

A specialist energy consultancy

Alternative Site Assessment

Fyrish BESS

Field Fyrish Ltd

16719-008 19 February 2025

COMMERCIAL IN CONFIDENCE



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Document Control

| Revision | Status | Prepared by | Checked by | Approved by | Date |
|----------|-----------------|-------------|------------|-------------|------------|
| D2 | DRAFT | КВ | SCH | BP | 03/02/2025 |
| RO | FIRST ISSUE | LS | SCH | BP | 05/02/2025 |
| R1 | CLIENT COMMENTS | КВ | SCH | BP | 18/02/2025 |
| R2 | FINAL ISSUE | КВ | SCH | BP | 19/02/2025 |

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1 Introduction

1.1 Introduction

This Alternative Site Assessment report (this Assessment) has been prepared by TNEI Services Ltd (TNEI) on behalf of Field Fyrish Ltd (the Applicant), to accompany an application for consent under Section 36 of the Electricity Act 1989 (the Electricity Act) (the S36 Application) and associated deemed planning permission for the construction and operation of a Battery Energy Storage System (BESS) and associated infrastructure, with a generating capacity of up to 200 megawatts (MW) (the Proposed Development) to be located on land 650 m south of Fyrish Substation, Alness, IV17 0XH (the Site).

1.2 The Applicant

The Applicant is a subsidiary of Virmati Energy Ltd (Field). Field is developing, building, and optimising the grid-scale energy infrastructure required to facilitate the transition to Net Zero. Field focuses on BESS in the UK and Europe, to create a more reliable, flexible and greener grid and to facilitate the scaling of renewables such as wind and solar. The Applicant currently has three operational BESS sites in Oldham, Gerrards Cross and Newport, with a further three sites under construction, and a further 4.5 GWh in the pipeline for development or in exclusivity with partners across the UK and Europe. Field is a committed and responsible developer for the long term, as it develops, owns, and operates its BESS sites throughout their entire lifecycles.

1.3 The Proposed Development

The Applicant is seeking planning permission for the construction and operation of a BESS development with a storage capacity of up to 200 MW. The Proposed Development will help to achieve Net Zero in Scotland by increasing the stability of the electricity grid and the amount of renewable energy that can be delivered to the grid network. The Proposed Development would store electricity and provide flexibility to the grid. It will not generate its own electricity generate any greenhouse gas emissions during operation, however it will store electricity generated from renewable energy sources when supply exceeds demand, then discharge this energy during periods in which demand exceeds supply without any time lag. The Proposed Development would therefore maximise the potential for renewable energy developments to replace the use of fossil fuels.

The Proposed Development will comprise a Battery Energy Storage System (BESS) with a storage capacity of up to 200 MW along with associated infrastructure, earthworks, drainage, access, ancillary works and landscape and biodiversity enhancements. This equipment would be sited on a levelled and stoned platform, with appropriate surface water drainage, with the battery compound enclosed by suitable security fencing.

1.4 Purpose of this Report

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Policy 5 of the NPF4 states, amongst other things, that *"development proposals on prime agricultural land... will only be supported where it is for:*

- *i.* Essential infrastructure and there is a specific locational need and no other suitable site; [...]
- *iv.* The generation of energy from renewable energy sources or the extraction of minerals and there is secure provision for restoration; and

In all of the above exceptions, the layout and design of the proposal minimises the amount of protected land that is required."



The NPF4 Annex 4 'Glossary of definitions' identifies BESS developments as being essential infrastructure, and as detailed further below, there is a locational need for a BESS development to be located within a 2 km radius of a grid connection point. BESS infrastructure can also be seen as an extension to renewable energy generation, as it helps bolster the deployment of renewable energy projects while limiting curtailment and providing grid stability services.

The total Site area is 53.5 hectares (ha), with only 2.8 ha (5.2%) classified as Prime Agricultural Land (Class 3.1). This Assessment aims to identify potential developable sites within the 2 km search area that could be suitable for the Proposed Development. In doing so, this Assessment aims to provide a shortlist of potential sites, identify any constraints associated with the sites and present sufficient reasoning as to why the Site has been chosen for the Proposed Development and is considered suitable.



2 Relevant Planning Policy and Legislation

2.1 Planning Policies

This Assessment has been prepared in accordance with local and national planning policy. The planning policy and guidance most relevant to the consideration of alternative sites with regard to this Assessment is considered to comprise the following:

- The National Planning Framework (4th Iteration) (NPF4);
- The Highland-wide Local Development Plan (2012) (HwLDP); and
- The Inner Moray Firth Local Development Plan 2 (IMFLDP2).

For an in-depth assessment of the policies relevant to the Proposed Development, please refer to the Planning, Design and Access Statement submitted alongside the S36 Application (document reference: 16719-007).

2.1.1 National Planning Framework (NPF4)

The NPF4 was adopted on the 13th of February 2023, setting out strategies and policies to guide development within Scotland. The most relevant policies to consider for this Assessment are **Policy 5** (Soils) (section 2.1.1.1) and **Policy 11 (Energy)** (section 2.1.1.2).

2.1.1.1 Policy 5: Soils

As aforementioned in section 1.4, the most relevant policy to this Assessment is Policy 5: Soils, which states the following:

- *b) "Development proposals on prime agricultural land, or land of lesser quality that is culturally or locally important for primary use, as identified by the LDP, will only be supported where it is for:*
 - *i.* Essential infrastructure and there is a specific locational need and no other suitable site;
 - *iv.* The generation of energy from renewable sources or the extraction of minerals and there is a secure provision for restoration".

Policy 5 is therefore supportive of the use of prime agricultural land provided that development is essential infrastructure with a specific locational need and there is no other suitable site.

2.1.1.2 Policy 11: Energy

Policy 11 of the NPF4 is also relevant for this Assessment. The intent of this policy is to "encourage, promote and facilitate all forms of renewable development onshore and offshore. This includes energy generation, storage, new and replacement transmission and distribution infrastructure and emerging low-carbon and zero emissions technologies...".

