Stonestreet Green Solar

Environmental Statement
Volume 2: Main Text
Chapter 3: Project Description

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3 Project Description

3.1 Introduction

3.1.1 This Chapter provides a description of the Project which forms the basis of the Environmental Impact Assessment ('EIA'). The physical characteristics of the Project are described alongside the key activities that will be undertaken during the construction, operation and decommissioning phases. The information included in this Chapter informs each of the technical assessments in **ES Volume 2, Chapters 7 to 18 (Doc Ref. 5.2)**.

3.1.2 This Chapter should be read alongside the following plans and figures:

Book 2 Plans:

- **Land Plans (Doc Ref. 2.1);**
- **Crown Land Plans (Doc Ref 2.2);**
- **Works Plans (Doc Ref. 2.3);**
- **Illustrative Project Drawings - Not for Approval (Doc Ref. 2.6);** and
- **Illustrative Landscape Drawings – Not for Approval (Doc Ref. 2.7).**

ES Volume 3 – Figures (Doc Ref. 5.3):

- **Figure 3.1**: **Existing Access Network;**
- **Figure 3.2: Proposed Access Network (Key Plan & Sheets 1 – 5);**
- **Figure 3.3: Illustrative Watercourse Crossings Locations; and**
- **Figure 3.4: Illustrative Bridge Locations and Existing Crossing Structures.**

3.2 Project Overview

3.2.1 The Project comprises the construction, operation and decommissioning of solar photovoltaic ('PV') arrays and energy storage, together with associated infrastructure and an underground cable connection to the existing National Grid Sellindge Substation.

3.2.2 The Project will include a generating station (incorporating solar arrays) with a total capacity exceeding 50 megawatts ('MW'). The agreed grid connection for the Project will allow the export and import of up to 99.9 MW of electricity to the grid. The Project will connect to the existing National Grid Sellindge Substation via a new 132 kilovolt ('kV') substation constructed as part of the Project and cable connection under the Network Rail and High Speed 1 ('HS1') railway.

3.2.3 The Site is located approximately 6.5km to the south east of Ashford Town Centre and approximately 13.7km to the west of Folkestone Town Centre, in the county of Kent. The Site is situated on land located to the north and west of the village of

Aldington, centred at Ordnance Survey ('OS') National Grid Reference ('NGR') TR 05898 37766. The Site is within the administrative boundaries of Ashford Borough Council ('ABC') and Kent County Council ('KCC').

3.2.4 The location of the Project is shown on **ES Volume 3, Figure 1.1: Site Location Plan (Doc Ref. 5.3)**. The Project will be located within the Order limits (the land shown on the **Works Plans (Doc Ref. 2.3)** within which the Project can be carried out). The Order limits plan is provided as **ES Volume 3, Figure 1.2: Order Limits (Doc Ref. 5.3)**. Land within the Order limits is known as the 'Site'.

3.2.5 The Site extends to approximately 192 hectares.

3.2.6 A 40-year period for the operational phase of the Project has been assessed in the EIA and reported in this ES. Once the Project ceases to operate it will be decommissioned.

3.3 Rochdale Envelope

3.3.1 The development of the Project has been an iterative process, including environmental assessment and rounds of non-statutory and statutory consultation.

3.3.2 The detailed design for the Project will be confirmed following the grant of the Development Consent Order ('DCO') for the Project and completion of Archaeological Management Strategy ('AMS') intrusive survey works. Flexibility is required as the technologies proposed are rapidly evolving and to allow the Project to utilise the best available technology available at that time to maximise the benefits the Project will deliver. The need for flexibility in design, layout and technology in DCO applications is recognised in Section 4.3: Environmental Effects/Considerations of NPS EN-1[1] and paragraphs 2.6.1 to 2.6.3 and paragraphs 2.10.70 to 2.10.72 of NPS EN-3[2].

3.3.3 To accommodate this flexibility, a 'Rochdale Envelope' approach is used, as described in PINS Advice Note Nine: Rochdale Envelope[3]. This involves assessing the maximum (and, where relevant, the minimum) parameters for the Project where flexibility needs to be retained while ensuring all likely significant effects (positive or adverse) are considered.

3.3.4 The **Works Plans (Doc Ref. 2.3)** have been prepared to provide a level of information which is considered sufficient to enable the likely significant effects on the environment to be assessed and the mitigation measures to be described.

3.3.5 A **Design Principles (Doc Ref. 7.5)** document accompanies the DCO Application and is structured to reflect the description of the Project, as set out in Schedule 1 of the **Draft Development Consent Order (Doc Ref. 3.1)** and shown on the **Works Plans (Doc Ref. 2.3)**.

3.3.6 The **Design Principles (Doc Ref. 7.5)** include a series of commitments and rules that will control the detailed design and provide guidance on aspects of the intended form and scale of the principal components of the Project. The **Works Plans (Doc**

Ref. 2.3) and the **Design Principles (Doc Ref. 7.5)** establish the three-dimensional envelope for the Project to be built and operated.

3.3.7 In addition, the **Illustrative Project Drawings - Not for Approval (Doc Ref. 2.6)** provide illustrative drawings (the 'Illustrative Project Layout') to demonstrate how the Project could be delivered within the parameters defined by the **Works Plans (Doc Ref. 2.3)** and **Design Principles (Doc Ref. 7.5)**. This allows a robust assessment of likely significant effects to be undertaken within the ES for topics where the nature of the assessment methodology requires a specific level of detail, namely the biodiversity, cultural heritage, landscape and visual, noise and water assessments. At detailed design stage, it will be necessary to demonstrate that the final design of the Project will not give rise to new or different significant effects from those stated in the ES.

3.3.8 Within this Chapter, any maximum and minimum parameters mentioned relate to the **Design Principles (Doc Ref. 7.5)**, unless otherwise stated.

3.3.9 The Rochdale Envelope for this ES comprises the description of the "authorised development" for the Project (as set out in Schedule 1 of the **Draft Development Consent Order ('DCO') (Doc Ref. 3.1)**, the **Works Plans (Doc Ref 2.3)** and the **Design Principles (Doc Ref. 7.5)**).

3.4 Description of the Authorised Development

3.4.1 The Project is described in Schedule 1 of the **Draft DCO (Doc Ref. 3.1)** where the "authorised development" is described using the relevant Work No. each part of the Project relates to. Each Work No. is summarised as follows:

- **Work No. 1:** a ground mounted solar photovoltaic generating station with a gross electrical output capacity of over 50 megawatts;
- **Work No. 2:** balance of system and battery energy storage system ('BESS') works;
- **Work No. 3:** project substation and associated works;
- **Work No. 4:** works to lay high voltage electrical cables and extend Sellindge Substation to facilitate grid connection;
- **Work No. 5:** associated works;
- **Work No. 6:** works to provide site access;
- **Work No. 7:** construction and decommissioning works;
- **Work No. 8:** works to create, enhance and maintain green infrastructure, boundary treatments and crossing structures; and
- **Site Wide Works:** further associated development in connection with the Project.

