Lime Down
Solar Park

Environmental Statement

Volume 1, Chapter 4: Alternatives and Design Evolution

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List of Contents

List of Tables

List of Plates

4 Alternatives and Design Evolution

4.1 Introduction

4.1.1 This chapter of the Environmental Statement (ES) describes the consideration of alternatives and the design evolution in relation to the Scheme. It sets out:

- The policy requirements for considering alternatives;
- An overview of the factors influencing the site selection process for the Scheme;
- The Site and alternative layouts;
- Alternative construction routes;
- Alternative construction compounds;
- Alternative cable route corridors;
- Alternative sites for the BESS Area;
- Alternative solar infrastructure technologies; and
- Alternative generation technologies to solar.

4.1.2 The **Design Approach Document [EN010168/APP/7.3]** sets out the design vision and the design principles that provided a clear framework for evolution of the Scheme's design since inception to ensure that good design is embedded. Design evolution is set out in the **Design Approach Document [EN010168/APP/7.3]** and also summarised in this chapter.

4.1.3 The design and layout of the Scheme has evolved iteratively since initial site selection, through environmental assessment, feedback received from non-statutory, statutory consultation and targeted consultation, and technical engagement with stakeholders. Relevant consultation responses include discussions with Wiltshire Council and the Cotswolds National Landscape Board regarding impacts of the Scheme on the setting of the Cotswolds National Landscape (CNL), feedback from Wiltshire Council's highways team regarding transport impacts of siting the Cable Route Corridor along the A350, and consultation responses from parish councils and interested parties regarding alternative sites for the Scheme (including around Westbury). **ES Volume 3, Appendix 4-1: Site Selection Assessment Report [EN010168/APP/6.3]** has also been updated since PEIR to consider further sites close to Melksham at a higher topographic gradient. Full details of how consultation responses have been considered and incorporated into the design evolution for the Scheme can be found in the **Consultation Report [EN010168/APP/5.1]**.

4.1.4 This chapter is supported by the following figures in **ES Volume 2 [EN010168/APP/6.2]:**

- **Figure 4-1: Development Site at Scoping and at PEIR (including figure series 4-1-1 to 4-1-8) [EN010168/APP/6.2]**;
- **Figure 4-2: Development Site at PEIR and DCO Application submission (including figure series 4-2-1 to 4-2-8) [EN010168/APP/6.2]**;
- **Figure 4-3: Main infrastructure layout changes between Scoping and PEIR [EN010168/APP/6.2];**
- **Figure 4-4: Main infrastructure layout changes between PEIR and DCO Application submission [EN010168/APP/6.2]; and**
- **Figure 4-5: Indicative Cable Route Corridors [EN010168/APP/6.2].**

4.1.5 This chapter is supported by the following appendix in **ES Volume 3**:

- **Appendix 4-1: Site Selection Assessment Report [EN010168/APP/6.3]**.

4.2 Relevant Policy and Legislation

4.2.1 The following section sets out the relevant policy and legislation relating to alternatives which has influenced the site selection and design evolution of the Scheme. It also sets out the requirement to 'seek to further' the purposes of the national landscape, which is relevant given the Scheme's proximity to the Cotswolds National Landscape (CNL).

4.2.2 The Department for Energy Security and Net Zero launched a consultation on revised National Policy Statements on 24 April 2025 (Ref 4-1), including draft updates to the Overarching National Policy Statement for Energy (NPS EN-1). The draft revisions to NPS EN-1 have been considered and do not materially alter section 4 of NPS EN-1 regarding alternatives. Some minor wording changes in NPS EN-1 regarding national landscapes are noted below. Further details of policy compliance with the NPSs (including relevant sections of the Draft NPSs) is included within Annex A: National Policy Accordance Tables of the **Planning Statement [EN010168/APP/7.2]**.

The Requirement to Consider Alternatives

4.2.3 There is no general requirement in the relevant national planning policy to consider alternatives or establish that the proposed project represents the best option from a policy perspective. Paragraph 4.3.9 of Overarching National Policy Statement for Energy EN-1, November 2023 (NPS EN-1) (Ref 4-2) states that: "*as in any planning case, the relevance or otherwise to the decision making process of the existence (or alleged existence) of alternatives to the proposed development is, in the first instance, a matter of law. This NPS does not contain any general requirement to consider alternatives or to establish*

whether the proposed project represents the best option from a policy perspective. Although there are specific requirements in relation to compulsory acquisition and habitats sites, the NPS does not change requirements in relation to compulsory acquisition and habitats sites".

4.2.4 Although there is no general planning policy requirement to consider alternatives and show the proposals represent the best option, the requirement to include information on alternatives is imposed by other legislation and in specific circumstances as set out in NPS EN-1. In particular:

- Regulation 2 of the Environmental Impact Assessment (EIA) Regulations (Ref 4-3) requires an ES to include "*a description of the reasonable alternatives studied by the applicant, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment*".
- Paragraph 2 of Schedule 4 of the Environmental Impact Assessment (EIA) Regulations (Ref 4-3) requires *"A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects"*;
- There is a requirement under the Habitats Directive, as transposed into UK law by the Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations) (Ref 4-4), to consider alternative solutions where a derogation is required under stage 3 of a Habitats Regulations Assessment (HRA) for projects where the Habitats Regulations apply;
- NPS EN-1 includes specific requirements to consider alternatives in relation to biodiversity and geological interests, flood risk and development within national designated landscapes which set out in Sections 5.4, 5.8, 5.10 of NPS EN-1; and
- NPS EN-1 Paragraph 4.3.17 provides that where there is a policy or legal requirement to consider alternatives, the applicant should describe the alternatives considered in compliance with these requirements.

4.2.5 This chapter meets the above legislative requirement to consider alternatives in the ES. The assessment of alternatives focuses on the site selection process and different layouts, sizing, technologies and design parameters considered during the design evolution of the Scheme.

Secretary of State Decision Making, Alternative Energy Projects and a "Do Nothing" Approach

4.2.6 NPS EN-1 Paragraph 4.3.22 sets out the weight that the Secretary of State should give to alternatives in its decision making. It provides that:

"Given the level of urgency of need for new energy infrastructure the Secretary of State should, subject to any relevant legal requirements (e.g. under the Habitats Regulations) which indicate otherwise, be guided by the following principles when deciding what weight should be given to alternatives:

- *The consideration of alternatives in order to comply with policy requirements should be carried out in a proportionate manner; and*
- *Only alternatives that can meet the objectives of the proposed development need to be considered."*

4.2.7 NPS EN-1 Paragraph 4.3.23 states that the Secretary of State should be guided by whether there is a realistic prospect of the alternatives delivering the same infrastructure capacity (including energy security, climate change, and other environmental benefits) in the same timescale as the proposed development. Paragraph 4.3.24 of NPS EN-1 goes on to say that the Secretary of State should not refuse an application for development on one site simply because fewer adverse impacts would result from developing similar infrastructure on another suitable site and should have regard as appropriate to the possibility that all suitable sites for energy infrastructure of the type proposed may be needed for future proposals.

4.2.8 The Applicant's approach to alternatives has been informed by the above policies.

4.2.9 NPS EN-1 Paragraph 4.3.27 provides that *"alternative proposals which mean the necessary development could not proceed, for example because the alternative proposals are not commercially viable or alternative proposals for sites would not be physically suitable, can be excluded on the grounds that they are not important and relevant to the Secretary of State's decision*". On that basis, it is not necessary to consider a "no development" or "do nothing" alternative, because it would not deliver the additional renewable electricity generation and storage proposed by the Scheme.

The Requirement to 'Seek to Further' the Purpose of the National Landscape

4.2.10 In addition to the above requirements to consider alternatives, it is also relevant to consider requirements specific to the CNL given the Scheme's proximity to the CNL and that Highway Improvement Areas are proposed within the CNL, as discussed further below.

4.2.11 Section 245 of the Levelling-up and Regeneration Act 2023 (LURA) (Ref 4-5) introduced a number of changes that are relevant to the assessment of landscape impacts to National Landscapes. This includes a change to Section 85 of the Countryside and Rights of Way (CRoW) Act 2000 (Ref 4-6), which now imposes an obligation on the relevant authority to *"seek to further the purpose of conserving and enhancing the natural beauty of the area of outstanding natural beauty*". A "relevant authority" includes the Applicant (as a statutory undertaker) and the Secretary of State as the determining body for decisions on DCO applications under the Planning Act 2008 (section 85(2) CRoW Act 2000). NPS EN-1 reflects this duty, which applies to development within National Landscapes, and those outside National Landscapes that may have an impact on them, as discussed below.

4.2.12 NPS EN-1 sets out the need for applicants to consider the requirement to seek to further the purposes of nationally designated landscapes in the management of landscape effects, as follows:

- For development proposals located within designated landscapes: the Secretary of State should be satisfied that measures which seek to further purposes of the designation are "*sufficient, appropriate and proportionate to the type and scale of the development.*" (NPS EN-1 Paragraphs 5.10.7 and 5.10.33). Draft NPS EN-1 (Ref 4-1) proposes to amend this test in paragraph 5.10.33 to *"appropriate, reasonable and proportionate".* Furthermore, NPS EN-1 Paragraph 5.10.33 also provides that the Secretary of State should ensure that any projects consented in designated landscapes should be carried out to "*high environmental standards, including through the application of appropriate requirements where necessary*".

- For development proposals located outside the boundary of a designated landscape which may have impacts within it: NPS EN-1 Paragraph 5.10.8 makes it clear that *"projects should be designed sensitively given the various siting, operational, and other relevant constraints*". In addition, NPS EN-1 Paragraph 5.10.34 provides that the aim should be to avoid harming the purposes of the designation or to minimise adverse effects through sensitive design (although the fact that a project is visible from a designated area should not in itself be a reason for refusing consent).

4.2.13 Whilst NPS EN-1 imposes obligations on applicants and the Secretary of State to carefully consider impacts on National Landscapes in light of Section 85 of the CRoW Act, the application of the duty to "seek to further" designation should be considered in the specific context of nationally significant infrastructure. In particular:

- There is an overarching presumption that the benefits of Critical National Priority (CNP) infrastructure will meet the exceptional circumstances test for impacts on National Landscapes (NPS EN-1 Paragraph 4.2.17). The

Scheme meets the definition of CNP infrastructure, as set out in **ES Volume 1, Chapter 5: Energy Need, Legislative Context and Energy Policy [EN010168/APP/6.1]** and the **Planning Statement [EN010168/APP/7.2]**;

- Harm to the landscape must only be "*minimised*" with "*reasonable mitigation where possible and appropriate*" (NPS EN-1 Paragraph 5.10.6);
- While measures which seek to further the purposes of the designation need to be sufficient, appropriate and proportionate to the type and scale of the development (Paragraphs 5.10.7 and 5.10.8), NPS EN-1 does not require all possible measures to be identified, or implemented, nor is there any legal, policy or guidance requirement to always include specific measures within a development to enhance a National Landscape regardless of the level of impact; and
- NPS EN-1 does not distinguish between the types of purposes that an applicant may seek to further for National Landscapes (i.e. it does not prioritise conservation and enhancement over public enjoyment or refer to enhancement in the same way the CRoW Act 2000 does).

