

Greenfields Battery Energy Storage System

# EIA Non-Technical Summary

August 2024

Prepared on behalf of Enso Green Holdings X Limited



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|                 | Miles Ryan-Cummings / Erin Banks                                                                 |



# 1 Introduction

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## 1.1 Introduction

- 1.1.1 Enso Green Holdings X Limited (the Applicant) are applying for full planning permission for the construction of a Battery Energy Storage System (BESS) and substation with associated infrastructure and works (the 'Proposed Development') on land at Greenfields Farm, Thorney Edge Road, Bagnall, Stoke-On-Trent, ST9 9LA. A BESS is a rechargeable battery that can store energy from different sources and then release this energy when required.
- 1.1.2 The Proposed Development has the potential for significant environmental benefits, especially in relation to climate change. BESS are a key part of renewable electricity infrastructure which ensure that energy can be stored from renewable energy sources to cover the times when they are not generating the energy (i.e. solar energy generation only being possible during daylight hours and wind energy generation only being possible during windy conditions). The Proposed Development will reinforce the National Grid by storing renewable energy produced nearby and releasing it to the grid during periods where demand is higher than renewable energy generation. This will reduce reliance on fossil fuels which have historically been used to provide rapid response power during periods of peak energy demand. The Proposed Development will therefore positively contribute towards the UK's net zero target by 2050 and decarbonisation of the electricity grid by 2035.
- 1.1.3 This document is a Non-Technical Summary (NTS) of the Environmental Impact Assessment (EIA) undertaken as part of the planning process. The main Environmental Statement (ES) (Volume 1) and the supporting appendices (Volume 2) contain detailed information on the project and each of the environmental topics assessed.

### Environmental Assessment

- 1.1.4 EIA is a formal process by which the likely environmental effects of a project are assessed in order that positive aspects can be enhanced and negative effects that cannot be avoided are mitigated to lessen the effect. The ES reports on the findings of the EIA and sets out those areas where likely significant environmental effects have been identified and the mitigation proposed to lessen the predicted effects. It forms an important part of the planning application decision making process.
- 1.1.5 An EIA Screening Request was made to the Staffordshire Moorlands District Council (the Council) in December 2023. The purpose of this was to identify whether the Council considers the Proposed Development may result in significant environmental effects and therefore constitute EIA development. The Council consulted with statutory consultees and issued a formal EIA Screening Opinion in May 2024 finding that the Proposed Development required EIA. Based on the Screening Opinion received from the Council, the following topics were considered likely to give rise to potentially significant effects and so were included in the EIA:
- Ecology;
  - Landscape and Visual Impacts;
  - Noise and Acoustics; and,
  - Transport and Access.
- 1.1.6 Following a review of other environmental topics (accidents, fire and natural disasters; agricultural land and soils; air quality; human health; heritage and archaeology; hydrology, flood risk and drainage; and waste), no other likely significant effects were identified and so these

have not been assessed in detail in this EIA. However, these other environmental topics have been considered within Chapter 9 of the ES (Other Environmental Matters).