3.4.2 The location of the Project is defined by the **Works Plans (Doc Ref. 2.3)**.

3.4.3 The remaining sections of this Chapter are structured as follows:

- **Sections 3.5 – 3.13** – Description of the authorised development;
- **Section 3.14** - Construction activities;
- **Section 3.15 -** Operational activities; and
- **Section 3.16** – Decommissioning activities.

3.5 Work No. 1: Solar PV Generating Station

3.5.1 The Site is divided into numbered field areas as shown on the **Works Plans (Doc Ref. 2.3)** and within **ES Volume 3, Figure 2.1: Field Boundaries and Site Area Plan (Doc Ref. 5.3)**. PV panels are not proposed in Fields 26 to 29 but these fields include landscaping, biodiversity and socio-economic enhancements.

3.5.2 The key components of Work No. 1 are described below.

PV Panels

3.5.3 PV panels convert sunlight into direct electrical current ('DC'). Individual PV panels are approximately 2.5m long and 1.5m wide and typically comprise PV cells set underneath a layer of strengthened glass. Each PV panel is enclosed in a module frame, typically built from anodised aluminium or steel and will be dark blue, black, grey or similar neutral colour.

3.5.4 The PV panels will be south facing and the angle of elevation will be between 20-25 degrees. The PV panels will be installed using a 'fixed' tilt arrangement with a maximum height of 3.5m Above Ground Level ('AGL') and a minimum clearance height above ground of 0.8m AGL.

PV Panel Mounting Structures

3.5.5 PV panels will be fixed to a metal frame mounting structure in groups known as 'PV strings'. An **Illustrative Framing Detail (4 No. Landscape PV Panel Format)** is provided within **Illustrative Project Drawings – Not for Approval (Doc Ref. 2.6)**.

3.5.6 The exact number and arrangement of panels in each PV string is dependent on factors such as the generating capacity and electrical characteristics of the PV panels used. PV panels currently have a typical power output of between 600 and 750 watts peak ('Wp') but this is increasing rapidly (latest development technology is up to 850Wp). As a result flexibility is required to accommodate technological advances.

3.5.7 The bare metal PV mounting structures are be attached to galvanised steel piles driven up to 3m into the ground. An alternative non-invasive mounting solution is proposed if there are circumstances where it may not be feasible to use piles due to ground conditions or other potential constraints, such as archaeology or utilities. This uses pre-cast reinforced concrete blocks to provide ballast to support the PV panels above ground, thereby avoiding subsurface impact. An **Illustrative Framing Detail (Ballast Mounting PV Panel Format)** is provided within the **Illustrative Project Drawings - Not for Approval (Doc Ref. 2.6)** to provide an illustration of this method.

3.5.8 The distance between each row of PV mounting structures will be between 2m and 5m, dependent on land topography to minimise inter-row shading, with a minimum of 2m required to allow for maintenance. The Illustrative Project Layout assumes PV rows are separated by 3.2m with a minimum distance of 3.2m provided between the edge of the PV panels and the security fencing.

3.6 Work No. 2: Balance of System and BESS

3.6.1 Inverters, transformers, switchgear and ancillary equipment are required to manage the electricity generated by the PV panels. This equipment will be sited in 'Inverter Stations' located across the Site within Work No. 2 areas as described further below.

3.6.2 Electricity from Inverter Stations will be exported to local Intermediate Substations, and then exported to the Project Substation. The combination of Inverter Stations and Intermediate Substations represent the key balance of system infrastructure required to deliver the power generated by the PV panels to the Project Substation.

3.6.3 The Project also includes a BESS which allows electricity generated from the PV panels to be stored and exported at a later time and will also allow the import of electricity from the National Grid typically during periods of high supply (low demand), with discharge typically during periods of high demand (low supply). The BESS allows the Project to load-shift electricity, both generated within the Site and imported from the National Grid, which helps to balance the electricity network.

3.6.4 Where installed, the BESS will be co-located with inverters within the Inverter Stations as opposed to located within a centralised single compound. This provides a number of advantages including reduced energy losses.

3.6.5 Physical infrastructure within Work No. 2 will have a maximum height of 4m AGL. All the main components will be dark green or similar neutral colour.

Inverter Stations

3.6.6 Each Inverter Station will contain electrical infrastructure including inverters, transformers and switchgear which, together, allow the electricity generated by the PV panels to be inverted and then exported to an Intermediate Substation. The Illustrative Project Layout includes 32 Inverter Stations which is the maximum that will be required.

3.6.7 Electricity is exported from PV strings to an inverter at low voltage, typically approximately 1.5/1.8kV. Inverters convert the DC electricity produced by PV panels into alternating current ('AC'). Inverters are sized and connected to a defined number of PV strings to match the total output.

3.6.8 Transformers step up the voltage of the AC electricity produced by an inverter to 33kV prior to export to an Intermediate Substation.

3.6.9 Switchgear and ancillary equipment include switches, fuses and circuit breakers which allow the control, protection and isolation of electrical equipment. Switchgear

is used both to de-energise equipment to allow work to be done and to clear faults downstream.

3.6.10 The above elements can either be installed independently as standalone units or can be integrated into a containerised unit.

3.6.11 The **Illustrative Containerised Inverter Station Detail,** supplied in the **Illustrative Project Drawings – Not for Approval (Doc Ref. 2.6)** shows illustrative dimensions of a containerised solution of 2.4m (width) x 6.0m (length) x 2.9m (height).

3.6.12 Typical dimensions for an inverter are approximately 1.5m (width) x 2.7m (length) x 2.3m (height), as shown in **Illustrative Inverter Station Individual Detail** provided within the **Illustrative Project Drawings – Not for Approval (Doc Ref. 2.6)**. Typical dimensions of a standalone transformer are expected to be 1.6m (width) x 2.2m (length) x 3m (height), with typical dimensions of switchgear being 1.5m (width) x 1.0m (length) x 2.3m (height).

3.6.13 Each Inverter Station will be enclosed by acoustic barriers (including an insulated gate) with a maximum height of 4m AGL.

Battery Energy Storage System

3.6.14 The BESS allows electricity generated by the PV panels or imported from the National Grid to be stored and discharged at a later time. The BESS supports the solar generation as it is able to balance the generation profile and enable the maximum renewable energy contribution from the Site area. It also allows the Project to more efficiently meet electricity demand (delivering energy when it is required as opposed to generated) and can also help to balance and support the local electricity network.

3.6.15 Battery technology is rapidly evolving and therefore flexibility is required to allow the Project to take advantage of expected future improvements.

3.6.16 The battery storage and associated heating, ventilation and cooling ('HVAC') systems, monitoring and risk mitigation equipment will be housed within individual metal containers, referred to as BESS Units. The exact number of BESS Units will depend on future improvements and the level of power and duration required.

3.6.17 An illustrative BESS Unit is shown on **Illustrative Battery Energy Storage System Detail** provided within the **Illustrative Project Drawings - Not for Approval (Doc Ref. 2.6).** The typical dimensions of the BESS Units are approximately 3.7m (width) x 13.7m (length) x 2.9m (height).