Policy 11 e) states that a proposal would need to demonstrate how impacts are addressed within project design and through mitigation. The impacts listed include the following:

- *i. "impacts on communities and individual dwellings, including, residential amenity, visual impact, noise and shadow flicker;*
- ii. significant landscape and visual impacts, recognising that such impacts are to be expected for some forms of renewable energy. Where impacts are localised and/or appropriate design mitigation has been applied, they will generally be considered to be acceptable;



- *iii.* public access, including impact on long distance walking and cycling routes and scenic routes;
- iv. impacts on aviation and defence interests including seismological recording;
- v. impacts on telecommunications and broadcasting installations, particularly ensuring that transmission links are not compromised;
- vi. impacts on road traffic and on adjacent trunk roads, including during construction;
- vii. impacts on historic environment;
- viii. effects on hydrology, the water environment and flood risk;
- *ix. biodiversity including impacts on birds;*
- x. impacts on trees, woods and forests;
- *xi.* proposals for the decommissioning of developments, including ancillary infrastructure, and site restoration;
- *xii.* the quality of site restoration plans including the measures in place to safeguard or guarantee availability of finances to effectively implement those plans; and
- xiii. cumulative impacts."

The impacts listed above have therefore been considered within this Assessment.

2.1.2 Highland-Wide Local Development Plan (HwLDP)

As the Proposed Development is to be wholly situated within THC's administrative area, the Local Development Plan (LDP) for the Site is the Highland-wide Local Development Plan (HwLDP). The HwLDP was adopted on the 5th of April 2012 and sets out the overarching spatial planning policy for The Highland Council (THC) administrative area. It should be noted that a new single Highland Local Development Plan (HLDP) is currently being prepared which would replace the HwLDP and all three area Local Development Plans including the Inner Moray Firth Local Development Plan 2 (IMFLDP2).

The key HwLDP policies relevant to this Assessment are **Policy 67: Renewable Energy Developments** (section 2.1.2.1), **Policy 28: Sustainable Design** (section 2.1.2.2), and **Policy 55: Peat and Soils** (section 2.1.2.3).

2.1.2.1 Policy 67: Renewable Energy Developments

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Policy 67 of the HwLDP sets out THC's support in principle for renewable energy developments. This policy states that THC are in support of renewable energy development proposals which do not generate significant adverse impacts on the environment (individually and cumulatively), taking into account appropriate mitigation measures. Environmental considerations are listed as follows:

- *"natural, built and cultural heritage features;*
- species and habitats;
- visual impact and impact on the landscape character of the surrounding area (the design and location of the proposal should reflect the scale and character of the landscape and seek to minimise landscape and visual impact, subject to any other considerations);
- amenity at sensitive locations, including residential properties, work places and recognised visitor sites (in or out with a settlement boundary);
- the safety and amenity of any regularly occupied buildings and the grounds that they occupy having regard to visual intrusion or the likely effect of noise generation;
- ground water, surface water (including water supply), aquatic ecosystems and fisheries;



- the safe use of airport, defence or emergency service operations, including flight activity, navigation and surveillance systems and associated infrastructure, or on aircraft flight paths or MoD low-flying areas;
- other communications installations or the quality of radio or TV reception;
- the amenity of users of any Core Path or other established public access for walking, cycling or horse riding;
- tourism and recreation interests;
- land and water-based traffic and transport interests."

2.1.2.2 Policy 28: Sustainable Design

Policy 28 states the following:

"Proposed developments will be assessed on the extent to which they:

• ...impact on non-renewable resources such as mineral deposits of potential commercial value, prime quality agricultural land, or approved routes for road and rail links...".

The Proposed Development will therefore be assessed against the above criterion by THC to determine that no significant impact is generated. Should a proposal be judged as *"significantly detrimental"*, the development will not be supported.

2.1.2.3 Policy 55: Peat and Soils

Policy 55 states that *"Development proposals should demonstrate how they have avoided unnecessary disturbance, degradation or erosion of peat and soils".*

Further, section 20.15: Crofting and Agriculture of the HwLDP states that *"Agricultural land will be protected in line with Scottish Planning Policy"*. See section 2.1.1.1 above.

The Proposed Development will ensure that underlying agricultural soils are reinstated during the decommissioning and restoration process in order to restore the Site back to its original use.

2.1.3 Inner Moray Firth Local Development Plan 2 (IMFLDP2)

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THC also has three area LDPs across the administrative area. The relevant area LDP for the Proposed Development is the Inner Moray Firth Local Development Plan 2 (IMFLDP2). The IMFLDP2 was adopted on the 27th of June 2024 and aims to deliver defined, positive outcomes for the environment, employment, communities and connectivity. One of the key overarching aims to achieve this is to tackle the climate and ecological emergency. There are no key relevant policies outlined within IMFLDP2, therefore is not discussed further.



3 Methodology

3.1 Overview

This section sets out the methodology used to search for potential, feasible and economically viable sites to accommodate the Proposed Development. Section 3.3 details the search area and key search parameters utilised for this Assessment. Section 4 comprises an appraisal of each potential site against the search parameters, providing a justification as to why they are or are not suitable for the Proposed Development.

3.2 Search Area

In order for a BESS to support network grid stability, as well as help manage the ebbs and flows of renewable energy supply and electricity demand, it requires a connection to the national grid. However, securing a grid connection in the UK is currently very challenging due to the highly constrained national grid network. A BESS development requires both an import and export connection to operate effectively on the grid network.

The UK's current national grid has located key generation assets (coal, gas, nuclear) and transmission cables to serve areas of high energy demand with commensurate supply. In contrast, renewable generation is located to maximise optimal weather conditions such as high wind locations in northern Scotland or in the North Sea. As a result, it is difficult to get the power where it is needed, or to maximise the use of the UK's own renewable electricity generation. BESS located in areas where there is a large amount of renewable energy generators, such as the Proposed Development, therefore play a vital role in decarbonising the energy sector by maximising the efficiency of existing renewable energy generators, whilst maintaining reliable energy security for consumers.

NESO currently pays renewable generators to turn off supply in Scotland, to prevent an overload of the system, and simultaneously instructs fast response generators (normally gas power plants) in areas of high consumption to switch on to increase supply. This results in both increased costs to consumers and undermines efforts to transition to a net-zero energy system with curtailment costs forecast to rise as high as £3.5 billion¹ by 2030 – equivalent to £200 in additional costs to annual household bills.