### **Assessment Methodology**

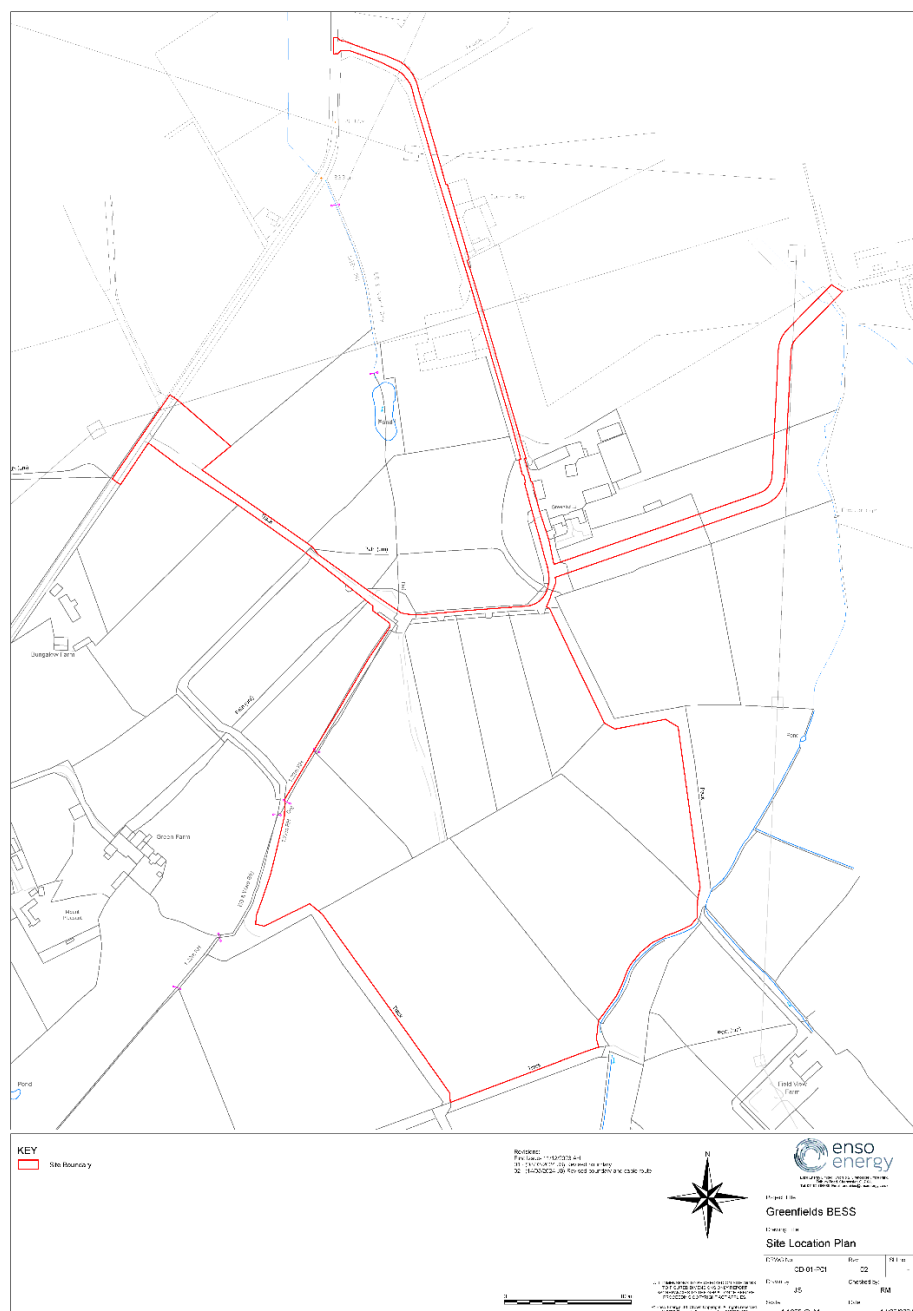
- 1.1.7 The methodology used to assess the Proposed Development is set out within Chapter 4 of the ES (Approach to assessment). Where industry standard approaches and methodologies exist these have been used to identify likely significant effects. For those topic areas where no standard approach exists, a matrix based approach has been used, which considers the sensitivity of receptors and the magnitude (scale of change) of the impact which results in the likely significance of the effect. This ensures that the effects are considered in a standard and transparent manner; the main ES sets out how the approach has been applied to each environmental topic in more detail.
- 1.1.8 The EIA project team has been led by EIA co-ordinators Savills, with input from other technical specialists within Aspect Ecology, LDA Design; Inacoustic and Transport Planning Associates.

## 2 Site and Local Context

### 2.1 The Site

2.1.1 The application Site is located approximately 700 metres to the north of Werrington and approximately 2.7 kilometres to the east of Stoke-on-Trent. The indicative location of the Site boundary is shown in Figure 1 below.

Figure 1: Site Location Plan



2.1.2 The application Site occupies approximately 9.74 hectares (ha) and comprises the following:

- (1) 'the main BESS Site' (containing the battery storage area, access, fencing, planting, etc);
- (2) 'the cable corridor' from the main BESS Site to the Point of Connection (POC) at Cellarhead Substation (the POC is the location where the cable connects the BESS to the National Grid); and
- (3) the two proposed access routes.

2.1.3 The existing use is agricultural land, which is of moderate quality. The field network within the Site is characterised by hedgerows with tree planting. The Site is located within the administrative boundary of Staffordshire Moorlands District Council, who are the Local Planning Authority (LPA).

## **2.2 Local Context**

2.2.1 The land immediately surrounding the Site comprises arable and grazing land, set within well-established hedgerow and tree planting. The Cellarhead Substation is located approximately 450 metres to the northeast of the BESS Site; Wetley Moor Common is located approximately 470 metres to the west of the BESS Site. The Site is located within the Green Belt.

2.2.2 The area surrounding the Site hosts, or will host a number of energy schemes associated with Cellarhead Substation. These include other BESS schemes, as well as solar farms. The Environmental Statement assesses the impacts of these schemes in combination with the Proposed Development.

2.2.3 The Site is mainly rural in character with some localised intrusion of man-made features, such as nearby agricultural buildings, overhead electricity transmission lines and Cellarhead Substation. The Site is accessed using existing access tracks from Thorney Edge Road to the northwest of the Site.

