
FENWICK SOLAR FARM

Fenwick Solar Farm
EN010152

Outline Design Parameters Statement

Document Reference: EN010152/APP/7.4

Regulation 5(2)(q)

Infrastructure Planning (Applications: Prescribed Forms and Procedure)
Regulations 2009

~~October 2024~~

May 2025

Revision Number: ~~000~~001

Revision History

Revision Number	Date	Details
00	October 2024	DCO application
<u>01</u>	<u>May 2025</u>	<u>Deadline 2</u>

Prepared for:
Fenwick Solar Project Limited

Prepared by:
AECOM Limited

© 2024 AECOM Limited. All Rights Reserved.

This document has been prepared by AECOM Limited (“AECOM”) for sole use of our client (the “Client”) in accordance with generally accepted consultancy principles, the budget for fees and the terms of reference agreed between AECOM and the Client. Any information provided by third parties and referred to herein has not been checked or verified by AECOM, unless otherwise expressly stated in the document. No third party may rely upon this document without the prior and express written agreement of AECOM.

Table of Contents

1. Introduction 1

1.1 Overview..... 1

1.2 Design Parameters 1

2. References 17

Tables

Table 1. Design Parameters 4

1. Introduction

1.1 Overview

- 1.1.1 This Outline Design Parameters Statement (the Statement) has been prepared to accompany the Development Consent Order (DCO) Application for Fenwick Solar Farm ('the Scheme'). It provides the guiding parameters for the detailed design of the Scheme and is secured by requirement 4 in the **Draft DCO [EN010152/APP/3.1]**. When the detailed design for the Scheme is submitted for approval to the relevant planning authority, those details must be in accordance with the design parameters set out in this Statement.
- 1.1.2 Securing the detailed design post-consent is necessary to achieve technological and design flexibility for the Scheme because solar photovoltaic (PV) and Battery Energy Storage System (BESS) technology are rapidly evolving. The Scheme seeks to allow provision in the DCO for the technological innovation and improvements that may be realised at the time of procurement and construction, in order to ensure that the Scheme can be constructed taking advantage of innovation and cost efficiencies.
- 1.1.3 That necessary flexibility has been facilitated by the adoption of the 'Rochdale Envelope' approach for the Environmental Impact Assessment which is explained in the Environmental Statement (ES) (see **ES Volume I, Chapter 2: The Scheme [EN010152/APP/6.1]**). The Rochdale Envelope approach ensures the maximum parameters and realistic worst case have been assessed, and this envelope is defined by the design parameters set out in this document. Therefore, by requiring that the detailed design of the Scheme must be in accordance with the design parameters, there can be confidence that the environmental effects would be the same as or no worse than those assessed and reported in the ES.

1.2 Design Parameters

- 1.2.1 The Scheme is described in Schedule 1 of the **Draft DCO [EN010152/APP.3.1]** where the different components of the Scheme are divided into works which correspond with the work number areas shown on the **Works Plan [EN010152/APP/2.2]** which would be subject to differing levels of development and/or management. For the purposes of the EIA, the Scheme is described in **ES Volume I, Chapter 2: The Scheme [EN010152/APP/6.1]**.
- 1.2.2 The works include Work No.1 which is for a generating station with a capacity of over 50 Megawatts (MW), which constitutes the Nationally Significant Infrastructure Project (NSIP) in accordance with section 14 and section 15 of the Planning Act 2008 (Ref. 1).
- 1.2.3 Work No. 2 of the **Draft DCO [EN010152/APP/3.1]** is for the Battery Energy Storage System and includes fire safety infrastructure, mitigation and control measures. The design parameters of the fire safety infrastructure, mitigation and control measures are set out in the **Framework Battery Safety Management Plan (BSMP) [EN010152/APP/7.16]** and the **Framework Drainage Strategy** (refer to **ES Volume III, Appendix 9-4 [EN010152/APP/6.3]**). Requirements 5 and 9 of the **Draft DCO**