In response to the transmission challenges affecting Great Britain's transmission network, SSE², National Grid and the National Energy System Operator³ are planning £70bn+ of major investment in new national transmission infrastructure across the Highlands, Scotland and wider Great Britain. Whilst new and upgraded transmission networks are essential in the transition to net zero, they are capital intensive, complex projects that will take many years to consent and deliver. By comparison, transmission connected BESS, such as the Proposed Development, are a proven technology that is comparatively capital efficient and quick to deploy, which can help smooth network constraints between the Highlands and the rest of Great Britain.

The Applicant identified the constraint and stability need of the national grid within the north of Scotland to identify a shortlist of existing substations which had both electrical capacity and minimal constructability constraints to providing a new connection. Fyrish substation was identified as an area where the Proposed Development can support the Transmission Operator to manage network

²SSE, 2024 https://www.ssen-transmission.co.uk/projects/2030-projects/

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³NESO, 2024 https://www.neso.energy/publications/beyond-2030



¹Carbon Tracker, 2023 https://carbontracker.org/britain-wastes-enough-wind-generation-to-power-1-million-homes/

constraints by minimising curtailment and maximising the benefits of current and future renewable energy generation in Northern Scotland.

The Applicant subsequently accepted a grid connection from SSEN at Fyrish Substation as there is capacity at this grid connection point to support grid stabilising infrastructure. The availability of grid connection points with sufficient capacity is a key constraint to the deployment of renewable energy schemes, therefore the location of BESS developments is contingent on the location of these points of connection. Therefore, a key constraint when identifying potential sites for this Assessment, is the proximity of a site to the Fyrish Substation, the grid connection point for the Proposed Development.

It is imperative for BESS infrastructure, such as the Proposed Development, to be situated in close proximity to the grid connection point. Lengthy transmission cables result in increased transmission losses (energy lost as heat through the cables) and significant increases in cable costs; this results in a more costly electricity grid to operate, with additional costs ultimately passed on to the consumer. Furthermore, lengthy transmission cables also result in greater environmental impacts. As a result, a 2 km radius is employed to identify potential sites around a substation.

Both the LDP and NPF4 offer support for renewable energy and battery energy storage. As such, it is not deemed necessary to explore further grid connection points beyond the secured connection point at Fyrish Substation. Figure 3.1 shows the location of Fyrish Substation, including a 2 km search area around it.





3.3 Constraints Mapping

A constraints map has been produced to facilitate this Assessment which illustrates the key environmental and physical constraints within the search area (Figure 3.2).

Initially, within the 2 km search area from the substation, any statutory and environmental designations are identified on the constraints map; including ancient woodland, Special protection areas, Sites of Special Scientific Interest, Scheduled Monuments, residential properties and Garden and Designed Landscapes. Any potential sites within the designations were excluded as unsuitable as a first step. Figure 3.2 illustrates the constraints map below.

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3.4 Search Parameters

There are a number of aspects to be considered when identifying a potential site for a BESS development. One of the key parameters to consider within this Assessment is agricultural land classification to determine if there is a suitable potential site which does not use any prime agricultural land.

Following the exclusion of the designated potential sites, the further search parameters also considered within this Assessment include the following:

- Size, shape and topography of the land. The land on which the Proposed Development can be located is required to be larger than 10 ha; although BESS are relatively compact, the site area also needs to incorporate biodiversity and landscape enhancements, screening measures, along with being able to accommodate other associated infrastructure such as access and internal tracks, rainwater attenuation pond, bunds, security and acoustic fencing, etc.
- Environmental factors;
 - Landscape setting and value;
 - Residential, noise and visual amenity;
 - Ecological and ornithological value;
 - Opportunities for biodiversity and landscape enhancements;
 - Forestry and Woodlands;
 - Cultural heritage and archaeological value;
 - Flood risk areas;
 - Drainage requirements; and
 - Access requirements.
- Nearby developments, such as renewables or residential developments;
- Existing infrastructure, such as underground or overhead cables, railways;
- Land ownership negotiations; and
- LDP allocations, such as for economic or residential development.

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Each potential site has been given a RAG rating following the interpretation of their constraints, as per Table 3.1 below.

Table 3.1 RAG Ratings and their meaning.

| RAG Rank | Interpretation |
|----------|---|
| | Site has significant constraints |
| | Site has constraints which could be overcome by mitigation and/or design measures |
| | Site is strongly suitable |

4 Assessment of Potential Sites

4.1 Overview

This section of the Assessment identifies the potential sites where the Proposed Development could be located, as illustrated within Figure 4.1 below. The suitability of each potential site is assessed within section 4.2 below against the search parameters outlined in section 3.4.

4.2 Potential Sites

Figure 4.1 below illustrates all identified potential sites within the 2 km search area. A total of 15 potential sites were identified.

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4.2.1 Potential Site A

Table 4.1 Potential Site A Appraisal

Potential Site A

Site Area: 31.8 ha Topography: N-S c. 20 m AOD decline Agricultural Land Classification: Class 3.2 Proximity to nearest Property: Onsite Proximity to nearest Environmental Designation: Adjacent to site Proximity to nearest Woodland: Adjacent to site Flood Risk: No risk Access: Requires upgrade

Proximity to Substation: 0.75 km N

Site A was selected as a potential site due to being situated approximately 0.75 km north of Fyrish Substation. Additionally, site A comprises a combination of agricultural land capabilities, with the majority of the site comprising Class 3.2 agricultural land, followed by smaller areas of Class 4.1 (W), Class 5.2 (S), and Class 3.1 (SE). Class 3.1 is classified as prime agricultural land, however due to the small area this comprises, it could be avoided during the site design process of the Proposed Development.

There are two existing overhead lines (OHLs) crossing the site in a northeast to southwest direction. The OHLs comprise a design constraint, but these could likely be avoided in the site design process.

However, there are several downsides to site A. Firstly, in terms of ecology and ornithology, the site lies adjacent to the Novar Special Protection Area (SPA) and Important Bird Area (IBA) as well as long-established woodland (of plantation origin), indicating that protected and/or priority species of birds and bats may be impacted by the Proposed Development. Due to the size of the site, a suitable stand-off distance between the BESS compound and the designation could be incorporated within the site's design, such as positioning the Proposed Development towards the southeast of the site. With regards to the historic environment, there is a Class C Listed Building present on site suggesting potential significant impacts on the setting of this asset, unless mitigation through site design was incorporated such as positioning the Proposed Development within the south of the site. However, due to the steep topography of the south of the site, this would require a significant cut and fill operation.