2.2.4 A Public Right of Way (PRoW) 'Bagnall 35' shares the proposed access track into the Site, before splitting into two separate footpaths to the northeast of the Site. The PRoW 'Cheddleton 49' runs along the southern boundary of the Site.

2.2.5 There are four residential agricultural properties within 200 m of the Site, located as follows; 43 m north; 160 m southeast; 100 m west; and 170 m east. Beyond the aforementioned residential properties, there are limited settlements with traditional scattered farms between the Site and the residential area of Armshead, Werrington, which is located approximately 560 m to the south of the Site.

2.2.6 The underground cable corridor from the main BESS Site to the POC runs in a northeast direction from the most northeastern point of the main BESS Site, crossing three agricultural fields between the main BESS Site and the POC.

## 3 The Proposed Development

### 3.1 Overview

3.1.1 The description of the Proposed Development assessed in this ES is as follows:

*“Battery Energy Storage System with substation, associated infrastructure and works”*

3.1.2 The proposal is for the construction, operation, maintenance and decommissioning of a BESS for distribution of electricity to the National Grid. The Proposed Development would operate for a time limited period of 40 years.

3.1.3 The layout for the Proposed Development is shown in Figure 2 below.

Figure 2: Proposed Site Plan



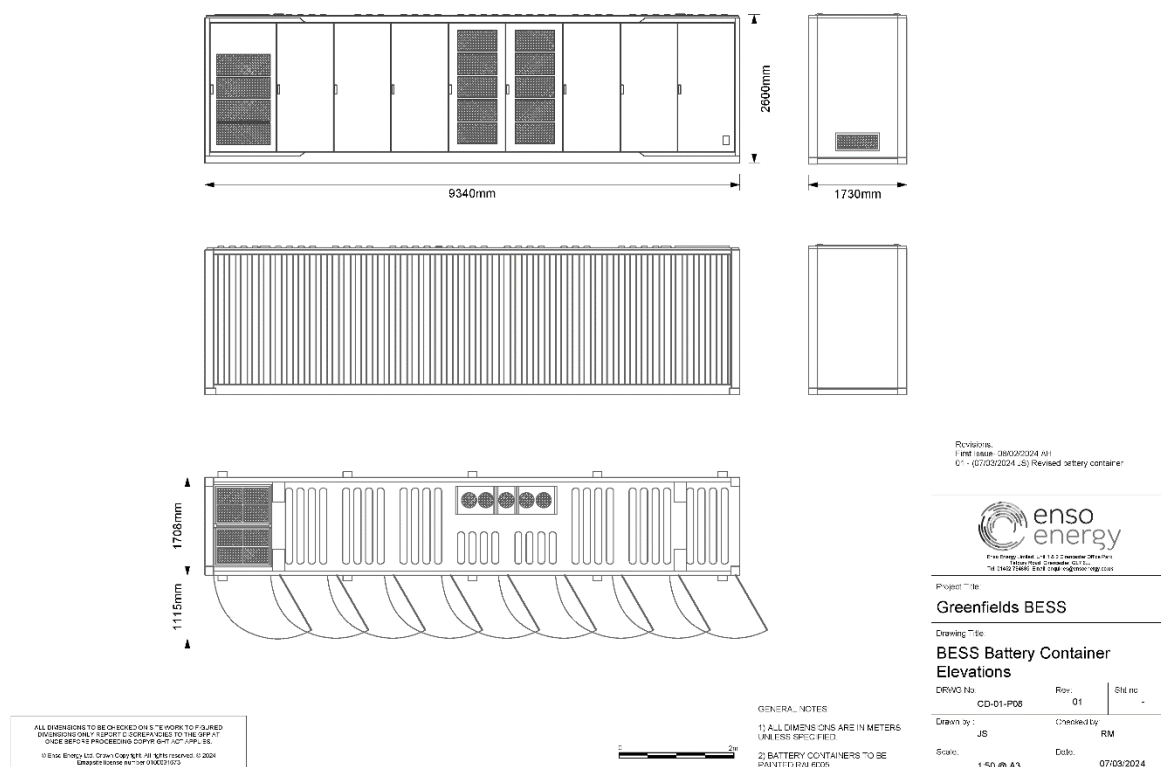
3.1.4 The main components of the Proposed Development are:

- Battery storage facility (comprising battery modules housed within shipping containers or similar (ES Figure 3-2); auxiliary transformer; switchgear and associated buildings comprising control rooms (ES Figure 3-3) and switchgear rooms (ES Figure 3-4));
- Inverter/transformer stations and associated electrical infrastructure distributed evenly across the Site housed within shipping containers or similar (ES Figure 3-5);
- Onsite substation infrastructure (ES Figure 3-6);
- Perimeter fencing (ES Figure 3-7) and Acoustic Fencing (ES Figure 3-8) the CCTV/infrared cameras mounted on posts internally within the perimeter of the Site (ES Figure 3-9);

