EAST PARK ENERGY

East Park Energy

EN010141

Preliminary Environmental Information Report
Volume 1 – Main Report

Chapter 2: The Scheme

September 2024

Version 01

EAST PARK ENERGY

Preliminary Environmental Information Report
Volume 1 – Main Report

Chapter 2: The Scheme

Version	Date	Status
01	September 2024	PEIR

CONTENTS

2.0 THE SCHEME ... 2-2
2.1 Introduction ... 2-2
2.2 The Scheme Boundary ... 2-3
2.3 Rochdale Envelope and Design Parameters ... 2-3
2.4 Key Components of the Scheme ... 2-6
2.5 Construction Phase ... 2-63
2.6 Operational Phase ... 2-72
2.7 Decommissioning Phase ... 2-74
2.8 References ... 2-76

2.0 THE SCHEME

2.1 Introduction

2.1.1 This chapter of the Preliminary Environmental Information Report (PEIR) provides an overview of the Scheme, setting out the Site location, Scheme Boundary, the key components of the operational development, and the activities associated with the construction, operational and decommissioning phases of the works. The chapter also describes the design parameters used within the assessment.

2.1.2 The description of the Scheme provided in this chapter has been used to inform the environmental assessments which are detailed in ***PEIR Volume 1 Chapters 5 to 17***.

2.1.3 As set out briefly in ***PEIR Volume 1 Chapter 1***, the Scheme comprises a new ground-mounted solar photovoltaic energy generating station with an associated Battery Energy Storage System (BESS) and 400 kV substation on land to the north-west of St Neots. The Scheme would allow for the generation and export of 400 megawatts (MW) of electricity to the National Grid from the solar photovoltaic energy generating station, and would be capable of exporting and importing up to 100 MW via the BESS.

2.1.4 This chapter is supported by the following appendices in ***PEIR Volume 2***:

- Appendix 2-1: Indicative Construction Phasing and Resource Schedule;
- Appendix 2-2: Outline Landscape and Ecological Management Plan;
- Appendix 2-3: Outline Construction Environmental Management Plan;
- Appendix 2-4: Outline Operational Environmental Management Plan; and
- Appendix 2-5: Outline Decommissioning Environmental Management Plan.

2.1.5 This chapter is supported by the following figures in ***PEIR Volume 3***:

- Figure 2-1(a-g): Indicative Work Plans;
- Figure 2-2(a-r): Illustrative Environmental Masterplan;
- Figure 2-3(a-u): Indicative Engineering Drawings;
- Figure 2-4(a-f): Indicative Crossing Plans;
- Figure 2-5(a-f): Proposed Site Access;
- Figure 2-6(a-g): Indicative Construction Access and Compounds; and
- Figure 2-7(a-f): Indicative Vegetation Clearance.

2.2 The Scheme Boundary

2.2.1 As the Scheme would have an electrical generating capacity in excess of 50MW it is a Nationally Significant Infrastructure Project (NSIP) under S.14(1)(a) and S.15(2) of the Planning Act 2008[1], necessitating the submission of a Development Consent Order (DCO) application to the Secretary of State for Energy Security and Net Zero (the 'SoS'). Accordingly, the application boundary which sets the maximum area of land potentially required for the Scheme is referred to as the 'Scheme Boundary'.

2.2.2 The draft Scheme Boundary covers all land expected to be required for the construction, operation and maintenance, and decommissioning of the Scheme. This includes land required for both temporary and permanent uses.

2.2.3 Identifying the Scheme Boundary has been the subject of ongoing design, consultation, appraisal and assessment work that began with a site search and land optimisation exercise (which is summarised in ***PEIR Volume 1 Chapter 3*** of the PEIR), and has continued with the Environmental Impact Assessment (EIA) process to refine the area for development in accordance with the mitigation hierarchy.

2.3 Rochdale Envelope and Design Parameters

2.3.1 The design of the Scheme is an ongoing iterative process in response to outcomes of the EIA process and consultation and engagement with stakeholders, including the local community. This process will be ongoing up to the point the application for development consent is submitted. The final detailed design will also be influenced by information gathered prior to construction, in accordance with the DCO Requirements.

2.3.2 The technology associated with solar development is advancing rapidly, and it is anticipated that this technological progression will continue at pace over the coming years as current research and development in the manufacturing sector yields new technologies. The design and construction contractor for the Scheme has also not been appointed. As such, the precise layout of the Scheme and equipment selection has not been finalised. It is therefore essential to provide a degree of flexibility within the DCO to allow the detailed design to react to these variables. This provides the opportunity for the most efficient scheme to be constructed at the point the project is implemented.

2.3.3 The Planning Inspectorate's Advice Note 9: 'Rochdale Envelope'[2] ('Advice Note 9') provides guidance regarding the degree of flexibility that may be considered appropriate within an application for development consent under the Planning Act 2008[3]. The advice note acknowledges that there may be aspects of the Scheme design that are not yet fixed, and therefore, it may be necessary for the EIA to assess likely worst-case variations to ensure that all foreseeable significant environmental effects of the Scheme will be assessed.

2.3.4 It is therefore necessary for the technical assessments to assess an 'envelope' within which the works will take place, defined using a parameter-based approach. As such, the DCO application and EIA will be based upon maximum and, where relevant, minimum parameters, alongside defined work areas where the types of development can take place. The parameters set out in this chapter, hereafter referred to as 'the Design Parameters' are based on industry knowledge and best practice such that a sufficient degree of flexibility is provided within the DCO. These parameters are considered in detail in this chapter and across the individual assessments to ensure the reasonable worst-case effects of the Proposed Development are assessed for each potential receptor to ensure the 'likely significant effects' are identified.

2.3.5 The key elements of Advice Note 9 in relation to the Scheme are defined below:

- The application should acknowledge the need for details of a project to evolve, within clearly defined parameters;
- The EIA should take account of the need for evolution within those parameters, and reflect the likely significance of such a flexible project in the ES;
- Within those defined parameters, the level of detail of the proposals must be sufficient to enable a proper assessment of the likely significant environmental effects and the identification of mitigation measures, if necessary, considering a range of possibilities: "*the assessment may conclude that a particular effect may fall within a fairly wide range. In assessing the 'likely' effects, it is entirely consistent with the objectives of the Directive to adopt a 'worst case' approach. Such an approach will then feed through into the mitigation measures envisaged. It is important that these should be adequate to deal with the worst case, to optimise the effects of the development on the environment"*; and
- It is for the decision maker in granting consent, to impose requirements to ensure that the process of evolution remains within the parameters applied for and assessed for the scheme.

2.3.6 The Rochdale Envelope is controlled by the Work Plans (see Indicative Work Plans on ***PEIR Volume 3 Figure 2-1a to Figure 2-1g***) and the design parameters and principles. These will ultimately be secured by the Requirements of the DCO.

2.3.7 Each component of the Scheme is described in more detail in Section 2.4 below, structured based on the Work Plans.

2.4 Key Components of the Scheme

Work Packages

2.4.1 The Scheme has been divided into a series of 'Work Packages', the purpose of which links to the approach to securing consent for the Scheme through a DCO. Setting out the Scheme in terms of its 'Work Packages' at this stage (as part of the PEIR and for Statutory Consultation) is to give early sight to stakeholders and the public as to what is being applied for, and the means by which it is being applied for. It is hoped this will enable early engagement with the detail of the Scheme and a general continuity in what is being consulted on with stakeholders and the public between Statutory Consultation and submission of the DCO application.

2.4.2 The Scheme has currently been divided into nine Work Packages, or 'Works' as follows:

- Work No. 1 – a ground mounted solar photovoltaic generating station;
- Work No. 2 – a Battery Energy Storage System (BESS);
- Work No. 3 – an on-site substation (East Park Substation);
- Work No. 4 – a 400 kV electrical cable connection to the National Grid's Eaton Socon Substation;
- Work No. 5 – works within the National Grid's Eaton Socon Substation
- Work No. 6 – works for internal cabling and ancillary infrastructure;
- Work No. 7 – works for temporary construction and decommissioning compounds and laydown areas;
- Work No. 8 – works to create, enhance and maintain green infrastructure; and
- Work No. 9 – works to facilitate access.

2.4.3 The Indicative Work Plans in ***PEIR Volume 3 Figures 2-1a to 2-1g*** indicate the locations where each of the above Works would occur.

2.4.4 The following sections summarise the key components of each Work Package, along with the relevant design parameters and principles that are being applied for, and what has been assessed across this PEIR.

Work No. 1 – a ground mounted solar photovoltaic generating station

2.4.5 Work No. 1 comprises a ground mounted solar photovoltaic generating station, comprising:

- Solar PV modules and mounting structures;
- Inverters;
- Transformers; and
- Switchgear.

Solar PV Modules and Mounting Structures

2.4.6 The Scheme comprises the installation of fixed (static) solar PV panels which convert sunlight into direct current (DC) electricity. It is possible to install the panels as either ‘fixed’ arrays, where the angle of the panels is fixed, or ‘tracker’ arrays, where the angle of the panels can change to follow the sun at different times of the year. The Scheme will use ‘fixed’ arrays.

2.4.7 The solar PV panels are installed on support frame mounting structures which would be arranged into rows on an east-west axis facing south, typically set approximately 3 to 4m apart. The maximum height of the panels along the top (northern) edge of the array will be 3m above existing ground levels, and the minimum height along the bottom (southern) edge of the array will be 0.8m above existing ground levels.

2.4.8 The solar PV support frame structures will likely consist of steel uprights and aluminium or steel cross bars. The steel uprights comprise hollow steel posts with a u-shaped cross section which are ram-driven into the ground using specialist small-scale piling machines to a depth of up to 3m, depending on ground conditions. The rest of the support frame is then fitted to the posts to create angled support tables ready for solar panel installation.

2.4.9 If areas of archaeological constraint are identified, surface mounted solar panel frames would be used to enable preservation of archaeology in-situ. The ram-driven posts would be replaced by pre-fabricated concrete blocks set directly on the topsoil without excavation.

2.4.10 The solar PV panels would be mounted on the pre-constructed support frame tables. The individual solar PV panels typically comprise dark blue, dark grey or black photovoltaic cells. PV technologies are evolving and it is not possible to specify the precise panel type, as this will depend on the competitive procurement process and the best technology available at the time of construction.

2.4.11 ***PEIR Volume 3 Figure 2-3a*** presents an indicative section drawing of the Solar PV Modules and Mounting Structures, with the typical mounting structure posts shown, and an example of sleepers that could be used in areas of archaeological sensitivity.

2.4.12 Table 2-1 identifies the relevant design parameters and design principles for the solar PV modules and mounting structures, and the basis on which they have been assessed in this PEIR.

Table 2-1: Solar PV Modules and Mounting Structures Design Parameters and Principles

Design Parameter or Principle	Parameter	Basis of Assessment
Location	The solar photovoltaic panel modules will be fixed to ground mounted structures arranged in arrays only within the area identified as Work No. 1 on the Work Plans.	It is assumed the solar PV arrays would be located as per the Illustrative Environmental Masterplan on ***PEIR Volume 3 Figure 2-2***.

Design Parameter or Principle	Parameter	Basis of Assessment
Design Parameter	The maximum height of the highest part of the solar PV panels will be 3m above ground level.	It has been assumed the highest part of the solar panels are 3m above ground level. This is the maximum height and judged to be the worst case.
Design Parameter	The minimum height of the lowest part of the solar PV panels will be 0.8m above ground level.	It has been assumed the lowest part of the solar panels are 0.8m above ground level. This is the minimum height and judged to be the worst case.
Design Parameter	The minimum pitch will be 7.5m and the maximum pitch will be 12m.	It has been assumed the pitch will be 7.5m. This is considered a worst case as it produces the 'densest' scheme with the highest number of panels.
Design Parameter	The solar PV panels will be set out in rows facing south, with a fixed angle of between 15 and 25 degrees from horizontal.	For the Glint and Glare Assessment at ***PEIR Volume 2 Appendix 5-6***, both the minimum and maximum angle have been assessed to understand possible impacts to receptors. For all other assessments it has been assumed the solar PV panels will have an angle of 25 degrees from horizontal. This is the steepest angle and judged to be the worst case.
Design Parameter	The solar PV panels will be orientated with an azimuth angle of between 175 and 185 degrees.	It has been assumed the solar PV panels will be orientated with an azimuth angle of 180 degrees. This is a realistic scenario and it is judged that the flexibility sought in this regard would not notably change any environmental impacts.
Design Parameter	The maximum depth the mounting structure posts will be driven into the ground will be 3m below ground level.	It has been assumed the mounting structure posts will be driven 3m below existing ground level. This is the maximum depth and judged to be the worst case.

