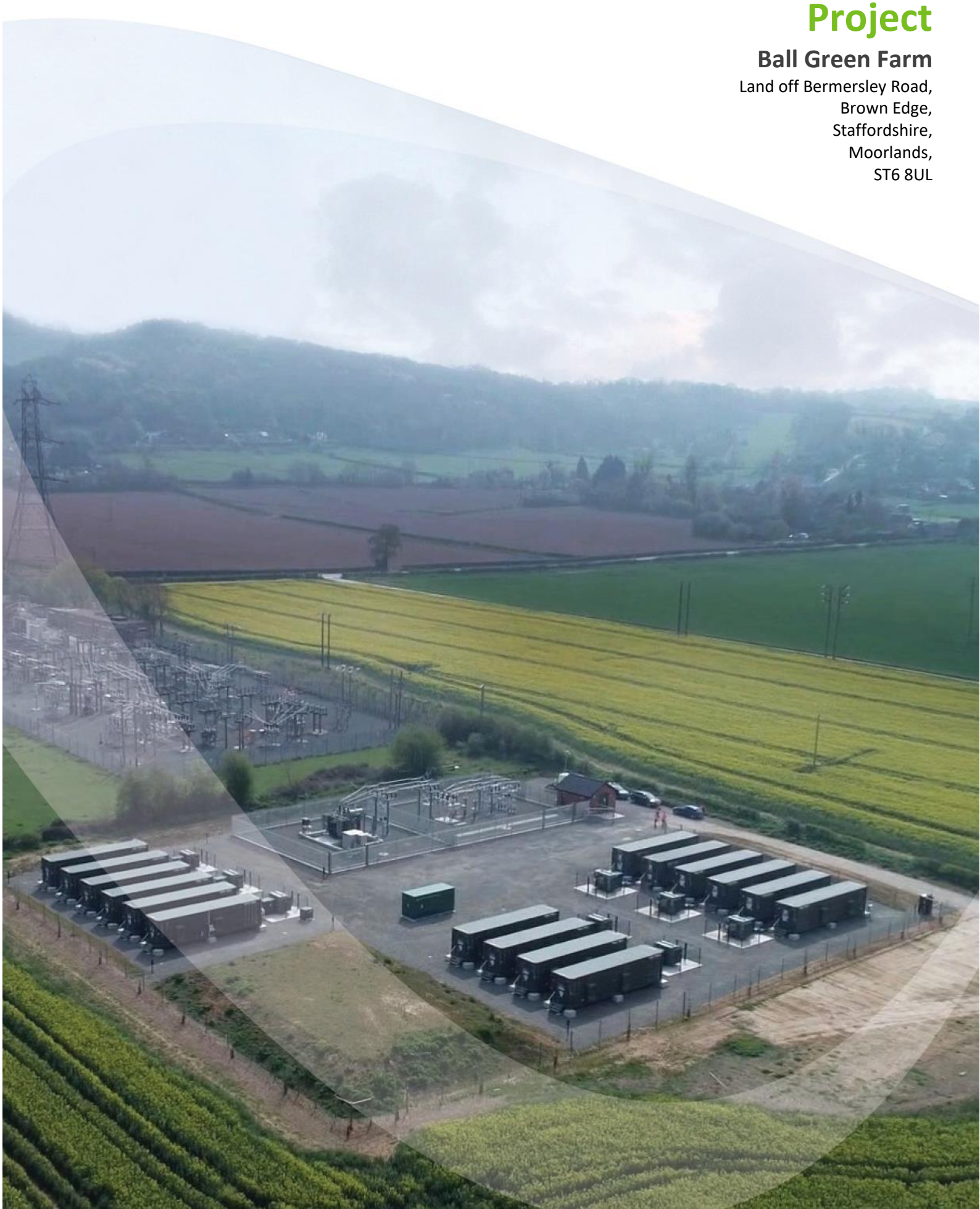
Proposed Battery Storage Project

Ball Green Farm

Land off Bermersley Road,
Brown Edge,
Staffordshire,
Moorlands,
ST6 8UL



Anesco Limited,
The Green, Easter Park,
Benyon Road, Reading,
Berkshire, RG7 2PQ
tel: 0845 894 4444