- Underground cabling to connect the battery containers and inverters/transformer stations to the proposed on-site substation and control room;
- Underground cabling from the main BESS Site to the point of connection (POC) at Cellarhead National Grid Substation;
- Limited earthworks on part of the Site ('cut and fill') to form a level development plateau on which the substation will be situated;
- On-site construction compound and temporary construction laydown area, and site access from the public highway; and,
- Landscape planting, biodiversity enhancements and surface water attenuation measures (including Sustainable Drainage Systems (SUDS)).

3.1.5 As illustrated in Figure 3, the shipping containers in which the battery modules will be housed typically measure 9.3 m in length, 1.7 m in width and 2.6 m in height; the containers will be elevated on a 300 mm concrete base.

Figure 3: Battery Container



- 3.1.6 The inverters will also be housed within containers, however, these containers will typically be 6.1 m in length, 2.4 m in width and 2.9 m in height (when the concrete base is taken into account).
- 3.1.7 The maximum height of any structure on site will be 13 m, which is the maximum height of the substation.
- 3.1.8 The main BESS site will be secured through 2.4 m perimeter fencing and CCTV/infrared cameras mounted on posts internally within the perimeter of the Site. In addition to the perimeter fencing, acoustic fencing, of with a maximum height of 5.5 m will also enclose much of the BESS infrastructure

- 3.1.9 The point of connection to the grid will be made to the Cellarhead National Grid Substation, located approximately 400 m north-east of the main BESS Site. The cable would run below ground from the boundary of the Site to the POC, so once it has been built the cable would not be visible.

## **3.2 Alternatives and Design Evolution**

### **Alternative Sites**

- 3.2.1 Due to the nature of the proposals, choosing the location of the Proposed Development was driven primarily by the need to be close to an available grid connection point, recognising that the viability of a low carbon energy led project reduces the further away it is from the POC. The National Grid Cellarhead Substation has capacity and the Applicant has secured this via a Connection Agreement
- 3.2.2 On securing the connection at the Cellarhead Substation, a 1 km radius was mapped from this POC. There are commercial and practical reasons for this:
- The further away from the POC, the greater the cost of cabling, which has a significant impact on the viability of the project;
  - Longer cable routes result in increased inefficiency in the scheme, i.e. from increased electrical losses; and
  - A longer cable route results in more disturbance, both environmentally and to local receptors.
- 3.2.3 Within this 1 km search area, the Applicant has considered environmental and planning constraints, such as landscape designations, policy designations such as Strategic Gaps, sensitive habitats, archaeological and heritage issues etc. The Applicant has also carefully considered other geographical and topographical factors such as slope, shading and access.
- 3.2.4 Once potentially suitable locations were identified, the Applicant engaged with the landowners in the area to ascertain their interest in being involved with the Project. These conversations involved landowners having the ability and desire to lease their land and having sufficient land of the right type to host a viable development, either on its own or in combination with other nearby landowners. This exercise has been successful and the Applicant is bringing forward the Proposed Development on a suitable site.

### **Alternative Layout Design**

- 3.2.5 Alternative designs for the Proposed Development were considered during the design process and the outcome of consultation with the technical consultant team. Amendments to the original design include:
- Revisions to the BESS layout to reduce overall development footprint;
  - 'Cut and fill' solution for the substation development plateau, to reduce the visual impact of the substation in the landscape;
  - New structural tree planting;
  - Boundary enhancement planting to improve screening; and
  - Pulling in of the security fencing as close to as possible to the BESS to create larger zones outside of the BESS for ecological and structural planting.

### **Do Nothing Alternative**

- 3.2.6 It is regarded as best practice in EIA to consider the "do nothing" alternative. The "do nothing" option would entail leaving the Site in its current condition and it is assumed that the current

land use would remain as it is. That is, available for agriculture. It is an obvious statement that any impacts associated with the Proposed Development would therefore not occur.

- 3.2.7 However, the “do nothing” option would result in the loss of a significant and urgently needed low carbon energy source and storage proposed by the Proposed Development. Other benefits that would not be secured are the biodiversity benefits; carbon sequestration benefits through tree planting; and farm diversification benefits.

