 Proposed Site



Coordinate System: British National Grid
 Projection: Transverse Mercator
 0 0.15 0.3 0.6 0.9 1.2 1.5
 Kilometres
 1:26,902

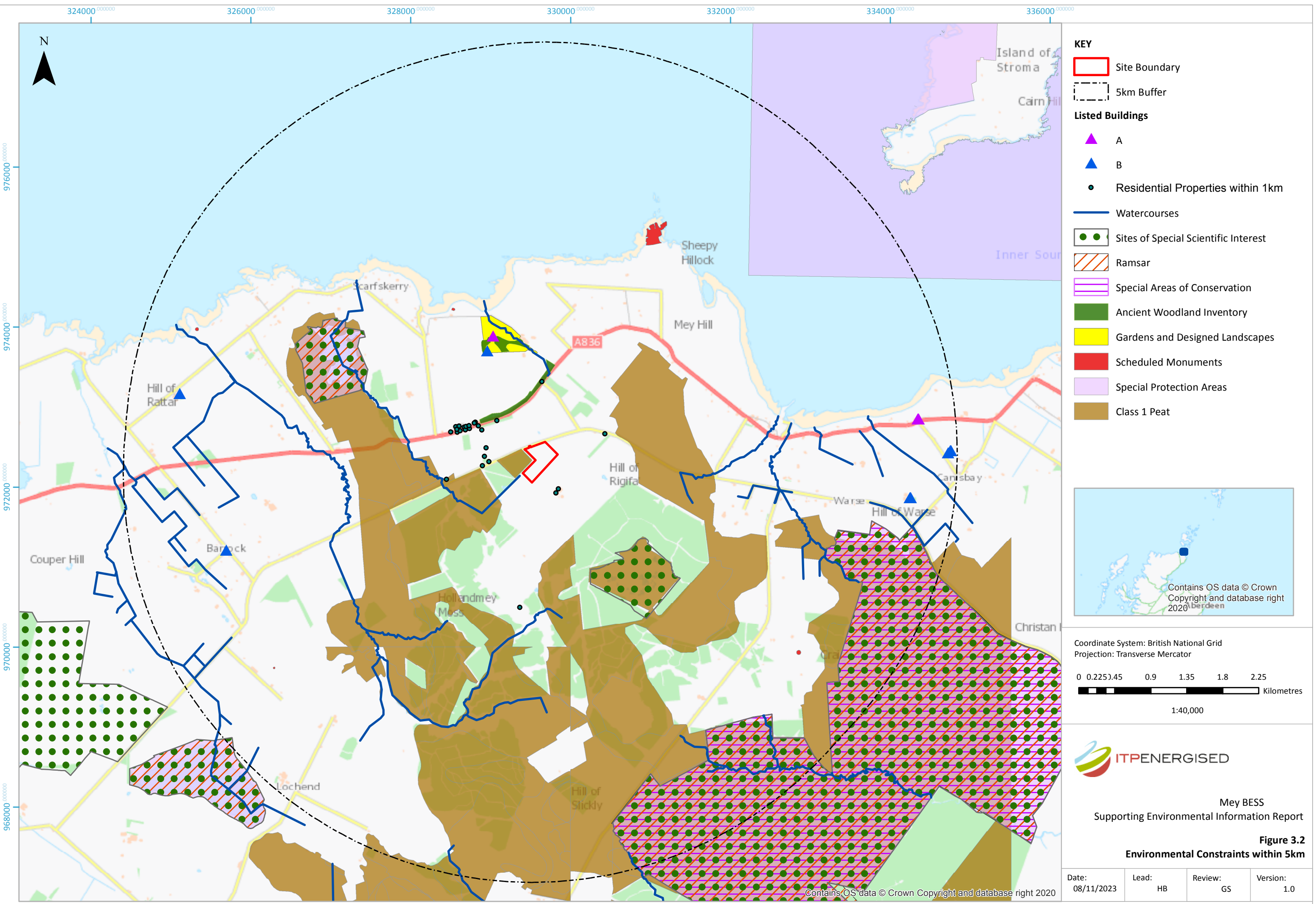


Mey BESS
 Supporting Environmental Information Report

**Figure 3.1
 Site Location**

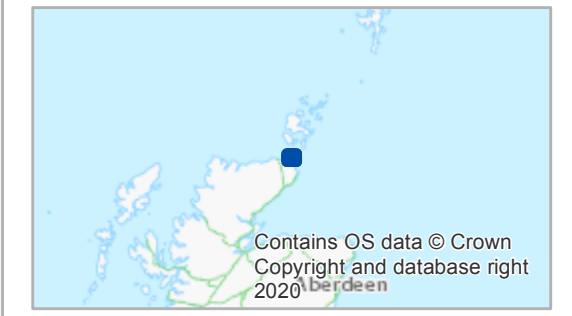
Date:	Lead:	Review:	Version:
03/11/2023	YD	GS	1.0

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KEY

- Site Boundary
- 5km Buffer
- Listed Buildings**
- ▲ A
- ▲ B
- Residential Properties within 1km
- Watercourses
- Sites of Special Scientific Interest
- Ramsar
- Special Areas of Conservation
- Ancient Woodland Inventory
- Gardens and Designed Landscapes
- Scheduled Monuments
- Special Protection Areas
- Class 1 Peat



Coordinate System: British National Grid
 Projection: Transverse Mercator

0 0.225 0.45 0.9 1.35 1.8 2.25
 Kilometres

1:40,000

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 Supporting Environmental Information Report

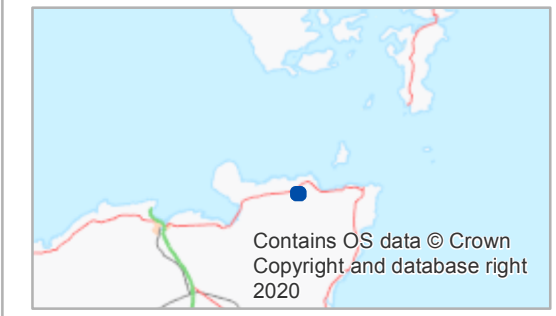
Figure 3.2
Environmental Constraints within 5km

Date: 08/11/2023	Lead: HB	Review: GS	Version: 1.0
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- KEY**
- Site Boundary
 - Battery Containers
 - Power Conditioning Units
 - Access Tracks
 - BESS Substation
 - Low Voltage Board and Transformer
 - Attenuation Pond
 - Water Tanks
 - Temporary Construction Compound
 - Welfare Unit
 - Spares
 - Car Parking Area
 - Communications
 - Fenceline
 - Mixed Native Species Woodland
 - Hedgerow
 - Indicative MeyGen Transformer (separate application)