There is an existing site access off Boath Road, however this is very narrow and would not be suitable for the movement of HGVs at present and would require upgrading.

The 'Fyrish Path' Core Path is situated to the northwest of site A and users of this path could therefore experience views of the Proposed Development on this site. Due to the intervening long-established plantation, views are not likely to be significant, subject to the positioning of the Proposed Development.

Due to the potential significant impacts identified with regards to ecology, ornithology and cultural heritage, site A was not the most suitable site to host the Proposed Development.

RAG rating

4.2.2 Potential Site B

Table 4.2 Potential Site B Appraisal

Potential Site B

Proximity to Substation: 1 km NE Site Area: 24.9 ha Topography: N-S c. 25 m AOD decline Agricultural Land Classification: Class 3.2 Proximity to nearest Property: Adjacent to site Proximity to nearest Environmental Designation: Adjacent to site Proximity to nearest Woodland: Adjacent to site Flood Risk: Medium surface water flood risk N Access: Requires upgrade

The site lies adjacent to the Novar SPA and IBA, as well as long-established woodland (of plantation origin) and therefore has the potential to generate significant impacts on ecology, ornithology, and the integrity of the SPA. Due to the size of the site, the site design process has the potential to ensure a suitable stand-off distance from the SPA and IBA.

In terms of agricultural land, the majority of the site is situated on Class 3.2 agricultural land, with a smaller portion of Class 3.1 within the southern part of the site. As one of the existing accesses is situated to the south of the site, prime agricultural land would not be able to be avoided for access upgrades such as for the construction of internal access tracks. There is a second site access option which is situated in closer proximity to the residential properties which lie adjacent to the eastern site boundary. Should this access be utilised, there is the potential for significant noise impacts during the construction phase of the Proposed Development.

Furthermore, due to the presence of prime agricultural land within the south of the site, the Proposed Development would need to be located within the north of the site. However, due to the identification of a medium risk of surface water flooding within the northern part of the site, as well as being situated in closer proximity to the long-established woodland (of plantation origin), SPA and IBA, positioning the Proposed Development here would also not be feasible.

As a result of the complications with siting the Proposed Development to avoid impacts on prime agricultural land, flood risk, ecology and ornithology, this site was not taken forward.

RAG rating

4.2.4 Potential Site C

Table 4.3 Potential Site C Appraisal

Potential Site C

Proximity to Substation: 865 m NE Site Area: 16.6 ha Topography: N-S c. 20 m AOD decline Agricultural Land Classification: Class 3.1 Proximity to nearest Property: Adjacent to site Proximity to nearest Environmental Designation: Adjacent to site Proximity to nearest Woodland: Adjacent to site Flood Risk: Medium surface water risk NE Access: Requires upgrade

Site C is situated 865 m northeast of Fyrish Substation and is therefore ideally positioned for a grid connection into the substation however there is and an Overhead Line (OHL) that crosses the site from east to west which would pose a design constraint.

There are multiple existing site entrances which could be utilised for the Proposed Development, removing the need to construct a new site access. Intervening woodland between the site and the settlement of Alness would screen potential views, resulting in minimal impacts on visual amenity.

However, the site in its entirety comprises of Class 3.1 prime agricultural land, with no opportunity of avoidance of these soils. Site C was therefore not considered suitable for the Proposed Development.

RAG rating

4.2.6 Potential Site D

Table 4.4 Potential Site D Appraisal

Site D was initially considered suitable due to the close proximity to Fyrish Substation and the good opportunity for site access from the east of the site. There is an unnamed road which runs from the southwest of the site to Fyrish Substation, providing opportunity for an underground cable with minimal impact.

The site comprises a combination of agricultural land capabilities, with a large portion of site D underlain by Class 3.1 agricultural soils which is classified as prime agricultural land. There are potential opportunities to avoid these soils through the iterative site design process, however the remaining land is not large enough to facilitate a 200 MW BESS development, as well as appropriate landscape and biodiversity enhancements, and so a moderate area of prime agricultural land would therefore be built upon.

Furthermore, the topography of the site comprises a steep north to south decline of approximately 45 m AOD, which would result in a large cut and fill operation. This could exacerbate other environmental impacts such as further increase vehicle movements and subsequent vehicle emissions during both construction and decommissioning, as well as impacting upon the character of the landscape.

As a result, the site was given an amber rating, due to just a moderate area of prime agricultural land which would be built upon but also considering the large cut and fill operation which would be required.

RAG rating

4.2.8 Potential Site E

Table 4.5 Potential Site E Appraisal

RAG rating

4.2.10 Potential Site F

Table 4.6 Potential Site F Appraisal

Potential Site F

Site Area: 10.8 ha Topography: N-S c. 14 m AOD decline Agricultural Land Classification: Class 3.1 Proximity to nearest Property: Onsite Proximity to nearest Environmental Designation: Adjacent to site Proximity to nearest Woodland: Adjacent to site Flood Risk: High risk of surface water and river flooding

Proximity to Substation: 590 m E

Access: Requires upgrade

Site F is located east of the B9176 and west of 'The Corkscrew' road to the northwest of Alness, comprising approximately 10.8 ha. Site F is one of the smaller potential sites considered within this Assessment. A watercourse crosses the entire width of the site from the southeast to the northwest, reducing the potential developable area, as well as introducing difficulty with site access from one half of the site to the other. The site itself has a high risk of both surface water and river flooding which reduce the viable developable area. As a result, the site was not considered suitable for the Proposed Development.

RAG rating

4.2.12 Potential Site G

Table 4.7 Potential Site G Appraisal

RAG rating

4.2.14 Potential Site H

Table 4.8 Potential Site H Appraisal

Potential Site H

Topography: N-S c. 25 m AOD decline Agricultural Land Classification: Class 3.2 Proximity to nearest Property: Adjacent to site Proximity to nearest Environmental Designation: Adjacent to site Proximity to nearest Woodland: Adjacent to site Flood Risk: Low to medium surface water flood risk W, SE

Proximity to Substation: 540 m SE Site Area: 19.2 ha

Access: Requires upgrade

Site H is situated approximately 500 m southeast of Fyrish Substation and therefore placed in a good location for a grid connection. With three potential site accesses along the southern boundary of the site which can be easily accessed via the B9176, it also places site H in a good location for construction traffic. Further, the site is wholly underlain by Class 3.2 agricultural soils.