Design Parameter or Principle	Parameter	Basis of Assessment
Design Principle	The solar PV panels will be either monofacial or bifacial and have an anti-reflective coating.	It has been assumed the panels will be bifacial, and have an anti-reflective coating.
Design Principle	The PV mounting structure will be a metal frame fixed to the ground by galvanised steel posts which are driven into the ground. In Areas of Archaeological Constraint (to be determined following further site investigation), the PV mounting structure will be attached to pre-fabricated concrete blocks set directly on the topsoil without excavation.	It has been assumed the PV mounting structure will be a metal frame.

Inverters

2.4.13 Inverters convert the DC electricity produced by the solar PV panels into alternating current (AC) that can be exported to the National Grid.

2.4.14 There are two principal types of inverter that can be utilised for solar arrays; string inverters, or centralised inverters.

2.4.15 String inverters are inverters typically attached to the mounting frames of solar panels and connect the wiring from different rows for conversion to AC. They are distributed across the solar arrays, with the advantage of being relatively small and easy to mount onto the solar PV tables.

2.4.16 An indicative drawing of a string inverter is shown on ***PEIR Volume 3 Figure 2-3a***.

2.4.17 Centralised inverters are either small shipping containers or large cabinets that house a single large-capacity inverter to which the solar arrays connect. Fewer centralised inverters are required compared to string inverters, and they would be distributed throughout the solar arrays alongside transformers.

2.4.18 An indicative drawing of a centralised inverter is shown on ***PEIR Volume 3 Figure 2-3b***.

2.4.19 The key differences between string inverters and centralised inverters are that:

- String inverters can be mounted directly to the solar arrays and do not require foundations or footings – centralised inverters do require foundations or footings;
- String inverters are more expensive to install than centralised inverters, but can be more efficient and can result in lower downtime losses; and
- String inverters have a lower sound power level – centralised inverters have a higher sound power level.

2.4.20 The Applicant is looking to maintain flexibility as to the type of technology utilised in the Scheme, with a final decision on approach expected to be made at the detailed design stage following a grant of development consent. This will enable the Applicant to select the most efficient and economic technology at the time.

2.4.21 Both string inverters and centralised inverters have therefore been assessed in the PEIR. The illustrative layout shown on the Illustrative Environmental Masterplan on ***PEIR Volume 3 Figure 2-2*** shows both string inverters and centralised inverters. In a scenario where string inverters are utilised, the centralised inverters shown on the drawing would not be required. Conversely, in the scenario where centralised inverters are utilised, the string inverters would not be required. In both scenarios the transformers indicated on the drawings would be required.

String Inverters

2.4.22 String inverters would be mounted on the mounting structure underneath the rear of the panels.

2.4.23 Table 2-2 identifies the relevant design parameters and design principles for the string inverters, and the basis on which they have been assessed in this PEIR.

Table 2-2: String Inverter Design Parameters and Principles

Design Parameter or Principle	Parameter	Basis of Assessment
Location	The string inverters would be mounted to the rear of Solar PV tables, directly to the mounting structures, within the area identified as Work No. 1 on the Work Plans.	It is assumed the string inverters would be located as per the Illustrative Environmental Masterplan on ***PEIR Volume 3 Figure 2-2***.
Design Parameter	The string inverters would have maximum dimensions of 1.2m width x 1m height, x 0.5m depth.	It is assumed the maximum dimensions are applied.

Centralised Inverters

2.4.24 The centralised inverters would be co-located with the transformers, distributed throughout the solar development.

2.4.25 Table 2-3 identifies the relevant design parameters and design principles for the centralised inverters, and the basis on which they have been assessed in this PEIR.

Table 2-3: Centralised Inverter Design Parameter and Principles

Design Parameter or Principle	Parameter	Basis of Assessment
Location	The centralised inverters would be co-located with transformers within the area identified as Work No. 1 on the Work Plans.	It is assumed the centralised inverters would be located as per the Illustrative Environmental Masterplan on ***PEIR Volume 3 Figure 2-2***.
Design Parameter	The centralised inverters would have a maximum dimension of	It is assumed the maximum dimensions are applied.

Design Parameter or Principle	Parameter	Basis of Assessment
	6.5m length x 2.5m width x 3.15m height.	
Design Parameter	The centralised inverters would have a concrete strip footing foundation with a levelling layer of aggregate extending up to 1m beyond the maximum area of the transformer, up to a maximum depth of 0.4m below ground level.	It is assumed the maximum dimensions are applied.
Design Parameter	Where required by the noise assessment, an acoustic screen will be provided around the centralised inverters. The acoustic screen will be positioned 2m away from the centralised inverters and solar transformers, around three sides of the co-located centralised inverters and solar transformers. The maximum height of the acoustic screen will be 4m.	It is assumed that acoustic screens are required in six locations as shown on the Illustrative Environmental Masterplan on ***PEIR Volume 3 Figure 2-2***.
Design Principle	The centralised inverters will have an external finish of either grey, green, or white according to manufacturer specifications, and subject to agreement with the relevant planning authority.	It is assumed the centralised inverters would be finished in grey.

Solar Transformers

2.4.26 Transformers are used to increase the voltage of the generated electricity before it reaches the on-site substation and in turn the National Grid. They are typically mounted on a skid together with control equipment.

2.4.27 An indicative drawing of a solar transformer is shown on ***PEIR Volume 3 Figure 2-3b***.

2.4.28 Table 2-4 identifies the relevant design parameters and design principles for the solar transformers, and the basis on which they have been assessed in this PEIR.

Table 2-4: Solar Transformer Design Parameters and Principles

Design Parameter or Principle	Parameter	Basis of Assessment
Location	The solar transformers would be distributed throughout the Solar PV areas within the areas identified as Work No. 1 on the Work Plans.	It is assumed the solar transformers would be located as per the Illustrative Environmental Masterplan on ***PEIR Volume 3 Figure 2-2***.
Design Parameter	The solar transformers would have a maximum dimension of 6.5m length x 2.5m width x 3.15m height.	It is assumed the maximum dimensions are applied.
Design Parameter	The solar transformers would have a concrete strip footing foundation with a levelling layer of aggregate extending up to 1m beyond the maximum area of the transformer, up to a maximum depth of 0.4m below ground level.	It is assumed the maximum dimensions are applied.
Design Parameter	Where required by the noise assessment, an acoustic screen will be provided around the solar transformers. The acoustic screen will be positioned 2m away from the solar transformers, around three sides solar transformers. The maximum height of the acoustic screen will be 4m.	It is assumed that acoustic screens are required in six locations as shown on the Illustrative Environmental Masterplan on ***PEIR Volume 3 Figure 2-2***.
Design Principle	The solar transformers will have an external finish of either grey, green, or white according to manufacture specifications, and subject to agreement with the relevant planning authority.	It is assumed the solar transformers would be finished in grey.

Switchgear

2.4.29 Switchgear includes a range of electrical switches, fuses, and breakers to control, protect and isolate the electrical circuits and equipment. The switchgear will be co-located with the solar transformers.

Work No. 2 – a Battery Energy Storage System

2.4.30 Work No. 2 comprises a Battery Energy Storage System (BESS), comprising:

- Battery Storage Units;
- Battery Transformers;
- Auxiliary Transformer;
- East Park BESS Control Building and Switchgear;
- Water Storage Tanks;
- East Park BESS Fencing;
- East Park BESS Surfacing and Drainage;
- East Park BESS Internal Access.

2.4.31 The BESS will be an integral element of the Scheme's associated infrastructure used to store electricity generated by the solar PV arrays at times of low demand from the National Grid and release the electricity at times of peak demand. BESS are essential for renewable electricity generating systems such as wind and solar due to their weather dependency and potential for intermittent generation.

2.4.32 In addition to the BESS' function as an essential part of the Scheme it will also be available to the National Grid for grid-balancing services. By importing excess renewable energy from the grid and storing it, BESS can capture energy that would otherwise be lost or unutilised. During situations when generating stations are interrupted, the BESS can bridge the gap in production, thus avoiding potential blackouts. It should be noted that the UK electricity network is interconnected and issues in one geographic location can have far reaching implications on the network. Accordingly, the BESS offer additional capacity to deal with system stress and any variations in grid frequency at both a local and national level.

2.4.33 The East Park BESS compound is proposed to be located in either East Park Site C or East Park Site D. At the non-statutory consultation and in the EIA Scoping Report it was assumed that the BESS would be located within Site C. However, in response to further environmental surveys and consultation with stakeholders it has emerged that Site D could be a preferable location for the BESS. This would have the following possible advantages:

- Ease of access from the public highway during construction, operation, and in case of an emergency response; and
- Separation from the archaeology discovered in Site C that is being treated as equivalent to a Scheduled Monument.

2.4.34 A disadvantage of locating the BESS in Site D would be the higher classification of the agricultural land, being partly Grade 3a instead of wholly Grade 3b.

2.4.35 The location of the BESS has therefore not yet been fixed and feedback on the location is specifically sought as part of this consultation. Accordingly, the BESS has been considered as follows:

i) **Option 1** – the BESS would be located within Site C with reference to ***PEIR Volume 3 Figure 2-1d, Figure 2-2i*** and ***Figure 2-2k***.
ii) **Option 2** – the BESS would be located within Site D with reference to ***PEIR Volume 3 Figure 2-1e*** and ***Figure 2-2n***.

2.4.36 Both Option 1 and Option 2 have been assessed in this PEIR. The assumptions around the layout and infrastructure within the facility are the same for either Option 1 or Option 2, it is only the location that is different along with the approach to construction access, cabling, and resulting impacts. Any assumptions relevant to specific environmental topic areas have been made in the relevant assessment chapters.

2.4.37 A final decision on either the Option 1 or Option 2 location for the BESS is expected to be made in advance of submission of the application for development consent.

Battery Storage Units

2.4.38 Battery Storage Units (BSUs) are typically similar in appearance to shipping containers. The BSUs are likely to contain lithium-ion battery modules along with control and monitoring systems, fire suppression systems, and cabling. A Heating, Ventilation and Air Conditioning (HVAC) or liquid cooling system will be integrated with the containers to manage the internal temperature of each BSU. A Power Conversion System (PCS) unit would be integrated with either the BSUs, or the battery transformers.

2.4.39 The chemistry of the lithium-ion battery modules has not yet been fixed and is unlikely to be fixed as part of the application for development consent. The final decision on the chemistry of the battery modules would be made at the procurement stage based on the safest, most efficient, and most economic technology available on the market at the time. At this stage it is reasonable to assume that Lithium-Iron-Phosphate (LFP) batteries would be used as they have a lower risk of thermal runaway and therefore improved safety, this chemistry has therefore been selected for the purposes of assessment.

2.4.40 An indicative drawing of a battery storage unit is shown on ***PEIR Volume 3 Figure 2-3c***.

2.4.41 Table 2-5 identifies the relevant design parameters and design principles for the BSUs, and the basis on which they have been assessed in this PEIR.

Table 2-5: Battery Storage Unit Design Parameters and Principles

Design Parameter or Principle	Parameter	Basis of Assessment
Location	The battery storage units would be located within the area identified as Work No. 2 on the Work Plans.	It is assumed the battery storage units would be sited as per the Illustrative Environmental Masterplan on ***PEIR Volume 3 Figure 2-2***.
Design Parameter	The battery storage units will have a maximum footprint of $16m^2$ and a maximum height of 3.15m.	It is assumed the maximum dimensions are applied.
Design Parameter	The foundations of the battery storage units would be concrete to a maximum depth of 0.4m below ground level.	It is assumed the maximum dimensions are applied.
Design Parameter	The battery storage units will be laid out in a regular grid pattern with the following minimum spacings provided between each Unit: a) 3m cross distance (end to end); and b) 2m longitudinal distance (side to side). The detailed layout may utilise different spacings to the above, which will be the minimum provided. The final spacings would be informed by Manufacturer recommendations and relevant national and international standards.	It is assumed the minimum spacings are applied and as such the Illustrative Environmental Masterplan on ***PEIR Volume 3 Figure 2-2*** shows the BSUs arranged with 3m cross distance gaps, and 2m longitudinal distance gaps.
Design Principle	The battery storage units will have an integrated HVAC, or liquid cooling system.	It is assumed the BSUs will have an integrated HVAC as these modules are typically noisier, and therefore represent a worst-case.
Design Principle	The battery storage units will have an external finish of either grey, green, or white according to manufacture specifications, and subject to agreement with the relevant planning authority.	It is assumed the BSUs would be finished in white, which is optimal for thermal management and likely to be most visually conspicuous.

Battery Transformers

2.4.42 The battery transformers will step up or step down the voltage depending on whether the BESS is exporting or importing. The battery transformers will be co-located with ring main units (RMU), a type of switchgear, which will allow each transformer to safely connect to or be isolated from the rest of the system. The battery transformers are also not dissimilar in size and appearance to shipping containers. A PCS unit would be integrated with either the battery transformers, or the BSUs.