3.6.18 The design for the Project employs a distributed (DC-coupled) approach with four individual containerised BESS Units located at any one Inverter Station, with a maximum of two Inverter Stations (and therefore eight units) being located in any one area of the Site, as opposed to locating all BESS Units together in a single centralised compound area. This allows the BESS to be charged directly from PV panels using DC electricity and reduces energy losses relative to a centralised compound

approach where panel electricity is converted to AC at distributed solar inverters and then back to DC before storage in the BESS.

3.6.19 Electricity from PV panels will charge the BESS Units via DC-DC converters which allow the inverters and BESS Units to interact. DC-DC converters are approximately 1m (width) x 1m (length) x 2m (height), with one DC-DC converter co-located with each BESS Unit.

3.6.20 BESS Units and DC-DC converters are expected to be located at all Inverter Stations with the exception of those located in Field 9 and in Fields 20 to 22. This is to ensure that the design complies with National Fire Chiefs Council ('NFCC') guidance[4]. Other requirements of the guidance have also been adhered to including spacing of BESS Units at least 6m apart from one another (container wall to container wall) and ensuring sufficient water supply and appropriate vehicle access is available. BESS Units will also be at least 200m from residential properties.

3.6.21 The general layout of an Inverter Station, including BESS Units, is shown on **Inverter Station Illustrative General Arrangement** provided within the **Illustrative Project Drawings - Not for Approval (Doc Ref. 2.6)**.

3.6.22 Where BESS Units and DC-DC converters are installed, the Inverter Station will be located within a perimeter containment bunded enclosure lined with a protective membrane to act as secondary containment and contain surface water and/or firewater run-off.

Intermediate Substations

3.6.23 Intermediate Substations combine electricity from several Inverter Stations at 33kV prior to export to the Project Substation. The purpose is to rationalise the number and length of 33kV cables required from the Work No. 1 and Work No. 2 areas to the Project Substation (Work No. 3).

3.6.24 Intermediate Substations will be located within Fields 3, 15, 20 and 26. Each Intermediate Substation will be sited on foundations and will be constructed using metal or brick which will be dark green or similar neutral colour. The typical dimensions of the Intermediate Substations are approximately 2.4m (width) x 8m (length) x 2.5m (height).

3.6.25 The **Illustrative Intermediate Substation Layout** provided within the **Illustrative Project Drawings - Not for Approval (Doc Ref. 2.6)** provides an illustration of a typical Intermediate Substation.

3.7 Work No. 3: Project Substation

3.7.1 The Project Substation will receive electricity exported from each of the Intermediate Substations. This electricity is transformed at the Project Substation from 33kV to 132kV for export to the electricity grid via the Grid Connection Cable. The Project Substation also allows the import of electricity from the electricity grid to charge the BESS Units.

3.7.2 Work No. 3 includes a 132kV switchroom and control room buildings (each with an expected footprint of 15m x 25m), circuit breakers, 132kV bus-bars, pad mounted transformers, and metering and other ancillary equipment to allow the conversion of electricity from 33kV (as received from the Intermediate Substations) to 132kV for export to the electricity grid. Two storage containers (approximately 2.5m (width) x 12m (length) x 2.5m (height)), single stacked for the storage of spare parts and equipment are also proposed. Physical infrastructure within Work No. 3 will have a maximum height of 7.5m AGL.

3.7.3 The Project Substation area will be enclosed by metal palisade fencing with a maximum height of 3m AGL with access provided via a secure access gate. Acoustic barriers with a maximum height of 4m AGL are proposed along the northern and eastern boundary to minimise noise impacts.

3.7.4 Indicative layout plans, elevations and sections of the Project Substation are shown within the **Illustrative Project Drawings - Not for Approval (Doc Ref. 2.6)**.

Project Substation Platform

3.7.5 The Project Substation will be sited on a newly constructed platform. This will also accommodate the storage containers and up to two Intermediate Substations included as part of Works No. 2.

3.7.6 The engineering design is anticipated to comprise a 5m contiguous bored pile wall (to the north and west of the platform), a 5m earth reinforced retaining wall (to the south and east of the platform), piling for the transformers and a reinforced concrete retaining wall (to the northeast). The contiguous bored pile wall will be offset from the boundary by approximately 7m to avoid tree root protection zones.

3.7.7 The earth retaining wall, visible from the south and east, will be seeded with native grass seed to soften its appearance in the landscape.

3.7.8 The development platform for the Project Substation will be no greater than 56m above ordnance datum ('AOD') and no lower than 55m AOD, fully outside the Aldington Flood Storage Area ('AFSA').

3.7.9 Stormwater from the Project Substation will outfall into a drainage swale with water ultimately received in a wetland basin located in the fluvial floodplain. The wetland will be designed to provide additional flood storage compensation areas which is expected to result in a net increase in flood storage.

3.7.10 Further detail is provided in the **Outline Operational Surface Water Drainage Strategy ('Outline OSWDS') (Doc Ref. 7.14)**.

3.8 Work No. 4: Grid Connection and Sellindge Substation Extension

3.8.1 Electricity generated by the Project will be exported to the National Grid Sellindge Substation via a new 132kV Grid Connection Cable.

3.8.2 UK Power Networks ('UKPN'), the distribution network operator responsible for connecting the Project, has confirmed that limited extension works will be required at Sellindge Substation to accommodate the connection, including an extension of the UKPN substation area of up to 0.05ha ('Sellindge Substation Extension').

3.8.3 Post installation there will be no above ground impacts from Work No. 4, except in relation to the Sellindge Substation Extension.

Grid Connection Cable

3.8.4 The Grid Connection Cable (maximum voltage 132kV) will be installed within the Cable Route Corridor which runs from the Project Substation to Sellindge Substation, approximately 2 kilometres ('km') to the east.

3.8.5 The cable (and associated fibreoptic data and communications cables) will be buried underground and installation will be in a trench up to 2m deep and 2m wide, including where it crosses Church Lane.

3.8.6 The Cable Route Corridor crosses the East Stour River at the location shown on **ES Volume 3, Figure 3.3: Illustrative Watercourse Crossings Locations (Doc Ref. 5.3)**. In this area Horizontal Directional Drilling ('HDD') methods will be used with a minimum depth of 2m from the bed of the river maintained.

3.8.7 HDD methods will also be used where crossing third-party infrastructure with an appropriate separation distance agreed with the third party.

3.8.8 A construction corridor will be identified within the Cable Route Corridor with an expected working width of 20m. Post installation an 8m easement will be maintained to allow access and cable maintenance.

3.8.9 Access for construction will be via the Primary Site Access. Temporary roadways, e.g. ground protection mats, aluminium trackway or similar, may be used to avoid compaction and damage to soil, depending on weather and ground conditions. Vehicle bridge crossings over the East Stour River will be required as shown on **ES Volume 3, Figure 3.4: Illustrative Bridge Locations and Existing Crossing Structures (Doc Ref. 5.3)**. Further details of vehicle bridge crossings are provided in **ES Volume 4, Appendix 10.5: Schedule of Watercourse Crossings (Doc Ref. 5.4)**.

3.8.10 To connect into Sellindge Substation, the Grid Connection Cable will need to cross under HS1 and the Network Rail railway lines, as shown on **ES Volume 3, Figure 3.3: Illustrative Watercourse Crossings Locations (Doc Ref. 5.3).** UKPN has confirmed there are existing cable ducts under its control that are available but, in the unlikely event this is not the case new ducts under the railway infrastructure using HDD methods will be required.