There are two Class B Listed Buildings located in close proximity of site H, approximately 530 m and 630 m southeast of the site. Due to the close proximity of these Listed Buildings from site H, and the relatively flat intervening topography, indirect impacts on the setting of these assets may occur, however these could be mitigated to an appropriate level which is not significant with the implementation of screening measures within the southeast of the site.

The closest residential property is situated adjacent to the southern site boundary with further properties situated within Alness approximately 350 m east of the site. The widest part of the site (N-S) is approximately 500 m, suggesting that the Proposed Development could be sited at an appropriate stand-off distance from the property adjacent to the site, with the addition of appropriate mitigation measures in the form of planting to provide intervening screening. However, this would push the Proposed Development closer to the B9176 which would generate adverse visual impacts for road users. Should the Proposed Development be sited more centrally within the site, planting would therefore be required along all boundaries of the Proposed Development in order to minimise views from the adjacent property, Alness to the east, and the B9176. Due to the openness of the site, potential significant impacts upon the character of the wider landscape may also be generated.

Although potential impacts upon the setting of nearby historic assets could be mitigated to an appropriate level, mitigating impacts upon visual amenity and the wider landscape would potentially be difficult to achieve. As a result, the site was given an amber rating, due to the difficulty that would be faced integrating the Proposed Development within the wider, open landscape.

RAG rating

4.2.15 Potential Site I

Table 4.9 Potential Site I Appraisal

Potential Site I

Proximity to Substation: 900 m SE Site Area: 44.1 ha Topography: N-S c. 20 m AOD decline Agricultural Land Classification: Class 3.2 Proximity to nearest Property: Adjacent to site Proximity to nearest Environmental Designation: 380 m S Proximity to nearest Woodland: 280 m N Flood Risk: Medium to high surface water flood risk Access: Requires upgrade

Site I is located in close proximity to the Cromarty Firth SPA, IBA, SSSI and RAMSAR site (approximately 380 m south of site I), and so indirect impacts cannot be ruled out without further assessments.

Site I is well positioned in relation to Fyrish Substation, as well as comprising a large enough area to allow for strategic siting of the Proposed Development within the site. Small areas of Class 2 agricultural soils are present within the east and the south of the site, however due to the size of the site, these areas could be avoided during the site design process.

Although the size of the site is beneficial for strategic site design, the vast openness of the site would likely generate significant impacts upon visual amenity and the wider landscape's character. Significant visual impacts are likely from the Core Path, which runs along the southern site boundary, and nearby residential properties to the east of the site. Consequently, large amounts of new planting for screening would be required along all boundaries of the Proposed Development in an attempt to mitigate significant visual impacts and to integrate the Proposed Development within the wider landscape. It is unlikely, however, that mitigation would result in an acceptable level of landscape and visual impact.

Additionally, due to the openness of the site, impacts may be generated on the setting of nearby historic assets. The site is situated approximately 10 m west of a Grade B Listed Building, with a further two also in close proximity to the site. Due to the relatively flat topography and close proximity to the site, significant impacts upon the setting of these assets are likely to occur. Fyrish Monument, a further Listed Building within the wider landscape, is situated approximately 2.6 km west of the site. Due to the openness of site I, and the altitude of Fyrish Monument, some views may be experienced from Fyrish Monument, which could not be mitigated by planting as the views are being experienced at height.

As a result of the openness of the site and the subsequent likely significant impacts on visual amenity, the wider landscape, and cultural heritage, site I was not considered to be suitable for the Proposed Development.

RAG rating

4.2.16 Potential Site J

Table 4.10 Potential Site J Appraisal

Potential Site J

Proximity to Substation: 1.55 km S Site Area: 16.7 ha Topography: N-S c. 6 m AOD decline Agricultural Land Classification: Class 2 Proximity to nearest Property: 20 m W Proximity to nearest Designation: 65 m N Proximity to nearest Woodland: Onsite Flood Risk: High risk of river and surface water flooding Access: Requires upgrade

Site J comprises approximately 16.7 ha of land underlain predominantly by Classes 2 and 3.1 prime agricultural land, with small areas of Classes 3.2 and 4.1 on site. A relatively large area of prime agricultural land would therefore be required to be developed on to accommodate a 200 MW BESS development.

The site is situated less than 65 m north of the Cromarty Firth SPA, IBA, SSSI and RAMSAR, indicating that significant impacts on protected species and the integrity of the designation could potentially be generated as a result of the Proposed Development.

The site is situated immediately south of a railway line which introduces significant challenges with routeing and installation of the proposed cable route.

Furthermore the 'Ballachraggan cycleway' Core Path runs adjacently parallel to the site, indicating the potential for adverse impact on visual amenity on the users of this Core Path. Additionally, large areas of the sites are at a high risk of both river and surface water flooding which could not be avoided during the site design process.

As a result of the potential significant impacts on the Cromarty Firth designation, 'Ballachraggan cycleway', and on flood risk, the site was not considered suitable for the Proposed Development.

RAG rating

4.2.18 Potential Site K

Table 4.11 Potential Site K Appraisal

While situated in a fairly open part of the landscape, site K is positioned further away from the settlement of Alness and is therefore unlikely to generate visual impacts on nearby residential properties.

There are two existing entrances for this site, one of which is located towards the southeast and the other towards the northwest. However, use of southeastern entrance is not feasible as construction of any internal access tracks would impact an area of Class 2 prime agricultural land. The 'Ballachraggan cycleway' Core Path and the B817 run adjacent to the southern site boundary, and the B9176 runs adjacent to the western site boundary. Due to the openness of the site and the lack of dense hedgerow or tree line along these boundaries, significant visual impacts on the users of these amenities are likely in the absence of mitigation and it would be difficult to mitigate such views.

Additionally, there is an existing drain which crosses the centre of the site in a northwest to southeast direction which would increase difficulty for construction traffic to manoeuvre around the site and therefore decreases the potential developable area which could be utilised for the Proposed Development. The site is also subject to a medium to high risk of surface water flooding.