Coordinate System: British National Grid
 Projection: Transverse Mercator

0 0.01 0.02 0.04 0.06 0.08 0.1
 Kilometres

1:2,000

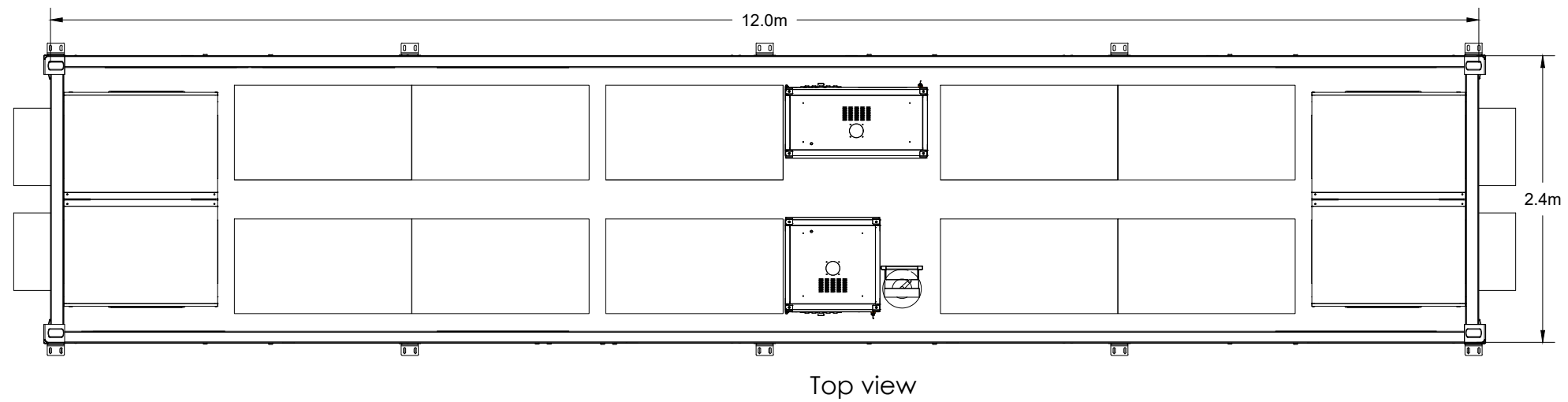
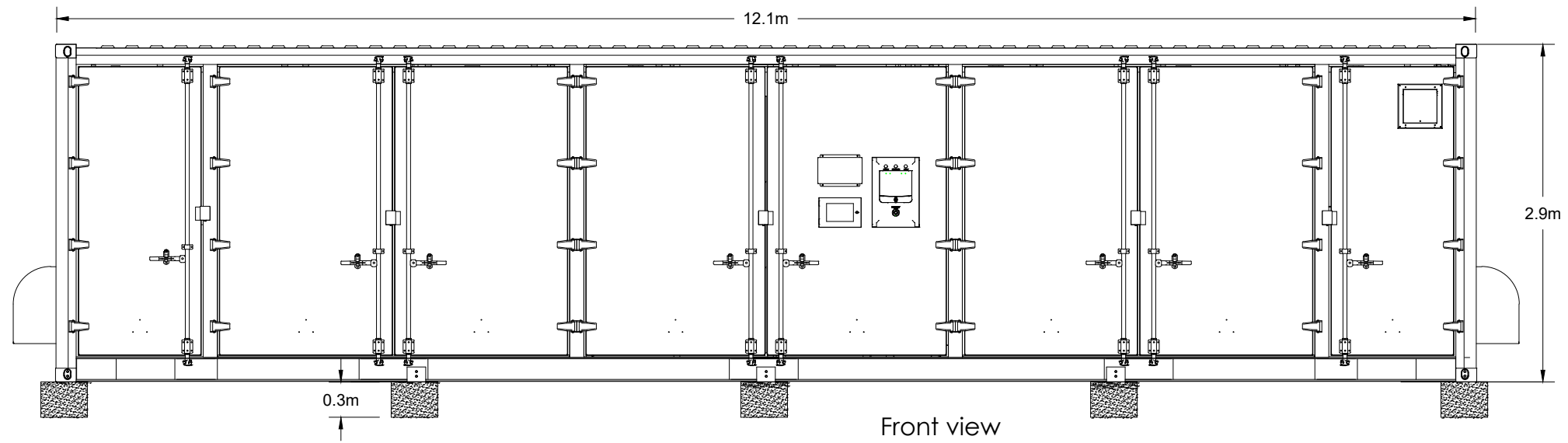
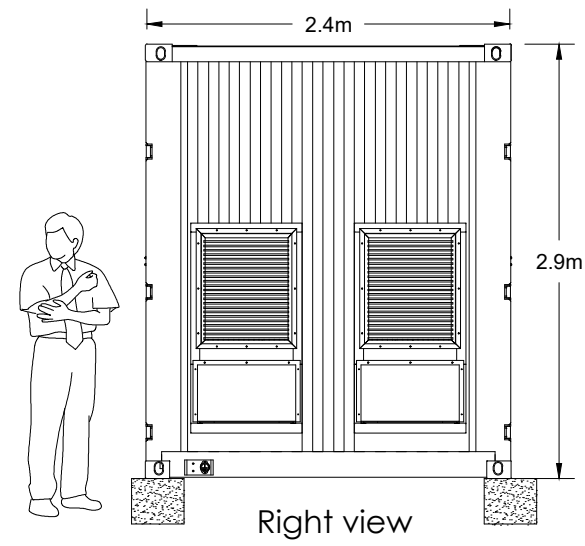


Mey BESS
 Supporting Environmental Information Report

Figure 4.1
Site Layout Plan

Date: 21/12/2023	Lead: YD	Review: GS	Version: 1.0
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NOTES

1. DO NOT SCALE. Use annotated measurements only

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Issue	Date	Comments
Drawn	DF	Approve
		GS
		Date
		25/10/23