2.4.43 An indicative drawing of a battery transformers is shown on ***PEIR Volume 3 Figure 2-3c***.

2.4.44 Table 2-6 identifies the relevant design parameters and design principles for the battery transformers, and the basis on which they have been assessed in this PEIR.

Table 2-6: Battery Transformer Design Parameters and Principles

Design Parameter or Principle	Parameter	Basis of Assessment
Location	The battery transformers would be located within the area identified as Work No. 2 on the Work Plans.	It is assumed the battery transformers would be sited as per the Illustrative Environmental Masterplan on ***PEIR Volume 3 Figure 2-2***.
Design Parameter	The battery transformers will have a maximum footprint of 22m^2 and a maximum height of 3.15m.	It is assumed the maximum dimensions are applied.
Design Parameter	The foundations of the battery transformers will be concrete to a maximum depth of 0.4m below ground level.	It is assumed the maximum dimensions are applied.
Design Parameter	The battery transformers will be located a minimum of 3.5m from	It is assumed the minimum spacing is applied and as such the

Design Parameter or Principle	Parameter	Basis of Assessment
	each battery storage unit, or as required by the Manufacturer, or as required by any relevant national or international standard.	Illustrative Environmental Masterplan on ***PEIR Volume 3 Figure 2-2*** shows the battery transformers arranged with a 3.5m gap from each battery storage unit.
Design Principle	The battery transformers will have an external finish of either grey, green, or white according to manufacture specifications, and subject to agreement with the relevant planning authority.	It is assumed the battery transformers would be finished in white, which is optimal for thermal management and likely to be most visually conspicuous.

Auxiliary Transformer

2.4.45 An auxiliary transformer will be located within the BESS Compound to provide an auxiliary power supply to the East Park Energy buildings and operations. This can be used for the Control Buildings at the BESS and East Park Substation, the Operations and Maintenance Building, and the Scheme CCTV.

2.4.46 An indicative drawing of an auxiliary transformer is shown on ***PEIR Volume 3 Figure 2-3d***.

2.4.47 Table 2-7 identifies the relevant design parameters and design principles for the auxiliary transformer, and the basis on which it been assessed in this PEIR.

Table 2-7: Auxiliary Transformer Design Parameters and Principles

Design Parameter or Principle	Parameter	Basis of Assessment
Location	The auxiliary transformer would be located within the area identified as Work No. 2 on the Work Plans.	It is assumed the auxiliary transformer would be sited as per the Illustrative Environmental

Design Parameter or Principle	Parameter	Basis of Assessment
		Masterplan on ***PEIR Volume 3 Figure 2-2***.
Design Parameter	The auxiliary transformer will have a maximum dimension of 3.5m length x 3.5m width x 3m height.	It is assumed the maximum dimensions are applied.
Design Parameter	The foundations of the auxiliary transformer will be concrete to a maximum depth of 0.4m.	It is assumed the maximum dimensions are applied.

East Park BESS Control Building

2.4.48 The BESS control building is for monitoring and control of the BESS facility. The control building will be formed of either a modified shipping container, pre-fabricated concrete structure, or built from glass-reinforced plastic (GRP).

2.4.49 An indicative drawing of the BESS control building is shown on ***PEIR Volume 3 Figure 2-3e***.

2.4.50 Table 2-8 identifies the relevant design parameters and design principles for the BESS control building, and the basis on which it has been assessed in this PEIR.

Table 2-8: BESS Control Building Design Parameters and Principles

Design Parameter or Principle	Parameter	Basis of Assessment
Location	The BESS control building would be located within the area identified as Work No. 2 on the Work Plans.	It is assumed the BESS control building would be sited as per the Illustrative Environmental Masterplan on ***PEIR Volume 3 Figure 2-2***.

Design Parameter or Principle	Parameter	Basis of Assessment
Design Parameter	The control building will have a maximum dimension of 13m length x 3m width x 3m height.	It is assumed the maximum dimensions are applied.
Design Parameter	The foundations of the control building will be concrete to a maximum depth of 0.4m.	It is assumed the maximum dimensions are applied.
Design Principle	The control building will be housed in either a modified shipping container or built from GRP. The external finish will be either grey, green, or white subject to agreement with the relevant planning authority.	It is assumed the control building will be built from GRP as this is the most common material used for such buildings, and it is realistic to assume this would be the case for the Scheme. The external finish has been assumed to be green.

Water Storage Tanks

2.4.51 Guidance has been published by the National Fire Chiefs Council (NFCC) on the design and layout of BESS which includes a recommendation that an on-site water supply is provided in the event of a fire. The recommendation is that the on-site water supply should be capable of delivering no less than 1,900 litres per minute for at least two hours (a total of 228,000 litres). The BESS would be located within Cambridgeshire and following initial discussions with Cambridgeshire Fire and Rescue Service it was agreed that on-site water storage tanks will be provided to meet this need.

2.4.52 There are two water storage tanks proposed and each would be capable of storing a minimum of 228,000 litres of water. The tanks would be located in close proximity to the points of access into the BESS.

2.4.53 An indicative drawing of a water storage tank is shown on ***PEIR Volume 3 Figure 2-3f***.

2.4.54 Table 2-9 identifies the relevant design parameters and design principles for the water storage tanks, and the basis on which it has been assessed in this PEIR.

Table 2-9: Water Storage Tanks Design Parameters and Principles

Design Parameter or Principle	Parameter	Basis of Assessment
Location	The water storage tanks would be located within the area identified as Work No. 2 on the Work Plans.	It is assumed the water storage tanks would be sited as per the Illustrative Environmental Masterplan on ***PEIR Volume 3 Figure 2-2***.
Design Parameter	The water storage tanks will have a maximum diameter of 10m, and a maximum height of 4.5m above ground level.	It is assumed the maximum dimensions are applied.
Design Parameter	The water storage tanks will sit on a reinforced concrete base up to a maximum depth of 0.6m.	It is assumed the maximum dimensions are applied.
Design Principle	Two water storage tanks will be provided, one at each point of access into the BESS.	It is assumed that two water storage tanks are included, as per the Illustrative Environmental Masterplan on ***PEIR Volume 3 Figure 2-2***.

East Park BESS Fencing

2.4.55 The BESS would be secured by steel palisade fencing.

2.4.56 An indicative drawing of steel palisade fencing is shown on ***PEIR Volume 3 Figure 2-3g***.

2.4.57 Table 2-10 identifies the relevant design parameters and design principles for the BESS Fencing, and the basis on which it has been assessed in this PEIR.

Table 2-10: BESS Fencing Design Parameters and Principles

Design Parameter or Principle	Parameter	Basis of Assessment
Location	The BESS fencing will be located within the area identified as Work No. 2 on the Work Plans.	It is assumed the fencing and gates would be located as shown on the Illustrative Environmental Masterplan on ***PEIR Volume 3 Figure 2-2***.
Design Parameter	Steel palisade fencing would have a maximum height of 3m.	It is assumed the maximum dimensions are applied.
Design Principle	Steel palisade fencing would have an external finish of either galvanised steel or a green coating, subject to agreement with the relevant planning authority.	It is assumed the steel palisade fencing would have a galvanised steel finish.

East Park BESS Surfacing and Drainage

2.4.58 The NFCC guidance for BESS notes that consideration should be given within the site design to the management of water run-off such that in an emergency situation where polluted water may run-off from the facility this can be safely contained and treated, rather than risking pollution of groundwater or local watercourses. To achieve this an impermeable surface would be required for the BESS, likely to be concrete, such that any run-off can be directed towards a retention basin. In normal operation the retention basin would allow rainwater to pass through and drain to a nearby watercourse (as set out in ***PEIR Volume 2 Appendix 8-2***), but in an emergency situation a sluice could be operated to isolate the retention basin and prevent any run-off for a period of time. This would allow the run-off to be collected and treated in an appropriate way.

2.4.59 Table 2-11 identifies the relevant design parameters and design principles for the BESS surfacing and drainage, and the basis on which it has been assessed in this PEIR.

Table 2-11: BESS Surfacing and Drainage

Design Parameter or Principle	Parameter	Basis of Assessment
Design Principle	The entirety of the BESS compound will have an impermeable surface finish (likely to be concrete). The BESS compound will drain to the BESS compound drainage lagoon located within Work No. 6B on the Work Plans.	It is assumed the BESS compound would have a concrete surface finish across its full extent.

East Park BESS Internal Access

2.4.60 There would be two separate points of access to the BESS to accord with the NFCC guidance. There would be internal perimeter access around the BSUs to allow different units to be accessed. The internal roads to the BESS would be constructed of tarmac, concrete or similar to allow for heavier vehicles during construction and decommissioning, and safe access for fire services in emergency situations.

2.4.61 An indicative section drawing through the East Park BESS internal access roads is indicated by the 'Heavy Duty Access Track' on ***PEIR Volume 3 Figure 2-3h***.

2.4.62 Table 2-12 identifies the relevant design parameters and design principles for the BESS internal access, and the basis on which it has been assessed in this PEIR.

Table 2-12: BESS Internal Access

Design Parameter or Principle	Parameter	Basis of Assessment
Design Parameter	The BESS compound internal access roads will be 5m wide and up to 0.35m depth.	It is assumed the maximum dimensions are applied.

Work No. 3 – an on-site substation (East Park Substation)

2.4.63 Work No. 3 comprises an on-site substation that will be known as the East Park Substation comprising:

- East Park Substation Control Building;
- Electrical Equipment;
- East Park Substation Fencing;
- East Park Substation Surfacing and Drainage;
- East Park Substation Internal Access.

2.4.64 The East Park Substation is an essential element of the Scheme's associated infrastructure. The electricity generated on site by the solar PV arrays will be relayed from the on-site solar transformers to the East Park Substation via underground cables. The East Park Substation will include equipment to control and operate the solar PV arrays and BESS, and to step up the voltage from the solar transformers (33 kV) to the voltage at the National Grid's Eaton Socon Substation (400 kV), which is the Scheme's point of connection.

2.4.65 The East Park Substation is proposed to be located in either East Park Site C or East Park Site D. At the non-statutory consultation and in the EIA Scoping Report it was assumed that the East Park Substation would be located within Site C, however in response to further environmental surveys and consultation with stakeholders it has emerged that Site D could be a preferable location. This would have the following possible advantages:

- Ease of access from the public highway during construction, operation, and in case of an emergency response;
- Separation from the archaeology discovered in Site C that is being treated as equivalent to a Scheduled Monument; and
- Reduced length of 400 kV Grid Connection between the East Park Substation and the Eaton Socon Substation.

2.4.66 A disadvantage of locating the East Park Substation in Site D would be the higher classification of the agricultural land, being partly Grade 3a instead of wholly Grade 3b.

2.4.67 The location of the East Park Substation has not yet been fixed and feedback on the location is specifically sought as part of this consultation. Accordingly, the East Park Substation has been considered as follows:

i) **Option 1** – the East Park Substation would be located within Site C with reference to ***PEIR Volume 3 Figure 2-1d, Figure 2-2i*** and ***Figure 2-2k***.
ii) **Option 2** – the East Park Substation would be located within Site D with reference to ***PEIR Volume 3 Figure 2-1e*** and ***Figure 2-2n***.

2.4.68 Both Option 1 and Option 2 have been assessed in this PEIR. The assumptions around the layout and infrastructure within the facility are the same for either Option 1 or Option 2, it is only the location that is different and the approach to construction access, cabling, and resulting impacts. Any assumptions relevant to specific environmental topic areas have been made in the relevant assessment chapters.

2.4.69 A final decision on either the Option 1 or Option 2 location for the East Park Substation is expected to be made in advance of submission of the application for development consent.

East Park Substation Control Building

2.4.70 The East Park Substation control building will be the main operational control building for the Scheme. It will house indoor 33 kV electrical switchgear with incoming connections from each of the solar transformers distributed throughout the solar PV arrays. The control building will be two-storey, comprising a ground-level and a basement level. The basement level would be used for the 33 kV electrical switchgear such that the buried cabling could connect directly into the switchgear units. The ground level would be used for control and monitoring rooms, office space, welfare facilities, and storage.

2.4.71 An indicative elevation drawing of the East Park Substation control building is shown on ***PEIR Volume 3 Figure 2-3i***.

2.4.72 Table 2-13 identifies the relevant design parameters and design principles for the control building, and the basis on which it has been assessed in this PEIR.