[EN010152/APP/3.1] require the submission and approval of both a battery safety management plan and details of the surface water drainage scheme. These details have to be substantially in accordance with the **Framework BSMP [EN010152/APP/7.16]** and **Framework Drainage Strategy** (refer to **ES Volume III, Appendix 9-4 [EN010152/APP/6.3]**). These control measures secure the design parameters of this part of the Scheme, and these are therefore not included in Table 1 of this Statement

- 1.2.4 Work No. 6 and parts of Work Nos. 4 and 5 include temporary construction and decommissioning compounds. The parameters for these temporary construction and decommissioning compounds are provided for on the **Works Plan [EN010152/APP/2.2]** and in the **Framework Construction Environmental Management Plan (CEMP) [EN010152/APP/7.7]** and **Framework Decommissioning Environmental Management Plan (DEMP) [EN010152/APP/7.9]**. The temporary construction and decommissioning elements of Work Nos. 4, 5 and 6 are not therefore included in Table 1 of this Statement.
- 1.2.5 Work No. 8 relates to works to facilitate access. The parameters for access works are set out in the **Framework Construction Traffic Management Plan (CTMP) [EN010152/APP/7.17]** with the parameters for their ongoing use during operation included for in the **Framework Operational Environmental Management Plan (OEMP) [EN010152/APP/7.8]**. Access works in relation to Work No. 8 are therefore not included in Table 1 of this Statement.
- 1.2.6 Work No. 9 relates to works to create areas of habitat management. The parameters for these works are set out in the **Framework Landscape and Ecological Management Plan (LEMP) [EN010152/APP/7.14]**. Works in relation to Work No. 9 are therefore not included in Table 1 of this Statement.
- 1.2.7 The design parameters which apply to the Scheme for the works are set out in Table 1. Further associated development in connection with the above works (as listed in the final paragraph of Schedule 1 to the **Draft DCO [EN010152/APP/3.1]**) may be necessary across the Order limits and would be subject to the design principles where they are applicable.
- 1.2.8 Construction activities will be subject to the controls included in detailed management plans. The detailed management plans will need to be submitted to and approved by the relevant planning authority prior to the commencement of development in accordance with requirements specified in Schedule 2 to the **Draft DCO [EN010152/APP/3.1]** and for the Scheme to be implemented in accordance with the approved details. The detailed management plans will comprise:
- Construction Environmental Management Plan which would be substantially in accordance with the **Framework CEMP [EN010152/APP/7.7]**;
 - Construction Traffic Management Plan which would be substantially in accordance with the **Framework CTMP [EN010152/APP/7.17]**;
 - Public Rights of Way (PRoW) Management Plan which would be substantially in accordance with the **Framework PRoW Management Plan [EN010152/APP/7.13]**;
 - Soil Management Plan (SMP) which would be substantially in accordance with the **Framework SMP [EN010152/APP/7.10]**;

- e. Battery Safety Management Plan (BSMP) which will need to be substantially in accordance with the **Framework BSMP [EN010152/APP/7.16]**.
- 1.2.9 Decommissioning activities will be subject to the controls included in the **Framework DEMP [EN010152/APP/7.9]**. This will be secured by requirement 18 of the **Draft DCO [EN010152/APP/3.1]**, which sets out when the DEMP must be submitted to and approved by the relevant planning authority and confirms that it must be substantially in accordance with the **Framework DEMP [EN010142/APP/7.9]**.
- 1.2.10 The operation of the Scheme will be subject to the controls included in:
- f. OEMP which would be substantially in accordance with the **Framework OEMP [EN010152/APP/7.8]**;
 - g. LEMP which would be substantially in accordance with the **Framework LEMP [EN010152/APP/7.14]**;
 - h. Drainage Strategy which would be substantially in accordance with the **Framework Drainage Strategy (ES Volume III, Appendix 9-4 [EN010152/APP/6.3])**;
 - i. Works Plan [EN010152/APP/2.2]; and
 - j. Streets, Rights of Way and Access Plans [EN010152/APP/2.3].
- 1.2.11 These documents and plans are secured by requirements in the **Draft DCO [EN010152/APP/3.1]**. The controls in these framework documents and plans are therefore not duplicated in this Statement.