4.2.14 In addition to national policy, the Government has published guidance on Protected Landscapes in the form of 'Guidance for relevant authorities on seeking to further the purposes of Protected Landscapes' (December 2024) (Ref 4-11). The Guidance was produced to inform relevant authorities on how the Protected Landscapes duty is intended to operate, providing broad principles to guide compliance with the duty. It confirms that the requirement to *"seek to further"* is considered to require a pro-active approach by the decision-maker and that authorities must take all reasonable steps to explore how the statutory purposes of the Protected Landscape can be furthered. The duty not only applies to land within the National Landscape but also within land affecting its setting.

4.2.15 The Guidance stipulates that relevant authorities will need to apply the duty when undertaking any function in relation to, or so as to affect, land in a Protected Landscape including:

- *"decision making in respect of development management, planning applications and nationally significant infrastructure projects;*
- *when considering the appropriateness of avoidance, mitigation, and compensation measures; and*
- *functions outside of a Protected Landscape which may have an effect on land in a Protected Landscape".*

4.2.16 The Guidance promotes the use of the relevant Protected Landscape's Management Plan, a statutory document, which will have been adopted by the Local Authority (or by the relevant Conservation Board) and which "*describes*

the natural beauty, special qualities and key characteristics of a Protected Landscape". It is the principal vehicle for ensuring that the statutory purposes of the Protected Landscape are met and is a material consideration in the planning process.

4.2.17 It is set out that the duty is intended to be an "active duty, not passive", which requires relevant authorities to take "*appropriate, reasonable and proportionate steps to explore measures to further the statutory purposes of Protected Landscapes"*. As "*far as is reasonably practicable",* relevant authorities should seek to avoid harm and contribute to the conservation and enhancement of the natural beauty, special qualities and key characteristics of Protected Landscapes. For development plan making and development management decisions affecting a Protected Landscape, a relevant authority should seek to further the purposes of the Protected Landscape - in so doing, the relevant authority should consider whether such measures can be embedded in the design of plans and proposals, where "*reasonably practical and operationally feasible".*

4.2.18 The Applicant notes that the Guidance explicitly states that the duty "*does not prevent relevant authorities from undertaking their statutory functions and discharging their legal duties and other responsibilities. The duty is intended to complement these requirements by ensuring that the purposes for which Protected Landscapes are designated for are recognised in reaching decisions and undertaking activities that impact these areas. Consideration of what is reasonable and proportionate in the context of fulfilling the duty is decided by the relevant authority and should take account of the context of the specific function being exercised*."

4.2.19 The Applicant's position is that the Secretary of State, when considering the application of the duty, must also comply with the legal obligation under s104(3) of the Planning Act 2008 to determine the DCO application in accordance with the relevant national policy statements.

4.2.20 The statutory purposes of Protected Landscapes are set out in the Guidance, which for National Landscapes with Conservation Boards are:

- *"conserving and enhancing the natural beauty of the area of outstanding natural beauty; and*
- *increasing the understanding and enjoyment by the public of the special qualities of the area of outstanding natural beauty".*

4.2.21 The Applicant has considered the above requirements in its design principles as set out in the **Design Approach Document [EN010168/APP/7.3],** site selection and design evolution of the Scheme, as discussed further in this chapter. In its site selection process, the Applicant identified the CNL as a constraint and avoided development within the CNL itself (with the exception of proposed Highway Improvement Areas, discussed below). It has also had regard to the

CNL in the design iterations of the Scheme to date (see table 4-1 below) and the requirement to minimise adverse effects through sensitive design and reasonable and appropriate mitigation. The design of the Scheme has evolved, in consultation with Wiltshire Council and the Cotswolds National Landscapes Board, and in consideration of meeting the strengthened duty under the CRoW Act 2000. Further detail of the assessment of the effects on the CNL, and the mitigation proposed to minimise adverse effects on the CNL, is contained within **ES Volume 1, Chapter 8: Landscape and Visual [EN010168/APP/6.1]** and **ES Volume 3, Appendix 8-6: LVIA Assessment of the Special Qualities of the Cotswold National Landscape [EN010168/APP/6.3]**.

4.3 Site Selection

Introduction

4.3.1 This section sets out the factors influencing site selection for the Scheme in accordance with relevant planning policy. This section also includes a review of specific sites to the south of Melksham that were suggested as potential alternatives in consultee comments set out in the Scoping Opinion and raised during statutory consultation.

Relevant Policy

4.3.2 There is no prescribed methodology in national planning policy or guidance relating to site selection for solar projects. The National Policy Statement for Renewable Energy Infrastructure (EN-3) (NPS EN-3) (Ref 4-7) paragraph 2.3.5 is clear that in general, the government does not want to direct applicants for renewable energy infrastructure to specific sites. Instead, Paragraph 2.3.9 of NPS EN-3 recognises that most renewable energy resources can only be developed where the resource exists and where it is economically feasible. Because there are no limits on the urgent need established in Part 3 of NPS EN-1, the Secretary of State should not use a consecutive approach in the consideration of renewable energy projects (for example, by giving priority to the re-use of previously developed land for renewable technology developments) (paragraph 2.3.9, NPS EN-3). When applied to site selection, there is no general requirement in national policy to consider alternatives or to demonstrate that a suitable site is the one with the least environmental, social and economic impacts (paragraph 4.2.9 of NPS EN-1).

4.3.3 NPS EN-1 recognises that there is a critical national priority for the provision of nationally significant low carbon infrastructure (paragraph 3.3.62) to meet urgent provision for energy security and legally binding net zero targets. Section 4.2 of NPS EN-1 defines solar as a low carbon energy generating technology and affords all solar NSIPs CNP infrastructure status. In accordance with the National Policy Statement for Electricity Networks Infrastructure (EN-5) (NPS

EN-5) (Ref 4-8), the electricity transmission infrastructure associated with the Scheme also benefits from CNP infrastructure status.

4.3.4 Given the urgency of need for CNP infrastructure, the Secretary of State will start with a presumption in favour of granting development consent for solar NSIPs. Paragraph 4.1.3 of NPS EN-1 provides that this presumption applies unless there are any other policies in the relevant technically specific NSIPs, which clearly indicate development consent should be refused. This presumption is also subject to the provisions of s104 of the Planning Act 2008 (Ref 4-9).

4.3.5 Paragraph 2.3.6 of NPS EN-3 states that the urgent need for CNP infrastructure will be presumed to outweigh any test of harm to nationally recognised designations. Paragraph 3.3.63 of NPS EN-1 states that the urgent need for CNP infrastructure will in general outweigh any other residual impacts not capable of being mitigated through the application of the mitigation hierarchy.

4.3.6 Paragraph 2.3.7 of NPS EN-3 requires the Secretary of State to have regard to the aims, goals and targets of the Environmental Improvement Plan 2023 and other existing and future measures and targets in England, as well as compliance with the Environment Act 2021. Specific reference is also made to the historic environment in paragraph 2.3.8 of NPS EN-3.

4.3.7 In seeking to be satisfied that substantial public benefits would outweigh any loss or harm to the significance of a designated heritage asset, the Secretary of State is required to consider the positive role that large-scale renewable projects play in the mitigation of climate change, the delivery of energy security and the urgency of meeting legally binding net zero targets. Draft NPS EN-3 (Ref 4-1) paragraph 2.3.8 also refers to the urgency of meeting the Clean Power 2030 Mission and net zero target. Further details on the need for the Scheme and the Clean Power 2030 Action Plan (and other government policy on net zero) is included within the **Statement of Need [EN010168/APP/7.1]** and the **Planning Statement [EN010168/APP/7.2]**.

4.3.8 The Applicant has considered the above policy position of NPS EN-1 and NPS EN-3 in its site-selection for the Scheme, with consideration of the likely environmental, social and economic effects, technical feasibility and financial viability. This has included reference to Section 2.3 and Paragraph 2.10.18 in NPS EN-3 which set out typical factors that are likely to influence site selection, including:

- Irradiance and site topography;
- Network connection (i.e. distance from the network);
- Proximity to dwellings;
- Agricultural land classification and land type;

- Accessibility (for construction and operation); and
- Public Rights of Way (PRoW).

Site Selection Methodology

4.3.9 The above policy considerations have been taken into account when assessing the suitability of the Site for the Scheme. The assessment methodology adopted is set out in further detail in **ES Volume 3, Appendix 4-1: Site Selection Assessment Report [EN010168/APP/6.3]**.

4.3.10 The Site Selection Assessment Report evaluates the proposed location for the Scheme against other potential areas for solar development in order to establish whether the Scheme is in a suitable location. It adopts a staged approach, as follows:

- Stage 1: Identification of an area of search near the available grid connection point.
- Stage 2: Exclusion of various planning, environmental and spatial constraints, in accordance with policy considerations (such as a preference not to site on best and most versatile agricultural land), to identify the most unconstrained land.
- Stage 3: Application of considerations around site size and land assembly, use of previously developed land and topography to identify potential development areas on the remaining land.
- Stage 4: Evaluation of the identified potential development areas against assessment indicators such as ecology and biodiversity, land use, landscape and visual, flood risk etc.
- Stage 5: Widening the search to consider further potential development areas on parcels of Grade 3 agricultural land, and land within flood zones 2 and 3.
- Stage 6: Widening the search to consider further potential development areas on parcels of land with a higher gradient (5% or less).

4.3.11 The Site Selection Assessment Report concludes that there are no locations within the search area that are more suitable than the proposed location for the Scheme, based on the criteria identified.

Use of BMV Agricultural Land

4.3.12 As set out above and in **ES Volume 3, Appendix 4-1: Site Selection Assessment Report [EN010168/APP/6.3]**, the Applicant has considered agricultural land classification in its site selection for the Scheme, initially seeking to avoid BMV land when assessing appropriate sites. Further details on the use of BMV agricultural land, how its inclusion within the Scheme has been

limited, and why the use of some BMV agricultural land can be justified, is included within the **Planning Statement [EN010168/APP/7.2]**.