Table 2-13: East Park Substation Control Building Design Parameters and Principles

Design Parameter or Principle	Parameter	Basis of Assessment
Location	The East Park Substation control building would be located within the area identified as Work No. 3 on the Work Plans.	It is assumed the East Park Substation control building would be sited as per the Illustrative Environmental Masterplan on ***PEIR Volume 3 Figure 2-2***.
Design Parameter	The control building will have a maximum footprint of 1,030m^2 and a maximum height of 6m above ground level.	It is assumed the maximum dimensions are applied.
Design Parameter	The control building will have a sub-surface structure to facilitate cable connections with internal switchgear. The sub-surface part of the structure will have a maximum footprint of 250m^2 and a maximum depth of 3m below ground level.	It is assumed the maximum dimensions are applied.
Design Principle	The external finish of the control building will be constructed of GRP.	It is assumed the control building will be constructed of GRP and finished in green.

Electrical Equipment

2.4.73 The electrical equipment would be located within the East Park Substation compound and comprises two 400 kV / 33 kV transformers along with busbars, disconnectors, circuit breakers, surge arresters and insulators, above ground cabling, gantries, cable sealing ends.

2.4.74 An indicative elevation drawing of the electrical equipment is shown on ***PEIR Volume 3 Figure 2-3j***, which relates to the arrangement shown for either East Park Substation location on the Illustrative Environmental Masterplan on ***PEIR Volume 3 Figure 2-2***.

2.4.75 Table 2-14 identifies the relevant design parameters and design principles for the electrical equipment, and the basis on which it has been assessed in this PEIR.

Table 2-14: East Park Substation Electrical Equipment Design Parameters and Principles

Design Parameter or Principle	Parameter	Basis of Assessment
Design Parameter	The maximum height of the electrical equipment within the East Park Substation Compound will be 13.6m above ground level.	It is assumed the maximum height of the electrical equipment would be 13.6m above ground level, but for the purposes of the visual assessment and visualisations the electrical equipment is assumed to be of varied height in accordance with the indicative elevation drawing on ***PEIR Volume 3 Figure 2-3j***. This is a realistic scenario in which the electrical equipment will come forward and considered to be a worst case.

East Park Substation Fencing

2.4.76 The East Park Substation would be secured by steel palisade fencing.

2.4.77 An indicative drawing of steel palisade fencing is shown on ***PEIR Volume 3 Figure 2-3g***.

2.4.78 Table 2-15 identifies the relevant design parameters and design principles for the fencing, and the basis on which it has been assessed in this PEIR.

Table 2-15: East Park Substation Fencing

Design Parameter or Principle	Parameter	Basis of Assessment
Location	The East Park Substation fencing will be located within the area identified as Work No. 3 on the Work Plans.	It is assumed the fencing and gates would be located as shown on the Illustrative Environmental Masterplan on ***PEIR Volume 3 Figure 2-2***.
Design Parameter	Steel palisade fencing would have a maximum height of 3m.	It is assumed the maximum dimensions are applied.
Design Principle	Steel palisade fencing would have an external finish of either galvanised steel or a green coating, subject to agreement with the relevant planning authority.	It is assumed the fencing is finished as galvanised steel.

East Park Substation Surfacing and Drainage

2.4.79 The surfacing of the East Park Substation compound would be made up of compacted stone, likely to be Type 1 Hardcore such that it is a permeable surface. The access roads would be impermeable and likely to be constructed of concrete or asphalt.

2.4.80 The East Park Substation would drain to the same retention basin as the East Park BESS which would in turn have a controlled flow release to a nearby watercourse.

2.4.81 Table 2-16 identifies the relevant design parameters and design principles for the surfacing and drainage, and the basis on which it has been assessed in this PEIR.

Table 2-16: East Park Substation Surfacing and Drainage Design Parameters and Principles

Design Parameter or Principle	Parameter	Basis of Assessment
Design Parameter	The East Park Substation compound will have a surface finish partly of permeable aggregates (such as type 1 hardcore) and partly of impermeable sealed surface (such as concrete). The East Park Substation compound will be no more than 65% sealed surface.	It is assumed that 65% of the East Park Substation compound would have concrete surfacing that would be impermeable, representing a worst case.

East Park Substation Internal Access

2.4.82 There would be a single point of access to the East Park Substation. The internal roads to the East Park Substation would be constructed of tarmac or asphalt or similar to allow for heavier vehicles during construction.

2.4.83 An indicative section drawing through the East Park Substation internal access roads is indicated by the 'Heavy Duty Access Track' on ***PEIR Volume 3 Figure 2-3h***.

2.4.84 Table 2-17 identifies the relevant design parameters and design principles for the access roads, and the basis on which it has been assessed in this PEIR.

Table 2-17: East Park Substation Internal Access Design Parameters and Principles

Design Parameter or Principle	Parameter	Basis of Assessment
Design Parameter	The East Park Substation compound internal access roads will be between 3m and 6m wide and up to 0.35m depth.	It is assumed the maximum dimensions are applied.

Work No. 4 – a 400 kV electrical cable connection from the East Park Substation to the Eaton Socon Substation

2.4.85 Work No. 4 comprises a 400 kV electrical cable connection from the East Park Substation to the Eaton Socon Substation, comprising:

- A 400 kV electrical circuit;
- Cable Jointing Chambers; and
- Temporary Construction Access and Laydown Areas.

2.4.86 The 400 kV connection from the East Park Substation to the National Grid's Eaton Socon Substation will comprise a single electrical circuit that will be below ground along its full length between the two substations. The cables will be trenched in an open cut trench along the majority of the length, with horizontal drilling or horizontal directional drilling potentially used to cross beneath watercourses, vegetation, areas of archaeological constraint, and roads.

2.4.87 The 400 kV cabling is typically available in lengths of up to 600m, with the lengths of cable therefore connected in below ground Cable Jointing Chambers.

2.4.88 As the East Park Substation is proposed to be in either Site C or Site D (Option 1 or Option 2 respectively, as set out earlier), the 400 kV grid connection will either be approximately 7,800m in length (Option 1) or 6,000m in length (Option 2).

2.4.89 The different potential impacts of the Option 1 and Option 2 400 kV Grid Connection have been identified in the relevant assessment chapters.

400 kV Grid Connection

2.4.90 The 400 kV Grid Connection comprises a single 400 kV electrical circuit formed of three extra high voltage (EHV) cables and associated fibre optic cabling and earthing. The cabling will potentially be set in concrete for safety reasons due to the extra high voltages involved, this is a precautionary measure only to prevent future ground intrusive works accidentally damaging or coming into contact with the cable.

2.4.91 An indicative cross-section drawing for the 400 kV cable trench is shown on ***PEIR Volume 3 Figure 2-3k***.

2.4.92 Table 2-18 identifies the relevant design parameters and design principles for the 400 kV Grid Connection, and the basis on which it has been assessed in this PEIR.

Table 2-18: 400 kV Grid Connection Design Parameters and Principles

Design Parameter or Principle	Parameter	Basis of Assessment
Location	The 400 kV Grid Connection will be located within the area identified as Work No. 4 on the Work Plans.	It is assumed the 400 kV Grid Connection would be located as shown on the Illustrative Environmental Masterplan on ***PEIR Volume 3 Figure 2-2***.
Design Parameter	The 400 kV Grid Connection will be laid in a single circuit in a trench up to 1.5m wide and up to 2m deep, with a minimum depth of 1m.	It is assumed the trench would be as per the indicative drawing on ***PEIR Volume 3 Figure 2-3k*** as this is a realistic representation of how it is expected to be built. The flexibility sought would only be in case obstacles are found and is expected to only be along short sections of the corridor, if at all.
Design Principle	Horizontal Drilling or Horizontal Directional Drilling (or similar method) will be used to install the 400kV Grid Connection beneath certain watercourses, areas of archaeological constraint, and roads.	Anticipated locations of Horizontal Drilling or Horizontal Directional Drilling are set out in Table 2-19 below and have formed the basis of assessment.

2.4.93 The 400 kV Grid Connection will run from either Site C or Site D to the Eaton Socon Substation. The grid connection will be required to cross other infrastructure including roads and utilities, as well as natural features such as watercourses and vegetation. There are three principal construction methods that will be utilised for crossing such features with the 400 kV cable, these are:

- Trenching – using an open-cut trench to cross, and reinstating the existing land use following trenching (refer to ***PEIR Volume 3 Figure 2-3q***);
- Horizontal Drilling – using a thrust-bore style drill to install conduit beneath features without above ground disturbance, the method is suitable for short crossings typically up to 30m in length, and where the crossing does not need to be too deep (refer to ***PEIR Volume 3 Figure 2-3r***);
- Horizontal Directional Drilling – using a larger drilling rig to install conduit beneath features without above ground disturbance, this method is suitable for crossing longer distances and allows greater guidance of the drill to arc beneath features where necessary, allowing greater depths to be reached (refer to ***PEIR Volume 3 Figure 2-3s***).

2.4.94 Table 2-19 sets out the current assumption as to the location of different crossings required to install the 400 kV Grid Connection. The table sets out the type of feature being crossed, the ID for the feature, the type of crossing to be utilised, and scheme component crossing the feature.

2.4.95 ***PEIR Volume 3 Figure 2-4*** shows the locations of the crossings set out in Table 2-19.

Table 2-19: 400 kV Grid Connection Crossings

Ref.	Existing or Proposed?	Feature Crossed		Crossing	
		Type	ID	Type	Scheme Component
C40	Proposed	Road	Access Track	Horizontal Drill	33kV Cabling / 400kV Grid Connection

Ref.	Existing or Proposed?	Feature Crossed		Crossing	
		Type	ID	Type	Scheme Component
C41	Proposed	Archaeology / Road	Scheduled Monument and Moor Road	Horizontal Directional Drill	33kV Cabling / 400kV Grid Connection
C47	Proposed	Utility	Anglian Water	Horizontal Drill	33kV Cabling / 400kV Grid Connection
C49b	Proposed	Utility	National Gas	Horizontal Drill	400kV Grid Connection
C50	Proposed	Watercourse	Field Ditch	Trench	400kV Grid Connection
C56	Proposed	Watercourse	South Brook	Horizontal Drill	400kV Grid Connection
C57	Proposed	Watercourse	Field Ditch	Trench	400kV Grid Connection
C58b	Proposed	Watercourse	Field Ditch	Trench	400kV Grid Connection
C59	Proposed	Road	Duloe Lane	Horizontal Drill	400kV Grid Connection
C60b	Proposed	Watercourse	Duloe Brook	Horizontal Drill	400kV Grid Connection
C61	Proposed	Road	Bushmead Road	Horizontal Drill	400kV Grid Connection
C62	Proposed	Road	Access Track	Horizontal Drill	400kV Grid Connection
C63	Proposed	Vegetation	Woodland	Horizontal Directional Drill	400kV Grid Connection

Cable Jointing Chambers

2.4.96 The cable jointing chambers will be located along the 400 kV Grid Connections at distances of between 500m and 700m apart. The cable jointing chambers will be located proximate to field boundaries wherever practicable, but avoiding excavation within root protection areas of trees and hedgerows.

2.4.97 The cable jointing chambers will be constructed of concrete and will be sealed and buried below ground at a depth sufficient that the existing land use can be instated above them following construction. An indicative plan view and section drawing of the cable jointing chambers is shown on ***PEIR Volume 3 Figure 2-3k***.

2.4.98 Table 2-20 identifies the relevant design parameters and design principles for the cable jointing chambers, and the basis on which they have been assessed in this PEIR.

Table 2-20: Cable Jointing Chamber Design Parameters and Principles

Design Parameter or Principle	Parameter	Basis of Assessment
Design Parameter	The cable jointing chambers will be up to 10m in length, by 2.4m in width, x 2.6m in depth.	It is assumed the maximum dimensions are applied.
Design Parameter	The top of the cable jointing chambers will be between 1m and 1.5m below ground level.	It is assumed the top of the cable jointing chambers are 1m below ground.
Design Parameter	The cable jointing chambers will be between 500m and 700m apart.	For Option 1 at a length of 7,800m it is assumed that 13 Cable Jointing Chambers would be required. For Option 2 at a length of 6,000m it is assumed that 10 Cable Jointing Chambers would be required.

Temporary Construction Access and Laydown Areas

2.4.99 There will be temporary construction access required along the length of the 400 kV Grid Connection. The assumed alignment of the temporary construction access is shown on ***PEIR Volume 3 Figure 2-6***.

2.4.100 The temporary construction access and laydown areas will utilise heavy duty construction matting.

2.4.101 An indicative cross-section through the proposed temporary access tracks is shown as a 'Temporary Access Track' on ***PEIR Volume 3 Figure 2-3h***.

Work No. 5 – works at the Eaton Socon Substation

2.4.102 The Scheme will connect into the Eaton Socon Substation with works required to create a new 400 kV generation bay including circuit breaker, switchgear, metering equipment, cable sealing ends, and associated infrastructure.

2.4.103 The works to the Eaton Socon Substation would be located within the area identified as Work No. 5 on the Work Plans.