Drawing Status
PLANNING

Project: Mey BESS

Address Phillips Mains farm, KW14 8XH

Client: Simec Atlantis Energy

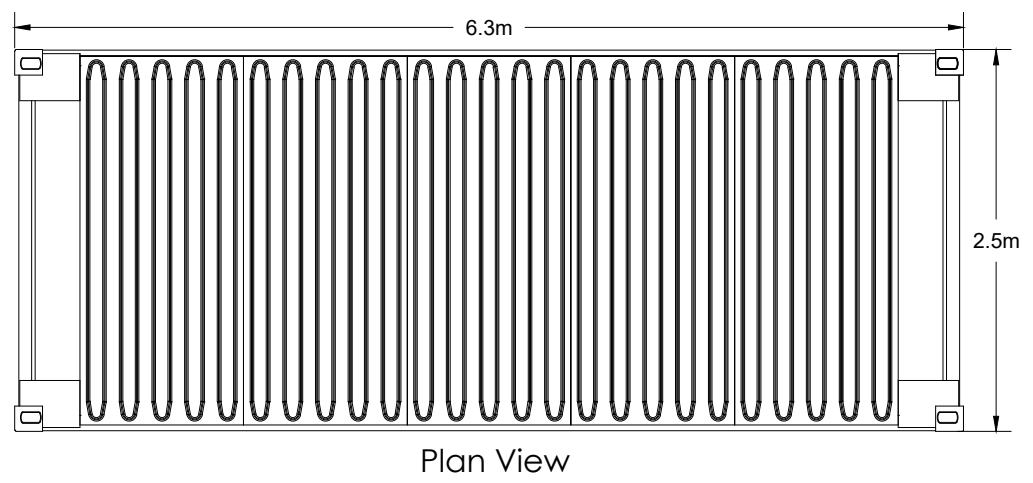
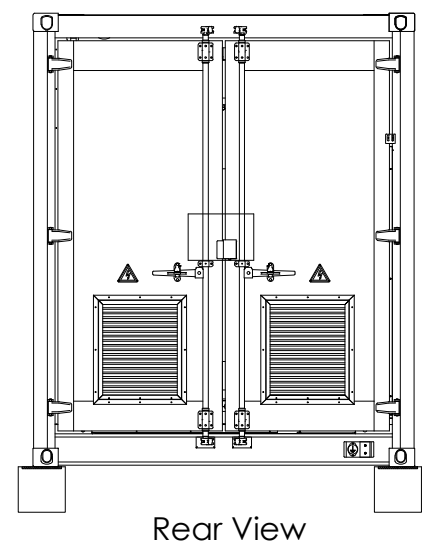
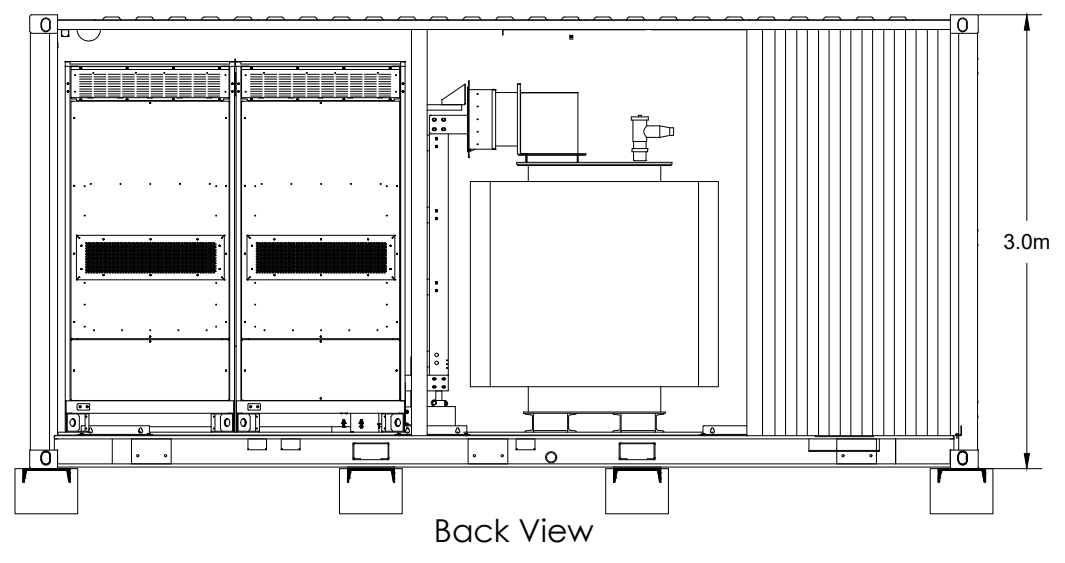
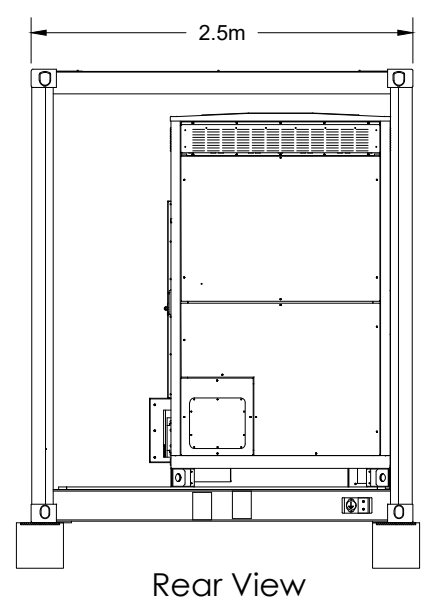
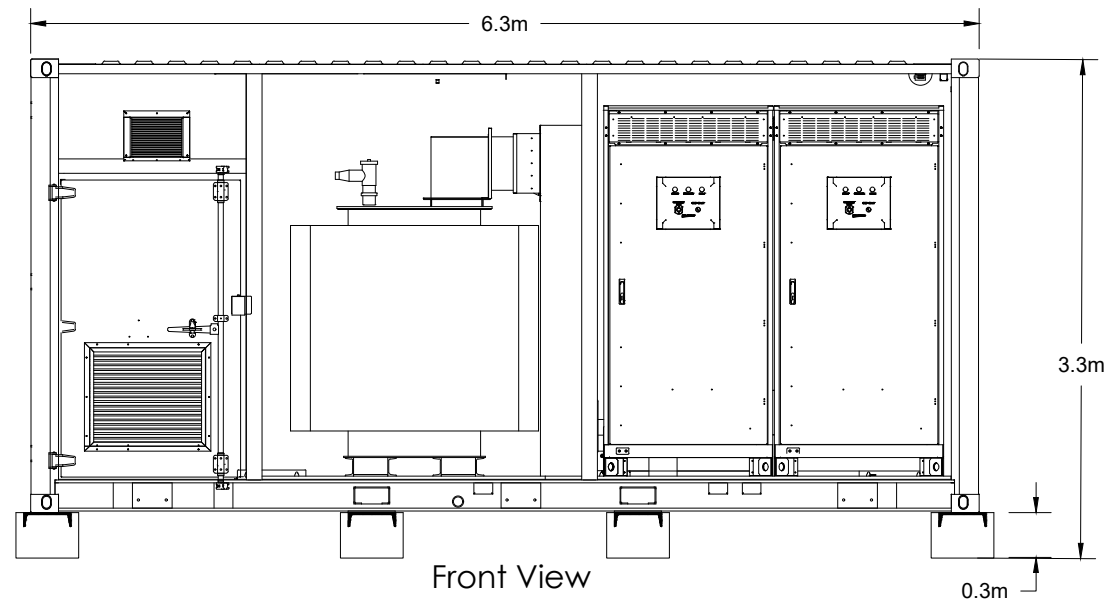
Title
Figure 4.2 Typical Battery Details