Moorlands House,
Stockwell St,
Leek,
ST13 6HQ

RE: Proposed Battery Storage Project at Land off Bemersley Road, Brown Edge, Staffordshire, Moorlands, ST6 8UL

Dear Sir or Madam,
Under Section 6 of The Town and Country Planning (Environmental Impact Assessment) Regulations 2017, I am writing to formally request a Screening Opinion to determine the requirement for an Environmental Impact Assessment (EIA) to accompany a planning application for a proposed solar farm on the land forming part of Land off Bemersley Road, Brown Edge, Staffordshire, Moorlands, ST6 8UL.

As required under this regulation, please find enclosed a site location plan, a description of the physical characteristics and location of the proposed development, and a description of the possible effects of the proposed development on the environment. Upon receipt of the screening opinion, we intend to provide a comprehensive pre-application planning submission to:

- Request an assessment on whether there seem reasonable prospects of gaining planning permission.
- Enquire about any potential issues such as the visual impact, traffic movements or site design; working towards solving these at the earliest possible point; working, in particular with the Council to ensure that any other matters are controlled via appropriate conditions.

Please do not hesitate to contact me if you have any queries.

Yours faithfully,

Jez McHale
Project Developer
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Proposed Battery Storage Project

On the Land off Bemersley Road, Brown Edge, Staffordshire, Moorlands, ST6 8UL.

Site Details

The 5acre site, referred to as Ball Green Farm Battery Storage Project, is located at 53.075259, -2.1606696 (Latitude, Longitude); approximately 1.4km north of Norton in the Moors, 1.6km southwest of Brown Edge; 2km southeast of Brindley Ford; 2.3km north west of Stockton Brook, on pastural land. The battery storage location is shown in Figure 1 below.