Sellindge Substation Extension Works

3.8.11 The Sellindge Substation Extension Works are required to allow the Project to connect to the electricity network. These are located within the secure Sellindge

Substation area and UKPN will be responsible for delivery of these works. An area of scrub will also need to be removed as shown on the **Vegetation Removal Plan (Doc Ref. 2.8)**.

3.8.12 The extension works are expected to include the installation of new circuit breakers and ancillary electrical infrastructure within the eastern part of the Sellindge Substation. The extension will require earthworks including a minor retaining wall.

3.8.13 Lighting, security and drainage for the Sellindge Substation Extension is expected to be consistent with the approach that is currently applied to the existing infrastructure at Sellindge Substation.

3.8.14 Access to Sellindge Substation for construction/decommissioning and operational purposes will continue to be via the existing access to the Sellindge Substation from Church Lane.

3.9 Work No. 5: Associated Works

3.9.1 The Project will require a range of associated works across the Work No. 5 area.

Site Fencing, Gates and Boundary Treatment

3.9.2 Perimeter fencing (excluding metal palisade fencing that forms part of Work No. 3 and Work No. 4) will be deer-proof fencing (wooden posts, metal fencing) with a maximum height of 2.5m AGL.

3.9.3 A minimum distance of 3.2m will be maintained between the security fencing and hedgerows outside of the security fencing. Internal to the security fencing a minimum distance of 3.2m will also be maintained between the security fencing and the edge of the PV panels.

3.9.4 Mammal gates will be installed at regular intervals in appropriate locations with access gates provided for habitat management, maintenance, security purposes and fire response access.

3.9.5 Fencing in Fields 19, 23 and 24 (downstream of the AFSA) will have a minimum 0.2m gap between the fence and ground level to prevent build-up of debris in a flood event with a minimum mesh spacing of 0.1m. Illustrative details of gates and fencing are shown on **Illustrative Fencing Detail Post and Wire,** within the **Illustrative Project Drawings - Not for Approval (Doc Ref. 2.6)**.

Lighting, Security and Monitoring (excluding Sellindge Substation Extension)

3.9.6 Lighting will be limited to emergency and overnight maintenance purposes only at Inverter Stations, Intermediate Substations, and the Project Substation with any lighting directed within the Order limits. Lighting will include features to reduce light spill. During the construction and decommissioning phases temporary lighting may be required, but in all cases will be managed to avoid significant adverse effects.

3.9.7 CCTV cameras will be located on ground mounted poles of up to 3m AGL in height, typically adjacent to the PV panels security fence line. A typical distribution and frequency of CCTV poles is shown on the **Illustrative CCTV Specifications** provided within the **Illustrative Project Drawings - Not for Approval (Doc Ref. 2.6)**). CCTV cameras will be directed towards the Site and its immediate environs, away from residential properties to protect privacy and amenity. CCTV cameras will use infra-red at night-time and will therefore produce no visible light. A fence detection system may be employed that will trigger a remote alarm if access is attempted.

3.9.8 Weather monitoring equipment, such as pyranometers, and communication equipment will be incorporated within the Works No. 5 area.

Cabling (excluding the Grid Connection Cable)

3.9.9 Electrical cabling (excluding the Works No. 4 132kV Grid Connection Cable) will be at varying voltages depending on the location within the Project.

3.9.10 Low voltage (typically 1.5/1.8kV) cabling connects the PV panels to inverters and other infrastructure including the BESS Units within the Inverter Stations. Combiner boxes may be used to combine cabling from multiple PV strings to reduce cabling required and will be situated on the PV mounting structure. Medium voltage (33kV) cabling will connect the Inverter Stations to the Intermediate Substations and then on to the Project Substation.

3.9.11 In both cases the cabling will be installed in up to 1.5m wide and between 0.6m and 1.5m deep underground trenches, with jointing pits requiring a maximum depth of 2m BGL.

3.9.12 The connection from the Intermediate Substation in Field 20 will include an approximately 1.2km section beneath the road surface of Goldwell Lane, using standard hard-dig trenching methods. Electrical cables will also need to cross Laws Lane, AE 396 (a byway open to all traffic ('BOAT')), Roman/Bank Road and Station Road.

3.9.13 Fibreoptic data cables, communication cables and earth cables will also be installed throughout the Site, typically in the same trenches as electrical cables to allow onsite data measurements to be communicated and allow central control.

3.9.14 Where cables cross the East Stour River (Field 24 to Field 25) and the Internal Drainage Board ('IDB') Managed Watercourse from Field 23 to Field 24, HDD methods will be used. For all other crossings, including drains, public highway crossings, BOATs or Public Rights of Way ('PRoWs'), standard trenching techniques will be used. Cable crossing locations for the East Stour River, IDB Managed Watercourses and drains are shown on **ES Volume 3, Figure 3.3: Illustrative Watercourse Crossings Locations (Doc Ref. 5.3)**. Further detail is provided in **ES Volume 4, Appendix 10.5: Schedule of Watercourse Crossings (Doc Ref. 5.4)**.

3.9.15 The routing of cables will be subject to detailed electrical design but will aim to avoid tree root protection zones, third party infrastructure, and identified areas of archaeological potential.

BESS Fire Risk Mitigation Infrastructure

3.9.16 The NFCC[4] has published specific guidance relating to grid scale BESS installations.

3.9.17 An **Outline Battery Safety Management Plan ('Outline BSMP') (Doc Ref 7.16)** has been produced for the Project that provides further detail on all aspects of the NFCC guidance and how the Project will comply with the requirements. The **Outline BSMP (Doc Ref 7.16)** forms the basis of the final detailed BSMP that will be approved by ABC, in consultation with Kent Fire and Rescue Service, prior to installation of the BESS as part of Work No. 2.

3.9.18 A series of internal access tracks are included to provide access to the BESS Units for emergency response purposes, in line with the NFCC guidance. Internal access tracks will be constructed using a 90% permeable grass-paving hardstanding surface (grass-paving) at least 3.7m wide, within foundations being approx. 300mm deep.

3.9.19 Water tanks for fire suppression water, with a maximum diameter of 12m and a maximum height of 3.5m AGL, will be connected to a fire hydrant located near to each BESS Unit to ensure water supply is available if required. Foundations for water tanks will be no greater than 2m BGL. Water tanks will be sited at least 50m from a BESS location.

3.9.20 The **Illustrative Project Drawings - Not for Approval (Doc Ref. 2.6)** provides illustrative locations of the internal access tracks and water tanks.

Temporary Bridge Crossings

3.9.21 Temporary bank to bank bridge crossings will be required over the East Stour River (between Field 24 and Field 25), over an IDB Managed Watercourse (between Field 23 and Field 24) and over a drain (between Field 18 and Field 19).

3.9.22 **ES Volume 3, Figure 3.4: Illustrative Bridge Locations and Existing Crossing Structures (Doc Ref. 5.3)** confirms the crossing locations. Further detail is provided in **ES Volume 4, Appendix 10.5: Schedule of Watercourse Crossings (Doc Ref. 5.4)**.