As a result of landscape, visual, and flood risk constraints, site K was not considered suitable for the Proposed Development.

RAG rating

4.2.20 Potential Site L

Table 4.12 Potential Site L Appraisal

Potential Site L

Proximity to Substation: 1.4 km SW Site Area: 10.9 ha Topography: N-S c. 10 m AOD decline Agricultural Land Classification: Class 3.1 Proximity to nearest Property: Adjacent to site Proximity to nearest Designation: Adjacent to site Proximity to nearest Woodland: Adjacent to site Flood Risk: High risk of surface water flooding W Access: Requires upgrade

Long-established woodland (of plantation origin) has been identified along the northern, southern and western boundaries of the site, suggesting that potential significant impacts may occur on ecology and ornithology, particularly due to the size of the site as this would create difficulty in providing a suitable stand-off distance from the site boundaries which are bordered by woodland. This woodland does, however, provide natural screening between the site and the Core Path identified approximately 190 m to the southeast of the site. The woodland would act to encompass the site, shielding the Proposed Development from generating significant impacts on the wider landscape. There are a few identified residential properties to the northwest and southwest of the site which unfortunately are not screened by this existing woodland.

This site is situated approximately 56 m east of the Novar Garden and Designed Landscape. Intervening woodland along the western boundary of site L would provide some screening to the Proposed Development. The woodland along the western boundary is, however, relatively sparse, which would allow for visibility between the Proposed Development and the designation, resulting in indirect impacts upon the setting of the Novar GDL.

Furthermore, site L is almost wholly underlain by Class 3.1 agricultural soils and therefore un-avoidable direct impacts on prime agricultural land would arise as a result of the Proposed Development. All infrastructure would be built upon prime agricultural land. Consequently, site L was not considered suitable for the Proposed Development.

RAG rating

4.2.22 Potential Site M

Table 4.13 Potential Site M Appraisal

Potential Site M

Proximity to Substation: 650 m S Site Area: 17.9 ha Topography: N-S c. 25 m AOD decline Agricultural Land Classification: Class 3.2 Proximity to nearest Property: Adjacent to site Proximity to nearest Designation: Adjacent to site Proximity to nearest Woodland: Adjacent to site Flood Risk: Medium to high surface water flood risk W Access: Requires new access

Site M comprises approximately 17.9 ha of land, with the majority of the site falling within Class 3.2 agricultural land, with the remainder of the site underlain by a combination of Class 3.1 and 5.3 soils. The site comprises approximately of 2.8 ha of Class 3.1 prime agricultural land within the northeast corner of the site. Through the iterative design process, this area has been avoided as far as reasonably practicable for the size of the Proposed Development as well as in consideration of other environmental factors including noise and visual amenity on the closest nearby residential properties such as Culcraggie Lodge, which is situated approximately 125 m northeast of the site. Appendix A illustrates the Site Layout Plan submitted alongside the S36 Application. Should the infrastructure be moved any further east, greater noise and visual impacts would be experienced by Culcraggie Lodge. Clashnabuiac Farm was not considered as a sensitive receptor within this Assessment as this property would be subsumed as an operational building within the site.

There is a suitable location along the eastern site boundary for a new site access to be proposed directly off of the B9176 to ensure that there are two site access roads for the site. This would generate minimal environmental disturbance and would comply with the requirements of fire safety guidance.

There is an extensive woodland to the north of the site, characterised as long-established plantation, helping to shield views of the site from Fyrish Monument and Fyrish Path (Core Path RC05.01), minimising the potential impact on the setting of this Listed Building. The site is situated approximately 1 km west of the nearest settlement, Alness, therefore suggesting that no significant impacts on visual amenity will occur for these residents. Furthermore, as the site is set back from the road, the Proposed Development is unlikely to generate significant impacts upon the wider landscape, and there is also the possibility for appropriate and effective screening to be incorporated within the site design process.

The area of identified plantation woodland situated behind the site potentially provides habitats for protected or priority species. Due to the size of the site, a suitable stand-off distance is possible in between the BESS infrastructure and the woodland, ensuring no direct significant effects are likely to occur, with minimal mitigation required, such as a species protection plan to ensure that best practice construction measures are implemented.

According to the SEPA Flood Maps, the site indicates a few small, localised areas of a medium to high surface water flood risk within the west of the site. As these areas a highly localised, the BESS development area can be strategically sited to avoid areas with surface water flooding risk and site design can implement appropriate mitigation measures such as an effective drainage strategy to mitigate potential impacts upon flood risk and drainage as a result of the Proposed Development.

In conclusion, identified environmental impacts can be appropriately and effectively mitigated without difficulty as this site allows for avoidance of such impacts in the first instance. As a result, site M was considered suitable for the Proposed Development.

RAG rating

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4.2.23 Potential Site N

Table 4.14 Potential Site N Appraisal

Potential Site N

Proximity to Substation: 1.1 km SW Site Area: 19.5 ha Topography: N-S c. 15 m AOD decline Agricultural Land Classification: Class 3.1 Proximity to nearest Property: 80 m S Proximity to nearest Designation: Adjacent to site Proximity to nearest Woodland: Adjacent to site Flood Risk: Medium to high surface water flood risk S Access: Requires upgrade

Site N comprises approximately 19.5 ha and is well screened to the north and the south of the site, shielding views from both Fyrish Monument, lying approximately 1.7 km northwest of the site, five residential properties to the south (one property approximately 80 m south, and four approximately 270 m south of the site), B817 and B9176 road users, and users of the Evanton – Skiach Cycleway. The existing screening along the southwestern boundary of the site is, however, sparse, allowing visibility between the site and the adjacent Novar GDL. The Proposed Development would subsequently generate indirect impacts upon the setting of this designation, particularly in the absence of any further planting.

The topography of the site gently slopes from the north to the south of the site, declining in elevation of approximately 15 m AOD and so relatively limited cut and fill would be required to level out the site prior to the construction of the Proposed Development.

On the other hand, Land Capability Assessment data identifies that the majority of the site is classed as prime agricultural land as it falls under Class 3.1. To the east and the west there are small sections of Classes of 5.3 and 3.2 respectively. Due to the expanse of prime agricultural land in this site, it would be very difficult to avoid this completely through the strategic placing of infrastructure, meaning that the majority of the infrastructure would be placed on prime agricultural land.