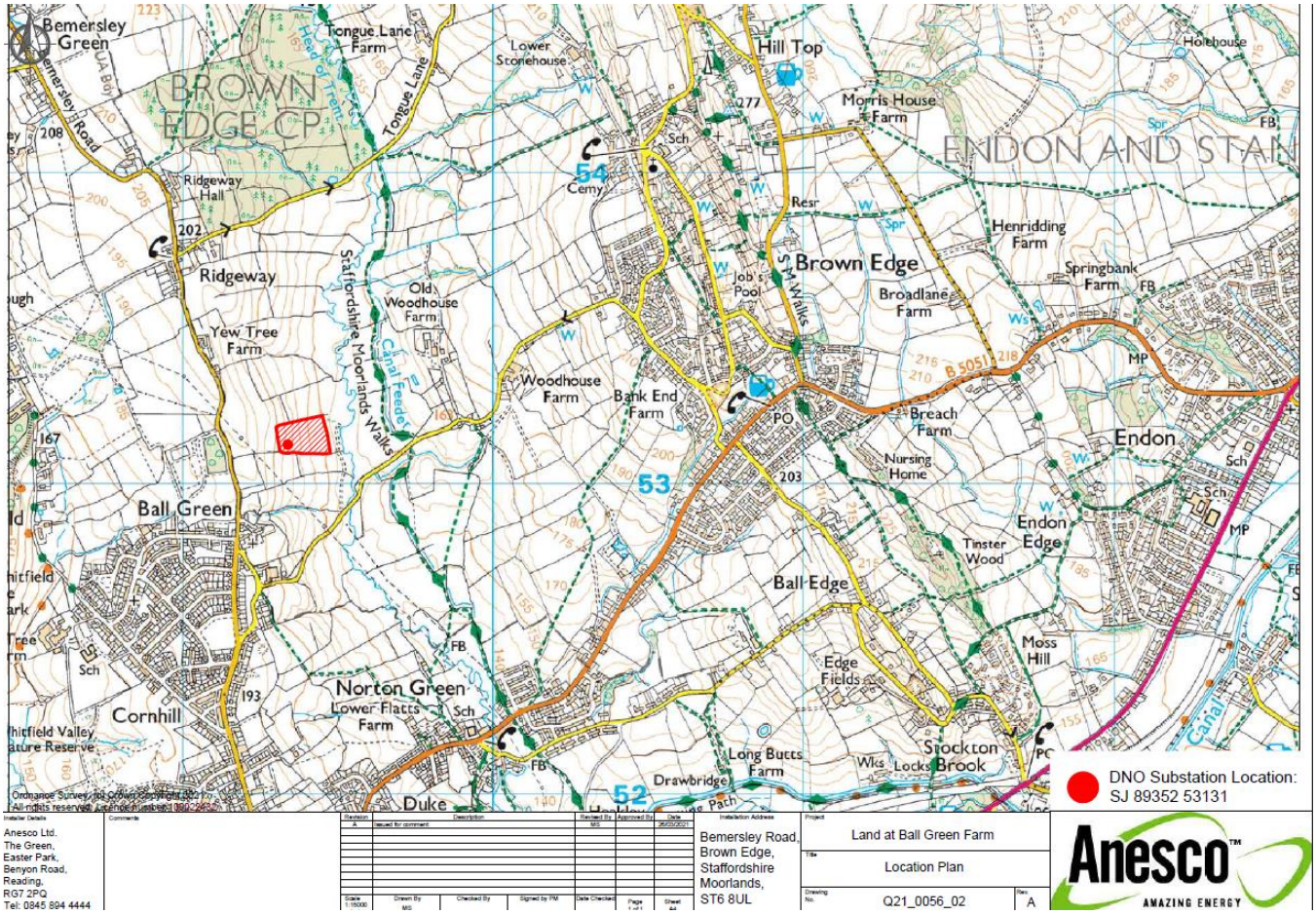

Figure 1: Site Location Plan

Proposed Activity

It is our intention to submit a planning application for the development of a Battery Storage Solution System (BESS) capable of importing and exporting approximately 50 Megawatts (MW) of electricity for 40 years. This would have the capacity to power around 13,052 average homes per annum[1].

[1] Based on energy yield stimulation based on an average UK domestic electricity consumption of 3,831kWh/yr (BEIS 2019).

A battery storage system is comprised of the following components:

- 14 energy storage cabinet units containing batteries, associated control equipment, PCS inverters, cooling system and fire safety equipment.
- 14 Transformers and feeder pillars
- A Single 132kv Substation compound, up to a heigh of 5.5m with a District Network operation (DNO) Substation (up to a height of 3.4m), customer substation (up to a height of 2.9m) and a communications hub
- A dedicated access track and security fencing enclosing the site

An idea of the proposed site layout can be seen in Figure 5 further below. This could be subject to change dependant on the determination of assessments, but helpfully provides an indication as to the location of containers, transformers, substations and associated equipment.

Figure 1 & 2: Typical Battery Cabinet unit, albeit they will be the coloured green to camouflage into the area

Figure 3: Typical Substation

Low Voltage (LV) Switchgear and Transformers

These are used to step up the low voltage from the PCS inverters, within the batteries, to a high voltage which is required to connect the battery storage to the high voltage grid network. Throughout site, there will be a total of 14 LV Cabins, each with an open-air transformer that will be installed with the battery containers.

The LV cabins are typically 2.2m high, 2.6m long and 1.2m wide and are painted green. The transformers are generally 2.1m high, 2.4m long and 2m wide.

Figure 4: Typical LV Switchgear with Transformer

High Voltage (HV) switchgear

- High Voltage (HV) switchgear is required to accumulate all the HV cables from the transformers before connecting to the grid network.
- Before connection to the grid, the Distribution Network Provider (DNO) requires an Intake Substation with various protection settings to protect the grid from any faults that the solar farm may cause. This intake substation will be built in compliance with building materials approved by the local planning authority.

Security system

- A security system is required to prevent both unauthorised access into the battery storage system, which is an energy import and export system, and to protect the equipment. This will consist of a 2.4m high deer fence, or similar, installed around the site demise. There will also be a security beam system installed around the fence perimeter. The security beams will be approximately 1.2m off the ground and will employ laser technology so no artificial lighting will be required.