### **3.3 Phasing, Construction and Implementation**

- 3.3.1 The construction of the proposal would commence in 2026, subject to planning consent being granted. Construction would take place over 12 months with some elements of the Proposed Development being sequenced during this period as follows: (1) site establishment; (2) groundworks; (3) substation installation; (4) BESS installation; (5) associated equipment installation; (6) testing and commissioning works; and (7) landscaping and site restoration.
- 3.3.2 Given the nature and extent of the Site, the phasing across the Site may not follow in sequence but be undertaken concurrently.
- 3.3.3 Construction access will be via Thorney Edge Road. Traffic movements have been estimated based on the likely construction activities and previous experience from the Applicant in similar projects. For the construction phase of the Proposed Development, it is assumed that there will be a maximum of five two-way Heavy Goods Vehicle (HGV) movements per day.
- 3.3.4 Construction activities and deliveries will be carried out Monday to Friday 08:00-1800 and between 08:00 and 13:30 on Saturdays. No construction activities or deliveries will occur on Sundays or Public Holidays unless agreed in advance with the Council. Where possible, construction deliveries will be coordinated to avoid the traditional AM peak hour (08:00-09:00) and PM peak hour (17:00-18:00).
- 3.3.5 A Construction Traffic Management Plan (CTMP) (ES Appendix 3-2) has been prepared and submitted with the planning application, which will be implemented during the construction phase. The CTMP includes measures to reduce the effect of construction on the local highway network.
- 3.3.6 The project will be constructed in accordance with industry standard techniques and mandatory minimum standards, and suitably experienced contractors will be appointed to construct and decommission the Proposed Development.
- 3.3.7 A Construction Environmental Management Plan (CEMP) (ES Appendix 3-1) has been prepared to control construction activities on site and is submitted alongside the application. The CEMP sets out how the works will be constructed and managed to ensure the protection of local amenity, highway operation and the environment.

### **3.4 Operation**

- 3.4.1 Once operational, with the exception of the main BESS Site, all development would be at or below ground level. Within the main BESS Site, the tallest infrastructure will be the substation at 13 m (reduced to approximately 11.8 m due to site levelling works).
- 3.4.2 Once operational there would be limited vehicle visits each month comprising a transit-style van or 4x4 vehicle, accessing the BESS from Thorney Edge Road for maintenance purposes.
- 3.4.3 A detailed soft landscape plan (Figure 4) has been developed as part of the design and layout of the Proposed Development. Trees will be planted along the north western and south eastern

edges of the main BESS Site, which will provide screening to nearby receptors. The BESS will be surrounded by proposed native buffer planting and native scrub planting. In the southeast corner of the main BESS Site, a SuDS attenuation basin is proposed, enveloped by a neutral grassland.

Figure 4: Detailed Soft Landscape Plan



3.4.4 Allowances for climate change in development have been made to ensure flood risk is considered for the lifetime of the Proposed Development and will also help minimise vulnerability and provide resilience to flooding. The conceptual drainage strategy includes on-site attenuation via an attenuation pond (basin) in the southeast of the Site. The proposed indicative surface water drainage concept provides attenuation of up to the 1 in 100 year event plus 40% climate change allowance, which will reduce risk of flooding downstream.

### 3.5 Decommissioning

3.5.1 The Proposed Development is anticipated to have a lifespan of 40 years once operational. Once the Proposed Development is no longer operational, it will be decommissioned in accordance with a decommissioning plan agreed with the Council. A decommissioning plan will include the safe management and disposal of the batteries and associated infrastructure in accordance with the most appropriate approach and technology at the time. The effects of decommissioning are anticipated to be similar to those anticipated at the construction phase and therefore, decommissioning has not been assessed separately in the ES.

## 4 Findings of the EIA

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### 4.1 Introduction

- 4.1.1 The following sections summarise the findings of the EIA relevant to each topic listed above.