Work No. 6 – Internal Cabling and Ancillary Infrastructure

2.4.104 Work No. 6 comprises all internal cabling and ancillary infrastructure required to build, operate and maintain the Scheme, comprising:

- 33 kV High Voltage Cabling;
- Low Voltage Cabling;
- Fencing and Gates;
- Access Tracks;
- Operations and Maintenance Area (Work No. 6A);
- East Park BESS and Substation Retention Basin (Work No. 6B);
- Drainage;
- CCTV and Monitoring Systems; and
- Utility Connections.

33 kV High Voltage Cabling

2.4.105 The 33 kV high voltage cabling connects the on-site Transformers from Work No. 1 with the East Park Substation at Work No. 3. The cabling is below ground and typically laid in parallel circuits. At the western end of the East Park Site (i.e. furthest from the East Park Substation) there will be fewer circuits laid in parallel, whereas at the eastern end of the East Park Site (i.e. closest to the East Park Substation) there will be a greater number of circuits. As a result, the trench at the western end will be narrower (typically 0.4m wide for a single circuit), whilst at the eastern end it will be wider (up to a maximum of 15m wide).

2.4.106 A typical cross-section drawing through a single circuit and multiple parallel circuits is shown on ***PEIR Volume 3 Figure 2-3l***.

2.4.107 Table 2-21 identifies the relevant design parameters and design principles for the 33 kV high voltage cabling, and the basis on which it has been assessed in this PEIR.

Table 2-21: High Voltage 33 kV Cabling Design Parameters and Principles

Design Parameter or Principle	Parameter	Basis of Assessment
Location	The high voltage 33 kV electrical cabling works will be undertaken within the area identified as Work No. 6 on the Work Plans.	It is assumed the high voltage 33 kV cabling would be located within the area identified as Work No. 6 on the Indicative Work Plans on ***PEIR Volume 3 Figure 2-1***.
Design Parameter	The high voltage 33kV electrical cabling will be below ground laid in trenches a minimum of 1m deep and of varied width dependent on the number of circuits at any point. A single circuit will be laid in a trench up to 0.4m wide. Additional circuits will be laid in parallel up to a maximum trench width of 15m.	The width of cable trenches across the Scheme within Work No. 6 will vary. For the purposes of assessment it is assumed that these trenches will not result in vegetation loss.

Design Parameter or Principle	Parameter	Basis of Assessment
Design Parameter	Horizontal Drilling or Horizontal Directional Drilling (or similar method) may be used to cross features such as roads, utilities, watercourses, or vegetation.	Anticipated locations of Horizontal Drilling or Horizontal Directional Drilling are set out in Table 2-22 below and have formed the basis of assessment.
Design Principle	Trenching of high voltage 33 kV cabling will be excluded from existing root protection areas unless absolutely essential.	It is assumed that the high voltage 33 kV cabling will be installed without removing any vegetation.

2.4.108 As with the 400 kV Grid Connection, the 33 kV high voltage cabling will be required to cross other infrastructure including roads and utilities, as well as natural features such as watercourses and vegetation. There are three principal construction methods that will be utilised, these are:

- Trenching – using an open-cut trench to cross, and reinstating the existing land use following trenching (refer to ***PEIR Volume 3 Figure 2-3q***);
- Horizontal Drilling – using a thrust-bore style drill to install conduit beneath features without above ground disturbance, the method is suitable for short crossings typically up to 30m in length, and where the crossing does not need to be too deep (refer to ***PEIR Volume 3 Figure 2-3r***);
- Horizontal Directional Drilling – using a larger drilling rig to install conduit beneath features without above ground disturbance, this method is suitable for crossing longer distances and allows greater guidance of the drill to arc beneath features where necessary, allowing greater depths to be reached (refer to ***PEIR Volume 3 Figure 2-3s***).

2.4.109 Table 2-22 sets out the current assumption as to the location of different crossings required to install the 33 kV high voltage cabling. The table sets out the type of feature being crossed, the ID for the feature, the type of crossing to be utilised, and scheme component crossing the feature.

2.4.110 ***PEIR Volume 3 Figure 2-4*** shows the locations of the crossings set out in Table 2-22.

Table 2-22: 33 kV Grid Connection Crossings

Ref.	Existing or Proposed?	Feature Crossed		Crossing	
		Type	ID	Type	Scheme Component
C01	Existing	Watercourse	Pertenhall Brook	Culvert	Access Track and 33kV Cabling
C03	Existing	Watercourse	Field Ditch	Culvert	Access Track and 33kV Cabling
C04	Proposed	Road	B660	Horizontal Drill	33kV Cabling
C05a	Proposed	Watercourse	Stream	Horizontal Drill	33kV Cabling
C06	Existing	Watercourse	Field Ditch	Culvert	Access Track and 33kV Cabling
C08	Proposed	Watercourse	Field Ditch	Culvert	Access Track and 33kV Cabling
C09	Proposed	Watercourse	Field Ditch	Culvert	Access Track and 33kV Cabling
C10	Existing	Watercourse	Field Ditch	Culvert	Access Track and 33kV Cabling
C11	Existing	Watercourse	Field Ditch	Culvert	Access Track and 33kV Cabling

Ref.	Existing or Proposed?	Feature Crossed		Crossing	
		Type	ID	Type	Scheme Component
C13	Proposed	Road	Little Staughton Road	Horizontal Drill	33 kV Cabling
C14	Proposed	Road	Great Staughton Road	Trench	33 kV Cabling
C15	Proposed	Road	Little Staughton Road	Horizontal Drill	33 kV Cabling
C16	Proposed	Watercourse	Field Ditch	Culvert	Access Track and 33kV Cabling
C17	Proposed	Road	Great Staughton Road	Horizontal Drill	33 kV Cabling
C18b	Proposed	Utility	National Gas	Horizontal Drill	33kV Cabling
C19b	Proposed	Utility	National Gas	Horizontal Drill	33kV Cabling
C20	Proposed	Watercourse	Field Ditch	Culvert	Access Track and 33kV Cabling
C21	Existing	Watercourse	Field Ditch	Culvert	Access Track and 33kV Cabling
C22b	Proposed	Utility	National Gas	Horizontal Drill	33kV Cabling
C23b	Proposed	Utility	National Gas	Horizontal Drill	33kV Cabling
C24	Proposed	Road	Little Staughton Road	Horizontal Drill	33kV Cabling
C27b	Proposed	Utility	National Gas	Horizontal Drill	33kV Cabling

Ref.	Existing or Proposed?	Feature Crossed		Crossing	
		Type	ID	Type	Scheme Component
C28b	Proposed	Utility	National Gas	Horizontal Drill	33kV Cabling
C30	Existing	Watercourse	Field Ditch	Culvert	Access Track and 33kV Cabling
C31	Proposed	Road	Unnamed Road	Horizontal Drill	33kV Cabling
C32b	Proposed	Utility	National Gas	Horizontal Drill	33kV Cabling
C33	Proposed	Watercourse	Field Ditch	Horizontal Drill	33kV Cabling
C35	Proposed	Watercourse	Field Ditch	Horizontal Drill	33kV Cabling
C36	Proposed	Watercourse	Field Ditch	Culvert	Access Track and 33kV Cabling
C37	Proposed	Watercourse	Field Ditch	Trench	33kV Cabling
C39	Proposed	Watercourse	Field Ditch	Trench	33kV Cabling
C40	Proposed	Road	Access Track	Horizontal Drill	33kV Cabling / 400kV Grid Connection
C41	Proposed	Archaeology / Road	Scheduled Monument and Moor Road	Horizontal Directional Drill	33kV Cabling / 400kV Grid Connection
C43	Proposed	Watercourse	Field Ditch	Trench	33kV Cabling
C46	Proposed	Utility	Anglian Water	Horizontal Drill	33kV Cabling
C47	Proposed	Utility	Anglian Water	Horizontal Drill	33kV Cabling / 400kV Grid Connection

Ref.	Existing or Proposed?	Feature Crossed		Crossing	
		Type	ID	Type	Scheme Component
C48	Proposed	Watercourse	Field Ditch	Trench	33kV Cabling
C51b	Proposed	Utility	National Gas	Horizontal Drill	33kV Cabling
C52b	Proposed	Utility	Anglian Water	Horizontal Drill	33kV Cabling
C53	Proposed	Utility	Anglian Water	Horizontal Drill	33kV Cabling

Low Voltage Cabling

2.4.111 Low voltage cabling will be used to connect the solar PV modules to the inverters, this cabling is typically mounted to the rear of the solar PV arrays. The cabling is in turn then relayed on to the solar transformers, typically laid in shallow trenches following the end of each row of panels. A typical cross-section through a buried low voltage cabling trench is shown on ***PEIR Volume 3 Figure 2-3m***.

2.4.112 Table 2-23 identifies the relevant design parameters and design principles for the low voltage cabling, and the basis on which it has been assessed in this PEIR.

Table 2-23: Low Voltage Cabling Design Parameters and Principles

Design Parameter or Principle	Parameter	Basis of Assessment
Location	The low voltage cabling works will be undertaken within the area identified as Work No. 6 on the Work Plans.	It is assumed the low voltage cabling would be laid in trenches along the end of rows of panels or alongside access tracks, relayed back to the solar transformers. The low voltage cabling is not shown on the Illustrative Environmental Masterplan.

Design Parameter or Principle	Parameter	Basis of Assessment
Design Parameter	Where buried, the low voltage cable trenches would be a minimum of 1m deep and 0.4m wide.	It is assumed the maximum dimensions are applied.
Design Principle	Cable trenching will avoid root protection areas of trees and hedgerows.	It is assumed the low voltage cabling will avoid all root protection areas and hedgerows.

Fencing and Gates

2.4.113 The fencing covered by Work No. 6 will be the fencing enclosing the solar PV areas identified in Work No. 1. The fencing will be suited to a rural context, comprising either deer fencing (timber posts and metal stock fencing), or green paladin fencing. Vehicle gates will be provided to each fenced area to allow operational and maintenance access. These gates will be secured by locks, with access provided to any relevant area that a relevant statutory undertaker may require access.

2.4.114 An indicative elevation drawing showing the two potential types of fencing that will be used is shown on ***PEIR Volume 3 Figure 2-3n***.

2.4.115 Table 2-24 identifies the relevant design parameters and design principles for the fencing and gates, and the basis on which it has been assessed in this PEIR.

Table 2-24: Fencing and Gates Design Parameters and Principles

Design Parameter or Principle	Parameter	Basis of Assessment
Location	The fencing and gates will be located within the area identified as Work No. 6 on the Work Plan.	It is assumed the fencing and gates would be located as shown on the Illustrative Environmental Masterplan on ***PEIR Volume 3 Figure 2-2***.

Design Parameter or Principle	Parameter	Basis of Assessment
Design Parameter	Fencing and gates around the Solar PV Areas will be up to 2.1m in height above ground level. Posts will be installed to a maximum depth of 1m below ground level.	It is assumed the fencing and gates would be up to the maximum height of 2.1m above ground level.
Design Parameter	Small mammal gates will be provided at the base of the fence with maximum dimensions of 0.3m in height by 0.25m in width. A minimum of two small mammal gates will be provided to each fenced area.	It is assumed that a minimum of two small mammal gates will be provided to each fenced area, at the maximum dimensions specified.
Design Principle	The fencing will be either deer fencing comprising timber posts and metal stock fencing, or green paladin fencing.	It is assumed that the fencing will be green paladin fencing, which is considered to be a worst-case scenario.

Access Tracks

2.4.116 The access tracks will provide a means of access within the Scheme and will be constructed of permeable compacted stone, expected to be Type 1 Hardcore. The tracks will have a width of up to 4m and a depth of up to 0.25m. Where practicable, existing access tracks within the Scheme Boundary will be used and only upgraded if necessary.

2.4.117 An indicative cross-section through the proposed access tracks is shown as a ‘Typical Access Track’ on ***PEIR Volume 3 Figure 2-3h***.

2.4.118 Table 2-25 identifies the relevant design parameters and design principles for the access tracks, and the basis on which it has been assessed in this PEIR.

Table 2-25: Access Tracks Design Parameters and Principles

Design Parameter or Principle	Parameter	Basis of Assessment
Location	The access tracks will be located within the area identified as Work No. 6 on the Work Plans.	It is assumed the access tracks will be located as shown on the Illustrative Environmental Masterplan on ***PEIR Volume 3 Figure 2-2***. This is considered to be a realistic case for how the access tracks will be delivered.
Design Parameter	The access tracks will have a width of up to 4m, and a depth of up to 0.25m.	It is assumed the maximum dimensions are applied.
Design Principle	At watercourses, the access tracks will utilise existing agricultural crossings wherever feasible. Where this is not feasible the watercourse will be culverted. Culverts will be designed to reduce any alteration of watercourse alignment where feasible and will be sunken so as to allow a natural bed substrate to be maintained through the culvert.	Anticipated watercourse crossings where culverts would be required are set out in Table 2-26 below and have formed the basis of assessment. An indicative drawing of a culverted watercourse is shown on ***PEIR Volume 3 Figure 2-3o***.