Scale 1:50 @A3

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Date	25/10/23	

Drawing Status
PLANNING

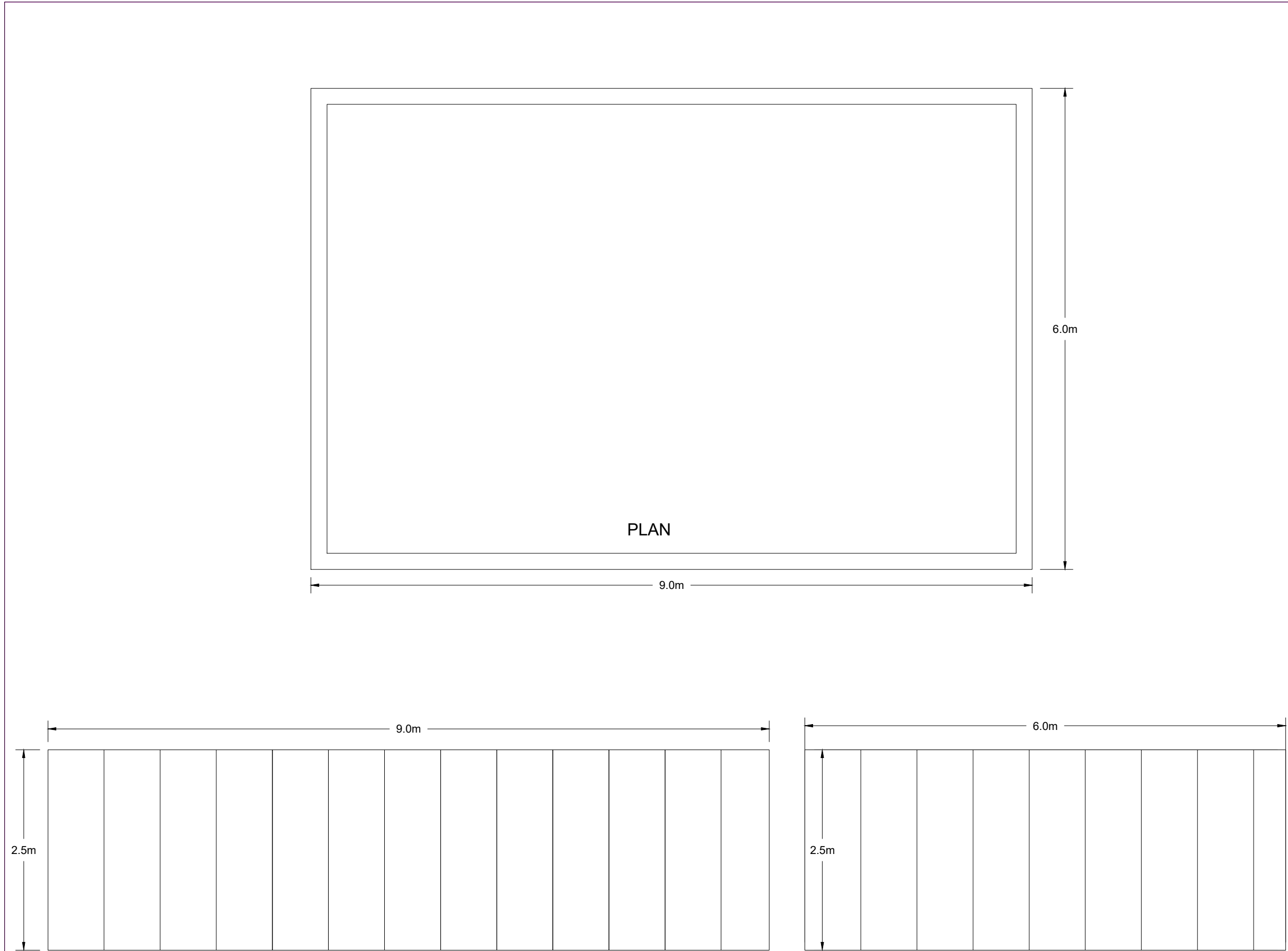
Project: Mey BESS
 Address: Phillips Mains farm, KW14 8XH
 Client: Simec Atlantis Energy