### 4.2 Ecology

- 4.2.1 An assessment of the likely ecological effects of the Proposed Development has been undertaken, i.e. effects on habitats and wildlife species, the findings of this assessment are set out in the Ecology ES chapter (ES Chapter 5) and Appendices 5-1 and 5-2 of the ES.
- 4.2.2 The Site and its surroundings have been subject to ecological survey work during 2024 including desktop study, field habitat survey, and specific surveys for bats, badger, water vole, otter, great crested newt, and reptiles.
- 4.2.3 The Site does not contain, nor is it located immediately adjacent to, any area of land that has any special ecological status or protected areas. The majority of habitats within the Site are of low value in ecological terms. Important habitats are limited to the hedgerow boundaries of the Site, which will be retained by the Proposed Development apart from minor losses to allow access to and from the Site during construction.
- 4.2.4 The ecological surveys undertaken at the Site recorded no evidence of habitats for the following protected species: badger, water vole, otter, great crested newt or reptiles. However, the Site does contain a number of trees with the potential to provide a habitat for bats, all of which will be retained and protected by the Proposed Development.
- 4.2.5 The chapter details the methodology followed and the results of the assessment. The assessment reports on the environmental effects on biodiversity with reference to mitigation that has been included within the design of the Proposed Development, including the landscape plan, working methods and best practice environmental protection to be implemented by all site contractors.
- 4.2.6 The chapter identifies additional mitigation measures, such as the careful management of construction practices, for example, the protecting of trees, as well as a management plan for continued maintenance and upkeep of the landscape within the main BESS site, that will prevent, reduce or offset adverse effects on species.
- 4.2.7 An outline Construction and Environment Management Plan (oCEMP) has been prepared alongside the ES (ES Appendix 3-1). The outline CEMP sets out the good practice construction measures, such as the cleaning of construction vehicle wheels and other measures to prevent pollution, will be deployed that will be adopted to ensure the construction works have no adverse impacts on adjoining land, watercourses or groundwater.
- 4.2.8 A Landscape and Ecology Management Plan (LEMP) sets out the biodiversity objectives, detailed management specifications, management schedules and a biodiversity monitoring programme.
- 4.2.9 The Proposed Development is to achieve a long term Biodiversity Net Gain and promote ecological resilience as illustrated on the Detailed Soft Landscape Plan (see ES Figure 3-10) and detailed within the Biodiversity Net Gain Assessment (ES Appendix 5-2), and to be defined in the Landscape and Ecology Management Plan (LEMP) (ES Appendix 3-4).

- 4.2.10 When taking into account the existing baseline conditions, and all of the mitigation measures proposed, no significant effects are predicted for any habitats or species during the construction or operation of the Proposed Development, either alone or in-combination with other permitted or proposed developments.

### **4.3 Landscape and Visual**

- 4.3.1 The likely significance of effects on landscape character and visual amenity resulting from the Proposed Development have been assessed. The principal landscape and visual effects would occur during the 40 year operational lifetime of the BESS and substation. At the end of its lifespan, the Proposed Development would be decommissioned and the Site would be returned to its former use. Hence, all landscape and visual impacts are deemed to be reversible.

#### **Construction Effects**

- 4.3.2 A CEMP will ensure good working practices that minimise adverse impacts on landscape character and visual amenity. This includes measures such as fencing to protect those landscape features, such as trees, that are to be retained, and the sensitive location of site cabins, lay down areas, and compounds to minimise impact.

#### Landscape

- 4.3.3 With the above mitigation in place, construction effects on landscape character would not be significant.

#### Visual

- 4.3.4 Given that the construction process is phased, the potential visual effects vary throughout the period of works as each new phase begins. Visual receptors have been grouped into four categories for the purposes of the landscape and visual assessment: group 1 relates to users of PROW within 70 m of the Site; group 2 includes surrounding farms and local roads; group 3 includes the northern edge of Werrington; and group 4 includes PROW off Rownall Road (approximately 550 m east).

#### *Group 1*

- 4.3.5 After the implementation of construction mitigation, significant visual impacts are anticipated with respect to users of PROW within 70 m of the Site. However, these impacts would be limited in extent and several of the PROW do not appear to be well used and not legible nor passable in their entirety on the ground.

#### *Groups 2, 3 and 4*

- 4.3.6 Due to the construction mitigation outlined above, visual effects on users within visual receptor groups 2, 3 and 4 would not be significant.

#### *Road Users*

- 4.3.7 Armshead Road passes the Site to the south and west, running along the northern settlement edge of Werrington and north towards Bagnall in the north, beyond the Study Area. Thorney Edge Road passes the Site to the west, connecting to Armshead Road and continuing north within the wider landscape. Road users on these roads, which are mostly travelled at relatively slow speeds and are not an identified scenic route, are not judged to be sensitive. Following implementation of construction mitigation, visual effects on users of these roads are not significant.

## Operational effects

4.3.8 The landscape and visual sensitivities of the Site and its surrounding environment have influenced the masterplanning of the Proposed Development through an iterative process. These include:

- Retention of key landscape features within and around the Site boundary, such as mature hedgerows and tree cover which contribute to the local landscape character;
- Setting back the Proposed Development from PROW, and the positioning of taller structures below existing ground levels to reduce their visibility;
- Retention and enhancement of existing green infrastructure, such as trees and scrubland; and,
- The creation of biodiverse habitats within the Site, including grassland, ponds and other habitats which would positively contribute to biodiversity both within and beyond the Site.

4.3.9 For the purposes of the landscape and visual assessment, operational effects have been assessed in both the short-medium term (0-10 year post construction) and in the long term (10-40 years).

### Landscape

4.3.10 As a result of the above mitigation measures, it is anticipated that there will be no significant effects on landscape during operation due to the Proposed development.