Alternative Sites put forward During Consultation

The Salisbury Plain, Westbury Chalk Quarry and Westbury Cement Works

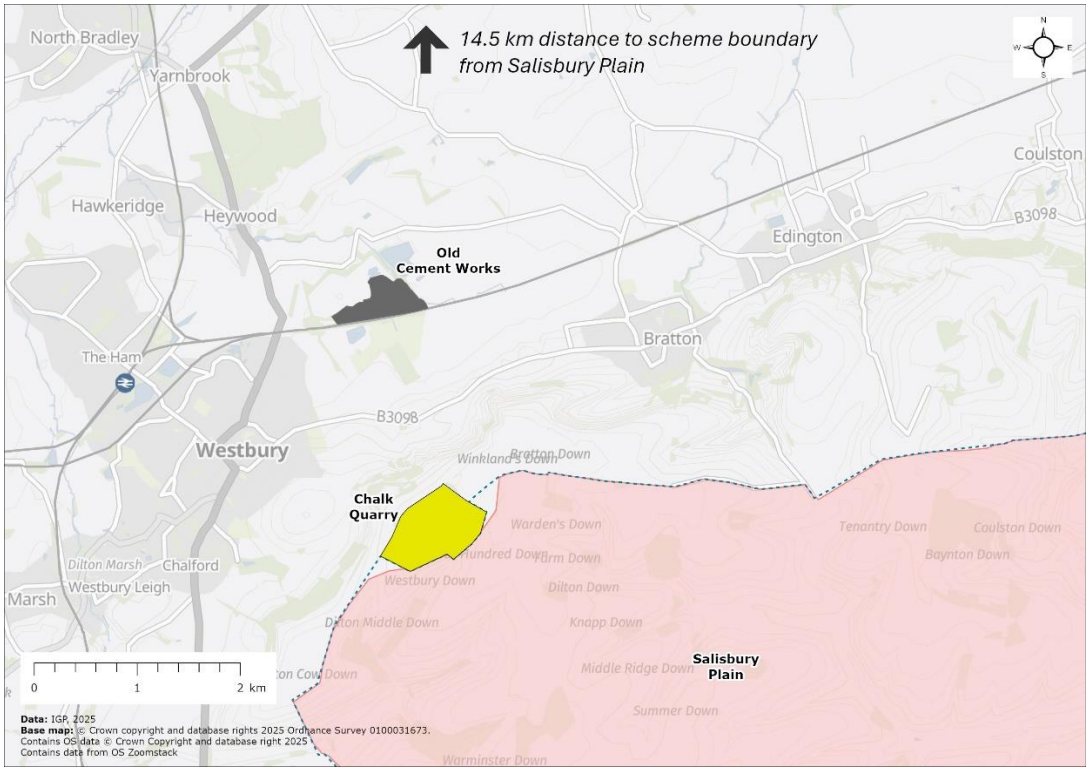
4.3.13 In consultee comments made at Scoping stage, Chippenham Without Parish Council, Dauntsey Parish Council, Kington St Michael Parish Council, Langley Burrell Without Parish Council and Seagry Parish Council ("the Parish Councils") highlighted the following same three sites, to be used in conjunction with each other, as an alternative location for the Scheme's Solar PV Sites:

- The Salisbury plain;
- The disused chalk quarry at Westbury; and
- The old cement works site at Westbury.

4.3.14 Consultee feedback from residents during statutory consultation also suggested the buffer zone to the Imber military firing range on the Salisbury Plain as a potential alternative.

4.3.15 **Plate 4-1** below shows the old cement works, the disused chalk quarry and part of the Salisbury Plain closest to Westbury. The Imber military firing range danger zone is indicated in pink, and takes up the majority of the Salisbury Plain.

Plate 4-1: Alternative Sites near Westbury



4.3.16 The Applicant has considered these sites and, whilst they would allow some use of brownfield land, they have been discounted on the following basis:

- The Salisbury Plain: The Salisbury Plain is a constrained site due to its classification as a Special Protection Area, a Site of Special Scientific Interest, a Special Area of Conservation, a Special Landscape Area under the Wiltshire Local Plan (and protected under saved policy C3 from the previous West Wiltshire District Plan), the presence of a number of scheduled monuments (including in the area close to Westbury) and its use for military training exercises (including a military firing range in the area close to Westbury). Given the above, the Salisbury Plain is an unsuitable site for solar development.
- The disused chalk quarry at Westbury: this site is also covered by the Salisbury Plain Special Protection Area mitigation zone and the Special Landscape Area for the Salisbury Plain. Also, the current topography of the quarry (with steep walls that would likely affect irradiance levels) makes it an unsuitable site for solar development in its current state, with the site requiring significant remediation to become usable for solar. Given the current disused status of the quarry, any timescales for quarry restoration do not align with the grid connection date, therefore it is not a realistically available site for the Scheme.

- The old cement works at Westbury: this site is also covered by the Salisbury Plain Special Protection Area mitigation zone. The site is flat and could offer good irradiance levels and topography. However, it cannot be used in combination with the two other sites identified by consultees due to the unsuitability of those other sites. More generally, the site itself is only 15 hectares (ha) and therefore falls below the Applicant's requirement for individual land parcels which are at least 40 ha in size, as set out in the Site Selection Assessment Report (**ES Volume 3, Appendix 4-1 Site Selection Assessment Report [EN010168/APP/6.3]**). Whilst the cement works are close to another potential development area identified in the Site Selection Assessment Report (PDA 4), it was not included within PDA 4 due to its small size, its irregular shape (taking account of existing ponds and vegetation) and its physical separation from PDA 4 due to an intervening pond, watercourse and woodland. The site was therefore not considered further in site selection.

4.3.17 The Parish Councils also suggested that the sites above could utilise a connection cable that the consented Northacre energy from waste facility (application reference number 18/09473/WCM) at Westbury will be laying to the 132 kV Rodden Road substation in Frome. It is anticipated that the majority of the electricity generated (25 MW) from the Northacre facility will use the proposed connection to the Frome Substation on Rodden Road. The connection agreement with the operator of Northacre Energy and the distribution network operator (DNO) may already be established, but in any event, a shared connection is not feasible, procedurally or electrically, due to specific contractual constraints binding the applicant to the network agreement. The Rodden Road substation serves as a Distribution Bulk Supply Point (BSP) with a transformer nameplate rating of 90 MVA and maximum load of 25.57 MW. There is already 100.86 MW of generation contracted to this substation and it is marked as constrained by Scottish and Southern Electricity Networks (SSEN), meaning the vast majority of available generation capacity has already been allocated to other developments and further capacity would only be available if substantial network reinforcements were carried out.

4.3.18 Given the maximum voltage of the Rodden Road substation is 132 kV, a project utilising the three sites proposed in addition to other sites to create a project that was of a similar scale to the Scheme could not technically connect to this substation as this requires a connection of 400 kV as a minimum. Furthermore, it is not possible to connect into the 400 kV lines that are located in close proximity to Frome for technical reasons. While looped or tee'd connections directly utilising overhead lines are feasible, the network can only accommodate a limited number of such connections. Other developments have already utilised the maximum number of connections that can be accommodated directly to these overhead lines.

Minety Substation

4.3.19 At statutory consultation, a number of consultees suggested the Minety Substation as an alternative point of connection to Melksham substation, on the basis that it is closer to the Solar PV Sites and therefore requires a shorter cable route.

4.3.20 The Applicant has undertaken extensive engagement with National Grid throughout the scoping and development of the Scheme to determine the appropriate point of connection. The Existing National Grid Melksham Substation was identified as having available capacity for a utility scale energy project such as the Scheme. Whilst Minety substation does house 400kV infrastructure, the Applicant's discussions with National Grid confirmed there was no connection available at Minety for the Scheme.

4.3.21 On that basis, Minety Substation is not a viable alternative and the Existing National Grid Melksham Substation remains the only viable connection point for the Scheme.

4.4 The Site and Alternative Layouts

Introduction

4.4.1 This section describes the alternative layouts considered for the Scheme, the design evolution (the main changes) to date and how the design changes accord with the Design Principles for the Scheme.

4.4.2 **ES Volume 2, Figure 4-1: Development Site at Scoping and at PEIR [EN010168/APP/6.2]** illustrates the changes to the Site between the Scoping and PEIR stages. **ES Volume 2, Figure 4-2: Development Site at PEIR and DCO Application submission [EN010168/APP/6.2]** illustrates the changes to the Site between PEIR and DCO Application submission. See also **ES Volume 2, Figure 2-2: Field Boundaries and Numbering [EN010168/APP/6.2]** more generally for the relevant field boundaries and field numbering for the Scheme, which are discussed in this section.

Evolution in Design Parameters

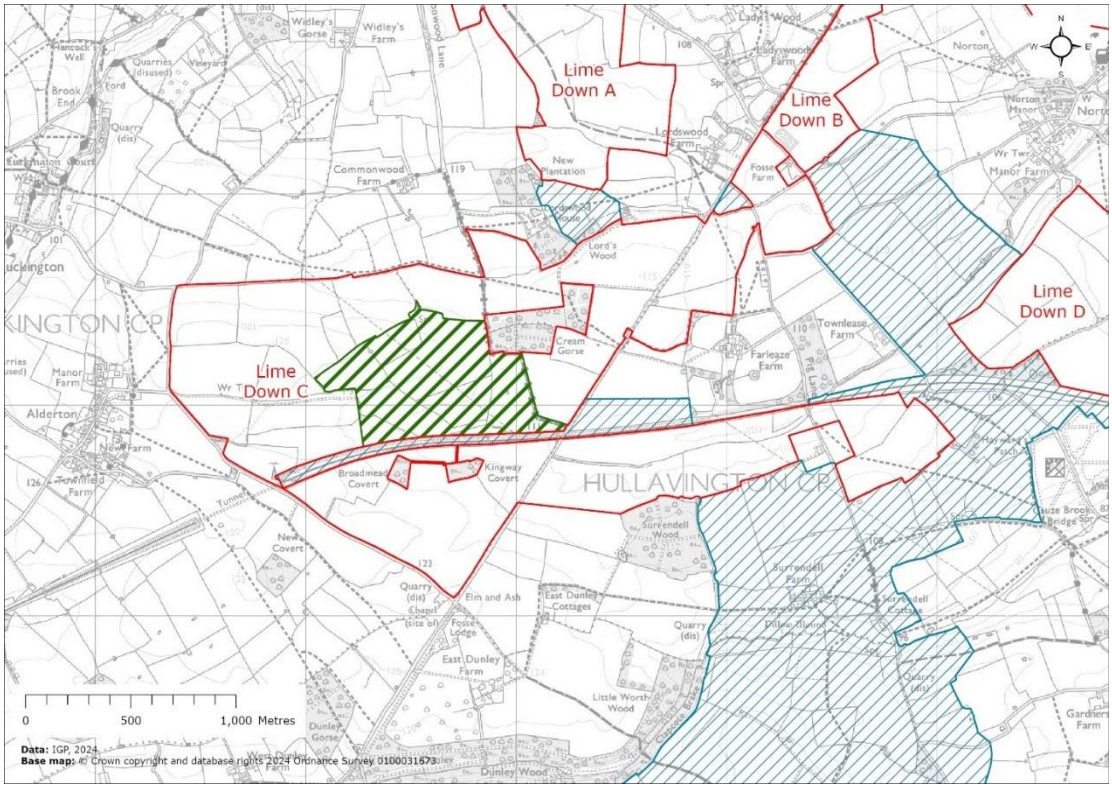
4.4.3 It is necessary to have some flexibility built into the design of the Scheme when submitting the DCO Application so that the detailed design of the Scheme can be informed by technical considerations, post consent work, and take advantage of innovation in technology. The technical assessments contained within this ES therefore assess an 'envelope' within which the works would take place (the Rochdale Envelope), based upon maximum and, where relevant, minimum design parameters, which are considered by the technical authors to ensure that the realistic worst-case effects of the Scheme as assessed. The design parameters for the Scheme are set out in **ES Volume 1, Chapter 3: The Scheme [EN010168/APP/6.1].**