2.4.119 The access tracks will be required to cross a number of watercourses and utilities within the Scheme Boundary. Where practicable, existing crossings of watercourses have been used, however where this is not feasible the watercourse will be culverted. The currently anticipated design of the culverts is shown on ***PEIR Volume 3 Figure 2-3o***.

2.4.120 Table 2-26 sets out the current assumption as to the location of crossings related to the proposed access tracks. The table sets out the type of feature being crossed, the ID for the feature, the type of crossing to be utilised, and scheme component crossing the feature.

2.4.121 ***PEIR Volume 3 Figure 2-4*** shows the locations of the crossings set out in Table 2-26.

Table 2-26: Access Track Crossings

Ref.	Existing or Proposed?	Feature Crossed		Crossing	
		Type	ID	Type	Scheme Component
C01	Existing	Watercourse	Pertenhall Brook	Culvert	Access Track and 33kV Cabling
C02	Proposed	Watercourse	Field Ditch	Culvert	Access Track
C03	Existing	Watercourse	Field Ditch	Culvert	Access Track and 33kV Cabling
C06	Existing	Watercourse	Field Ditch	Culvert	Access Track and 33kV Cabling
C07	Proposed	Watercourse	Field Ditch	Culvert	Access Track
C08	Proposed	Watercourse	Field Ditch	Culvert	Access Track and 33kV Cabling
C09	Proposed	Watercourse	Field Ditch	Culvert	Access Track and 33kV Cabling
C10	Existing	Watercourse	Field Ditch	Culvert	Access Track and 33kV Cabling
C11	Existing	Watercourse	Field Ditch	Culvert	Access Track and 33kV Cabling
C12	Existing	Watercourse	Field Ditch	Culvert	Access Track
C16	Proposed	Watercourse	Field Ditch	Culvert	Access Track and 33kV Cabling
C18a	Proposed	Utility	National Gas	n/a	Access Track

Ref.	Existing or Proposed?	Feature Crossed		Crossing	
		Type	ID	Type	Scheme Component
C19a	Proposed	Utility	National Gas	n/a	Access Track
C20	Proposed	Watercourse	Field Ditch	Culvert	Access Track and 33kV Cabling
C21	Existing	Watercourse	Field Ditch	Culvert	Access Track and 33kV Cabling
C22a	Existing	Utility	National Gas	n/a	Access Track
C23a	Existing	Utility	National Gas	n/a	Access Track
C25	Proposed	Utility	National Gas	n/a	Access Track
C26	Proposed	Utility	National Gas	n/a	Access Track
C27a	Proposed	Utility	National Gas	n/a	Access Track
C28a	Proposed	Utility	National Gas	n/a	Access Track
C29	Existing	Watercourse	Field Ditch	Culvert	Access Track
C30	Existing	Watercourse	Field Ditch	Culvert	Access Track and 33kV Cabling
C34	Existing	Watercourse	Field Ditch	Culvert	Access Track
C36	Proposed	Watercourse	Field Ditch	Culvert	Access Track and 33kV Cabling
C38	Existing	Watercourse	Field Ditch	Culvert	Access Track
C45	Existing	Watercourse	Field Ditch	Culvert	Access Track

Ref.	Existing or Proposed?	Feature Crossed		Crossing	
		Type	ID	Type	Scheme Component
C51a	Proposed	Utility	National Gas	n/a	Access Track
C52a	Proposed	Utility	Anglian Water	n/a	Access Track
C54	Proposed	Watercourse	Field Ditch	Culvert	Access Track

Temporary Access Tracks

2.4.122 Temporary access tracks will be required during construction and decommissioning of the Scheme. These tracks will supplement the proposed access tracks to enable access to all relevant parts of the Scheme Boundary. An illustrative layout of the temporary access tracks is shown on ***PEIR Volume 3 Figure 2-6***. The temporary access tracks will utilise heavy duty construction matting.

2.4.123 An indicative cross-section through the proposed temporary access tracks is shown as a 'Temporary Access Track' on ***PEIR Volume 3 Figure 2-3h***.

2.4.124 Table 2-27 identifies the relevant design parameters and design principles for the temporary access tracks, and the basis on which it has been assessed in this PEIR.

Table 2-27: Temporary Access Tracks Design Parameters and Principles

Design Parameter or Principle	Parameter	Basis of Assessment
Location	The temporary access tracks will be located within the areas identified as Work No. 6 on the Work Plans.	It is assumed the temporary access tracks will be located in the areas identified on the Indicative Construction Access and Compounds Plan on ***PEIR Volume 3 Figure 2-6***.

Design Parameter or Principle	Parameter	Basis of Assessment
Design Parameter	The temporary access tracks will be up to 4m wide.	It is assumed the maximum dimensions are applied.
Design Principle	At watercourses, the temporary access tracks will utilise existing agricultural crossings wherever feasible. Where this is not feasible the watercourse will be culverted, or a bailey bridge will be used. Culverts will be designed to reduce any alteration of watercourse alignment where feasible, and will be sunken so as to allow a natural bed substrate to be maintained through the culvert.	Anticipated watercourse crossings where culverts or bailey bridges would be required are set out in Table 2-28 below and have formed the basis of assessment. An indicative drawing of a culverted watercourse is shown on ***PEIR Volume 3 Figure 2-3o***. An indicative drawing of a bailey bridge crossing is shown on ***PEIR Volume 3 Figure 2-3u***.
Design Principle	The temporary access tracks will be formed of heavy-duty construction matting that does not require excavation to install.	It is assumed that heavy duty construction matting is used.

2.4.125 The temporary access tracks will be required to cross a number of watercourses and utilities within the Scheme Boundary. Where practicable, existing crossings of watercourses have been used, however where this is not feasible the watercourse will be temporarily culverted or crossed by a bailey bridge. The currently anticipated design of the culverts is shown on ***PEIR Volume 3 Figure 2-3o***, and a design for the bailey bridge is shown on ***PEIR Volume 3 Figure 2-3u***.

2.4.126 Table 2-28 sets out the current assumption as to the location of crossings related to the temporary access tracks. The table sets out the type of feature being crossed, the ID for the feature, the type of crossing to be utilised, and scheme component crossing the feature.

2.4.127 ***PEIR Volume 3 Figure 2-4*** shows the locations of the crossings set out in Table 2-28.

Table 2-28: Temporary Access Track Crossings

Ref.	Existing or Proposed?	Feature Crossed		Crossing	
		Type	ID	Type	Scheme Component
C05b	Proposed	Watercourse	Stream	Bailey Bridge	Temporary Construction Access
C32a	Proposed	Utility	National Gas	n/a	Temporary Construction Access
C42	Proposed	Watercourse	Field Ditch	Culvert	Temporary Construction Access
C44	Proposed	Watercourse	Field Ditch	Culvert	Temporary Construction Access
C49a	Proposed	Utility	National Gas	n/a	Temporary Construction Access
C55	Existing	Watercourse	South Brook	Culvert	Temporary Construction Access
C58a	Proposed	Watercourse	Field Ditch	Culvert	Temporary Construction Access
C60a	Proposed	Watercourse	Duloe Brook	Bailey Bridge	Temporary Construction Access

Operations and Maintenance Area (Work No. 6A);

2.4.128 An operations and maintenance area is proposed to be co-located with the East Park BESS and East Park Substation. The purpose of the operations and maintenance area is to provide a building that can be used for storage of site management and maintenance equipment, which will include plant and machinery not only for maintaining the infrastructure components of the Scheme, but also for maintaining the extensive habitats and landscape areas proposed across the Scheme.

2.4.129 The location of the operation and maintenance area has not yet been fixed, as it will be linked to the decision on the location of the East Park BESS and Substation (Work No. 2 and Work No. 3). Accordingly, the operations and maintenance area has been considered as follows:

iii) **Option 1** – the operations and maintenance area would be located within Site C with reference to ***PEIR Volume 3 Figure 2-1d, Figure 2-2i*** and ***Figure 2-2k***.

iv) **Option 2** – the operations and maintenance area would be located within Site D with reference to ***PEIR Volume 3 Figure 2-1e*** and ***Figure 2-2n***.

2.4.130 Both Option 1 and Option 2 have been assessed in this PEIR. Any assumptions relevant to specific environmental topic areas have been made in the relevant assessment chapters.

2.4.131 An indicative drawing of the storage, operations and maintenance building is shown on ***PEIR Volume 3 Figure 2-3t***.

2.4.132 Table 2-29 identifies the relevant design parameters and design principles for the operations and maintenance area, and the basis on which it has been assessed in this PEIR.

Table 2-29: Operations and Maintenance Area Design Parameters and Principles

Design Parameter or Principle	Parameter	Basis of Assessment
Location	The operations and maintenance area will be located within the area identified as Work No. 6A on the Work Plans.	It is assumed the operations and maintenance area will be located as shown on the Illustrative Environmental Masterplan on ***PEIR Volume 3 Figure 2-2***.

Design Parameter or Principle	Parameter	Basis of Assessment
Design Parameter	The maximum dimensions of the storage, operations and maintenance building will be 40m in length, by 20m in width, by 6m in height.	It is assumed the maximum dimensions are applied.
Design Principle	The storage, operations and maintenance building will be designed to have a pitched roof, and finished with green walls and a white roof.	It is assumed the design of the storage, operations and maintenance building is as per the elevation drawing on ***PEIR Volume 3 Figure 2-3t***.

East Park BESS and Substation Retention Basin (Work No. 6B);

2.4.133 The East Park BESS and Substation retention basin will provide a specific drainage retention basin for Work No. 2, Work No. 3 and Work No. 6A. The retention basin will be designed to deliver environmental benefits for ecology in addition to functioning as part of the Scheme drainage.

2.4.134 The location of the East Park BESS and Substation retention basin has not yet been fixed, as it will be linked to the decision on the location of the East Park BESS and Substation (Work No. 2 and Work No. 3). Accordingly, the East Park BESS and Substation retention basin has been considered as follows:

v) **Option 1** – the East Park BESS and Substation retention basin would be located within Site C with reference to ***PEIR Volume 3 Figure 2-1d, Figure 2-2i*** and ***Figure 2-2k***.

vi) **Option 2** – the East Park BESS and Substation retention basin would be located within Site D with reference to ***PEIR Volume 3 Figure 2-1e*** and ***Figure 2-2n***.

2.4.135 Table 2-30 identifies the relevant design parameters and design principles for the East Park BESS and Substation retention basin, and the basis on which it has been assessed in this PEIR.

Table 2-30: East Park BESS and Substation Retention Basin Design Parameters and Principles

Design Parameter or Principle	Parameter	Basis of Assessment
Location	The East Park BESS and Substation retention basin associated with Work No. 2, Work No. 3, and Work No. 6A will be located within the area identified as Work No. 6B on the Work Plans.	It is assumed that the East Park BESS and Substation retention basin will be located as per the Illustrative Environmental Masterplan on ***PEIR Volume 3 Figure 2-2***.
Design Principle	The East Park BESS and Substation retention basin will have a design capacity sufficient to hold rainwater run-off from Work No. 2, Work No. 3 and Work No. 6A, and in addition store all water from the two water storage tanks if they were to both be discharged.	It is assumed the required capacity is provided.
Design Principle	The East Park BESS and Substation retention basin will have an isolating sluice such that it can closed off in an emergency situation.	It is assumed the isolating sluice is included as part of the design.

Drainage

2.4.136 The solar arrays would allow rainwater to fall between the gaps to the ground below the panels where it would percolate to ground or follow the existing drainage pathways to ditches or watercourses. Erosion would be prevented by maintaining the grass sward beneath the panels that would prevent rilling.

2.4.137 Where necessary, drainage would comprise field drains, swales and retention basins.

CCTV and Monitoring Systems

2.4.138 The Scheme will incorporate CCTV and other monitoring systems (e.g. weather stations) at intermittent locations within the area defined by Work No. 6.

2.4.139 An indicative elevation drawing of the CCTV and Monitoring Systems is shown on ***PEIR Volume 3 Figure 2-3p***.

2.4.140 Table 2-31 identifies the relevant design parameters and design principles for the CCTV and monitoring systems, and the basis on which it has been assessed in this PEIR.

Table 2-31: CCTV and Monitoring Systems Design Parameters and Principles

Design Parameter or Principle	Parameter	Basis of Assessment
Location	CCTV and other monitoring systems will be located in the areas identified as Work No. 6 on the Work Plans.	It is assumed that CCTV and other monitoring systems would be located in the areas shown on the Illustrative Environmental Masterplan on ***PEIR Volume 3 Figure 2-2***.
Design Parameter	The CCTV and other monitoring systems will be located on poles and will have a maximum height of 4m above ground level.	It is assumed the maximum dimensions are applied.