Table 1. Design Parameters

Element of Scheme	Parameter Type	Design Parameter
Work No. 1 — a ground mounted solar photovoltaic generating station with a gross electrical output capacity of over 50 megawatts including— (a) solar panels fitted to mounting structures; and (b) field stations;		
Solar PV Panels	Location	The Solar PV Panels would be located within the areas shown as Work No. 1 on the Works Plan [EN010152/APP/2.2]
	Scale	Individual Solar PV Panels would be between 2.0 metres (m) and 2.5 m in length and between 1.0 m and 1.4 m wide.
	Design	The Solar PV Panels would comprise two layers of toughened, low reflectivity glass with a series of PV cells, wiring, etc. sandwiched between. These would be framed with an anodised aluminium frame.
	Design	The Solar PV Panels would be dark blue, grey, or black in colour.
Solar PV Mounting Structures	Location	The Solar PV Mounting Structures would be located within the areas shown as Work No. 1 on the Works Plan [EN010152/APP/2.2]
	Scale	The Solar PV Panels would be secured on a fixed south facing system.
	Scale	<p>The Solar PV Mounting Structures would be pile driven directly into the ground in areas where no archaeological mitigation is required. The depth of piles would be a minimum of 1.8 m to a maximum of 3.0 m depending upon ground conditions.</p> <p>In areas where archaeological mitigation is required, the Solar PV Mounting Structures would be mounted on pre-cast concrete blocks using up to 4,000 1-tonne blocks measuring approximately 4 m by 0.5 m in footprint each. Block size, number and weight</p>

Element of Scheme	Parameter Type	Design Parameter
Solar PV Tables (rows of Solar PV Mounting Structures with Solar PV Panels on top)		would only be determined upon final detailed design. Areas of archaeological mitigation are defined within the Draft Archaeological Mitigation Strategy [EN010152/APP/7.19] .
	Design	The Solar PV Mounting Structures would be made of galvanised steel.
	Location	The Solar PV Tables would be located within the areas shown as Work No. 1 on the Works Plan [EN010152/APP/2.2]
	Scale	The orientation and slope of the Solar PV Tables will be fixed south facing with a tilt angle of between 10 and 30 degrees from horizontal.
	Scale	The maximum height to the top of the Solar PV Panel above ground level (AGL) would be 3.5 m.
	Scale	The minimum height to the lower edge of the Solar PV Panel from ground level would be 0.8 m, except in areas of Flood Zone 3 where this would be determined ensuring a 300 mm freeboard above the 1-in-100 year plus climate change flood level is maintained at all times. Where Solar PV Panels are located within the Credible Maximum Scenario flood extent, these would be raised 400 mm above the flood level associated with this event.
Field Stations - comprising electrical equipment - inverters, transformers and switchgear that could be provided in three different configurations - see a), b) and c) under “field stations” in the Interpretation	Scale	The minimum separation distance between rows (inner spacing) of Solar PV Tables will be 3 m.
	Location	All Field Stations would be located within the areas shown as Work No. 1 on the Works Plan [EN010152/APP/2.4] .
	Location	Field Stations would be located at least 250 m from any residential property.
	Location	Field Stations <u>housed in a container</u> will be located outside of Flood Zone 2 and Flood Zone 33b .
	Scale	Where Field Stations are located within the Credible Maximum Scenario flood extent, these will be raised 300mm above the flood level associated with this event.
	Scale	There would be a maximum number of 28 Field Stations.