4.4.4 The design parameters for the Scheme have evolved from Scoping, to PEIR and then to DCO Application submission to adapt to new information, technical considerations and changes in design. The **Design Approach Document [EN010168/APP/7.3]** summarises the evolution of the design parameters.

Additions to the Solar PV Sites

4.4.5 An additional 44 ha of land in the centre of Lime Down C, as shown hatched in green on **Plate 4-2**, was identified and added to the Scheme following non-statutory consultation. The inclusion of this additional land provides an opportunity to move the proposed solar infrastructure away from sensitive areas and receptors such as the CNL and nearby heritage assets such as Fosse Way.

Plate 4-2: Additional land added to Lime Down C



4.4.6 Other minor additions to the Solar PV Sites have been made following statutory consultation and further consideration of environmental and technical constraints, for instance, to include highway boundaries, and inclusion of additional areas to allow wider buffers around heritage assets and woodland. These are detailed in **ES Volume 2, Figure 4-2: Development Site at PEIR and DCO Application submission [EN010168/APP/6.2].**

Removals from the Solar PV Sites

4.4.7 Notable removals of land from the Solar PV Sites following statutory consultation are listed below and the removals are shown on **ES Volume 2,**

Figure 4-2: Development Site at PEIR and DCO Application submission [EN010168/APP/6.2].

4.4.8 The Order Limits have been reduced in fields B2, B3 and B4 in Lime Down B, near Ladyswood and the Fosse Way, to only that required for the Cable Route Corridor. The solar PV panels previously planned for those fields have been removed following further consideration of views from the nearby Fosse Way footpath.

4.4.9 Fields C2, C3 and C4 of Lime Down C, located north-east of Alderton, have been removed from the Order Limits. The change was made following feedback from the CNL Board regarding the relationship between the fields and the setting of the CNL, in particular given the higher topography of the fields from a nearby footpath and the clear view over the fields into the CNL towards St Gile's Church in Alderton. In accordance with the Scheme's design principles and in particular the 'landscape led' approach adopted, these fields have been reviewed further and removed from the Scheme. Solar PV Panels have also been removed from nearby field C6 for the same reason (together with heritage considerations). However, this field has been retained within the Order Limits to allow areas for mitigation and enhancement close to the CNL, providing an opportunity to seek to further the purposes of the CNL in line with NPS EN-1 (discussed at **section 4.2** above).

4.4.10 Field C20 of Lime Down C has been removed from the Scheme due to the presence of possible heritage assets.

4.4.11 Field E16 in Lime Down E has been removed from the Order Limits due to landscape and visibility matters (being on higher ground), and field E8 (previously intended to be used for ecological mitigation) has been removed following further field work due to the lack of suitability of the field for ecological mitigation.

4.4.12 Other areas have been removed from the Order Limits to account for additional buffers to residential properties, or as part of general refinement where fields are no longer required for the Scheme.

4.4.13 In addition to the above removals from the Order Limits, the infrastructure layout for the Scheme has been adapted, including removal of Solar PV panels from fields retained within the Order Limits (where fields are retained for landscape and ecological enhancements). These are detailed in **Table 4-1** below.

Infrastructure Layout Iterations

4.4.14 **Table 4-1** below summarises the main infrastructure layout iterations for the Scheme and includes information on how the design changes have been influenced by the design principles as set out in the **Design Approach Document [EN010168/APP/7.3]**. The main changes discussed in **Table 4-1** are illustrated on **ES Volume 2, Figure 4-3: Main infrastructure layout changes**

between Scoping and PEIR [EN010168/APP/6.2] and **Figure 4-4: Main infrastructure layout changes between PEIR and DCO Application submission [EN010168/APP/6.2]**.

Table 4-1: Layout Iterations for the Scheme at Key Milestones

<table>
<tr><th>Stage</th><th>Proposed layout</th><th>Consultation which influenced proposed layout</th><th>Design evolution</th><th>Relevant Design Principle</th></tr>
<tr>
<td>Non-statutory consultation layout</td>
<td>The Site (excluding Cable Route Corridor) covered an area of 856.68 ha as set out below:
<table>
<tr><td>Lime Down A</td><td>94.28 ha</td></tr>
<tr><td>Lime Down B</td><td>113.74 ha</td></tr>
<tr><td>Lime Down C</td><td>272.81 ha</td></tr>
<tr><td>Lime Down D</td><td>212.47 ha</td></tr>
<tr><td>Lime Down E</td><td>145.01 ha</td></tr>
<tr><td>Land at Melksham Substation</td><td>18.37 ha</td></tr>
<tr><td>Total</td><td>856.68 ha</td></tr>
</table></td>
<td>The non-statutory consultation layout was finalised in the early stages of design development prior to consultation with external stakeholders.</td>
<td>The proposed red line boundary was drawn to include any land that could potentially be within the Site. The intention was that the area would be refined following surveys and the outcomes of environmental assessment and non-statutory and statutory consultation. The following embedded mitigation measures were considered from the outset to protect the landscape fabric of the potential Site:
<table>
<tr><th>Receptor</th><th>Buffer between receptor and infrastructure</th></tr>
<tr><td>All hedgerows and woodland</td><td>15 m</td></tr>
<tr><td>A ditch or watercourse of any kind</td><td>8 m</td></tr>
<tr><td>Signs of Otter or abundant evidence of Water Vole in the ditch or Watercourse</td><td>10 m</td></tr>
<tr><td>Outlier badger setts</td><td>10 m</td></tr>
<tr><td>Individual Trees and groups of trees (unless Arb survey indicates greater RPA)</td><td>10 m</td></tr>
<tr><td>Ancient Woodland</td><td>15 m</td></tr>
<tr><td>Some minor watercourses (depending on Ecological Value)</td><td>15 m</td></tr>
<tr><td>Ponds (with no Great Crested Newts)</td><td>10 m</td></tr>
<tr><td>Major watercourses</td><td>30 m</td></tr>
<tr><td>Main badger setts</td><td>30 m</td></tr>
<tr><td>Ponds containing Great Crested Newts</td><td>50 m</td></tr>
<tr><td>Bat roosts</td><td>Case by Case</td></tr>
<tr><td>Schedule 1 bird nests</td><td>Case by Case</td></tr>
<tr><td>Curtilage of Residential Properties</td><td>50 m</td></tr>
<tr><td>PRoW</td><td>15 m</td></tr>
<tr><td>Internal Drainage Board (IDB) drain</td><td>9 m</td></tr>
<tr><td>Services</td><td>6 m minimum</td></tr>
<tr><td>Red Line Boundary</td><td>5 m</td></tr>
<tr><td>Internal offset from fence to Solar PV Panels</td><td>4 m minimum</td></tr>
</table></td>
<td>• The design of the Scheme will be ‘Landscape Led’ and give due weight to the intrinsic character and beauty of the surrounding countryside.
• Adherence to the mitigation hierarchy to reduce impacts and control any adverse effects on the environment throughout the lifecycle of the Scheme from construction through to operation and maintenance and decommissioning.
• The Scheme will protect the water environment by adhering to good pollution control practice and be resilient from flooding both now and in the future and not increase the risk of flooding elsewhere.
• The Scheme will seek to minimise the effects of the Scheme on PRoW by incorporating measures to maintain, and where practicable, explore opportunities to improve the local footpath network.</td>
</tr>
<tr>
<td>EIA Scoping layout (July 2024)</td>
<td>The Site (excluding Cable Route Corridor) increased to 901.61 ha as set out below:</td>
<td>The EIA scoping layout was finalised in the early stages of design development prior to consultation with external stakeholders.</td>
<td>The proposed red line boundary was drawn to include any land that could potentially be within the Site. The intention was that the area would be refined following surveys and the outcomes of environmental assessment and non-statutory and statutory consultation.</td>
<td>• The design of the Scheme will be ‘Landscape Led’ and give due weight to the intrinsic character and beauty of the surrounding countryside.</td>
</tr>
</table>