Title
Figure 4.3 Typical Inverter Details

Scale 1:50 @A3

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PLAN

FRONT ELEVATION

SIDE ELEVATION

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Date	26/10/23	

Drawing Status
PLANNING

Project: Mey BESS

Address Phillips Mains farm, KW14 8XH

Client: Simec Atlantis Energy

Title
Figure 4.4 Typical LV Db & TX

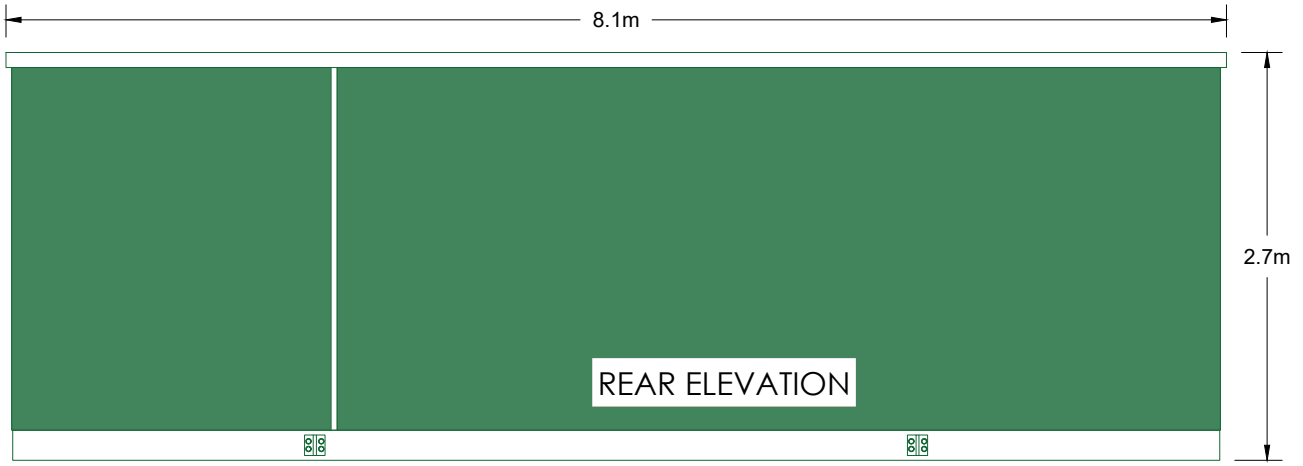
Scale 1:50 @A3

Issue
01

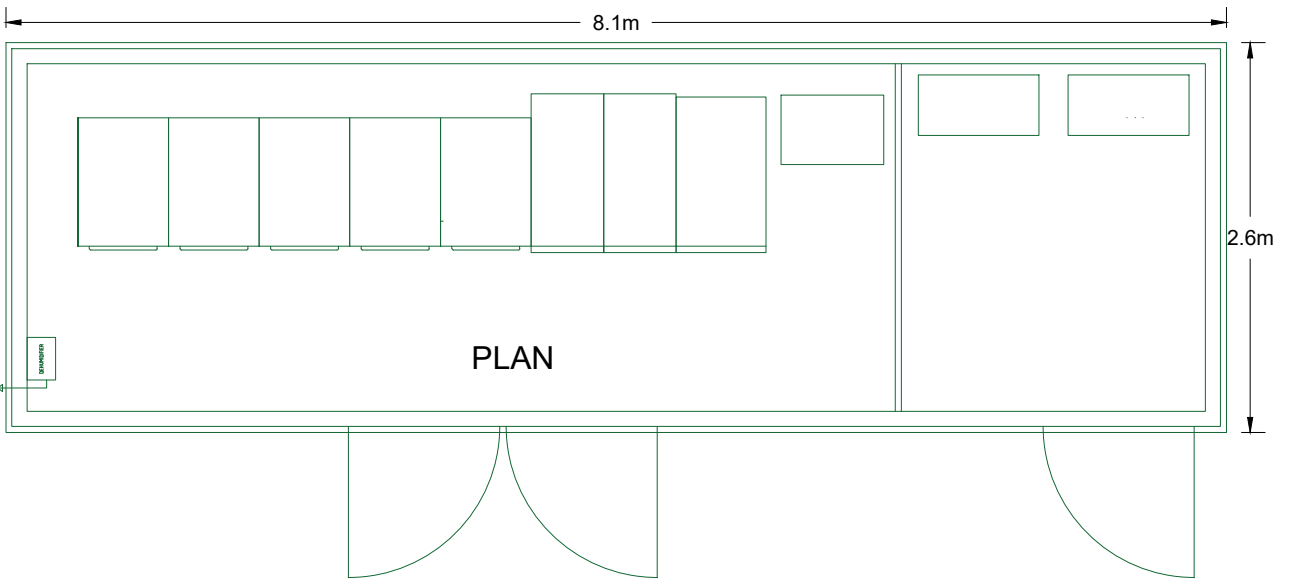
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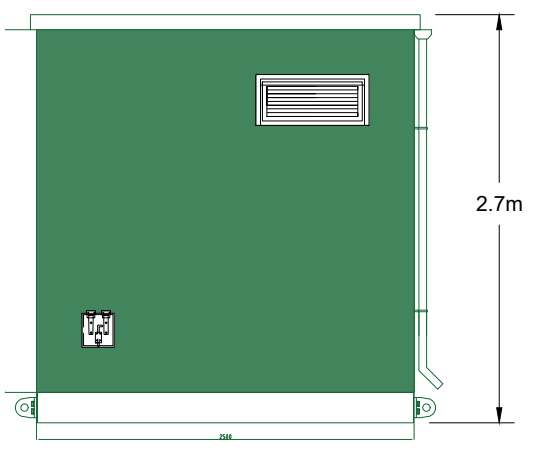
1. DO NOT SCALE. Use annotated measurements only