Flood risk is also a concern for site N. The SEPA Flood Maps indicate that there is a medium to high risk of surface water flooding within a large portion of the south of the site, indicating that the Proposed Development would need to be sited within the northern portion of the site. As a result, appropriate standoff distances from the adjacent woodland may be difficult to achieve and subsequently incorporate within the site design.

As a result of the aforementioned environmental constraints, site N was not considered suitable for the Proposed Development.

RAG rating

4.2.24 Potential Site O

Table 4.15 Potential Site O Appraisal

Potential Site O

Proximity to Substation: 860 m SW Site Area: 34 ha Topography: N-S c. 65 m AOD decline Agricultural Land Classification: Class 3.1 Proximity to nearest Property: Onsite Proximity to nearest Designation: Adjacent to site Proximity to nearest Woodland: Adjacent to site Flood Risk: No risk Access: Requires upgrade

Site O is situated wholly on Class 3.1 prime agricultural suggesting that it is not the most suitable for the Proposed Development. There are two OHLs identified across the site in a southwest to northeast direction towards Fyrish Substation (the grid connection point) which pose a design constraint on the site. The topography of the site is also not suitable for the Proposed Development. The elevation of the site in the north is approximately 140 m AOD which falls to approximately 75 m AOD in the south of the site. There is a steeper elevation decline (40 m AOD) within the northern field within the site, as opposed to the more southern field (25 m AOD), suggesting that the Proposed Development would need to be located within this southern field to minimise the cut and fill operation. Removing the need for cut and fill or minimising the amount that takes place is of high importance with regards to both minimising environmental impacts on soils and surrounding hydrology, as well as ensuring that a development is economically viable.

However, if the Proposed Development was placed towards the south of the site, it would then be situated adjacent to the Novar GDL which could potentially generate significant impacts on the setting of this designation in absence of appropriate mitigation measures. Further, the positioning of the Proposed Development within the south of the site may also result in views of the Proposed Development from Fyrish Monument.

Access is another key consideration during site selection. It can be advantageous for a development to be located in close proximity to major road networks for ease of construction traffic movement. It is also advantageous for a development to be located on land with an existing access on to the site for minimising the environmental impacts in the creation of a new access. Access to site O could be obtained from the B817 by turning down a narrow track leading to the identified residential property, travelling approximately 1.67 km to reach the site. Due to the size and nature of the track, 1.67 km would be required to be upgraded including widening of the track and construction of passing places.

As a result of the potential significant impacts on access, heritage and the large amounts of cut and fill which may be required, site O was not considered suitable for the Proposed Development.

RAG rating

4.3 Shortlist of Sites

Following appraisal of all identified potential sites, a shortlist of sites was produced for those rated either amber or green. Those sites are listed as follows:

- Site D (RAG rating Amber);
- Site H (RAG rating Amber); and
- Site M (RAG rating Green).

The shortlisted sites were deemed suitable with regards to size, proximity to Fyrish Substation (the grid connection point), and site access. Site D is positioned in very close proximity to Fyrish Substation which would benefit the Proposed Development due to the requirement of a shorter cable route, however the topography of the site was very steep, which would result in a large cut and fill operation, subsequently requiring further vehicle movements. Furthermore, a moderately sized area of prime agricultural land would be built upon. As a result, site D was deemed less suitable for the Proposed Development than sites H and M.

The location of site M allows for various avoidance and mitigation measures to be integrated within the design of the Proposed Development, due to the relatively flat topography compared to site D and the positioning at the foot of Fyrish Hill, meaning that the site is not situated within an open part of the landscape. These factors would allow for the Proposed Development to integrate within the wider landscape, whilst minimising the impacts generated on the landscape character. Furthermore, flood risk areas identified on site are small and localised, meaning the flood risk and drainage would be easily managed by the implementation of a sustainable surface water drainage scheme. Site M comprises 2.8 ha (out of 17.9 ha) of Class 3.1 prime agricultural which is situated within the very northwestern corner of the site, therefore allowing for the majority of this area to be avoided through the site design process.

Whilst site H does not comprise of any prime agricultural land, it was deemed less suitable for the Proposed Development than site M. One of the key reasons for this is that it is much more open, subjecting the Proposed Development to generate potential significant impacts upon the character of the landscape. Secondly, site H is situated in closer proximity to the town of Alness as opposed to site M, leading to more severe visual impacts for its' residents. On balance, the presence of a small area of prime agricultural land was deemed appropriate in order to be able to mitigate landscape and visual impacts to an acceptable level, which would be difficult to achieve with site H.

Another key justification for the selection of site M, is the availability of the land. Following the process of shortlisting suitable sites, the Applicant was able to secure a landowner agreement for site M. Consequently, site M was taken forward to host the Proposed Development as a result of it being the least constrained site, as well as it being available on behalf of the landowner.

4.4 The Proposed Site

Site M was identified as the preferred site for the Proposed Development following assessment against the search parameters as set out Section 3.4 of this Assessment. Site M is:

- Suitable in regard to size, comprising 17.9 ha of relatively flat agricultural land;
- Located in close proximity to the existing Fyrish Substation;

- The least environmentally constrained;
 - Situated at a distance from settlements such as Alness;
 - Not located within an ecological, historic, or landscape designation;
 - Close proximity to the B9176 providing suitable vehicular access without significant highways works;

- The Proposed Development can be strategically sited towards the west of the Site to help mitigate noise and visual impacts on Culcraggie Lodge, whilst minimising the area of Class 3.1 prime agricultural land which is taken up by the Proposed Development.
- Has no current or proposed developments being considered by THC; and
- Has no LDP allocations associated with the site.

Overall, it was considered that any identified constraints could be effectively mitigated against through appropriate design, including careful siting within the field to minimise the area of prime agricultural land which would be built on, siting at a suitable stand-off distance from adjacent long-established woodland (of plantation origin), and by means of a well-thought-out planting scheme to minimise views from the northeast, east and the south.