<table>
<tr><th>Stage</th><th>Proposed layout</th><th>Consultation which influenced proposed layout</th><th>Design evolution</th><th>Relevant Design Principle</th></tr>
<tr><td></td><td><table><tr><td>Lime Down A</td><td>94.28 ha</td></tr><tr><td>Lime Down B</td><td>113.74 ha</td></tr><tr><td>Lime Down C</td><td>317.74 ha</td></tr><tr><td>Lime Down D</td><td>212.47 ha</td></tr><tr><td>Lime Down E</td><td>145.01 ha</td></tr><tr><td>Land at Melksham Substation</td><td>18.37 ha</td></tr><tr><td>Total</td><td>901.61 ha</td></tr></table></td><td>Responses to the non-statutory consultation were under review.</td><td>An additional 44 ha was identified and added to Lime Down C following non-statutory consultation. The additional land presents the opportunity to move the proposed solar infrastructure away from sensitive areas and receptors such as the Cotswolds National Landscape (CNL) and nearby heritage assets such as Fosse Way.</td><td>• Adherence to the mitigation hierarchy to reduce impacts and control any adverse effects on the environment throughout the lifecycle of the Scheme from construction through to operation and maintenance and decommissioning.</td></tr>
<tr><td>PEIR Layout (December 2024)</td><td>The Site (excluding Cable Route Corridor) reduced to 878 ha as set out below:<table><tr><td>Lime Down A</td><td>94 ha</td></tr><tr><td>Lime Down B</td><td>114 ha</td></tr><tr><td>Lime Down C</td><td>318 ha</td></tr><tr><td>Lime Down D</td><td>213 ha</td></tr><tr><td>Lime Down E</td><td>139 ha</td></tr><tr><td>Total</td><td>878 ha</td></tr></table></td><td>Initial consultation was undertaken with Officers from the Cotswold National Landscape Board and Landscape Officer from Wiltshire Council. At this stage, the Applicant awaited detailed feedback from Wiltshire Council following statutory consultation.
Feedback from non-statutory consultation and the SoS's Scoping Opinion also influenced the proposed layout at PEIR stage. This included discussions regarding conservation and enhancement of the CNL and impacts on its setting. Consultation feedback is summarised in ES Volume 1, Chapter 8: Landscape and Visual [EN010168/APP/6.1] and the Consultation Report [EN010168/APP/5.1].
Identification of Landscape and Visual Constraints and Opportunities through desk top studies and fieldwork and the LVIA process influenced the design evolution, including:
1. Landscape and visual sensitivities of the land at Melksham for the BESS Area and substations.
2. Extent of buffering required to protect the Cotswold National Landscape and its setting.
3. Sensitive landscape receptors such as the Fosse Way, publicised</td><td>Taking account of non-statutory consultation feedback, the SoS's Scoping Opinion and further consideration of environmental constraints and opportunities, the boundary and layout of the Solar PV Sites have been further refined, in particular:
Relocation of BESS Area and the onsite substation to Lime Down D, see Section 4.7 for further explanation.
Removal of Solar PV Panels in part of field A1, C1, part of C6, C8, part of C9 and most of C10 to protect the setting of the Cotswold National Landscape.
Removal of Solar PV Panels along the Fosse Way and sensitive PRoW.
Removal of Solar PV Panels from parcels which are highly visible or have high intervisibility with the landscape eg: B5, C1, C6, E8.
Solar PV Panels removed from parcels with identified flood risk and archaeological constraints provide opportunities for landscape and ecological enhancement.
Refinement of the cable corridor. See Section 4.6 for further explanation.
Specific measures incorporated include:
1. Reinforcement of native tree and hedgerow planting along roadsides.
2. Reinforcement of hedgerows along bridleways and the Fosse Way.</td><td>• The design of the Scheme will be 'Landscape Led' and give due weight to the intrinsic character and beauty of the surrounding countryside.
• Adherence to the mitigation hierarchy to reduce impacts and control any adverse effects on the environment throughout the lifecycle of the Scheme from construction through to operation and maintenance and decommissioning.
• The Scheme will deliver a minimum 10% net gain for biodiversity through strategic habitat creation and enhancement measures.
• The Scheme will protect the water environment by adhering to good pollution control practice and be resilient from flooding both now and in the future and not increase the risk of flooding elsewhere.
• The design of the Scheme will be sensitive to above and below ground heritage assets and their setting, by locating infrastructure at a suitable distance and through appropriate landscape screening.
• The Scheme will be sensitive to existing land uses where practicable and maximise opportunities to strengthen green and blue infrastructure.
• The Scheme will seek to minimise the effects of the development on PRoW by incorporating measures to maintain, and where practicable, explore opportunities to improve the local footpath network.</td></tr>
</table>

<table>
<tr><th>Stage</th><th>Proposed layout</th><th>Consultation which influenced proposed layout</th><th>Design evolution</th><th>Relevant Design Principle</th></tr>
<tr><td></td><td></td><td>long-distance footpaths and PRoW.
4. Analysis of topography in relation to visibility and identification of areas sensitive to landscape and visual change.
5. Multidisciplinary constraints including ecology, heritage, noise, transport, water and flood risk integrated into the layout.</td><td>3. Provision of additional native tree and ground cover planting alongside the existing water courses to improve ecological corridors and connections to surrounding landscape.
4. Improvement of tree line connections between existing woodland and/or the creation of new woodlands with connectivity to existing woodlands.

Creation of habitat connections between existing ponds where practicable.
Positive enhancement within those areas adjacent to the Cotswold National Landscape.
Retention of selected fields in agriculture use or used for ecological mitigation, such as ground nesting bird mitigation, to provide greater ecological value.
Provision of new hedgerows to protect visual amenity and improve landscape structure.
Enhancement of existing field margins with additional native tree planting to provide reinforcement of the existing landscape framework.
Connection of isolated trees to green infrastructure.
Maintenance of views to and from churches.
Removal of land at Melksham Substation previously identified as a potential area for the BESS is discussed further in Section 4.7 below).</td><td></td></tr>
<tr><td>DCO Application submission stage (September 2025)</td><td>The Site (excluding Cable Route Corridor) has reduced to 749.3 ha as set out below:
<table><tr><td>Lime Down A</td><td>94.3 ha</td></tr><tr><td>Lime Down B</td><td>70 ha</td></tr><tr><td>Lime Down C</td><td>241 ha</td></tr><tr><td>Lime Down D</td><td>212.5 ha</td></tr><tr><td>Lime Down E</td><td>131.3 ha</td></tr><tr><td>Total</td><td>749.3 ha</td></tr></table>The Cable Route Search Corridor presented at PEIR has been reduced to the Cable Route Corridor, covering an area of 463.2 ha.</td><td>Further discussions with Officers from the Cotswold National Landscape Board and Wiltshire Council regarding the CNL and protection of its setting. This included discussions regarding views from within the CNL and towards it from outside the CNL and a request from the Cotswolds National Landscape Board to remove certain fields closest to the CNL.

Other feedback from statutory consultation.

Consultation feedback is summarised in ES Volume 1, Chapter 8: Landscape and Visual [EN010168/APP/6.1] and the Consultation Report [EN010168/APP/5.1].

Further refinement of the Site to remove land not required for the Scheme (particularly in the Cable Route Corridor), and to include further small sections of land required where highways improvements are required to accommodate Abnormal Indivisible Loads</td><td>Taking account of statutory consultation feedback and further discussions with stakeholders, the infrastructure layout was refined further, including the following:

Removal of Solar PV Panels from Lime Down A (fields A11 and A12) to protect the CNL and its setting. Removal of Solar PV Panels at the tip of field A4 to increase the buffer with a residential property. Fields retained within the Order Limits for landscape/habitat enhancement opportunities.

Increase in area in Lime Down A for 132kV substation to allow flexibility in siting.

Removal of Solar PV Panels from Lime Down B (field numbers B2, B3 and B4) and reduction in Order Limits across those fields and field B5. Panels removed following further consideration of views to the nearby Fosse Way footpath. The construction compound has been moved to B1 as a result of the above changes.

Removal of field numbers C2, C3, C4 (previously part of Lime Down C) from the Order Limits to protect the CNL and its setting.

Removal of Solar PV Panels from Lime Down C field C6 to protect the CNL and its setting, and to address heritage considerations. Field retained in Order Limits for mitigation and enhancement opportunities.</td><td>• The design of the Scheme will be ‘Landscape Led’ and give due weight to the intrinsic character and beauty of the surrounding countryside.
• Adherence to the mitigation hierarchy to reduce impacts and control any adverse effects on the environment throughout the lifecycle of the Scheme from construction through to operation and maintenance and decommissioning.
• The Scheme will deliver a minimum 10% net gain for biodiversity through strategic habitat creation and enhancement measures.
• The design of the Scheme will be sensitive to above and below ground heritage assets and their setting, by locating infrastructure at a suitable distance and through appropriate landscape screening.
• The Scheme will be sensitive to existing land uses where practicable and maximise opportunities to strengthen green and blue infrastructure. The Scheme will seek to minimise the effects of the development on PRoW by incorporating measures to maintain, and where practicable, explore opportunities to improve the local footpath network.</td></tr>
</table>

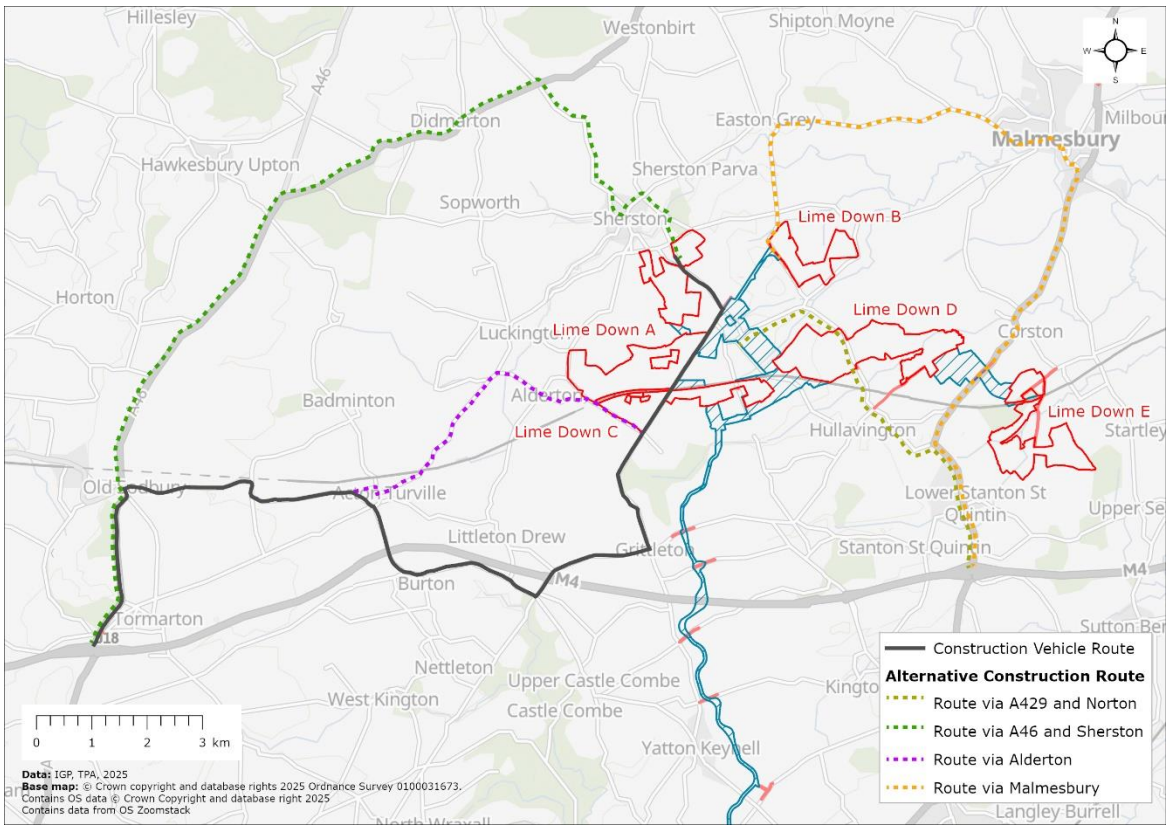
Stage	Proposed layout	Consultation which influenced proposed layout	Design evolution	Relevant Design Principle
		on construction routes (Highways Improvement Areas).	Removal of Solar PV Panels from section of Lime Down C field C15 close to Pig Lane due to statutory consultation feedback identifying residential receptors (previously believed to be a grain store). Removal of panels from E7, E9 and E10 following further considerations on visibility, the gradient of the land and protection of existing vegetation. Other refinements to allow for environmental buffers, hedgerows etc as a result of further field work and consultation feedback. Further refinement of the Cable Route Search Corridor to create the Cable Route Corridor. See **Section 4.6** for further explanation. Inclusion of additional Highways Improvement Areas required to accommodate Abnormal Indivisible Loads on construction routes (Highways Improvement Areas). These were the subject of targeted consultation between 3 June 2025 and 11 July 2025.	