Element of Scheme	Parameter Type	Design Parameter
<p>section at Schedule 1(1) of the Draft DCO [EN010152/APP/3.1]</p> <p>Two types of inverters are being considered and will only be determined at the detailed design stage post consent. These are central inverters, or string inverters.</p>	Scale	There would be a maximum number of 99 containers (also referred to as Field Station Units in the Application) used across 28 Field Stations. There would be a maximum of 4 containers at Field Stations.
	Scale	Field Stations would comprise areas of hardstanding up to a maximum of 20 m by 20 m.
	Scale	The maximum dimensions of a single container would be 12.5 m by 2.5 m footprint and 3.5 m high.
	Scale	For configurations (b) and (c), string inverters would either be mounted parallel to the Solar PV Tables, or more likely be mounted at the end of the Solar PV Table frame. One single string inverter unit could <u>will</u> be utilised for approximately up to every 10 to 12 Solar PV Tables.
	Scale	For configurations (b) and (c), string inverters would be 1.5 m length by 0.5 m depth by 1.0 m high.
		Due to the location of some Solar PV Panels in Flood Zone 2 and Flood Zone 3, the maximum height of string inverters in these Flood Zones is expected to be up to 2 m AGL.
	Scale	For configuration (c), transformers may be provided externally (not in cabins or enclosures). They will have a maximum footprint of up to 4.0 m by 4.0 m and a maximum height of 3.5 m. To comply with British Standard (BS) EN 62271-1:2017 (Ref. 2), these transformers will be surrounded by a secure wire mesh fence of up to 2.4 m high.
	Scale	For configuration (c), switchgear may be standalone housed in a cabin with maximum dimensions of 6.0 m by 2.5 m in plan and up to 3.5 m high.
	Design	The Field Station containers would be located on concrete foundations (blocks or plinths), ground screws, reinforced concrete piles, or compacted stone/gravel depending on the

Element of Scheme	Parameter Type	Design Parameter
		local geology or land quality. <u>The containers would be externally finished in keeping with the prevailing surrounding environment, often with a green or grey painted finish.</u>
	Design	For configuration (c), transformers may be provided externally and they would therefore be externally finished in keeping with the prevailing surrounding environment, often with a grey or green painted finish. External finish varies between manufacturers and colour would be confirmed at detailed design.
	Design	For configuration (c), switchgear may be housed in a cabin and the cabin would be externally finished in keeping with the prevailing surrounding environment, often with a green or grey painted finish.

Element of Scheme	Parameter Type	Design Parameter
-------------------	----------------	------------------

Work No. 2 —battery energy storage systems including—

- a. battery energy storage system (BESS) units each comprising an enclosure for BESS electro-chemical components and associated equipment, with the enclosure being of metal façade, joined or close coupled to each other, mounted on one or more of reinforced concrete foundation slab, concrete piles, ground screws, metal piles or compacted stone/gravel;
- b. transformers and associated bunding;
- c. inverters, switchgear, power conversion systems (PCS) and ancillary equipment;
- d. containers or enclosures housing all or any of Work Nos. 2(b) and (c) and ancillary equipment;
- e. monitoring and control systems housed within the containers or enclosures comprised in Work Nos. 2(a) or (d) or located separately in its own container or enclosure;
- f. heating, ventilation and air conditioning (HVAC) systems either housed on or within each of the containers or enclosures comprised in Work Nos. 2(a), (d) and (e), attached to the side or top of each of the containers or enclosures, or located separate to but near to each of the containers or enclosures;
- g. electrical cables including electrical cables connecting to Work No. 3;
- h. bunded impermeable surface to manage surface water drainage;
- i. fire safety infrastructure including water storage tanks, impermeable water capture basins and a shut-off valve for containment of fire water and hard standing to accommodate emergency vehicles; and
- j. containers or similar structures to house spare parts and materials required for the day to day operation of the BESS facility.

Battery Energy Storage Systems (BESS) (infrastructure for the storage of electrical energy) Two options of BESS inverters are being considered and will only be determined upon final detailed design.	Location	All BESS and its supporting infrastructure would be located within the area shown as Work No. 2 on the Works Plan [EN010152/APP/2.3] .
	Location	All BESS would be located at least 500 m from any residential property.
	Scale	The BESS <u>area</u> would be <u>up to 250 m by 200 m and</u> located within Flood Zone 1. The Work No.2 area would be bunded to provide protection during the unlikely event of a breach of the flood defences. The height of this bund would be 300 mm above the maximum flood depths during the River Don breach scenario.
	Scale	BESS would be housed in containers (referred to as BESS Containers) with a maximum footprint of 12.5 m by 2.5 m and a height of up to 3.5 m. 'BESS Container' refers to any