Laydown Areas

3.9.23 Areas within Work No. 5 will be used as laydown areas on a temporary basis as required during the construction and decommissioning phases.

3.10 Work No. 6: Site Access

3.10.1 The main site access ('Primary Site Access') to the Project from the public highway will be located via access off Station Road and is shown as Work No. 6 on the **Works Plans (Doc Ref 2.3)**. This provides access to the Primary Construction Compounds

/ Primary Decommissioning Compounds within Fields 25 and 26 during construction/decommissioning and to the Project Substation during operation.

3.10.2 With the exception of the South Eastern Area construction and decommissioning related traffic will not use the public highway (save for crossing at defined points) after entering the Primary Site Access, with all movements being on the internal haulage road. Access to the South Western Area (Fields 1-9) into Field 9 will be via the existing Bank Farm access track off Roman/Bank Road.

3.10.3 Access to the South Eastern Area will be via an existing access from Goldwell Lane with escort vehicles used as required. A limited amount of construction traffic will need to use Goldwell Lane to reach this access as no other route is possible. Access to Sellindge Substation for construction/decommissioning and operational purposes will continue to be via the existing access to the Sellindge Substation from Church Lane.

3.10.4 Further detail on construction access and traffic management is provided in **ES Volume 2, Chapter 13: Traffic and Access (Doc Ref. 5.2)** and in the **Outline Construction Traffic Management Plan ('CTMP') (Doc Ref. 7.9).**

3.10.5 Access to the Site during operation will be from the public highway. The layout of the internal access tracks and operational access points is subject to detailed design approval but is expected to be in general accordance with that shown on the **Illustrative Project Layout** provided within the **Illustrative Project Drawings – Not for Approval (Doc Ref. 2.6)**.

3.11 Work No. 7: Construction and Decommissioning Works

3.11.1 During the construction and decommissioning phases a number of temporary works will be required, including construction/decommissioning compounds and an internal haulage road.

3.11.2 Two Primary Construction Compounds / primary decommissioning compounds will be located in Fields 25 and 26 as shown as Work No. 7 on the **Works Plans (Doc Ref. 2.3)** and have been selected to limit the distance vehicles will need to travel using local roads after exiting the A20 Hythe Road.

3.11.3 The Primary Construction Compounds will include temporary site offices/welfare facilities, turning and loading areas for incoming Heavy Goods Vehicles ('HGVs'), containerised storage areas, waste storage area, PV panel testing area, bunded area for storage of fuels and hydrocarbons, parking, and security infrastructure (fencing, CCTV).

3.11.4 Four Secondary Construction Compounds will be located in Fields 8/9 (adjacent to Bank Farm), 19, 20 and 23 as shown on the **Works Plans (Doc Ref. 2.3)**. Secondary Construction Compounds will be unsurfaced and fuel / oil will not be stored in these areas. They will include welfare facilities, open areas and containers for storage of materials and equipment, waste storage, and areas for turning and loading of vehicles.

3.11.5 An internal (off-road) haulage road is proposed from the Primary Construction / Decommissioning Compounds to reduce the use of the local road network during construction and decommissioning. The internal haulage road will be provided at grade using a permeable surface.

3.11.6 The internal haulage road will cross the public highway at Station Road (between Fields 19-23) and at Roman/Bank Road (south of Field 10) but otherwise will ensure the use of local roads is minimised for the duration of the construction/decommissioning phases. Crossings of PRoW will be managed in accordance with the **Outline Rights of Way and Access Strategy ('RoWAS') (Doc Ref. 7.15)**.

3.11.7 The internal haulage road will cross the East Stour River, IDB Managed Watercourses and drains, via temporary bank to bank bridge crossings as included under Work No. 5 and shown on **ES Volume 3, Figure 3.4: Illustrative Bridge Locations and Existing Crossing Structures (Doc Ref. 5.3)**.

3.11.8 The internal haulage road (but no internal access tracks) will be located within 8m of the toe of the AFSA for a short section (approximately 40m) between Fields 24 and 25. No below ground excavation works are expected for the internal haulage road and therefore no impacts are anticipated.

3.12 Work No. 8: Green Infrastructure, Boundary Treatments and Crossing Structures

3.12.1 The Project has been carefully designed to integrate into the existing landscape and green infrastructure network, with the objective of minimising landscape and biodiversity impacts and maximising benefits.

3.12.2 To achieve this Work No. 8 identifies specific areas to deliver landscape and biodiversity enhancements where there is no above-ground Project infrastructure.

3.12.3 Construction will require the removal of a small number of trees and no more than 150m of hedgerow is to be removed as shown on the **Vegetation Removal Plan (Doc Ref. 2.8)**. Unless otherwise agreed with the local planning authority, vegetation loss will be restricted to the maximum extents shown on the **Vegetation Removal Plan (Doc Ref. 2.8)**. The tree removals are primarily lower quality category 'C' trees, apart from one 'B' quality tree, a small category 'B' group and minor part-removals of trees from two category 'B' quality groups.

3.12.4 No infrastructure or excavation is proposed near to the Backhouse Wood LWS ancient woodland. No veteran trees would be lost. Appropriate buffers for ancient woodland and veteran trees are secured by the **Design Principles (Doc Ref. 7.5)**. Appropriate buffers to protect existing badger setts and ponds are also secured by the **Design Principles (Doc Ref. 7.5)**

3.12.5 The **Illustrative Landscape Drawings - Not for Approval (Doc Ref. 2.7)** provide an indication of the landscape and biodiversity improvements that could be delivered as part of the Project, with illustrative quantities included in **ES Volume 2, Chapter**

8: Landscape and Views (Doc Ref. 5.2). The illustrative proposals include 2.82ha of native woodland planting, 11.25km of hedgerow reinforcement and 5.48km of new hedgerow planting. Significant new Biodiversity Improvement Areas ('BIA') are included in the Project, across Field 26 and the full extents of Fields 27-29 inclusive, all located adjacent to the East Stour River which will provide extensive nesting opportunities for skylark and other ground nesting birds.

3.12.6 The **Outline Landscape and Ecological Management Plan ('Outline LEMP') (Doc Ref. 7.10)** sets out the proposed ecological mitigation and enhancement measures for the Project. The **Outline CEMP (Doc Ref. 7.8)** and **Outline DEMP (Doc Ref. 7.12)** also include measures relevant to biodiversity and mitigation measures for habitats and species. The Project will provide a BNG of at least 100% for habitat units and at least 10% for hedgerow and river units**.**

Temporary bridge crossings

3.12.7 A temporary bank to bank bridge crossing will be required over the East Stour River: between Field 27 and Field 28. **ES Volume 3, Figure 3.4: Illustrative Bridge Locations and Existing Crossing Structures (Doc Ref. 5.3)** confirms the crossing location. Further detail is provided in **ES Volume 4, Appendix 10.5: Schedule of Watercourse Crossings (Doc Ref. 5.4).**

Existing bridges / drain crossings

3.12.8 An existing agricultural vehicle bridge over the East Stour River between Fields 26 and 28 and two existing drain crossings are expected to be used during the operational phase. The locations are shown on **ES Volume 3, Figure 3.4: Illustrative Bridge Locations and Existing Crossing Structures (Doc Ref. 5.3)**.