Transport and Construction

The construction of the site will take approximately 30-34 weeks, based on a six-day working week (08:00 to 18:00 hours Monday to Friday, and 08:00 to 14:00 hours on Saturdays) dependent on weather conditions. The Battery storage units and other components will be delivered to site using 16.5-metre-long articulated HGVs. Deliveries will be spread evenly throughout the construction. Approximately 3 deliveries per day on average over the construction phase, although this will wary in line with the build process. All other traffic will be construction staff traffic.

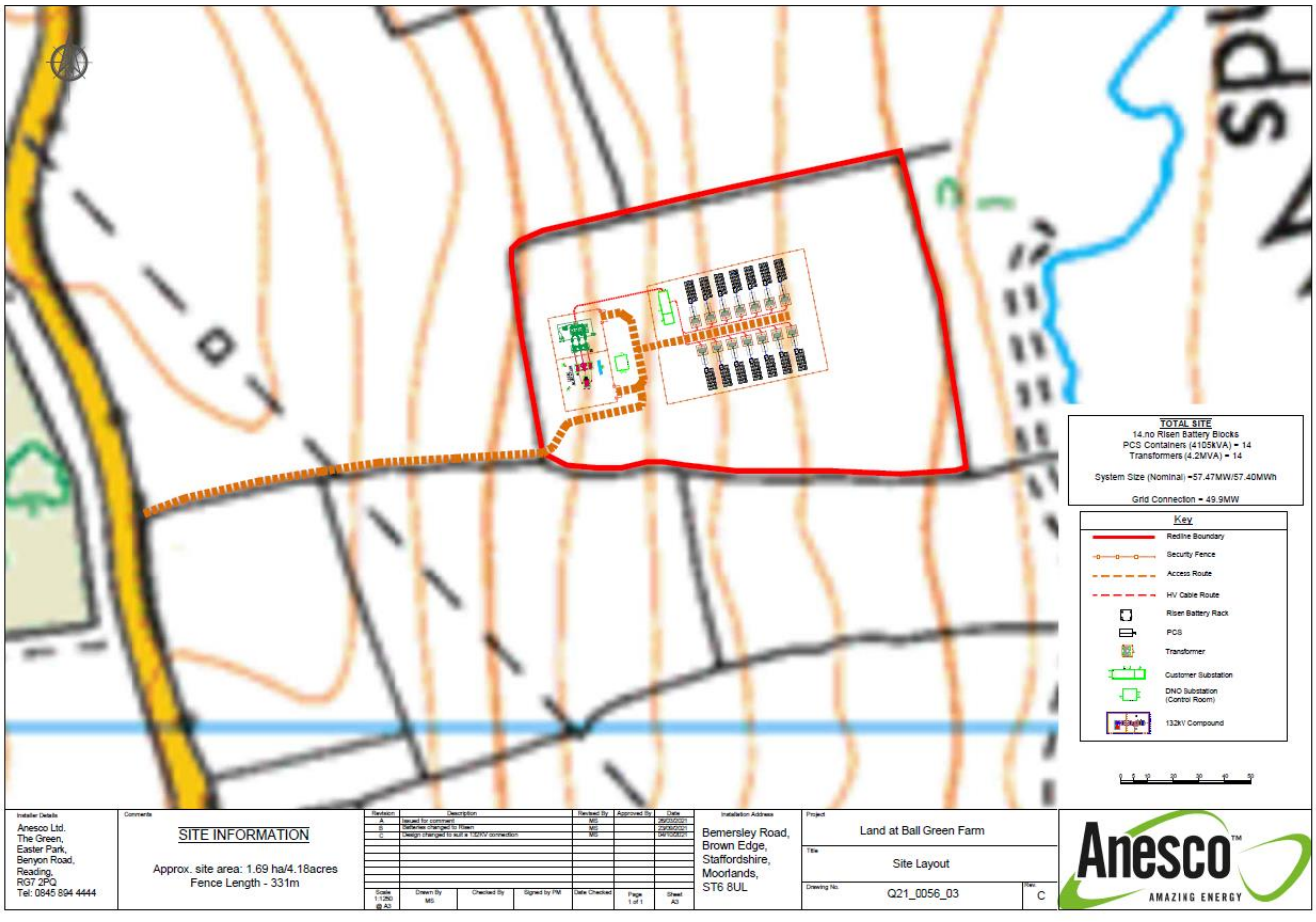

Figure 5: Initial Battery Storage (BESS) Site Layout

Once constructed, access to the battery system will typically generate 10 – 20 visits per year by engineers for maintenance works in Anesco transit vans. Maintenance will include maintaining hedgerows and mowing the grass twice a year. There will be no onsite office or permanent staff on the site.