Utility Connections

2.4.141 The Scheme will require a water supply to the East Park BESS (Work No. 2), East Park Substation (Work No. 3), and the operations and maintenance area (Work No. 6A). The Applicant has been in discussion with Anglian Water and it is expected that this connection will be made to an existing Pump House located close to the Main Site Access north of Site D on the B645 (grid reference: TL146638).

2.4.142 There will be no requirement for a connection to the public sewer, or for an electrical connection other than the grid connection to the Eaton Socon Substation.

Work No. 7 – Temporary Construction and Decommissioning Compounds and Laydown Areas

2.4.143 Work No. 7 comprises temporary works associated with the construction and decommissioning of the Scheme, comprising:

- Temporary Construction and Decommissioning Compounds.

Temporary Construction and Decommissioning Compounds

2.4.144 The construction and decommissioning compounds will be situated across the Scheme in relation to construction and decommissioning phases. They would typically provide areas for welfare facilities, laydown areas, plant and equipment storage, offices, and car parking for construction workers.

2.4.145 A total of ten construction compounds would be required, as follows:

- Main Site Construction Compound located in Site D – this will include the main site offices, delivery areas, car parking, and storage;
- 1 no. satellite compound in Site C;
- 5 no. satellite compounds in Site B; and
- 3 no. satellite compounds in Site A.

2.4.146 Table 2-32 identifies the relevant design parameters and design principles for the temporary construction and decommissioning compounds, and the basis on which it has been assessed in this PEIR.

Table 2-32: Temporary Construction and Decommissioning Compounds Design Parameters and Principles

Design Parameter or Principle	Parameter	Basis of Assessment
Location	The construction and decommissioning compounds will be located within the areas identified as Work No. 7 on the Work Plans.	It is assumed the compounds will be located in the areas identified on the Indicative Construction Access and Compounds Plan on ***PEIR Volume 3 Figure 2-6***.
Design Principle	The construction and decommissioning compounds will have a base of heavy duty matting which would be removed following completion of the construction and decommissioning phases.	It is assumed that heavy duty construction matting would be used.

Work No. 8 – Works to create, enhance and maintain Green Infrastructure

2.4.147 Work No. 8 comprises works associated with the retention of existing habitats and creation of new green infrastructure across the Scheme, including native species woodland, native species hedgerows, individual trees, grasslands and permissive paths.

2.4.148 The Illustrative Environmental Masterplan (***PEIR Volume 3 Figure 2-2***) illustrates the location of the following proposed landscape elements:

- Proposed Native Species Woodland or Woodland Belt;
- Proposed Native Species Hedgerow;
- Proposed Native Species Individual Tree;
- Proposed Grazing Pasture or Neutral Grassland;
- Proposed Species-Diverse Grassland; and
- Proposed Permissive Paths.

2.4.149 An Outline Landscape and Ecological Management Plan (oLEMP) has been prepared which covers the Construction, Operational and Decommissioning Phases of the Scheme and sets out the objectives for the existing and proposed landscape elements at the Site, along with management prescriptions to ensure the successful establishment of new green infrastructure and the future maintenance of the Scheme.

2.4.150 The draft oLEMP is provided as ***PEIR Volume 2 Appendix 2-2*** and will be progressed further following consultation and will be submitted with the application for development consent.

2.4.151 A detailed Landscape and Ecological Management Plan will be produced following grant of the DCO and prior to the start of construction based on the principles of the oLEMP as a requirement of the DCO, and will be subject to sign off by the relevant planning authority.

Work No. 9 – Works to Facilitate Access

2.4.152 Work No. 9 comprises engineering works to create and maintain permanent means of access to the Scheme, comprising:

- Creation of access from the public highway;
- Creation of visibility splays;
- Works to widen the existing highway; and
- Works to create passing places.

2.4.153 In total there are 20 permanent or temporary points of access with the public highway, as shown on ***PEIR Volume 3 Figure 2-5*** and set out in Table 2-33 below:

Table 2-33: Proposed Site Access Locations

Ref.	Existing, Proposed or Upgraded Access?	Location	Description	Purpose
SA01	Existing	B660 Kimbolton Road	Existing access to Pertenhall Solar Farm, provides access to Site A	Construction Operation Decommissioning
SA02	Upgraded	B660 Kimbolton Road	Upgrade existing field access, provides western access to Site B	Construction Operation Decommissioning
SA03	Upgraded	Great Staughton Road	Upgrade existing field access, provides access to single field in Site B	Construction Operation Decommissioning
SA04	Upgraded	Great Staughton Road	Upgrade existing field access, provides access to single field in Site B	Construction Operation Decommissioning
SA05	Upgraded	Great Staughton Road	Upgrade existing field access, provides access to single field in Site B	Construction Operation Decommissioning
SA06	Upgraded	Great Staughton Road	Upgrade existing field access, provides access to north of Site B	Construction Operation Decommissioning
SA07	Upgraded	Little Staughton Road	Upgrade existing field access, provides access to west of Site B	Construction Operation Decommissioning
SA08	Upgraded	Little Staughton Road	Upgrade existing field access, provides access to east of Site B	Construction Operation Decommissioning

Ref.	Existing, Proposed or Upgraded Access?	Location	Description	Purpose
SA09	Upgraded	Little Staughton Road	Upgrade existing field access, provides access to south of Site B	Construction Operation Decommissioning
SA10	Upgraded	Spring Hill	Upgrade existing field access, provides eastern access to Site B	Construction Operation Decommissioning
SA11	Proposed	Spring Hill	Temporary access required for laying cable between Site B and Site C	Construction Decommissioning
SA12	Upgraded	Great Staughton Road	Upgrade to existing access to provide access from Site A / B to Site C / D	Construction Operation Decommissioning
SA13	Upgraded	Moor Road	Upgrade existing access to Site C	Operation
SA14	Proposed	Moor Road	Temporary access required during construction and decommissioning to provide access to Site C from Site D, and to lay cable between Site C and Site D	Construction Decommissioning
SA15	Proposed	Moor Road	Temporary access required during construction and decommissioning to provide access to Site C from Site D, and to lay cable between Site C and Site D	Construction Decommissioning

Ref.	Existing, Proposed or Upgraded Access?	Location	Description	Purpose
SA16	Proposed	B645	Main Site Access, and access to Site D	Construction (inc. Abnormal Load) Operation Decommissioning
SA17	Proposed	Duloe Road	Temporary access required to lay grid connection between Site D and Eaton Socon Substation	Construction Decommissioning
SA18	Existing	Duloe Road	Existing access from Duloe Road to provide temporary access to fields south of Duloe Road for laying grid connection to Eaton Socon Substation	Construction Decommissioning
SA19	Proposed	Bushmead Road	Temporary access required to lay grid connection between Site D and Eaton Socon Substation	Construction Decommissioning
SA20	Existing	Bushmead Road	Existing access from Bushmead Road to the Eaton Socon Substation, required on temporary basis to lay grid connection between Bushmead Road and Eaton Socon Substation	Construction Decommissioning

Visibility Splays within the Public Highway

2.4.154 Work No. 9 extends across the full extent of the public highway required for visibility splays. This includes for all existing, proposed, and temporary access points into the Site.

2.4.155 From a review of the vertical and horizontal alignment of the visibility splays it is not currently anticipated that any vegetation will need to be removed to facilitate visibility splays, however if required then existing verges and vegetation sitting within or adjacent to visibility splays will be managed to maintain visibility.

Visibility Splays across Private Land (Work No. 9A)

2.4.156 There are two locations where required visibility splays are not within the public highway and cover private land adjacent to the public highway. These locations are marked by Work No. 9A on the Work Plans and relate to the following access points identified in Table 2-33 and shown on ***PEIR Volume 3 Figure 2-5***:

- SA16 – Main Site Access from B645; and
- SA19 – Temporary Access to Bushmead Road.

2.4.157 At each of these access points there is no existing vegetation within the private land that obstructs views, however it will be a provision of the DCO that no obstructions are erected within the visibility splay, and if required, existing features will be managed to maintain visibility.

Works to widen the existing highway

2.4.158 To the north of SA10 and SA11 along Spring Hill there will be minor road widening works to facilitate the movement of Heavy Good's Vehicles (HGVs) during the construction phase. These works are within the extent of Work No. 9 and entirely within the public highway.

2.4.159 On the western side of Spring Hill the carriageway would be widened by a maximum of 1.2m across a 160m length. On the eastern side of Spring Hill the carriageway will be widened by a maximum of 0.5m across a 50m length. These works are described within ***PEIR Volume 1 Chapter 9***.

2.4.160 There would also be minor works to widen the junction between Spring Hill and Great Staughton Road to the north of SA10 and SA11 to ensure that two HGVs could safely track around the junction at the same time, if required. These works are described within ***PEIR Volume 1 Chapter 9*** and would be within the extent of Work No. 9 and entirely within the public highway.

2.5 Construction Phase

Construction Programme

2.5.1 The Construction Phase is expected to last for approximately 30 months, based on experience of constructing other similar-scale installations across Europe. Subject to the Scheme securing a Development Consent Order in Summer 2026 it is anticipated that works would start on site in Summer 2027 and be completed in late 2029 or early 2030.

2.5.2 It is possible that the Construction Phase could be slightly shorter or longer than 30 months, however this is considered to be an unlikely scenario and the deviation from a 30 month programme would not be expected to be substantial. Therefore, for the purposes of this PEIR a 30 month programme has been assessed. The final programme will be dependent on the final Scheme design once any DCO Requirements have been discharged.

2.5.3 The Scheme will be split into a number of construction phases which are illustrated in ***PEIR Volume 2 Appendix 2-1***. These construction phases would be managed such that they are often happening in tandem in order to build out the Scheme in the most efficient way possible.

2.5.4 The primary construction phases set out in ***PEIR Volume 2 Appendix 2-1*** are as follows:

vii) Enabling Works (Months 1 to 3)

a. Establishment of Main Construction Compound in Site D;
b. Establishment of Main Site Access from B645 into Site D to the Main Construction Compound;
c. Establishment of access tracks and temporary access tracks across Sites A, B, C and D;
d. Establishment of crossing points over drainage ditches and existing utilities; and
e. Establishment of satellite compounds in Sites A, B and C.

viii) Construction of the East Park Substation (Months 2 to 12);

a. Establishment of internal access roads, fencing and surfacing;
b. Establishment of foundations for the transformers, control building and electrical equipment;
c. Construction of the control building;
d. Establishment of metallic structures for the electrical equipment;
e. Delivery and installation of the 400 kV transformers;
f. Installation of switchgear, cabling and other equipment;
g. Establishment of other minor ancillary works.

ix) Construction of the 400 kV Grid Connection (Months 3 to 10);

a. Establishment of temporary access road and crossings;
b. Excavation of trench in sections;
c. Excavation and construction of cable jointing chambers in sections;
d. Laying of cable conduits in the trenches between cable jointing chambers;
e. Pouring of concrete around the conduits and backfilling of trench with soils;
f. Cable pulling between cable jointing chambers;
g. Connecting of cables within cable jointing chambers;
h. Establishment of new generation bay within the Eaton Socon Substation;
i. Testing and commissioning of grid connection;

j. Sealing of cable jointing chambers and backfilling of land above cable jointing chambers; and
k. Removal of temporary access road and reinstatement of all land.

x) Construction of the East Park BESS (Months 7 to 24);

a. Establishment of internal access roads, fencing and surfacing;
b. Establishment of foundations for the battery storage units, transformers, control building, auxiliary transformer and water storage tanks;
c. Establishment of internal cable trenches between equipment;
d. Installation of cabling;
e. Delivery and installation of battery storage units, transformers, control building, auxiliary transformer and water storage tanks; and
f. Testing and commissioning of BESS.

xi) Construction of East Park Sites A, B C and D (Months 2 to 30).

a. Establishment of fencing;
b. Marking out locations of solar PV tables, solar transformers, and trenches;
c. Excavation of trenches and laying of conduit for cables;
d. Establishment of surface water drainage infrastructure;
e. Establishment of foundations for solar transformers (and centralised inverters if used);
f. Establishment of solar PV mounting structures;
g. Installation of solar PV modules, inverters, and transformers;
h. Establishment of CCTV and monitoring systems;
i. Construction of storage, operations and maintenance building;
j. Installation of low voltage cabling between solar PV modules, string inverters, transformers and CCTV;
k. Installation of 33 kV high voltage cabling between solar transformers and East Park Substation;
l. Testing and commissioning; and
m. Establishment of soft landscaping in areas of habitat mitigation.