3.12.9 These crossings will be upgraded or repaired if required. As these are existing structures any repairs, upgrades or replacements of/to these structures will not be removed during decommissioning.

3.13 Site Wide Works

3.13.1 In connection with and in addition to Work Nos. 1 - 8, further associated development may be carried out comprising such other works as may be necessary or expedient for the purposes of or in connection with the authorised development and which are within the Order limits and fall within the scope of work assessed by the ES.

Site preparation work

3.13.2 The Site Wide Works include site preparation works and site clearance, remediation of any identified contamination, alteration to locations of services and utilities infrastructure and required earthworks and vegetation removal, where required.

Water and drainage infrastructure

3.13.3 An outline Operational Surface Water Drainage Strategy has been developed and is provided within the **Outline OSWDS (Doc Ref. 7.14)**. The **Outline OSWDS (Doc**

Ref. 7.14) is based on the **ES Volume 4, Appendix 10.2: Flood Risk Assessment (Doc Ref. 5.4)** and outlines how surface water impacts will be managed to prevent an increase in flood risk, including required changes to existing drainage arrangements.

3.13.4 The layout of the Project has been designed to ensure that it does not compromise the function or efficacy of the flood risk management structure or the Environment Agency's ability to undertake maintenance of the AFSA embankment.

3.13.5 A minimum 10m buffer (as measured from the top of the bank or channel edge under normal flows) will be provided to the East Stour River and IDB-managed Ordinary Watercourses. Within these areas no new physical infrastructure (other than essential works such as cable crossings, watercourse crossings, drainage and PRoW footbridges) will be developed in this buffer. A minimum 3.2m buffer would also be provided from all drains and channels.

3.13.6 A buffer will be provided from the toe of the AFSA embankment. This buffer extends at least 8m from the toe of the raised embankment and extend beyond this to align with the wider standoff requested by the Environment Agency.

3.13.7 No new physical infrastructure will be developed within this buffer other than:

- Approximately 40m section of the internal haulage road associated with Work No. 7 during the construction and decommissioning phases;
- The access track where it enters the main Project Substation – the works associated with this are above ground only comprise improvements to the surface treatment only; and
- Approximately 10m section of the cable route to the Project Substation which crosses the northern most section of the Primary Access Track.

3.13.8 The only temporary development within this buffer zone will be an approximately 40m section of the internal haulage road during the construction and decommissioning phases as outlined with **Paragraph 3.11.8**. No below ground excavation works will be undertaken for the internal haulage road.

3.13.9 Further details on the relationship of the Project to the AFSA are provided in **ES Volume 4, Appendix 10.4: Aldington Flood Storage Area Risk Assessment (Doc Ref. 5.4)**.

Landscaping and Biodiversity Enhancements

3.13.10 The Project will include additional planting, boundary enhancement and planting of seed mixes which will result in further landscape and biodiversity enhancements in areas of the Site outside the Work No. 8 area specifically identified for green infrastructure.

3.13.11 Further detail is provided in **ES Volume 2, Chapter 8: Landscape and Views (Doc Ref. 5.2)** and **ES Volume 2, Chapter 9: Biodiversity (Doc Ref. 5.2).**

PRoW diversions and establishment of new PRoWs

3.13.12 A number of existing PRoWs cross the Site as shown in **ES Volume 3, Figure 3.1: Existing Access Network (Doc Ref. 5.3)**. The Project will require temporary and permanent closures and diversions of PRoWs and will introduce a number of new and extended links to improve local connectivity as shown in **ES Volume 3, Figure 3.2: Proposed Access Network (Doc Ref. 5.3)**.

3.13.13 In designing the Project, the Applicant has sought to minimise diversions as far as practicable and discussions have been ongoing with KCC, ABC and Kent Ramblers throughout the design process.

3.13.14 The **Outline RoWAS (Doc Ref. 7.15)** provides descriptions of the temporary and permanent PRoW closures and diversions across the Site throughout the construction, operation and decommissioning of the Project and includes details regarding management of these to ensure they can continue to be used safely. The **Guide to the Application (Doc Ref. 1.5)** provides details of the labelling conventions used for PRoW across the DCO Application documents.

3.13.15 All PRoWs will be a minimum of 2m wide and will sit within a corridor of 10m minimum width, with the exception of the section of PRoW 'New 3' adjacent to Work No. 3 (Project Substation) which will sit within a 5m corridor.

3.13.16 There are five existing footbridges over the East Stour River, IDB Managed Watercourse and drains within the Site as shown on **ES Volume 3, Figure 3.4: Illustrative Bridge Locations and Existing Crossing Structures (Doc Ref. 5.3)**. As part of the Project, these footbridges will continue to be used for the PRoW network and will be maintained by the Applicant. Two new PRoW footbridges over an IDB-managed Ordinary Watercourse and drain will be provided, as shown **on ES Volume 3, Figure 3.4: Illustrative Bridge Locations and Existing Crossing Structures (Doc Ref. 5.3)**. New PRoW footbridges will be free standing structures with appropriate set backs from the top of banks, and are anticipated to be formed of wooden boards with the final design subject to agreement with the IDB. Any repairs, upgrades or replacements of/to existing or new structures required during the operational phase of the Project would be permanent and not removed during decommissioning. Further details of footbridge crossings are provided in **ES Volume 4, Appendix 10.5: Watercourse Crossing Schedule (Doc Ref. 5.4)**.

3.13.17 The PRoWs will be managed throughout the construction, operation and decommissioning phases to ensure that they can continue to be used safely where possible. These management measures are set out within the **Outline RoWAS (Doc Ref. 7.15)**, with details secured by Requirement in the **Draft DCO (Doc Ref. 3.1)**.

3.14 Construction

Construction Programme

3.14.1 Subject to the DCO being granted, the anticipated construction delivery programme for the Project, adopted for the purposes of assessment, is as follows:

- Construction works are expected to commence in 2026 and be fully complete in 2027; and
- Construction activities are likely to take place continuously over a 12-month period, albeit at different levels of intensity across the Site.

3.14.2 The duration of construction activities associated with the Project are expected to generally be in line with the following:

- Enabling and site preparation - 3 months;
- Installation of key infrastructure - 9 months;
- Project Substation construction - 10 months;
- Grid Connection Cable and Sellindge Substation Extension - 4 months; and
- Commissioning and site restoration / landscaping - 2 months.

3.14.3 The above construction stages would overlap over the 12-month period.

3.14.4 The spatial phasing and timing of construction will depend on a number of factors. The EIA assumes a worst-case assumption that the Project will be constructed over a single phase. This provides a reasonable worst-case assessment as construction works will be accelerated by undertaking more activities concurrently, i.e., greater overlap and therefore intensity of construction activities across the Site.