4.5 Alternative Construction Routes for Solar PV Sites

Construction routes to avoid the CNL

4.5.1 Various construction routes for construction traffic have been considered including options to connect Lime Down A, Lime Down B and Lime Down C to the M4 as set out on **Plate 4-3** below.

Plate 4-3: Alternative Construction Routes to avoid the CNL



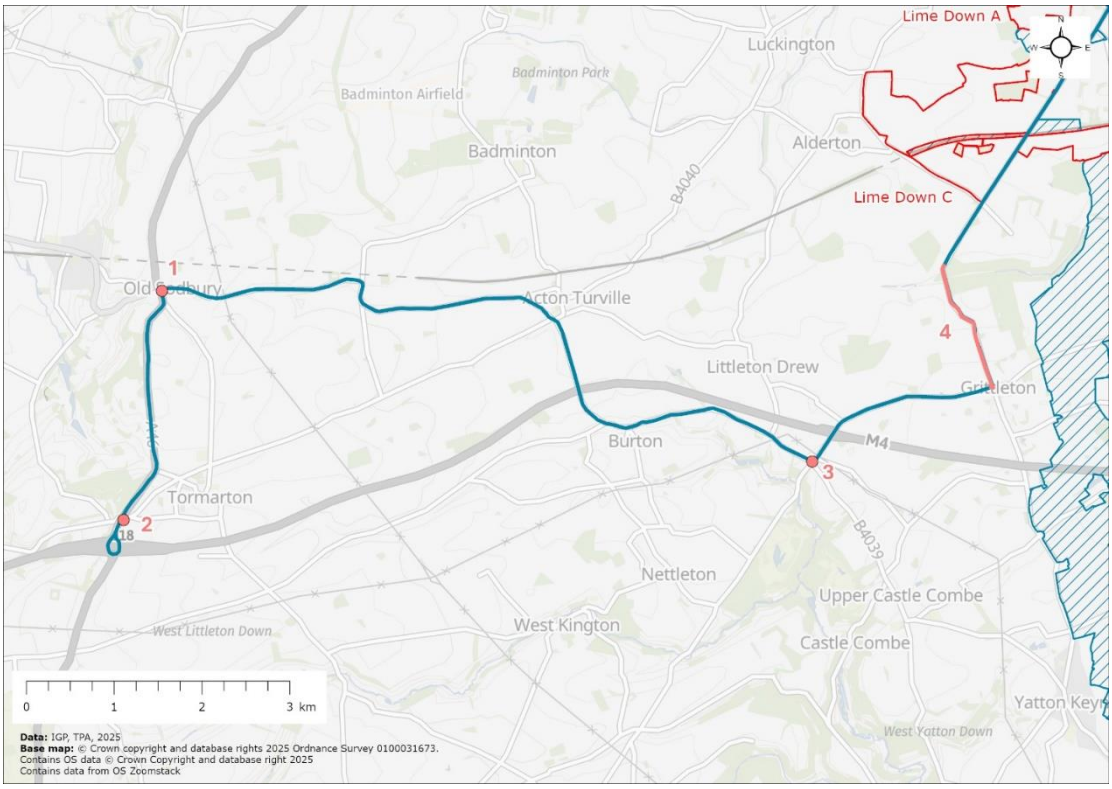
4.5.2 The proposed construction route (shown in black on **Plate 4-3**: Alternative Construction Routes to avoid the CNL) begins at Lime Down A, south of Sherston. It follows the Fosse Way south to Grittleton, then turns west along the B4039 to Burton and Acton Turville. It then follows the B4040 towards Old Sodbury and joins Bath Road, travelling south to junction 18 of the M4. The proposed construction route passes through the CNL.

4.5.3 Four Highway Improvement Areas are proposed in the CNL, where works are required to the current roads and junctions to facilitate construction traffic (shown on **Plate 4-4** below). These are:

- Junction works to the east of Old Sodbury at the junction between the B4040 and the A46. The works involve the temporary removal of street furniture and vegetation to allow abnormal load vehicles to turn at the junction;

- Junction works north of junction 18 of the M4 (at the junction between Acton Turville Road and the A46) The works involve the temporary removal of street furniture and vegetation to allow abnormal load vehicles to turn at the junction;
- Junction works in The Gibb at the junction between The Fossway and Gib Hill (B4039). The works involve the temporary removal of street furniture and vegetation to allow abnormal load vehicles to turn at the junction; and
- Improvements to a section of narrow road near Grittleton in order to accommodate construction traffic, being up to four or five passing places, a maximum of 20 metres each in length, minor drainage improvements, and minor (1-1.5m) edge of carriageway improvement where the existing road suffers from pothole damage.

Plate 4-4: Highway Improvement Areas



4.5.4 The Applicant has considered the alternative construction routes shown on **Plate 4-3** to avoid the highway improvement works within the CNL. These have been discounted for the following reasons:

- The route via Alderton (shown in purple on **Plate 4-3**) has been discounted on the basis that it is narrow in places and not suitable for construction traffic. Further, this route still passes through the CNL, so offers no material benefits over the proposed route.

- The route via the A46 and Sherston (shown in dark green on **Plate 4-3**) is unsuitable for HGVs as it utilises the road through Sherston village. It is also still within the CNL. Therefore, it offers no material benefits over the proposed route.
- The route via the A429 and Norton (shown in light green on **Plate 4-3)** avoids the CNL but is very narrow and walled in places which would make road widening unsuitable. In its current state, the road could not support HGVs and therefore this route is not a viable option.
- The route travelling north through Malmesbury (shown in orange on **Plate 4-3**) avoids the CNL but is unsuitable because it would require HGVs to be routed through Malmesbury town centre. The town centre, which contains narrow streets bordered by houses and a higher incidence of on street parking, has a 7.5 tonne weight limit and therefore would not be suitable for construction traffic. It has therefore been discounted as it is considered materially worse than the proposed route.

4.5.5 On that basis, the proposed construction route through the CNL is considered the least constrained in terms of both meeting the needs of the Scheme and minimising environmental effects and is preferred for the Scheme. The preferred route has been presented to Wiltshire Council, which it has generally confirmed to be acceptable during technical engagement discussions.

Construction Routes raised at Targeted Consultation

4.5.6 Comments on other construction routes (unrelated to the route through the CNL discussed above) were received in response to the Targeted Consultation on the Scheme which ran between 3 June and 11 July 2025 regarding changes to the development boundary to include highway improvement areas and other minor adjustments. In particular, the following comments were raised regarding Abnormal Indivisible Load (AIL) routes:

- The suitability of the ‘Lime Down AC substation alternative AIL route’ running through Yatton Keynell (shown in yellow in targeted consultation materials), with a comment highlighting the difficulty in turning through Yatton Keynell due to the number of buildings together with concerns around the presence of an assisted living home and the already busy nature of the road. To clarify, the ‘Lime Down AC substation alternative AIL route’ running through Yatton Keynell is an alternative to the main AIL route to Lime Down A and C and provides an alternative option if AIL deliveries are required to route straight over the Grittleton crossroads. This would include for the delivery of four transformers to the substations located in Lime Down A and Lime Down C. This route would not be used by general construction traffic. All AIL movements would be subject to an AIL licence and be safely escorted to site. All other alternative routes to this point to facilitate this movement are either significantly longer or comprise single lane roads which are not suited

to AIL movements and therefore do not offer practical alternatives to the proposed route; and

- The suitability of the 'Lime Down DE and cable route corridor AIL route' (shown in orange on consultation materials) running along the A429 and through the east of Malmesbury. The comments particularly highlighted concerns regarding works required to the A429 and whether the B4014 could be more suitable for HGV traffic. To clarify, the A429 provides the most direct and appropriate route to Lime Down D and Lime Down E in terms of the road's classification, width and geometry, which is designed to accommodate high volumes of traffic movements including HGVs. It is also considered to be more practical than routing via the B4014, which would require traffic to pass through the centre of Tetbury, Avening, Nailsworth and beyond. On that basis, the A429 is the preferred option.

4.6 Alternative Cable Route Corridors

4.6.1 This section sets out the design evolution of the Cable Route Corridor and the alternatives that have been considered from non-statutory consultation up to DCO Application submission.

Initial Optioneering for Non-Statutory Consultation and Scoping

4.6.2 In the initial stages, a desk top study was undertaken to identify potential grid connection routes to link the Solar PV Sites to the land at the Existing National Grid Melksham Substation. The desk top study adopted the following methodology when selecting the initial options:

- The route should be kept as straight and short as possible;
- Residential properties and gardens should be avoided and include a 25 m buffer where practicable;
- Direct significant impacts to internationally and nationally designated areas should be avoided;
- Direct significant impacts to ancient woodland should be avoided;
- Impacts on local wildlife sites should be minimised;
- The number of crossings of assets (e.g. utilities), transport infrastructure (road and rail), hedgerows and watercourses should be kept to a minimum; and
- The number and length of trenchless crossings should be kept to a minimum.

4.6.3 Three routes were initially identified, as follows:

- Route 1: South from the Solar PV Sites, south across the M4 near Sevington then east of Yatton Keynell, then running south across the A420, then west of Gastard and east of Corsham until it reaches the Existing National Grid Melksham Substation.
- Route 2: South from the Solar PV Sites towards Leigh Delamere, crossing the M4 west of Leigh Delamere, heading west and joining Route 1 south of the M4.
- Route 3: South from the Solar PV Sites, south across the M4 near Leigh Delamere then west of Kington St. Michael, across the A420 road, east of Gastard and West of Notton.