Site Location

The site is not located in an AONB (Area of outstanding natural beauty), conservation area, SSSI (site of special scientific interest) or other statutory or non-statutory ecological, landscape or heritage designation. It is however, located within Stoke greenbelt zone within Stoke on Trent City Council's boundary. A full landscape and visual assessment will be completed to go alongside our planning application, with proposed screening and landscape enhancements to minimise visual impact around the battery storage system.

The site is not located within any high flood risk areas, it sits within a flood risk zone 1. However, a detailed flood risk and drainage/mitigation scheme will be completed to support the full planning application.

The closest scheduled monument is 'Chatterley Whitfield Colliery' that sits approximately 0.85km northwest of the boundary of site. There are no other further scheduled monuments within 5km of the site.

The nearest features of historic designation's are a cluster of Grade II listed designations that are within Chatterley Whitfield, northwest of the proposed battery storage project. These are the Grade II listed 'Chatterley Whitfield: Hesketh heapstead (6) and mine car circuit (2)', then the Grade II listed Chatterley Whitfield: Hesketh winding and power house (7), then the Grade II Chatterley Whitfield: Former fan house (11), then the Grade II 'Chatterley Whitfield: Electrical and mechanical fitters', then the Grade II 'power house (4)'. Within this same cluster of listed designations, also sits the Grade II 'Chatterley Whitfield: Pitead baths complex (18-21)', the Grade II 'Chatterley Whitfield: Forer office and laboratory complex (12-14), the Grade II 'Chatterley Whitfield: boiler house (16) And chimney (3), the Grade II 'Chatterley Whitfield: area shaft building (23)', and the Grade II 'Chatterley Whitfield:Weight house (22) and weight plates'. These all sit northwest of the Energy storge proposal, the closest sitting 0.85km northwest, ranging to 1.10km.

Slightly further afield, sits the Grade 1 Listed building '1 Fir Tree Farmhouse and Cottage', this sits approximately 1km southwest of the site. There are no further historic features recorded within 1km of the site. Impacts on heritage assets father than 1km from the site are expected to be limited due to the distance between them although a full heritage assessment will be submitted as part of the planning application to detail any impacts.

An agricultural land classification (ALC) survey will be carried out for confirmation of land grade and will accompany the full application.

There are no public rights of way (PRoW) on the site. The nearest PRoW runs east of the site, approximately 0.2km away from the proposed battery storage projects boundary. This is the 'Staffordshire Moorlands Walks', and runs from Woodhouse Lane, northwards along the canal Feeder, towards Tongue Lane. Appropriate screening will be planted, or enhanced, to minimise visual impact from this footpath. There are no further public rights of ways, or byways located near the site.

In addition to any necessary infill and hedgerow planting, Anesco will also plant wildflower meadow seed mix throughout the site and carry out a 40-year habitat management plan, to improve the biodiversity of the site and the local area.

Following a review of the Staffordshire Moorlands online planning application database there has been no energy storage projects similar to this proposal, or ground mounted renewable solar farms, within close proximity that has been identified as receiving planning permission. Although, there has been several rooftop solar PV installations that have gained permission.

Environmental Impact Assessment

The proposal has been considered against The Town and Country Planning (Environmental Impact Assessment) Regulations 2017.

Under the EIA regulations an EIA is automatically required for Schedule 1 developments. The proposed BES development does not fall within any of the categories set out in Schedule 1 of the regulations.

Development is classified as a Schedule 2 development, if it falls within a category of development listed in Schedule 2 and meets one of the relevant criteria or exceeds one of the relevant thresholds set out in Schedule 2, or is located in a sensitive area. It is considered that the proposal falls within category (3)(a) for 'industrial installations for the production of electricity, steam and hot water (unless included in Schedule 1)', and, given the site area exceeds 0.5ha, the proposal is classed as a Schedule 2 development.