Description of Construction Activities

3.14.5 The construction activities will be undertaken in accordance with the principles set out within the **Outline CEMP (Doc Ref. 7.8)** and **Outline CTMP (Doc Ref. 7.12).** The following sections provide a description of the main construction activities for the Project by stage:

Enabling and Site Preparation

3.14.6 The following activities will be required during the enabling and Site preparation phase:

- Site preparation including clearance and setup of access, compounds and security;
- PRoW diversions and PRoW extinguishments;
- Layout of the internal haulage road and internal access tracks;
- Diversion and laying of existing services;
- Marking out the location of infrastructure;
- Installation of temporary bank to bank bridges; and
- Import of and storage of construction materials, plant and equipment.

Installation of PV Panels, Inverter Stations, Intermediate Substations and Water Tanks

3.14.7 The following activities will be required during the installation of PV panels and Inverter Stations phase:

- Import of components to the Site;
- Erection of mounting structures either through piling construction methods or, if this is not possible, using pre-cast concrete blocks to provide ballast;
- Mounting of PV panels using hand held power tools;
- Installation of Inverter Stations and Intermediate Substations, including earthworks and foundations and use of cranes to lift electrical components into position;
- Installation of BESS systems, with use of cranes to lift electrical components into position;
- Installation of on-Site electrical cabling, primarily using shallow trenches;
- Installation of water tanks including earthworks and foundations, with connection to hydrants located at Inverter Stations where BESS Units are installed; and
- Testing and commissioning.

Project Substation Construction

3.14.8 Construction of the Project Substation platform will require multiple phases and will require retaining structures and bulk earthworks to provide a suitable development platform. The following activities are expected to be required:

Development Platform

- Remove and stockpile soil and subsoil for reuse;
- Excavate foundations for retaining walls;
- Construct a contiguous piled wall on the northern and western extents of the platform. This will require preparing a piling platform adjacent to the proposed contiguous piled retaining wall;
- Construct a reinforced earth structure to form the southern and eastern extents of the platform;
- Construct an L-shaped retaining wall made of reinforced concrete on the north east side of the platform;
- Earthworks and import of fill material to achieve final levels; and
- Placement of capping and subbase layers and compaction to the final development platform level.

Project Substation

- Excavate and construct the foundations for high-voltage equipment;
- Install lightning, CCTV and metal palisade fencing;
- Install grounding systems for electrical safety;
- Construct control rooms and switchroom buildings;
- Install high-voltage equipment; and
- Lay and connect the high-voltage cables.

Cable Route Corridor and Grid Connection Cable

3.14.9 The following activities will be required:

- Trenching in sections;
- Use of HDD where required, including under the East Stour River;
- Installation under HS1, expected to be via use of existing ducts but with option to install new cable ducts using HDD methods if required;
- Cable pulling; and
- Sellindge Substation Extension and electrical works, to be undertaken by UKPN.

Commissioning and Site Restoration/Landscaping

3.14.10 Following construction, a programme of commissioning and Site reinstatement and habitat creation to include:

- Installation of security and safety equipment;
- Final installation checks;
- Energisation (first export of power) and testing;
- Site clearance and compound removal; and
- Landscape planting and biodiversity enhancements, including habitat creation.

3.14.11 Commissioning of the Project will include testing and commissioning of the process equipment. This will involve mechanical and visual inspection, electrical and equipment testing, and commencement of electricity supply into the grid. This process will take place prior to operation of the Project.

Hours of Working and Lighting

3.14.12 Construction activities are expected to be carried out during the following core hours:

- 08:00 – 18:00 hours on weekdays;
- 08:00 – 13:00 hours on Saturdays; and
- no working on Sundays or Bank Holidays.

3.14.13 Start-up and shut-down works will be undertaken before and after the core hours (i.e. 07:00 to 08:00 and 18:00 to 19:00 on weekday and 07:00 to 08:00 and 13:00 to 14:00 on Saturday) including:

- Arrival and departure of workforce on-Site;
- Deliveries and unloading;
- Site inspections, plant maintenance and safety checks; and
- Site clean-up.

3.14.14 The only identified exceptions to the above hours are in relation to:

- HDD works for Work No. 4 in the event that existing cable ducts are not

available under HS1 and new ducts are required which may require a 24-hour duration;

- Delivery of abnormal loads, being the main transformer unit(s) to the Project Substation. The load(s) are likely to be classified as abnormal only due to weight with an escort vehicle provided if required.

Construction Workers

3.14.15 On average, there are expected to be 132 construction workers on-Site at any one time. During peak construction periods, this is expected to increase to 199 construction workers. Most staff are expected to be transported to/from the Site by minibus.

Construction Environmental Management Plan

3.14.16 The **Outline CEMP (Doc Ref. 7.8)** sets out the strategy, standards, control measures and monitoring procedures that will be implemented to manage and mitigate any adverse environmental effects of the construction process. It describes the framework of measures that will be implemented in detailed CEMP(s) prior to construction. Detailed CEMP(s) are to be prepared in accordance with the **Outline CEMP (Doc Ref. 7.8)** as secured by Requirement in the **Draft DCO (Doc Ref. 3.1).**

3.14.17 It includes details on roles and responsibilities, control measures, monitoring and record-keeping requirements. It also provides a framework for engaging with the local community including residents, businesses, and other developers and their representatives throughout the construction period.

3.14.18 The **Outline CEMP (Doc Ref. 7.8)** will form part of Employers' Requirements (documents produced by the employer to outline their expectations for a project, including performance specifications, drawings, and initial designs) and the appointed construction contractor(s) will be responsible for implementing the measures therein.

3.14.19 The **Outline CEMP (Doc Ref. 7.8)** details measures to avoid and minimise the construction stage effects on the following:

- Cultural heritage;
- Climate change;
- Noise and vibration;
- Air quality (including dust);
- Arboriculture;
- Landscape and visual amenity;
- Ground conditions;
- Water environment;
- Biodiversity;
- Soil and ground conditions;

- Waste and materials;
- Energy and water usage;
- Rights of way and access; and
- Lighting.

Construction Traffic Management Plan

3.14.20 The **Outline CTMP (Doc Ref. 7.9)** sets out the strategy and approach to traffic routing and management to minimise disruption effects on the local community and environment. It describes the framework of measures that will be implemented in detailed CTMP(s) prior to construction. Detailed CTMP(s) are to be prepared in accordance with the **Outline CTMP (Doc Ref. 7.9)** as secured by Requirement in the **Draft DCO (Doc Ref. 3.1).**

3.14.21 The **Outline CTMP** includes details of:

- The routing of construction and delivery vehicles to/from the Site, including confirmation that no HGVs or other construction traffic will pass through the centre of Aldington village;
- Details of parking and turning areas for construction and delivery vehicles and site personnel;
- Timing of deliveries including the avoidance of traditional AM peak hour (08:00-09:00) and PM peak hour (17:00-18:00) and avoidance of drop-off/pick-up times at The Caldecott School (special education facility) on Station Road and Aldington Primary School on Roman/Bank Road;
- Provision of wheel washing facilities and street sweeper (as required);
- Management of abnormal loads; and
- Temporary traffic management / signage.