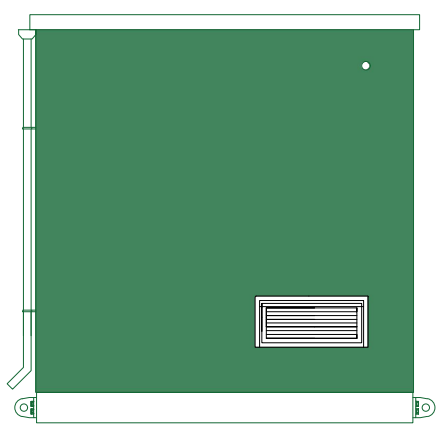
REAR ELEVATION



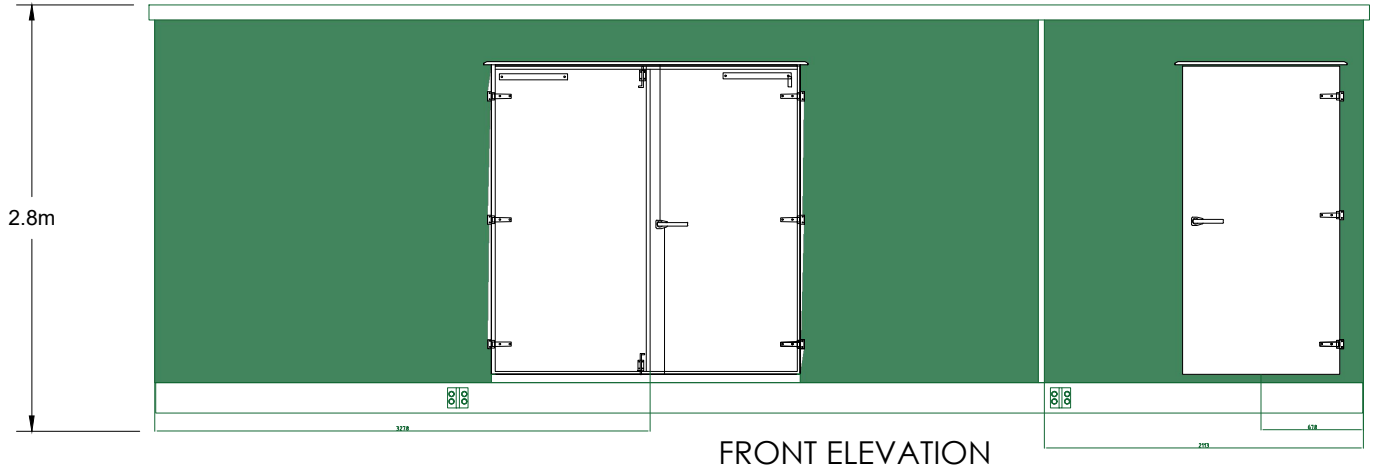
PLAN



SIDE ELEVATION



SIDE ELEVATION



FRONT ELEVATION

01	30/10/23	Initial Issue
Issue	Date	Comments
Drawn AA	Approved DF	Date 30/10/23

Drawing Status
PLANNING

Project: Mey BESS

Address Phillips Mains farm, KW14 8XH

Client: Simec Atlantis Energy

Title
Figure 4.5 Typical Private Switchgear

Scale 1:50 @A3

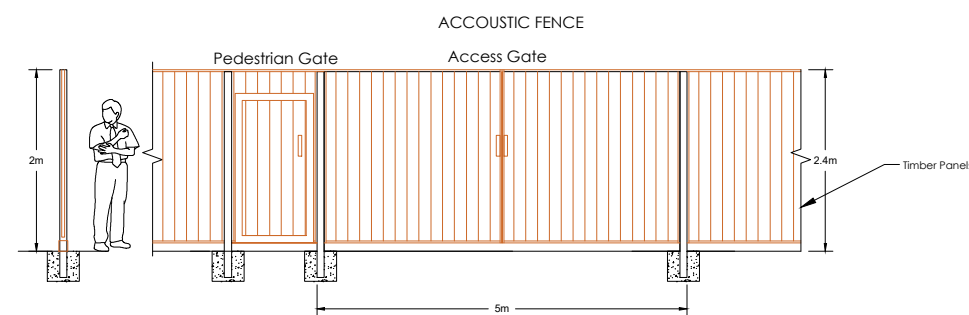
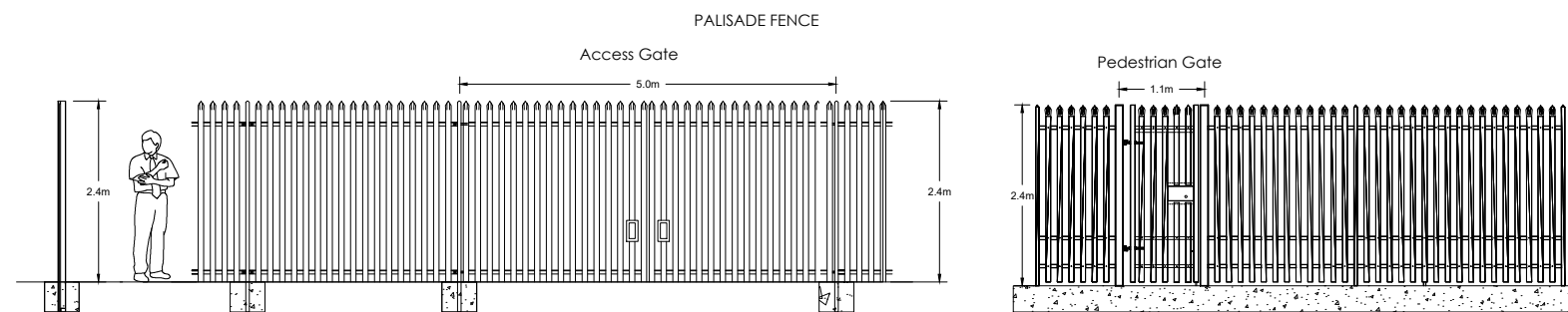
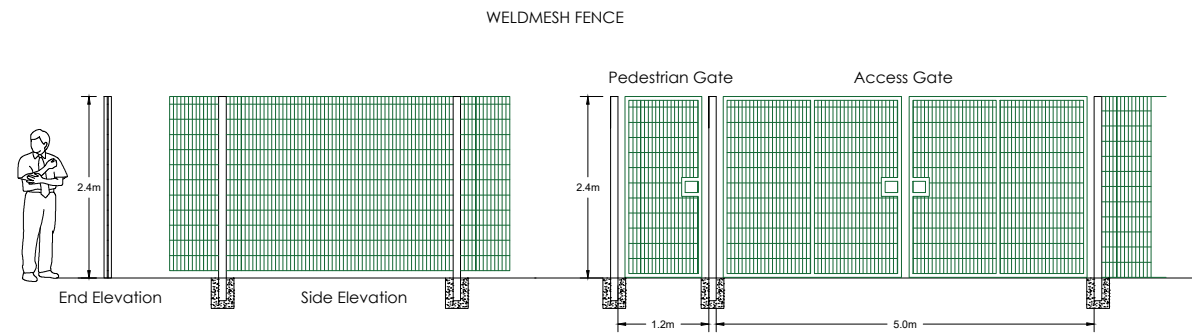
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		Date
		25/10/23

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Client: Simec Atlantis Energy