Schedule 2 developments require an EIA if the specific proposal is considered to have significant effects on the environment given its location, characteristics, and size. As the site exceeds 0.5ha in size it is considered appropriate to screen the proposal with the Local Planning Authority to determine whether there are any significant effects likely to arise from the proposal.

The screening process should consider the development proposal against the criteria and thresholds which are included within the EIA Regulations in determining whether or not an EIA is required to accompany the application. Schedule 3 of the EIA Regulations sets out criteria to inform screening under the following headings:

- The characteristics of the development;
- The location of the development; and
- The types and characteristics of the potential impact.

Development Characteristics

The nature of the development is described above. Once constructed, the battery storage system will constitute a passive operation, with no emissions and very limited onsite activity. Impact to flora and fauna is considered low.

Taking into account the criteria in paragraph 1 Schedule 3 of the EIA Regulations, it is considered that:

- The development is limited in size, being approximately 5 acres in area;
- There is limited scope for cumulative impacts with other developments;
- The proposed construction phase of the development will use resources in terms of land, water and energy but the operation phase would compromise of the storage of energy. This type of technology works well in tandem with and promotes the development of other renewable energy sources.
- The development will not generate any waste during operation, aside from any required replacement of components;
- The BESS will not generate any pollution or nuisances due to the clean, static nature of the technology involves; and
- The risk of any accidents is very low, and restricted to construction and maintenance activities, which will be covered by health and safety plan.

The proposal will store electrical energy so that it can be readily available to meet demand whenever needed. It will also help manage the amount of electricity required to supply customers at times when the need is at its greatest. The batteries can store enough energy to power approximately 13,052 homes. In addition, it will provide frequency regulation to maintain the balance between the electricity network's load and power generated in the local area. All of the above makes this proposal a valuable contribution to the energy requirements locally, and nationally.

Environmental Impacts

Following the temporary impacts associated with construction, the BESS development will have little to no impacts on the environment. The containers and associated equipment are passive in nature, and do not result in any emissions, their main impact is the change in the visual appearance of the subject site, and as noted above it is considered that proposed screening on site will avoid any adverse impacts on the surrounding area.

When asserting the suitability of a site for a BESS development, Anesco looks at a number of criteria, as set below:

- Suitability of the site for operating a Battery Energy Storage System:
    - Site size
    - Site orientation
    - Topography
    - Geology
    - Access
- Grid Connection Issues:
    - Proximity of a suitable connection (overhead line or substation) with available capacity
    - Ease of accessing electricity connection point.
    - Available capacity of grid connection point
- Planning Issues:
    - Visibility of site
    - Neighbouring properties
    - Flood risk
    - Agricultural land grading
    - Sensitive areas
    - Ecology
    - Flora and Fauna

The BESS Solution will not result in any hazardous impacts, the electrical equipment is suitably secured and protected. The electrical equipment would be stored In accordance with relevant legislation and would include regularly safety checks.

Construction waste would be reused and recycled where possible. Due to the nature of the proposed development, there would be no operational waste produced.

It is important to note that the BESS would be classified as a 40-year temporary development and following the removal of the containers and associated infrastructure at the end of the lifetime, the land will return to its original condition.

The planning application will be accompanied by a number of technical impact assessments, which will identify mitigation measures where these are considered necessary.

We are keen to work closely with local residents to obtain their views and opinions of the proposed development as part of the planning process, and to identify beneficiaries for community benefit schemes.

Summary

We consider this to be a suitable location for this type of development given that the site is located away from landscape, ecological, and heritage designations. At only 2 hectres the site can be suitably integrated within the surrounding landscape and ensuring there should be no significant effects to the environment. Even though the site sits within the local green belt, the proposed area is already well screened from the surrounding landscape, and we will be including additional mitigation that will be proposed alongside our planning application. The site is also to be shown of special circumstance for the storage and export of energy.

Having reflected on the regulations, including Schedule 2 and 3, we consider that the proposed development does not constitute an EIA development and that the submission of an Environmental Statement is not required as no significant effects are likely (or can be avoided with appropriate mitigation that will be discussed in the planning application and accompanying assessments).