4.6.4 An additional route was then added to consider using the road verge along the A350, as follows:

- Route 4: A route that broadly follows the A350 south from M4 Junction 17.

4.6.5 The four routes are shown indicatively on **ES Volume 2, Figure 4-5: Indicative Cable Route Corridors [EN010168/APP/6.2].**

PEIR Stage

4.6.6 At PEIR stage, the Cable Route Search Corridor was further refined to a westerly corridor, as shown in **ES Volume 2, Figure 4-1: Development Site at Scoping and at PEIR [EN010168/APP/6.2].** To refine the Cable Route Search Corridor for the PEIR, a comparative analysis was undertaken using the following criteria:

- Length of route;
- Number of railway crossings;
- Number of motorway crossings;
- Number of Primary Road crossings;
- Number of A road crossings;
- Number of B road crossings;
- Number of minor road crossings;
- Number of PRoW crossings;
- Number of Statutory Main River crossings;
- Number of watercourse crossings;
- Number of field boundary crossings; and

- Length of route within land graded 1 and 2 by Natural England's Provisional Agricultural Land Classification.

4.6.7 This analysis identified that Route 4 (along the A350) could be a preferred option due to it avoiding several major constraints and having the smallest number of constraint crossings. However, following consultation with Wiltshire Council, Route 4 was discounted due to concerns of potential disruptions to road traffic associated with installation of the cable immediately adjacent to the A350 (the A350 being the most highly trafficked road managed by Wiltshire Council). As to co-ordinating the works with the planned duelling of the A350, Wiltshire Council also raised issues regarding co-ordination and timing, as an attempt to co-ordinate the works would likely affect the design and alignment of construction programmes for each scheme.

4.6.8 Of the remaining routes, Route 1 and Route 2 were preferred over Route 3 as they avoid a greater number of the identified constraints, are shorter and have a smaller number of constraint crossings.

4.6.9 To minimise potential environmental effects, facilitate construction, and enable construction access, the Cable Route Search Corridor at PEIR stage was adjusted at five locations to provide further flexibility in locating the Cable Route Corridor (refer to **ES Volume 2, Figure 4-1: Development Site at Scoping and at PEIR [EN010168/APP/6.2]**). These comprise:

- **Southeast of Lime Down D**: minor expansion to allow access to be taken from the A429.
- **North of the A4**: expansion to allow flexibility in routing Cable Route Corridor in an area with multiple constraints such as the A4, A350, built development of Chippenham, and Pudding Brook and tributaries.
- **Railway bridges east of Corsham**: expansion to potentially allow the Cable Route Corridor to use the three bridges which crosses the railway. This approach would not require the use of HDD and avoid associated environmental effects.
- **South of the Existing National Grid Melksham Substation**: expansion to potentially allow the Cable Route Corridor to be routed to the southern side of Existing National Grid Melksham Substation should a bay be made available for the Scheme in that location.

DCO Application Submission

4.6.10 For DCO Application submission, the Cable Route Search Corridor has been further refined to the Cable Route Corridor as shown on **ES Volume 2, Figure 4-2: Development Site at PEIR and DCO Application Submission [EN010168/APP/6.2]**. The alignment of the Cable Route corridor has been informed in part by statutory consultation feedback. This includes the provision

of wider areas for Avoidance Areas in line with feedback from the Environment Agency which required the used of Horizontal Directional Drilling (HDD) to reduce effects on sensitive ecological receptors; feedback from Historic England regarding impacts of HDD on a scheduled monument (which has been avoided); and minor adjustments to include the full extent of highways and avoid a site with an active planning application.

4.6.11 The Cable Route Corridor follows a westerly route most closely aligned with Route 1. The Cable Route Corridor is approximately 22km in length and the width is typically 50 m but may be up to 600 m in some locations where utilities are located or where there are road and rail crossings.

4.6.12 In addition to the criteria adopted to select the Cable Route Search Corridor presented at PEIR stage (listed above), the final alignment of the Cable Route Corridor has been chosen in consideration of the potential impacts on the following constraints:

- Landscape and Visual: PRoW, residential receptors;
- Ecology and Biodiversity: ponds, watercourses and vegetation;
- Arboriculture: woodland, individual tress and hedgerows;
- Hydrology, Flood Risk and Drainage: surface and fluvial flood risk areas, rivers;
- Cultural Heritage: conservation areas, listed buildings, scheduled monuments, records of undesignated assets;
- Transport and Access: potential access locations and disturbance to local roads;
- Noise and Vibration: residential receptors;
- Air Quality: residential receptors;
- Socio-Economics, Tourism and Recreation: PRoW, local business premises;
- Soils and Agriculture: minimising soil disturbance by selecting as direct a route as practicable;
- Human Health: residential receptors; and
- Ground Conditions: records of historic contamination.

4.6.13 Temporary construction compounds would be located along the Cable Route Corridor. These have been located to minimise interaction with the constraints identified in this report and to allow construction vehicles to turn off the public highway and park safely. These are presented in **ES Volume 2, Figure 3-2 Key Construction Phase Features [EN010168/APP/6.2].**

4.6.14 Where necessary to avoid significant environmental effects as a result of open cut trenching within the Cable Route Corridor, Avoidance Areas have been established. At each Avoidance Area the cables will be installed through HDD. The Avoidance Areas are presented in **ES Volume 2, Figure 3-2 Key Construction Phase Features [EN010168/APP/6.2].**

4.7 Alternative Sites for the BESS Area

4.7.1 The Scheme includes one BESS Area within Lime Down D (see **ES Volume 2, Figure 3-3: 400 kV Substation and BESS Layout [EN010168/APP/6.2]**. The following section sets out the alternatives considered.

EIA Scoping

4.7.2 At Scoping stage, the options for locating the BESS Area comprised either land at the Existing National Grid Melksham Substation, or within land at Lime Down D, as shown in Figure 3.4 accompanying the Scoping Report. The land within Lime Down D and the land at Melksham Substation were identified because:

- The land at Melksham Substation provided an option closer to the PoC at the Existing National Grid Melksham Substation which has benefits of minimising transmission losses, maximising storage efficiency, providing effective grid balancing and supporting a faster and more reliable reaction to power outages and disruptions; and
- The land at Lime Down D provided an option that was in close proximity to the solar PV sites and the onsite substation. This too has the same benefits in terms of minimising transmission losses, maximising storage efficiency, providing effective grid balancing and supporting a faster and more reliable reaction to power outages and disruptions. Of the options for co-locating the BESS Area with the Solar PV Sites, the land at Lime Down D represented the option with the least overall effects because it is centrally located, well screened, is not close to many residential receptors and is in close proximity to built infrastructure being the existing railway line. Overall, the location of the BESS Area within Lime Down D had lower potential for significant effects.

PEIR Stage

4.7.3 At PEIR Stage, the location for the BESS Area was further refined to one or two sites within Lime Down D, as shown in Volume 2, Figure 3-1 of the PEIR. The land at the Existing National Grid Melksham Substation was discounted following feedback at non-statutory consultation and further analysis of potential environmental effects. In particular:

- The rising topography of the proposed site may lead to more likely significant environmental effects;

- Mitigation measures to screen the BESS Area would cause adverse effects on the intact character of the rural agricultural landscape which forms the setting of Whitley and would lead to a loss of views to the Roman Road and arable farmland that forms the hinterland to Whitley;
- There are numerous footpaths in the vicinity from which the BESS Area is visible. Due to the rising landform and the lack of vegetation along the southern edge of BESS Area, there is potential for the Scheme to be visible across the countryside to the south, especially from the adjacent northern edge of Whitley; and
- Discounting this proposed site for the BESS Area avoids impacts to nearby designated heritage assets that may have arisen from the BESS Area.

4.7.4 Whilst it was anticipated that potential impacts on flood risk, ecology and biodiversity arising from the BESS Area installation could be mitigated, the removal of the BESS Area from this location removes these impacts for that site.

DCO Application Submission

4.7.5 For DCO Application submission, the location of the BESS has been refined further to field D1 within Lime Down D, as shown on **ES Volume 2, Figure 3-1: Indicative Site Layout Plan [EN010168/APP/6.2].**

4.8 Alternative Construction Compounds

PEIR Stage

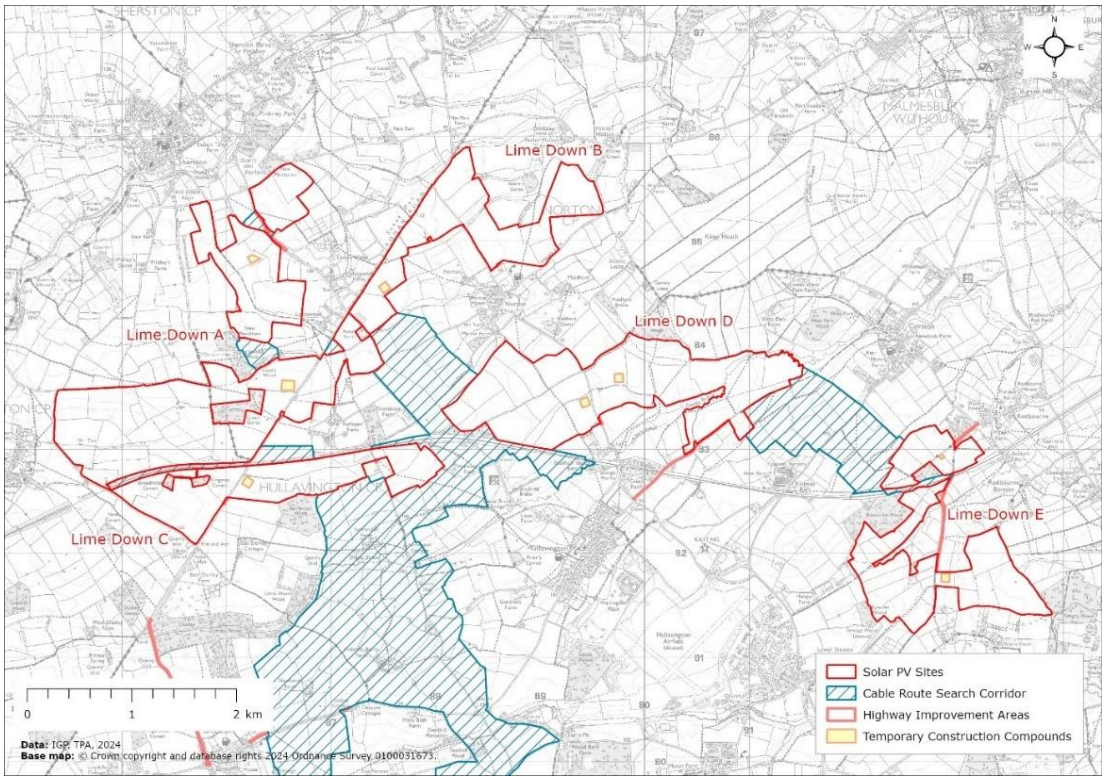
4.8.1 At PEIR stage, options were explored for the siting of temporary construction compounds to be used during the construction phase for the Solar PV Sites. A desk-based site selection was carried out to identify suitable locations based on the following parameters:

- It is assumed the compounds will be approximately 100 m x 100 m in area;
- At least one compound will be required within each Solar PV Site;
- The compound should be located close to the proposed access to the Solar PV Sites to limit the construction of temporary access tracks;
- The compounds should not be within 250 m of residential receptors;
- The proposed compound areas should not be at risk of flooding from rivers or surface water;
- The compound areas should not be located in areas of archaeological interest identified through geophysical surveys; and

- The proposed compound area should not be within the buffers defined for the development of the Scheme Layout defined set out within Table 4-1.