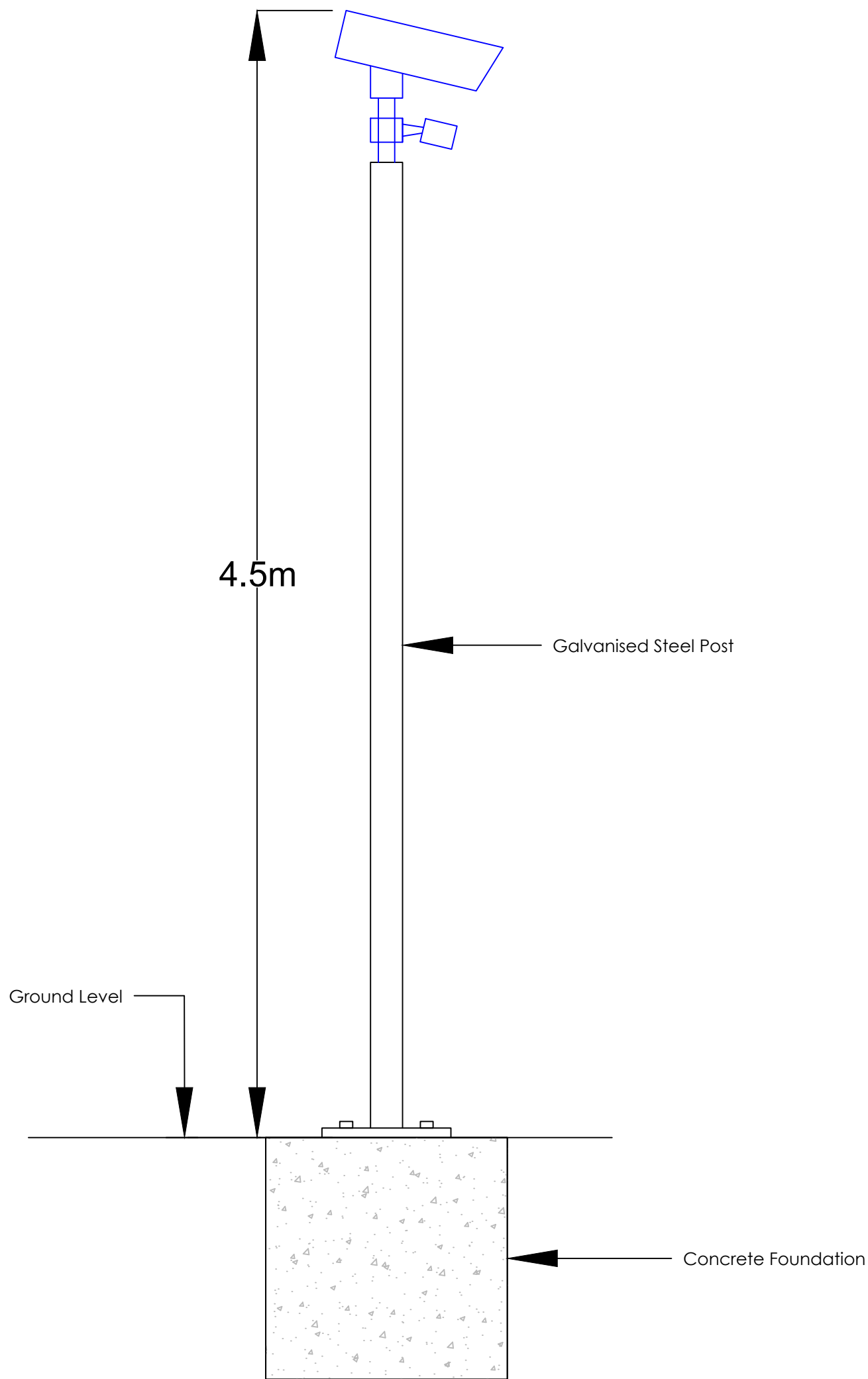
Title
Figure 4.6 Typical Fence Details

Scale 1:50 @A3

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Typical Elevation

NOTES

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LEGEND

Issue	Date	Comments / Changes
01	26/10/23	Initial Issue

Drawn: DF Approve: GS Date: 26/10/23

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PLANNING

Project: Mey BESS

Address: Phillips Mains farm, KW14 8XH

Client: Simec Atlantis Energy

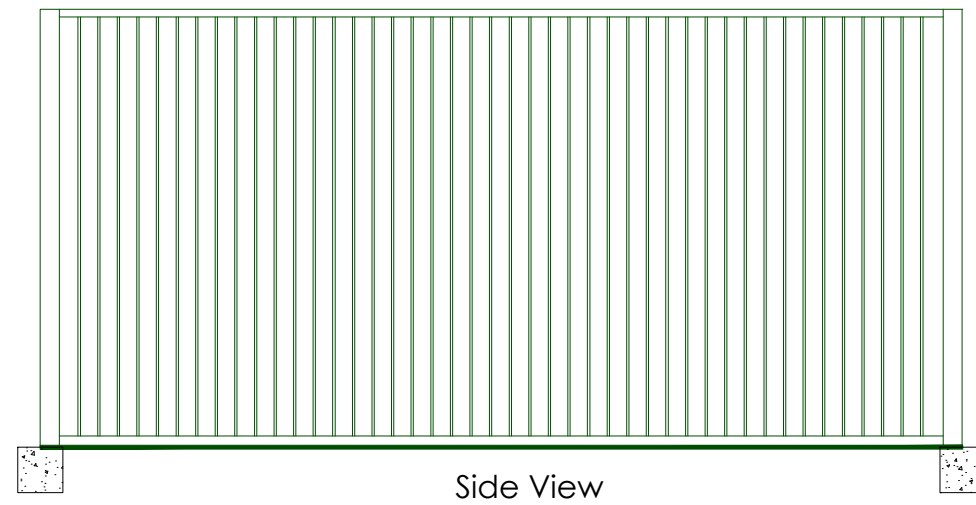
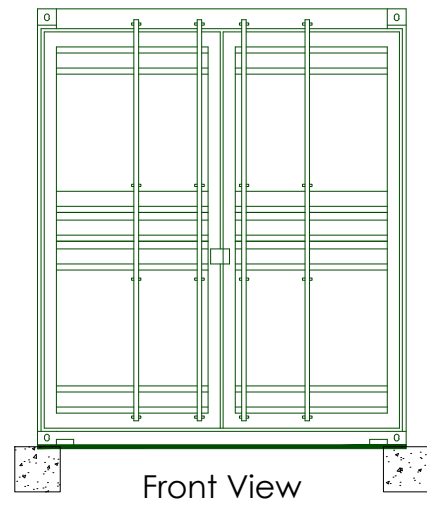
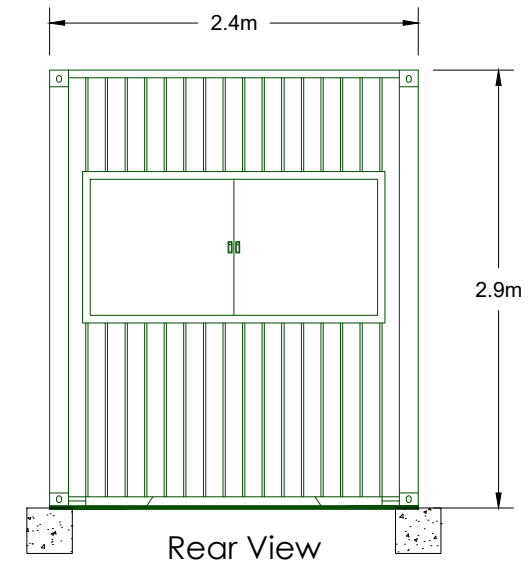
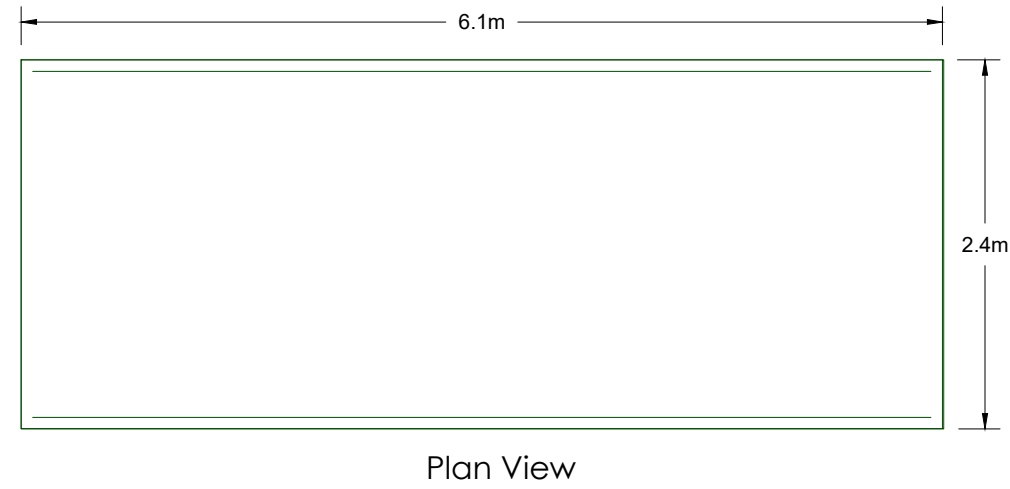
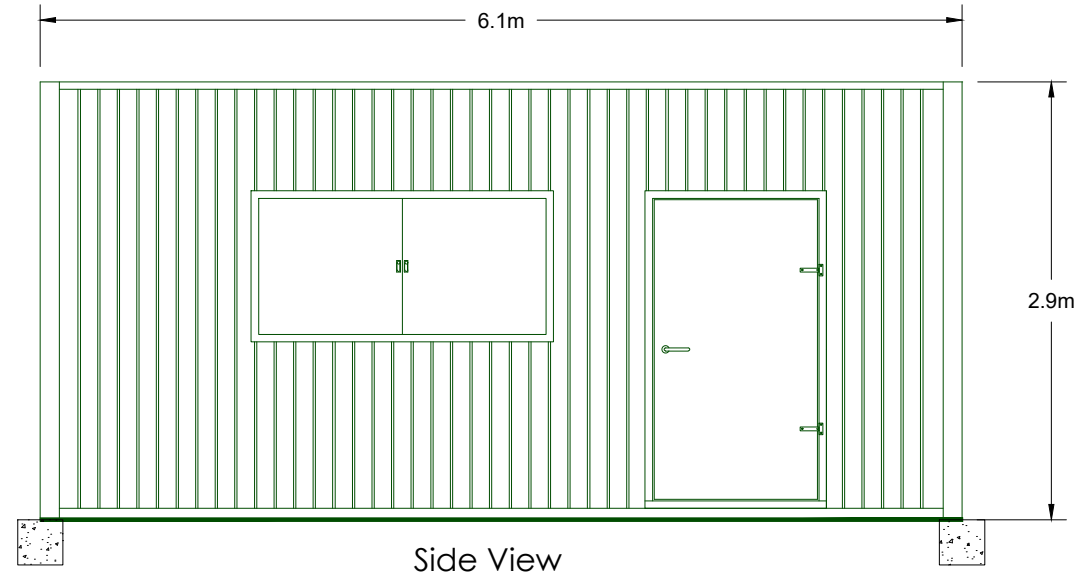
Title
Figure 4.7 Typical CCTV Detail