Public Rights of Way

3.14.22 Measures to minimise disturbance to rights of way and access are set out in the **Outline RoWAS (Doc Ref 7.15)** and **Outline CTMP (Doc Ref. 7.9)**. General protections against construction impacts such as noise are managed through the **Outline CEMP (Doc Ref. 7.8).**

3.14.23 Several existing paths will be crossed by the internal haulage route, while the Goldwell Lane access will share PRoW AE474. To ensure the local PRoW network remains available, safe and convenient for public use, temporary signage warning pedestrians, horse riders and cyclists of potential construction traffic will be provided. A 5 miles per hour ('mph') speed limit with associated signage for construction and delivery vehicles will also be provided at the Site access, along the route adjacent to the AE474 and at the internal haulage road crossing points.

3.14.24 In relation to the Goldwell Lane access, a site banksman will be made aware of construction related traffic movements prior to a vehicle's arrival/departure and warn passing pedestrians, horse riders and cyclists of the pending movement. They will

then escort construction traffic between Goldwell Lane along the AE474 to the South Eastern Area as necessary.

Waste, Materials and Soil Management

3.14.25 Solid waste materials generated during construction will be segregated and stored at construction compounds in containers / skips prior to transport to an approved facility for recycling or disposal. Estimates of waste and materials volumes for the Project are provided in **ES Volume 2, Chapter 16: Other Topics (Doc Ref. 5.2)**.

3.14.26 Topsoil and subsoil material is expected to be generated from excavation associated with cable trenches, internal access tracks, Inverter Stations, Intermediate Substations, water tanks and drainage features. Topsoil, subsoil and spoil will be stored in accordance with the outline Soil Management Plan included within the **Outline CEMP (Doc. Ref. 7.8)** and utilised to backfill and reinstate the soil profiles. It is not expected that any such material will be removed from the Order limits. These materials will be stored outside of the 1 in 100-year floodplain extent.

Post Construction Land Reinstatement

3.14.27 Following completion of the construction works, a programme of land reinstatement will commence. An **Outline LEMP (Doc Ref. 7.10)** accompanies the DCO Application and sets out the principles for how the land will be managed following the completion of construction and then throughout the operational and decommissioning phases. It describes the framework of measures that will be implemented in detailed LEMP(s). Detailed LEMP(s) are to be prepared in accordance with the **Outline LEMP (Doc Ref. 7.10)** as secured by Requirement in the **Draft DCO (Doc Ref. 3.1).**

3.15 Operational Activities

3.15.1 During the 40 year operational phase the activities on-Site will be limited and are expected to amount to maintenance and servicing of plant and equipment (including fire mitigation infrastructure), habitat and vegetation management, and monitoring to ensure effective operation of the Project.

3.15.2 There will be a need for periodic replacement of Project infrastructure over the operating lifetime of the Project but no wholesale replacement of PV panels is proposed.

3.15.3 Along the Cable Route Corridor, operational activity will consist of routine inspections and any reactive maintenance such as where a cable has been damaged.

3.15.4 The **Outline Operational Management Plan ('OMP') (Doc Ref. 7.11)** includes design and other mitigation measures to prevent or reduce potential adverse environment effects relevant to operation and maintenance, monitoring and reporting. It describes the framework of measures that will be implemented in a detailed OMP prior to operation. The detailed OMP is to be prepared in accordance with the **Outline OMP (Doc Ref. 7.11)** as secured by a Requirement in the **Draft DCO (Doc Ref. 3.1)**.

Operational Access

3.15.5 Operational traffic is expected to typically comprise 2 (two-way) vehicle movements per day for maintenance purposes. Such trips are likely to be made by 4x4 vehicles (pick-up trucks) and Light Goods Vehicles ('LGVs'). HGVs will only require access to the Project to remove any damaged infrastructure, to deliver infrastructure replacements, empty the cess tank, and provide water to the water storage tanks across the lifetime of the Project. The vehicle movements associated with these HGVs would be limited and infrequent.

3.15.6 Access to the Site during operation will be from the public highway. The layout of the internal access tracks and operational access points is subject to detailed design approval but is expected to be in general accordance with that shown on the **Illustrative Project Layout** provided within the **Illustrative Project Drawings – Not for Approval (Doc Ref. 2.6)**.

3.16 Decommissioning

3.16.1 Decommissioning is expected to take place over a 12-month period, and for the purposes of the assessment is expected to occur after 40 years of operation of the Project.

3.16.2 Following the operational lifetime of the Project, all infrastructure built as part of the Project will be removed from the Site (with the exception of elements of Work No. 4 that are within Sellindge Substation, any repairs, upgrades or replacements of/to the existing bridge / drain crossings, PRoW footbridges and highway improvements) and recycled or disposed of in accordance with good practice, market conditions and available technologies for recycling/reprocessing at that time. Further details on waste are provided within **ES Volume 2, Chapter 16: Other Topics (Doc Ref. 5.2)**.

3.16.3 During the decommissioning phase, the disassembly of the Site and associated infrastructure will mirror the construction phase processes in reverse. During this process, the same number of compounds are expected to be required and the process will require a similar level of personnel. All compounds and temporary access tracks will be removed once decommissioning is complete.

3.16.4 Post-decommissioning the Site will be returned to the control of the landowners. For the purposes of the EIA, it has been assumed that the landowners will return those areas of the Site that are currently in arable use back to arable use, except for limited areas of established habitats.

3.16.5 Following the removal of infrastructure, soil will be tilled to mitigate for any compaction. Areas where grass does not exist because of the footprint of Project infrastructure (e.g. the Project Substation) shall be reseeded.

3.16.6 The effects of decommissioning are likely to be similar to construction effects and are considered within the relevant technical chapters of this ES.

3.16.7 The **Outline Decommissioning Environmental Management Plan ('DEMP') (Doc Ref. 7.12)** and the **Outline Decommissioning Traffic Management Plan ('DTMP') (Doc Ref. 7.13)** provide an approach to mitigation of environmental impacts during this stage. Each outline management plan describes the framework of measures that will be implemented in detailed DEMP(s) / DTMP(s) prior to decommissioning. Detailed DEMP(s) and DTMP(s) are to be prepared in accordance with the **Outline DEMP (Doc Ref. 7.12)** and the **Outline DTMP (Doc Ref. 7.13)** as secured by Requirement in the **Draft DCO (Doc Ref. 3.1).**

References

1 Department for Energy Security & Net Zero, 2023. Overarching National Policy Statement for Energy (NPS EN-1) (November 2023). Accessed on 19/01/2024: https://www.gov.uk/government/publications/overarching-national-policy-statement-for-energy-en-1

2 Department for Energy Security & Net Zero, 2023. National Policy Statement for Renewable Energy Infrastructure (NPS EN-3) (November 2023). Accessed on 19/01/2024: https://www.gov.uk/government/publications/national-policy-statement-for-renewable-energy-infrastructure-en-3

3 Planning Inspectorate (July 2018). Advice Note Nine: Rochdale Envelope. Accessed on 19/01/2024: https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-nine-rochdale-envelope/

4 National Fire Chief Council (November 2022). Grid scale battery energy storage system planning – Guidance for FRS. Accessed on 19/01/2024: https://nfcc.org.uk/wp-content/uploads/2023/10/Grid-Scale-Battery-Energy-Storage-System-planning-Guidance-for-FRS.pdf