4.8.2 **Plate 4-5** below shows the locations (in yellow) that were identified for further consideration following the desk-top assessment process.

Plate 4-5: Temporary Construction Compound Potential Locations at PEIR Stage



4.8.3 Following the identification of initial compound locations, these locations were refined to, where practicable, avoid or reduce potential environmental effects. This included the following refinements and changes:

- Locations were refined to avoid local visual impacts and disturbance;
- Locations were refined to increase distance to residential receptors;
- Locations were refined to limit the construction of temporary access tracks;
- An existing farm storage area in Lime Down E was identified for use as a compound and therefore this was chosen as an appropriate location given its existing use;
- The location of compounds in the context of all the Solar PV Sites were considered to minimise movements of construction materials within the Solar PV Sites and across local roads; and

- The compound within Field C22 was enlarged to 120 m by 120 m to avoid the need for a further compound within Lime Down C.

4.8.4 The compound locations were provided in Volume 2, Figure 3-2 accompanying the PEIR.

DCO Application Submission

4.8.5 The proposed temporary construction compounds at DCO Application submission are shown on **ES Volume 2, Figure 3-1: Indicative Site Layout Plan [EN010168/APP/6.2]** and **Figure 3-2: Key Construction Phase Features [EN010168/APP/6.2]**, including proposals for temporary construction compounds in the Cable Route Corridor**.** The proposed temporary construction compound in Lime Down B has been moved from field B2 to field B1 as a result of the Order Limits being significantly reduced in field B1. Statutory consultation comments in relation to the siting of the construction compounds emphasised the requirement to set back the locations from trees, hedgerows and watercourses and therefore compound locations have been informed by these comments to allow opportunity to maximise set back distances from these features.

4.9 Alternative Solar Infrastructure Technologies

4.9.1 As set out in **ES Volume 1, Chapter 3: The Scheme [EN010168/APP/6.1]**, the parameters for the DCO will maintain a degree of design flexibility to allow the latest technology to be utilised at the time of construction provided that it falls within the scope of those assessed parameters.

4.9.2 Within the preliminary stage, a number of solar design technologies were considered against environmental constraints and the objectives of the Scheme, and preferred options have been selected where applicable.

4.9.3 **Table 4-2** below summarises the key design parameters adopted at PEIR and DCO Application submission stages. A full list of the design parameters can be found in **ES Volume 1, Chapter 3: The Scheme [EN010168/APP/6.1].**

Table 4-2: Technological Alternatives

Design Technology Element	Considerations
Solar PV technology	Solar PV Panels will be bifacial monocrystalline panels, comprising two layers of toughened, low reflectivity glass. Both east-west single axis tracking Solar PV Panels (Option A) and south facing fixed Solar PV Panels (Option B) are included within the parameters that have been assessed. East-west fixed Solar PV Panels were discounted by the Applicant early on in the process as not being suitable for the Scheme (because of the lower energy generation yield).

Solar PV Mounting Structures	Each Solar PV Panel would be mounted onto a metal rack fixed to the ground. The most common fixing method is the use of driven piles which avoid the need for foundations and avoid disturbance to the surrounding land surface (soils). The Scheme will use driven piles, which will be driven to a depth of 1.5 m to 4 m (depending on ground conditions), other than in areas where archaeological protection is required, where concrete feet or other non-ground penetrative techniques will be used to secure the Solar PV Mounting Structures.
Conversion Units	The exact size and arrangement of transformers, switchgear and inverters would be determined at a detailed design stage and a suitable area has been left for the flexibility of options. The maximum parameters (height, size and noise etc.) of the equipment will be used for the assessment. The options are discussed in **ES Volume 1, Chapter 3: The Scheme [EN010168/APP/6.1].**
Solar PV Panel height	The maximum height of the Solar PV Panels is dependent on the panel type utilised. For Option A (east-west single tracking Solar PV Panels), the Solar PV Panels would have a maximum height of 4.5 m AGL at maximum tilt (+/- 60 degrees). The maximum height when Solar PV Panels are horizontal would be 2.5 m AGL. For Option B (south facing fixed Solar PV Panels), the Solar PV Panels would have a maximum height of 3.5 m AGL.
Cabling technology	Underground cables will be used to connect the Solar PV Sites and to connect the Scheme to Melksham substation. Connecting into existing overhead cables was discounted due to the current lines being constrained by existing connections. Installation of new overhead cables were discounted at an early stage to avoid likely significant landscape and visual effects associated with overhead cables.

4.10 Alternative Generation Technologies

4.10.1 The Applicant is a solar PV and energy storage developer. On that basis, alternative types of low carbon electricity generation have not been considered by the Applicant in the development of the Scheme. However, it is considered that the Site would not be suitable for other forms of renewable electricity generation at the same scale as the Scheme and the relevant technologies are considered below. Further details on various alternative generation technologies, and the role they play in the UK's wider energy portfolio, is contained within the **Statement of Need [EN010168/APP/7.1].**

4.10.2 Due to the Scheme's location away from the coast, tidal power and offshore wind are deemed unviable. Further, there are no local opportunities to source hydroelectric power from rivers that would provide a generating capacity equivalent to the electricity generated by the Scheme, and therefore hydroelectric power was not considered.

4.10.3 Nuclear power is not considered a suitable alternative for the Scheme given the high cost of electricity and the length of time it would take to plan and build a nuclear plant. For example, as referred to in the **Statement of Need [EN010168/APP/7.1],** the development of Hinkley Point C started in the late 2000s and is scheduled for completion between 2029 and 2031. In contrast, the Scheme, if consented, is expected to be built and operational by 2029.

4.10.4 Onshore wind is not considered to be a suitable alternative because the flat topography of the Site would likely give rise to greater adverse visual effects due to the height of the wind turbines, and the proximity to residential dwellings may give rise to adverse effects associated with shadow flicker and turbine noise. It is also considered that onshore wind would have a greater impact on the setting of the CNL than the Solar PV Panels proposed for the Scheme.

4.10.5 Whilst there may be opportunities to "co-locate" different renewable generation technologies, the Scheme instead includes the BESS, which can store electricity at times of lower demand and therefore enhances grid resilience and stability. The BESS allows for energy to be released 'on demand' at time of greater need, in a way that cannot be provided by wind turbines at this time. Therefore, it is considered that Solar PV Panels, co-located with the BESS, is the preferred energy generating solution for the Site.

4.11 Summary

4.11.1 In summary, the Applicant has considered alternatives in line with the requirements of the EIA Regulations and the specific provisions of NPS EN-1, NPS EN3 and NPS EN-5. When considering alternatives, the Applicant has been guided by NPS EN-1 Paragraph 4.3.22, 4.2.23 and 4.3.27 and weight likely to be given to alternatives in the decision-making process.

4.11.2 As set out above, various alternatives have been considered as part of the design process, and preferred options have been identified with consideration of the Design Principles for the Scheme, outcomes of environmental assessment, the Scheme's functionality, and feedback from stakeholders received to date.

4.12 References

Ref 4-1 Department for Energy Security and Net Zero. *Planning for new energy infrastructure: 2025 revisions to National Policy Statements*. Available at: https://www.gov.uk/government/consultations/planning-for-new-energy-infrastructure-2025-revisions-to-national-policy-statements Last accessed 01/05/2025. Last accessed 15/09/2025

Ref 4-2 Department for Energy Security and Net Zero (2023) Overarching National Policy Statement for energy (EN-1). Available at: https://assets.publishing.service.gov.uk/media/65bbfbdc709fe1000f637052/overarching-nps-for-energy-en1.pdf. Last accessed 15/09/2025

Ref 4-3 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. Available at: The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (legislation.gov.uk). Last accessed 15/09/2025

Ref 4-4 The Conservation of Habitats and Species Regulations 2017. Available at https://www.legislation.gov.uk/uksi/2017/1012/contents. Last accessed 15/09/2025

Ref 4-5 The Levelling-up and Regeneration Act 2023. Available at: Levelling-up and Regeneration Act 2023. Last accessed 15/09/2025

Ref 4-6 The Countryside and Rights of Way Act 2000. Available at: Countryside and Rights of Way Act 2000. Last accessed 15/09/2025

Ref 4-7 Department for Energy Security and Net Zero (November 2023): National Policy Statement for Renewable Energy Infrastructure EN-3. Available at National Policy Statement for renewable energy infrastructure (EN-3) - GOV.UK (www.gov.uk). Last accessed 15/09/2025

Ref 4-8 Department for Energy Security and Net Zero (November 2023): National Policy Statement for Electricity Networks Infrastructure (EN-5). Available at National Policy Statement for electricity networks infrastructure (EN-5) - GOV.UK. Last accessed 15/09/2025

Ref 4-9 The Planning Act 2008. Available at Planning Act 2008 Last accessed 15/09/2025

Ref 4-10 Ministry of Housing, Communities and Local Government (2024) National Planning Policy Framework (NPPF). Available at: https://www.gov.uk/government/publications/national-planning-policy-framework--2 Last accessed 15/09/2025

Ref 4-11 Department for Environmental, Food and Rural Affairs (December 2024), *Guidance for relevant authorities on seeking to further the purposes of Protected Landscapes.* Available at Guidance for relevant authorities on seeking to further the purposes of Protected Landscapes - GOV.UK. Last accessed 15/09/2025