Scale: 1:20 @A3

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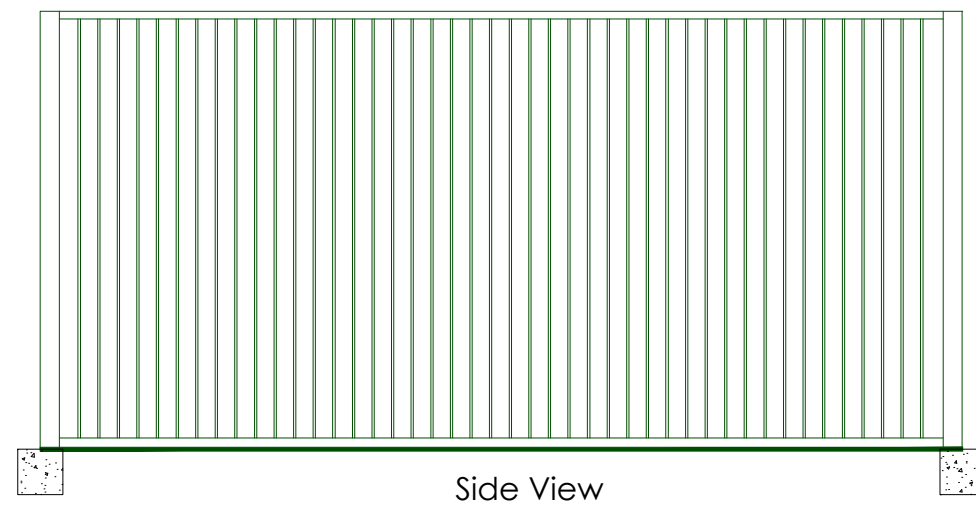
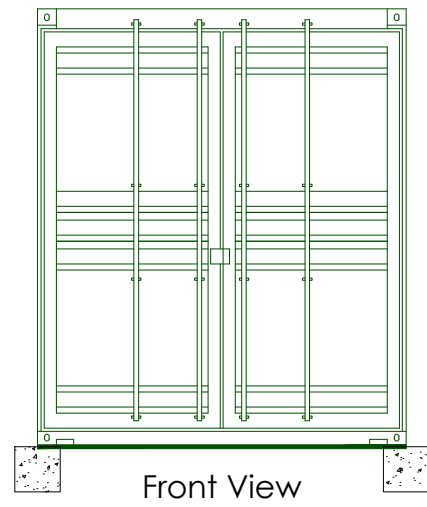
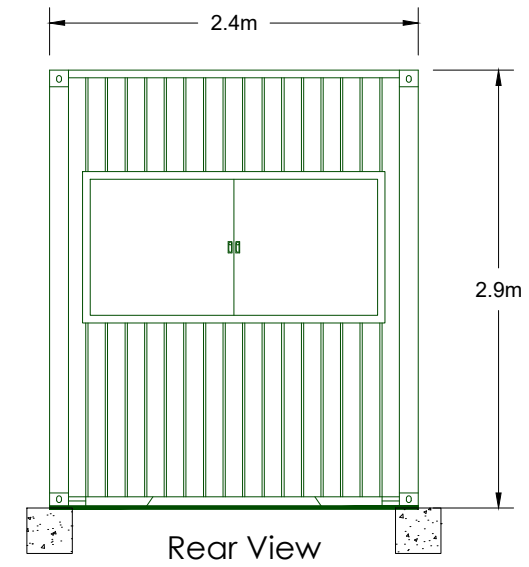
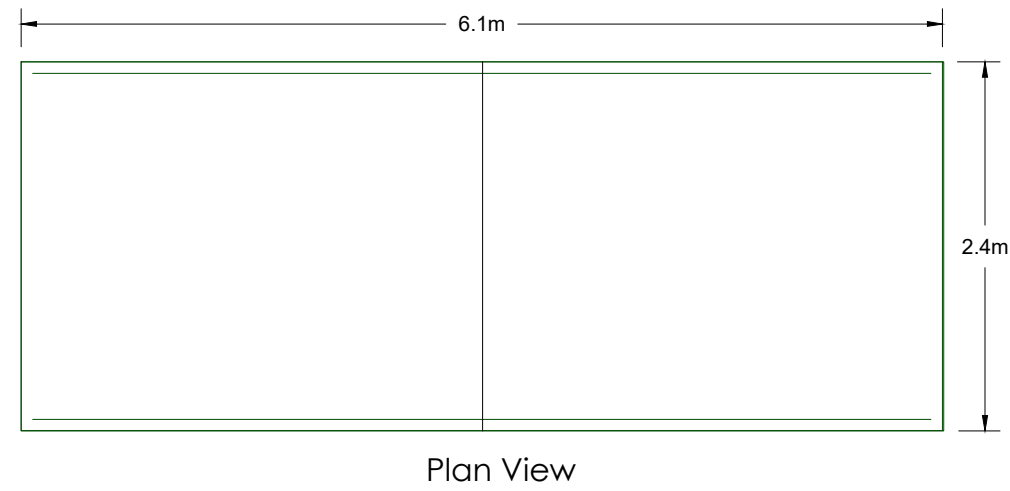
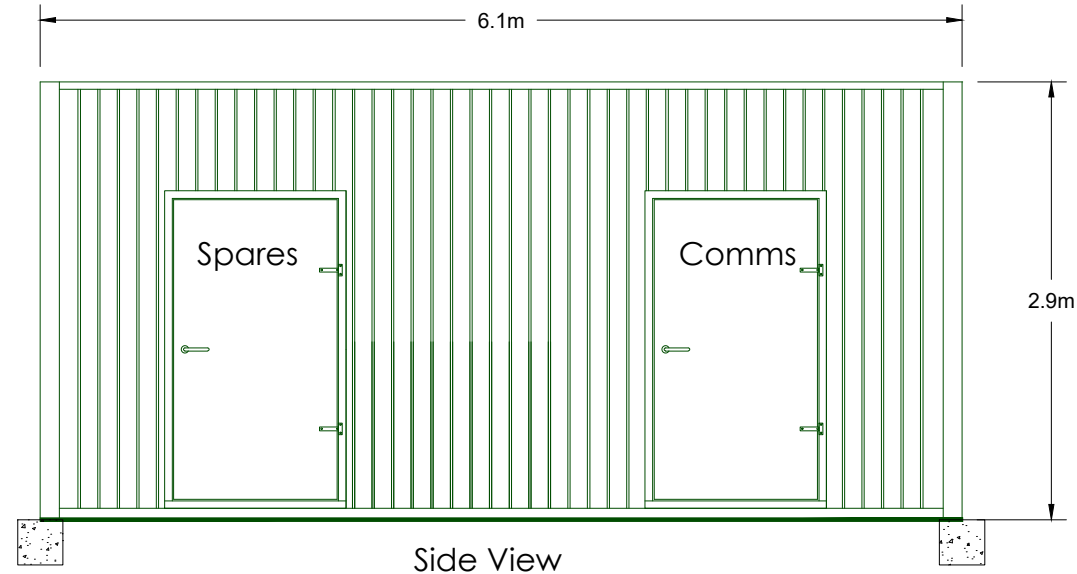
Title
Figure 4.8 Typical Welfare Container

Scale 1:50 @A3

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Title
Figure 4.9 Typical Spares and Comms

Scale 1:50 @A3

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