Element of Scheme	Parameter Type	Design Parameter
These are BESS central inverters or BESS string inverters.		battery storage system enclosure design that may be used for the Scheme, i.e. cabinet, unit, shipping-type container.
	Scale	There would be a maximum of 432 BESS Containers.
	Scale	Up to five shipping-type metal containers with a maximum footprint of 12.5 m by 2.5 m and a height of up to 3.5 m would be required to house the equipment needed to control the BESS.
	Design	BESS Containers would be on concrete foundations (blocks or plinths), although other types of foundations (for example ground screws, metal piles, or compacted stone/gravel) may be used depending on the local geology or land quality.
	Design	BESS Containers would have built-in gas, heat and smoke detection and an explosion protection system. In case of a fire at the BESS, on-site water storage would be provided in above ground fire water tanks and fire water containment comprising impermeable water capture with penstocks would be provided. Outline design details of the fire safety infrastructure are provided in the Framework Battery Safety Management Plan [EN010152/APP/7.16] .
	<u>Design</u>	<u>Areas within 10 m of BESS enclosures will not contain combustible vegetation and would not be planted with any new combustible vegetation.</u>
	Scale	If BESS central inverters are used, central inverters, transformers and switchgear would be provided in shipping-type metal containers, with a maximum footprint of up to 12.5 m by 2.5 m and a height of up to 3.5 m.
	Scale	If BESS string inverters are used, there would be up to a maximum of 1187 BESS string inverters located at the end of the BESS Containers. BESS string inverters would sit on a 1m x 2m plinth which would house 5 string inverters.
	Scale	If BESS string inverters are used, they would be 1.5 m in length by 0.5 m depth by 1.0 m high.

Scale	If BESS string inverters are used, they would feed electricity from the BESS Containers into a shipping-type containerised/or open sided container up to a maximum footprint of 12.5m x 2.5m and a height of up to 3.5m. This would house the switchgear and the transformer.
Scale	A maximum of 64 shipping-type containerised/or open sided containers would be required to house transformers and switchgear or transformers, switchgear and central inverters if string inverters are not used. These would be located adjacent to the BESS Containers

Work No. 3 —development of onsite substation and associated works including—

- a. substation, switch room buildings and ancillary equipment including reactive power units and harmonic filters; and**
- b. monitoring and control systems housed within a control building or located separately in their own containers or control rooms, with welfare facilities.**

Location	The On-Site Substation would be located in the areas shown as Work No. 3 on the Works Plan [EN010152/APP/2.2].
Location	The On-Site Substation would be located at least 500 m away from any residential property.
Scale	The On-Site Substation would be located within Flood Zone 1. The On-Site Substation would be bunded to provide protection during the unlikely event of a breach of the flood defences. The height of this bund would be 300 mm above the maximum flood depths during the River Don breach scenario.
Scale	The footprint of the On-Site Substation compound would be up to 100 m by 200 m.
Scale	The maximum height of the On-Site Substation would be 13.0 m, although the majority of the associated infrastructure would be much shorter.
Scale	The control and metering building would have a footprint of 20 m by 20 m and be a maximum of 6.0 m high.
Design	The electrical infrastructure associated with the On-Site Substation comprising cable sealing ends (where the export cables would terminate into the infrastructure), e

transformer would be located outside (i.e. not contained within a building or cabin) and would comprise of multiple components.

Work No. 4— works to lay electrical cables and compounds for the electrical cables including—

- a. works to lay 400kV electrical cables connecting Work No. 3 to the National Grid Thorpe Marsh Substation, including link boxes and tunnelling, boring and drilling works for trenchless crossings;**
- b. electrical engineering works within or around the National Grid Thorpe Marsh Substation, including the laying and terminating of the electrical cables and ancillary equipment; and**
- c. construction and decommissioning compounds, including site and welfare offices and areas to store materials and equipment.**

Work No. 5— works including—

- b. works to lay electrical cables connecting Work No. 3 to an existing on site overhead line tower including the laying and terminating of the electrical cables and ancillary equipment;**