Construction Staff

2.5.5 It is anticipated that the average number of workers on Site across the Construction Phase would be 496, with a peak workforce of 854 in Month 12. The workforce would be distributed across the Site with work happening in parallel across the Substation, BESS, 400 kV Grid Connection, and solar PV areas in Sites A, B, C and D.

2.5.6 An illustrative workforce resource schedule is presented in ***PEIR Volume 2 Appendix 2-1***.

Construction Hours of Work

2.5.7 Construction operations would be limited to 08.00 to 18.00hrs Monday to Friday and 08:00 to 13:00hrs Saturday, with no construction work on Sundays or Bank Holidays.

Construction Compounds

2.5.8 The main construction compound will be located in Site D close to the main site access from the B645 to the north-east. The Main Construction Compound would comprise offices and welfare facilities, car parking, materials and equipment storage area, and vehicle manoeuvring and unloading area.

2.5.9 Satellite Compounds would also be located across Sites A, B and C in relation to the construction phasing of the solar PV areas. These compounds would be smaller in footprint than the Main Construction Compound but would still provide offices and welfare facilities, car parking, materials and equipment storage area, and vehicle manoeuvring and unloading area.

2.5.10 There would be no dedicated construction compounds located along the 400 kV Grid Connection as excavated soils would be stored adjacent to the trench, and materials such as conduit, concrete and cabling would be delivered to the

Main Construction Compound and installed along the Grid Connection as and when required.

Construction Traffic, Plant and Site Access

2.5.11 The Main Site Access will be from the B645 into Site D, with all HGVs arriving into the Site from this point, and the majority of daily staff movements arriving into Site D. A small number of daily staff movements would access Sites A and B without passing through the Main Site Access.

2.5.12 The construction access strategy has been designed to avoid vehicles using the public highway as far as practicable. Once vehicles arrive in Site D from the Main Site Access at the B645, a temporary access road will connect westward across fields to Site C, avoiding the use of Moor Road. From Site C, access will be taken north-west via an upgraded track (which may require realignment subject to ongoing discussion with the landowner and environmental assessment) to an existing HGV access to Great Staughton Road where vehicles will follow the public highway to access Site B, thus avoiding large volumes of traffic passing through Great Staughton. Vehicles would be routed through Site B crossing Little Staughton Road close to Lodge Farm before continuing west towards the B660. At the B660 vehicles would follow the public highway for a short section before accessing Site A using an existing access at Manor Farm.

2.5.13 There are existing access tracks through the Site that will be utilised as far as practicable, as will existing agricultural access points from the public highway. It will be necessary to upgrade or restore sections of the existing access track in order to provide safe and suitable access for vehicles. It is also likely that passing places will need to be established at intermittent positions along these tracks in order to manage vehicle movements during the Construction Phase.

2.5.14 It is assumed that there would be an average of 11 one-way HGV movements per day across the 30 month Construction Phase, with a peak of 44 one-way daily movements during the Enabling Works in Months 1 to 3. It is assumed there would be an average of 248 one-way daily staff movements across the 30 month Construction Phase, with a peak of 427 one-way daily staff movements in Month 12.

2.5.15 Typical vehicles, plant and machinery that are assumed to be required during the Construction Phase will likely include:

- Articulated Lorries;
- Low Loaders;
- Tipper Trucks;
- Concrete Mixer Lorries;
- Mobile cranes;
- Fuel Tankers;
- Water Tankers;
- Vacuum Tankers;
- Excavators;
- Telehandlers;
- Push press piling rigs;
- Power generators;
- Vibrating rollers;
- Cable pullers;
- Horizontal Directional Drill rigs; and
- Skips.

2.5.16 In addition, the following larger vehicles will be required in relation to the delivery of transformers at the East Park Substation:

- 2 no. Abnormal Indivisible Loads (AILs) expected to be up to 200 tonne weight;
- 1 no. 250 tonne mobile crane.

2.5.17 An Outline Construction Traffic Management Plan (oCTMP) has been prepared to minimise traffic impacts and is provided at ***PEIR Volume 2 Appendix 9-1***. A final Construction Traffic Management Plan (CTMP) will be secured by the DCO and subject to final sign off by the relevant planning authority.

Construction Lighting

2.5.18 Temporary mobile lighting towers will likely be required during winter months at each of the construction compounds. Lighting will be operated to minimise impacts on human and ecological receptors, and would not be operated outside of the specified construction working hours. Lighting will utilise directional fittings to minimise outward light spill and glare.

Construction Environmental Management

2.5.19 An Outline Construction Environmental Management Plan (oCEMP) has been prepared which outlines the principles, controls, and measures to be implemented during construction to reduce potential significant environmental effects from occurring. The draft oCEMP is provided as ***PEIR Volume 2 Appendix 2-3*** and will be progressed further following consultation and will be submitted with the application for development consent.

2.5.20 Where the Scheme relies on mitigation measures in relation to significant construction phase environmental effects from the EIA, these measures have been outlined within the oCEMP.

2.5.21 A detailed Construction Environmental Management Plan will be produced following grant of the DCO and prior to the start of construction based on the principles of the oCEMP as a requirement of the DCO, and will be subject to sign off by the relevant planning authority.

Vegetation Clearance

2.5.22 The design and layout of the Scheme aims to avoid vegetation removal as far as practicable, however a small amount of clearance cannot be avoided during the construction phase to facilitate both temporary or permanent access between fields.

2.5.23 The indicative location of vegetation clearance (woodland, trees or hedgerows) across the Scheme is shown on ***PEIR Volume 3 Figure 2-7***, with references on Figure 2-7 corresponding to Table 2-34 below.

2.5.24 A detailed Arboricultural Impact Assessment will be prepared prior to submission of the application for development consent.

Table 2-34: Indicative Vegetation Clearance

Ref.	Vegetation Type	Assumption on Length Removed	Reason for Removal	Timing of Reinstatement
V01	Hedgerow	6m	Facilitate operational access	Following Decommissioning
V02	Hedgerow	6m	Facilitate operational access	Following Decommissioning
V03	Hedgerow	6m	Facilitate operational access	Following Decommissioning
V04	Hedgerow	6m	Facilitate temporary construction access	During Operational Phase
V05	Hedgerow	6m	Facilitate temporary construction access	During Operational Phase
V06	Hedgerow	6m	Facilitate temporary construction access	During Operational Phase

Ref.	Vegetation Type	Assumption on Length Removed	Reason for Removal	Timing of Reinstatement
V07	Hedgerow	6m	Facilitate temporary construction access	During Operational Phase
V08	Hedgerow	6m	Facilitate temporary construction access	During Operational Phase
V09	Hedgerow	6m	Facilitate temporary construction access	During Operational Phase

Public Rights of Way

2.5.25 It is anticipated that access to all public rights of way (PRoW) will be maintained during the construction phase, with management in place to ensure that all routes can be safely used, including temporary diversions where necessary.

2.5.26 Management of PRoWs is likely to involve the use of mesh fencing or Heras fencing as appropriate in order to clearly demarcate and separate public rights of way from construction traffic and activities. Where necessary, banksmen would be utilised during construction where construction traffic is required to cross a PRoW.

2.5.27 There are expected to be a limited number of temporary PRoW diversions during the construction phase, primarily in relation to the trenching of cables across PRoW. Any diversion will be highly localised and for a limited period of time. It is expected that diversions would be in the magnitude of 10-15m buffer from the existing PRoW, and only in place whilst trenches are open across the PRoW. At PRoW crossings the works would be phased to minimise the amount of time that a temporary PRoW diversion is in place, and as a result it is not expected that such diversions would last longer than 4 weeks.

At all times, the definitive PRoW width would be retained as a minimum width for any temporary PRoW diversion.

2.5.28 An Outline Public Right of Way Management Plan will be prepared and submitted with the application for development consent. This document will set out the principles by which PRoW will be managed during the construction, operation and decommissioning phases, with a detailed Public Right of Way Management Plan produced as a requirement of the DCO prior to the start of construction, which will be subject to sign off by the relevant planning authority.

2.6 Operational Phase

2.6.1 The Scheme comprises a temporary development with an operational phase of up to 40 years.

Operational Workforce and Activities

2.6.2 During the operational phase, access to the Site would principally be to the East Park BESS and Substation, and to the wider site for routine maintenance operations, replacement of faulty equipment, habitat management, and farming activities. It is expected that there would be 20 full time equivalent (FTE) roles for the Scheme during the Operational Phase covering the various activities, this would breakdown broadly as twelve FTE roles working on site maintenance, five FTE roles working in management and administrative roles, and three FTE roles working in land management including landscape maintenance and agriculture.

2.6.3 Maintenance access to the Site would be by a small van or similar and the storage, operations and maintenance building would contain spare equipment and tools for routine repairs and maintenance. Operational access would be via the existing public highway with limited traffic movements expected.

2.6.4 At times when more major repairs may be required, such as the replacement of transformers, more staff and specialist equipment (cranes and low loaders) would be required. Table 2-35 below sets out assumptions regarding the operational lifespan of key individual components of the Scheme.

Table 2-35: Indicative Operational Lifespan of Scheme Components

Scheme Component	Indicative Operational Lifespan
Solar Panels	20 – 40 years
Mounting Structures	20 – 40 years
String Inverter	20 – 40 years
Centralised Inverter	20 – 40 years
Solar Transformer	20 – 40 years
Battery Storage Unit	20 – 40 years
Battery Transformer	20 – 40 years
Auxiliary Transformer	20 – 40 years
400 kV / 33kV Transformers	20 – 40 years
Cabling	40 years

Operational Environmental Management

2.6.5 An Outline Operational Environmental Management Plan (oOEMP) has been prepared which outlines the principles, controls, and measures to be implemented during the operational phase to reduce potential significant environmental effects from occurring. The draft oOEMP is provided as ***PEIR Volume 2 Appendix 2-4*** and will be progressed further following consultation and will be submitted with the application for development consent.

2.6.6 Where the Scheme relies on mitigation measures in relation to significant operational phase environmental effects from the EIA, these measures have been outlined within the oOEMP.

2.6.7 A detailed Operational Environmental Management Plan will be produced following grant of the DCO and prior to operation based on the principles of the oOEMP as a requirement of the DCO, and will be subject to sign off by the relevant planning authority.

Public Rights of Way

2.6.8 During the operational phase all existing PRoW would be maintained on their existing alignment, and it is not expected that any diversions or stopping-up of PRoW is required.

2.7 Decommissioning Phase

2.7.1 When the operational phase ends the Scheme will require decommissioning. All solar PV modules, mounting poles, cabling, inverters, transformers, BESS equipment, the East Park Substation, and fencing would be removed from the Site and recycled or disposed of in accordance with good practice and market conditions at that time. Any infrastructure that is more than 1m below ground level, such as cable conduit and casing, would be left in situ. The Site will be returned to a condition suitable for return to its original use after decommissioning, with the exception of areas of planting (woodland and hedgerows) which would be retained post decommissioning.

2.7.2 Any requirements to retain access tracks will be discussed and agreed with the landowners as part of the decommissioning process.

2.7.3 It is likely that the generation bay and associated infrastructure therein at Eaton Socon substation will be left in situ following decommissioning because National Grid will own this infrastructure.

2.7.4 Decommissioning is expected to take between 12 and 24 months and would be undertaken in phases.

2.7.5 The effects of decommissioning are often similar to, or to a lesser magnitude than, the construction effects and will be considered where possible in the relevant sections of the ES. However, there can be a high degree of uncertainty regarding decommissioning as engineering approaches and technologies evolve over the operational life of the Scheme.

Decommissioning Environmental Management

2.7.6 An Outline Decommissioning Environmental Management Plan (oDEMP) has been prepared which outlines the principles, controls, and measures to be implemented during the operational phase to reduce potential significant environmental effects from occurring. The draft oDEMP is provided as ***PEIR Volume 2 Appendix 2-5*** and will be progressed further following consultation and will be submitted with the application for development consent.

2.7.7 Where the Scheme relies on mitigation measures in relation to significant decommissioning phase environmental effects from the EIA, these measures have been outlined within the oDEMP.

2.7.8 A detailed Decommissioning Environmental Management Plan will be produced following grant of the DCO and prior to decommissioning based on the principles of the oDEMP as a requirement of the DCO, and will be subject to sign off by the relevant planning authority.

2.8 References

[1] HMSO (2008). Planning Act 2008. Available at: https://www.legislation.gov.uk/ukpga/2008/29/introduction [Last Accessed: 11 September 2024]

[2] National Infrastructure Planning (2018). Advice Note 9: Using the 'Rochdale Envelope'. Available at: https://www.gov.uk/government/publications/nationally-significant-infrastructure-projects-advice-note-nine-rochdale-envelope [Last Accessed: 11 September 2024]

[3] HMSO (2008). Planning Act 2008. Available at: https://www.legislation.gov.uk/ukpga/2008/29/introduction [Last Accessed: 11 September 2024]