### Visual

4.3.11 As with the construction-phase visual impact assessment, visual receptors have been grouped into four categories for the purposes of the landscape and visual assessment: group 1 relates to users of PROW within 70 m of the Site; group 2 includes surrounding farms and local roads; group 3 involves the northern edge of Werrington; and group 4 includes PROW off Rownall Road (approximately 550 m east).

#### *Group 1*

4.3.12 In the short-term (0-10 years post construction), before the proposed tree and scrubland planting has matured, the Proposed Development would have a significant visual effect on users of PROW within 70 m of the Proposed Development. However, as noted previously, many of the footpaths to the east of the Site do not appear to be well used and sections are not legible on the ground.

4.3.13 In the longer term (10-40 year post construction), the proposed planting will have matured such that the Proposed Development would not have a significant visual effect on users of PROW within 70 m of the Site. Hence, for the majority of the Proposed Development's operational lifetime, there would be no significant visual effects on users of PROW within 70 m of the Site.

#### *Groups 2, 3 and 4*

4.3.14 In both the short-term and longer-term, the measures put in place to mitigate visual effects arising from the Proposed Development outlined above result in the Proposed Development causing no significant visual effects on users within visual receptor groups 2, 3 and 4.

### *Road Users*

4.3.15 Armshead Road passes the Site to the south and west, running along the northern settlement edge of Werrington and north towards Bagnall in the north, beyond the Study Area. Thorney

Edge Road passes the Site to the west, connecting to Armshead Road and continuing north within the wider landscape. Road users on these roads, which are mostly travelled at relatively slow speeds and are not an identified scenic route, are judged to be of low sensitivity. Following implementation of the mitigation measure outlined above, visual effects on users of these roads during the operational phase of the Proposed Development are not significant.

#### **4.4 Noise and Acoustics**

- 4.4.1 The likely significance of effects on local noise and vibration resulting from the construction and operation of Proposed Development have been assessed.

##### **Construction Effects**

- 4.4.2 A CEMP will ensure good working practices that minimise adverse impacts from noise generated by the Proposed Development. This includes measures such as construction equipment being deployed with suitable noise mitigation or specification (i.e. deployment of the quietest equipment or construction method feasible); all machinery which is used intermittently shall be shut down during the intervening period between works; and where possible, battery-powered equipment will be used instead of diesel or petrol-powered generators.
- 4.4.3 Works will be undertaken between 08:00 and 18:00 from Monday to Friday, and between 08:00 and 13:30 on Saturdays. No construction activities or deliveries will occur on Sunday or Public Holidays. Any works agreed outside of these hours are to be agreed with the Council.
- 4.4.4 When taking into account the all of the mitigation measures proposed, no significant effects are predicted in relation to noise during the construction phase of the Proposed Development, either alone or in-combination with other permitted or proposed developments.

##### **Operational effects**

- 4.4.5 The Proposed Development has been designed in a way where all noise generating equipment is optimally located and distributed within the application Site such that acoustic effects at nearby residential receptors are minimised. In addition to this, low noise-generating BESS equipment has been chosen to minimise any noise generation. Equipment which generates the most noise will be enclosed within acoustic fencing, which will act to reduce any noise being emitted from such equipment.
- 4.4.6 As a result of the mitigation measures proposed, no significant effects are anticipated in relation to operational noise during the operational phase of the Proposed Development, either alone or in-combination with other permitted or proposed developments.

#### **4.5 Transport and Access**

- 4.5.1 The likely significance of effects on local transport and access resulting from the construction and operation phases of Proposed Development have been assessed.

##### **Construction Effects**

- 4.5.2 During the construction phase, a CTMP will be implemented and enforced, which provides a framework for the management of construction vehicle movements to and from the Proposed Development to ensure that the effects of the temporary construction phase on the local highway network are minimised. It includes measures such as construction access arrangements, construction vehicle routing, construction trip generation and management measures. These include:

- Signs to direct construction vehicles associated with the Proposed Development to be installed along the agreed construction traffic route. Delivery drivers, contractors and visitors will be provided with a route plan in advance of delivering to the Site to ensure that vehicles follow the identified route;
- Advisory signs informing contractors and visitors that parking is not permitted on-street in the vicinity of the Site or on the Site access road;
- All signage on the designated route will be inspected twice daily by the Site Manager (once in the morning and once at lunchtime), to ensure they are kept in a well-maintained condition and located in safe and appropriate locations;
- An area for contractors to be set up on-Site including appropriate parking spaces. Contractors and visitors will be advised that parking facilities will be provided on-Site in advance of visiting the Site and that they should not park on-street;
- A wheel wash facility to be provided ahead of exiting the Site allowing vehicles to be hosed down so that no construction vehicles will take mud or debris onto the local highway network;
- A road sweeper to be provided for surrounding local roads along the designated route to alleviate any residual debris generated during the construction phase, as required;
- The Site to be secured at all times with Heras fencing;
- A requirement for engines to be switched off on-Site when not in use;
- Spraying of areas with water supplied as and when conditions dictate to prevent the spread of dust;
- Vehicles carrying waste material off-Site to be sheeted;
- Banksman to be provided at the Site access junction to indicate to construction traffic when it is safe for them to enter and exit the Site;
- Measures to ensure the safety of public rights of way users; and
- Residents in the vicinity of the Site along the designated route to be provided with contact details of the Site Manager, which will also be provided on a Site-board at the Site access and egress junctions.