400 kilovolt (kV) electrical cables referred to as Grid Connection Cables (Work 4a) or cables for the Grid Connection Line Drop (Work 5(b)) depending upon the location of the Scheme's connection to the National Electricity Transmission System (NETS)	Location	The Grid Connection Cables would be located within areas shown as Work No. 4 on the Works Plan [EN010152/APP/2.2]
	Location	The cables for the Grid Connection Line Drop would be located within the areas marked at Work No. 5 between Work No. 3 and an existing on-site overhead line tower on the Works Plan [EN010152/APP/2.2]
	Scale	The Grid Connection Cables or cables for the Grid Connection Line Drop would comprise three 400 kV single core AC cables, as well as a bare copper earth cable, fibre optic cable, and low voltage control cable.
	Scale	The Grid Connection Cables or cables for the Grid Connection Line Drop would be underground and installed to a minimum depth of 1.0 m (to top of cable duct).
	Scale	The cable trench would be up to approximately 0.75 m wide and up to 1.5m in depth.
	Scale	Where Horizontal Directional Drilling (HDD) is used to install the Grid Connection Cables beneath watercourses, installation would be a minimum of 1.5 m below the bed of the

watercourse, except for Mill Dike, Wrancarr Drain, Engine Dike and Thorpe Marsh Drain due to the connectivity to the River Don where the minimum installation depth would be 5.0 m below the lowest surveyed point of the watercourse.

Scale

The working area for installation of the Grid Connection Cables or cables for the Grid Connection Line Drop ~~is anticipated to~~will be a 30 m wide corridor, but this may be widened in specific places to accommodate required operations (such as access points) and narrowed in others (minimum width 5 m), for example to minimise removal of hedgerows or at open cut watercourse crossings. The working area includes the trench, soil and spoil storage, working area and haul road with passing places where required. The haul road will be up to a maximum of 5 m wide and would run directly on the subsoil surface with temporary track matting used where required.

Link Boxes - inspection pits which are installed at points where different sections of the Grid Connection Cables or the cables for the Grid Connection Line Drop are joined.

Location and scale

Link boxes would be below ground and would be a maximum of 2.0 m long by 2.0 m wide and 2.0 m deep.

Scale and design

Above ground features would comprise manhole covers with maximum dimensions of 2.0 m by 2.0 m, and marking posts.

Work No. 5— works including—

- a. electrical cables, including but not limited to electrical cables connecting Works No. 1, 2, 3 and 4 to one another and connecting solar panels to one another and the field stations including tunnelling, boring and drilling works for trenchless crossings;
- c. landscaping, biodiversity and heritage mitigation and enhancement measures including planting;
- d. earthworks;
- e. laying down of footpath diversions, permissive paths, signage and information boards;
- f. hardstanding and parking areas;
- g. sustainable drainage systems including ponds, runoff outfalls, general drainage and irrigation infrastructure, systems and improvements or extensions to existing drainage and irrigation systems;
- h. fencing, gates, boundary treatment and other means of enclosure;
- i. works for the provision of security and monitoring measures such as CCTV columns, cameras, lighting columns and lighting, weather stations, perimeter fencing and communication infrastructure;
- j. improvement, maintenance and use of existing private tracks;
- k. laying down of internal access tracks, ramps, means of access, footpaths, crossing of watercourses and roads, including the laying and construction of drainage infrastructure, signage and information boards;
- l. construction and decommissioning compounds, including site and welfare offices and areas to store materials and equipment; and
- m. works to divert and underground existing electrical overhead lines.

Electrical cables – referred to as On-Site Cables	Location	All On-Site Cables would be located within areas shown as Work No. 5 on the Works Plan [EN010152/APP/2.2]
	Location	If string inverters are used for Work No.1, On-Site Cables between Solar PV Panels and string inverters would typically be above ground level (along a row of racks fixed to the mounting structure or fixed to other parts of nearby components), and then underground if required (between racks and in the inverter's input).