The proposed Site Layout is illustrated within Appendix A. The BESS compound would be positioned relatively centrally within the Site to allow for a suitable stand-off distance from the long-established plantation woodland which borders the northern Site boundary, and the potential GWDTE within the southwest of the Site. No infrastructure associated with the Proposed Development will be constructed on the potential GWDTE area.

This location was presented at the first public consultation event at Ardross Community Centre, Ardross, IV17 0XW from 2pm to 7pm on Thursday the 3rd of September 2024. The consultation feedback was that it would be preferred if the location was at the back of the field in order to be as far from sensitive noise and visual receptors as possible such as nearby residential properties, roads and Core Paths.

Over the course of the pre-application consultation period, Field has made several changes to the Site's design as a result of stakeholder engagement, the progression of environmental studies and construction requirements. In addition to design changes, Field has also committed to the development of additional technical assessments to accompany the planning application in response to points raised during the consultation period.

These changes have included:

- Strengthening the landscape design elements including incorporating bunding within the east of the Site to screen views of the Proposed Development from Alness, informed by landscape and visual analysis and ensuring that they look natural and not man-made;
- Reduction of the overall development footprint and impact profile through the selection of a smaller candidate battery technology;
- Introduction of an acoustic barrier as fencing along the southern and eastern boundaries of the BESS compound to reduce noise impacts on surrounding noise sensitive receptors; and
- Incorporation of proposed planting within the landscape plan within the north and the west of the Site to mitigate potential views from the Novar Garden and Designed Landscape and Fyrish Monument;
- Painting the fence a recessive green colour, to help soften the BESS compound's appearance within the landscape;
- Relocation of the compound, including rearrangement of BESS containers and the site footprint to avoid the area of potential GWDTEs; and
- Inclusion of fire water storage tanks to provide water for any potential incidents.

5 Conclusion

This Alternative Site Assessment has sought to consider potential sites to accommodate the Proposed Development within the identified search area from the grid connection point at Fyrish Substation.

In order for a BESS to support network grid stability, it requires a connection to the national grid. However, securing a grid connection in the UK is currently very challenging due to the highly constrained national grid network. Furthermore, potential sites are required to be situated within a certain distance from the point of connection for the project to be feasible. As a result, a 2 km radius is employed to identify potential sites around a substation.

The Applicant has accepted a grid connection from SSEN at Fyrish Substation as there is capacity at this grid connection point to support grid stabilising infrastructure. Both the LDP and NPF4 offer support for renewable energy and battery energy storage. As such, it was not deemed necessary to explore further grid connection points beyond the secured connection point at Fyrish Substation.

Within this 2 km search radius, potential sites were then assessed against a range of key criteria including:

- Size, shape and topography of the land;
- Environmental factors;
 - Landscape setting and value;
 - Residential noise and visual amenity;
 - Ecological and ornithological value;
 - Opportunities for biodiversity and landscape enhancements;
 - Forestry and woodlands;
 - Cultural heritage and archaeological value;
 - Flood risk category;
 - Drainage requirements; and
 - Access requirements.
- Nearby developments, such as renewables or residential developments;
- Existing infrastructure, such as underground or overhead cables;
- Land ownership negotiations; and
- LDP allocations, such as for economic or residential development.

The town of Alness falls within the 2 km area of search, with a further few residential properties also present, albeit sparsely, within the search area.

The northeastern section of the search area has a steep topography, comprises of prime agricultural land and is situated in close proximity to a Class C Listed Building, and a consented battery development (22/05167/FUL) with another currently under consideration (23/05999/FUL). Although intervening woodland screens potential views from Alness, sites A, B, C, D, and E were considered less suitable for the Proposed Development either due to the large areas of prime agricultural land which could not be avoided, or due to being positioned adjacent to ecological and ornithological designations. There is potential for significant impacts upon the setting of an identified Class C Listed Building, as well as the potential for significant cumulative impacts which could arise should the Proposed Development be located near to the consented and proposed battery developments.

The town of Alness is situated 1 km southeast of Fyrish Substation with relatively flat intervening topography with some intervening existing screening along the named road 'The Corkscrew' within the west of Alness. However, there are approximately eight properties situated to the west of 'The Corkscrew' road and are therefore not subject to any existing screening from sites G, H and I. Given

the flat topography along an open agricultural landscape within sites, G, H and I, these were not considered to be the most suitable for the Proposed Development as it would be difficult to achieve an acceptable level of impact upon noise visual amenity as well as the wider landscape character.

Site J is situated at a distance from the grid connection point with an intervening railway. The site comprises predominantly of prime agricultural land, is subject to a high risk of both surface water and river flooding across large areas and is situated less than 65 m north of the Cromarty Firth SPA, IBA, SSSI and RAMSAR site. Consequently, this site was not deemed suitable for the Proposed Development.

Sites L, N, and O were also not considered suitable for the Proposed Development due to their close proximity to the Novar Garden and Designed Landscape as well as being situated almost wholly on Class 3.1 prime agricultural land.

Sites wholly or predominantly situated on prime agricultural land were deemed less suitable for the Proposed Development as there is no opportunity for avoidance of developing within these areas. However, it was also necessary to consider the other identified search parameters, including all other environmental constraints to ensure that the selected site provided a well-rounded opportunity for avoidance and mitigation of all identified potential impacts where required.

Site M was selected for the Proposed Development due to landowner agreement, proximity to Fyrish Substation, suitable road infrastructure for construction and to facilitate an underground grid connection, and site size to allow for suitable and appropriate stand-off distances from nearby woodlands and residential properties. Furthermore, site M has very localised areas of flood risk, is not in proximity to any existing renewable energy developments or existing planning applications and has the ability to avoid identified areas of prime agricultural land and to largely minimise the area of prime agricultural land which would be developed on as far as practicable through careful site design. The total site area of site M is 17.9 ha, and 4.6 ha of this is being developed for the BESS compound. There is approximately 2.8 ha of Class 3.1 prime agricultural land towards the northwestern corner of site M. The BESS compound area would intrude just approximately 1 ha of this area of this prime agricultural land, therefore greatly minimising the amount of prime agricultural land which would be developed on. The Applicant will therefore implement best practice soil protection and storage measures to ensure no significant impacts arise on these soils and to ensure the quality of the soil does not deteriorate whilst being handled and stored.

Appendix A – Proposed Site Layout

BTGBFYR01_001.1 – Site Layout Plan

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