4.5.3 Effects assessed related to road vehicle driver and passenger safety, severance (i.e. where roads or the flow of vehicles act as barriers to pedestrians), road vehicle driver delay, non-motorised user delay, non-motorised user amenity (including fear and intimidation), and hazardous loads / large loads.

4.5.4 A peak of 36 two-way construction movements (including 10 HGVs) were predicted per day during the construction phase of the Proposed Development. Using 2026 as the baseline construction year, the modelled traffic for each of the roads within the study area do not exceed the guideline thresholds published by the Institute of Environmental Management and Assessment on any of the roads. As a robust assessment, all roads within the study area were included within the assessment.

4.5.5 During the Proposed Development's construction and decommissioning phases, all effects are not identified as significant.

### **Operational Effects**

4.5.6 During the Proposed Development's operational phase, there are anticipated to be up to five visits to the Site per month for maintenance purposes. These would typically be made by light van or 4x4 vehicles. All effects will not be significant during this phase of the Proposed Development.

4.5.7 Several cumulative schemes that may be in construction at the same time as the Proposed Development were assessed for the future baseline year 2026. In total, eight cumulative schemes would have an effect on the study area. All effects remain not significant.

## **4.6 Other Environmental Matters**

- 4.6.1 The ES has also considered those other potential environmental topics which are covered through the EIA Regulations, but were not considered likely to give rise to significant environmental effects, determined through the screening process. The topics considered were:
- Accidents, fire and natural disasters;
  - Agricultural land and soils, including ground conditions;
  - Air quality;
  - Heritage;
  - Human health; and
  - Hydrology, flood risk and drainage.
- 4.6.2 No significant adverse effects would occur in relation to the above listed environmental topics. Any adverse effects which might occur during construction would be temporary and suitably mitigated through the measures implemented via the CEMP, after which they would not be significant.
- 4.6.3 Once operational, it is concluded that several beneficial effects would occur, particularly in relation to climate change (increased provision of renewable energy) and biodiversity enhancement.

## 5 Conclusions and Next Steps

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### 5.1 Conclusions

- 5.1.1 The ES has considered how the environment and the local community would be affected by the Proposed Development.
- 5.1.2 A range of effects have been predicted to occur as a result of the Proposed Development, both positive and negative. All but two of these effects are not significant. The only significant effects relate to construction phase, and short-medium term (0-10 years post construction) visual effects on users of public rights of way within 70m of the Proposed Development, however, many of these public rights of way do not appear to be well used and sections are not legible on the ground. The longer-term (10-40 years post construction) visual effects on users of public rights of way reduce to not significant due to the maturing of scrub and tree planting, proposed as mitigation.
- 5.1.3 Mitigation measures have been identified and are either part of the Proposed Development's design or are additional measures that are required to reduce any negative effects.
- 5.1.4 Many of the effects that have been identified occur at the construction stage of the Proposed Development, these effects are of a temporary nature during the construction period.
- 5.1.5 In addition, it is important to recognise that the Proposed Development will have a positive effect in terms of supporting the UK's net zero target by 2050 and decarbonisation of the electricity grid by 2035.

### 5.2 Next Steps

- 5.2.1 The ES has been submitted alongside other relevant documents to form a planning application for the Proposed Development to the Council. Prior to making a decision, the Council will contact relevant statutory and non-statutory bodies for advice on the proposals. Members of the general public are also welcome to make comments on the application during this time. The feedback from these consultations will be provided to the project team to consider and address where appropriate, and will be taken into account by the Council in reaching their decision.
- 5.2.2 The full ES can be viewed via the Council's planning page at:  
<http://publicaccess.staffs Moorlands.gov.uk/portal/servlets/ApplicationSearchServlet>
- 5.2.3 A copy of the ES is available on USB at a charge of £25.00. Enquiries in respect of these or printed copies of the ES and Appendices should be made to Savills at the address below:  
  
Savills (UK) Limited, 33 Margaret Street, London, W1G 0JD.