	Location	If central inverters are used for Work No.1, On-Site Cables between the Solar PV Panels and Field Stations would be underground.
	Location	All other On-Site Cables would be underground unless there are obstacles such as archaeology in which case an above ground method such as concrete trough or cable tray would be used in these limited scenarios.
	Scale	The indicative cable trench dimensions for On-Site Cables would be up to 2 m in width and up to 1.4 m in depth. Trench depths would increase at crossings, for example at or on the approach to open trenched watercourse crossings, or if utilities or obstacles such as buried utilities are encountered in which case trenches would be deeper to avoid the obstacle by set clearance limits.
	Design	The On-Site Cables would be low voltage (less than 1.0 kV alternating current (AC) or 1.5 kV direct current (DC)) or medium voltage (33 kV). and include fibre optic and/or Cat 5/6 network data (communications) cables.
Solar PV Site Fencing (Work 5(h)) (including Solar PV Site Internal Fencing where required to create rotational grazing plots)	Location	Solar PV Site Fencing would be located within areas shown as Work No. 5 on the Works Plan [EN010152/APP/2.2]
	Scale	For the Solar PV Site fencing the average/typical distance between fence posts will be 5 m but will vary between 3 m and 7 m to best avoid tree Root Protection Zones (RPZ) and fit the shape of the field.
	Scale	The maximum height of the Solar PV Site Fencing would be 2.2 m. Solar PV Site internal fencing would be a minimum height of 1.0 m, or maximum height of 2.2 m similar to perimeter fencing.
	Design	The Solar PV Site fencing and Solar PV Site internal fencing would be stock proof mesh-type security fence with wooden posts. Fence posts would be directly driven into the ground using a standard post driver. There would be no excavation of foundations or 'concreting in' of posts.
On-Site Substation Fencing (Work 5(h))	Location	The On-Site Substation fencing would be located within the area shown as Work No.1, 3, 4 and 5 on the Works Plan [EN010152/APP/2.2]

	Scale	The On-Site Substation would be securely fenced with galvanised palisade security fencing up to 2.5 m high with mandatory warning signage.
	Design	The On-Site Substation fencing would comprise fence posts that would be directly driven into the ground using a standard post driver. There would be no excavation of foundations or 'concreting in' of posts.
BESS Fencing (Work 5(h))	Location	The BESS fencing would be located within area shown as Work No.1, 2 and 5 on the Works Plan [EN010152/APP/2.2]
	Scale	The BESS would be securely fenced with galvanised palisade security fencing up to 2.5 m high.
	Design	The BESS fencing would comprise fence posts that would be directly driven into the ground using a standard post driver. There would be no excavation of foundations or 'concreting in' of posts.
Security System (Work 5(i))	Location/Design	Pole mounted internal facing closed circuit television (CCTV) systems would be deployed around the perimeter of the operational areas of the Solar PV Site. Alternatively, for the On-Site Substation (Work No.3) a centrally located CCTV system would likely be installed within the On-Site Substation covering a 360° view of the On-Site Substation.
	Scale	CCTV cameras would be mounted on wooden posts approximately 2.5 m high. The posts would be positioned at every change in direction to the fence, and the anticipated spacing is every 50 m along straight sections. For the centrally located CCTV system for the On-Site Substation this would be mounted up to 5m high.
	Design	The CCTV cameras would have fixed, inward-facing viewsheds and would be aligned to capture only the perimeter fence and the area inside the fence.
	Design	CCTV would use thermal imaging and Infrared (IR) lighting to provide night vision functionality.

Work No. 7— works to develop operations and maintenance buildings including—

- a. alteration and maintenance of existing structures;**
- b. offices, security and welfare facilities;**
- c. storage facilities; and**
- d. parking areas.**

Operations and Maintenance Hub	Location	The Operations and Maintenance Hub would be located within the area shown as Work No. 7 on the Works Plan [EN010152/APP/2.2]
	Scale	The Operations and Maintenance Hub would comprise a containerised welfare unit with a maximum footprint up to 12.5 m by 2.5 m, up to 6.5 m in height.

2. References

- Ref. 1 The Planning Act 2008. Available at: <https://www.legislation.gov.uk/ukpga/2008/29/> [Accessed 30 July 2024].
- Ref. 2 British Standards Institute (BSI) (2017). BS EN 62271-1:2017 High voltage switchgear and control gear. Common specifications for alternating current switchgear and control gear. Brussels: BSI.



BUILD | OWN | OPERATE | MAINTAIN

BOOM-POWER.CO.UK