

# **Lime Down Solar Park**

**Planning Inspectorate Reference:  
EN010168**

**Wiltshire Council Written Representation**

**May 2026**

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## **Use of Artificial Intelligence**

In accordance with the procedural decision made by the Examining Authority about the use of artificial intelligence in submissions, as set out in Annex F of the Rule 6 Letter [\[PD-006\]](#), the council can confirm that Microsoft Co-Pilot has been used to support the development of the initial basis of the Executive Summary, from the content of Sections 3 to 14 as contained within this submission. The output has been reviewed and amended by appropriately knowledgeable or qualified people before inclusion. This means that all text has been validated for its content and accuracy by the council before submission to the Examining Authority.

# 1. Acronyms and Abbreviations

| Acronym / Abbreviation | Meaning / Description                                                 |
|------------------------|-----------------------------------------------------------------------|
| AONB                   | Area of Outstanding Natural Beauty                                    |
| BESS                   | Battery Energy Storage System                                         |
| BNG                    | Biodiversity Net Gain                                                 |
| CC                     | Climate Change                                                        |
| CEE                    | University of Exeter Centre for Energy and the Environment            |
| CNL                    | Cotswolds National Landscape                                          |
| CPBT                   | Carbon Payback Time                                                   |
| CRC                    | Cable Route Corridor                                                  |
| CSWMP                  | Construction Surface Water Management Plan                            |
| DCO                    | Development Consent Order                                             |
| DLL                    | District-Level Licensing                                              |
| EN-1                   | Overarching National Policy Statement for Energy                      |
| EN-3                   | National Policy Statement for Renewable Energy Infrastructure         |
| EPMS                   | Ecological Protection and Mitigation Strategy                         |
| EPS                    | European Protected Species                                            |
| ES                     | Environmental Statement                                               |
| ExA                    | Examining Authority                                                   |
| FLL                    | Functionally Linked Land                                              |
| FRA                    | Flood Risk Assessment                                                 |
| HGV                    | Heavy Goods Vehicle                                                   |
| HRA                    | Habitats Regulations Assessment                                       |
| GCN                    | Great Crested Newt                                                    |
| GHG                    | Greenhouse Gas                                                        |
| GLVIA3                 | Guidelines for Landscape and Visual Impact Assessment (third edition) |
| GWh                    | Gigawatt-hour                                                         |
| IEMA                   | Institute of Environmental Management and Assessment                  |
| LEMP                   | Landscape and Ecological Management Plan                              |
| LLFA                   | Lead Local Flood Authority                                            |
| LOAEL                  | Lowest Observable Adverse Effect Level                                |
| LPA                    | Local Planning Authority                                              |
| LVIA                   | Landscape and Visual Impact Assessment                                |
| MMU                    | Minimum Mapping Units                                                 |
| MWh                    | Megawatt-hour                                                         |
| NESO                   | National Energy System Operator                                       |
| NFNP                   | New Forest National Park                                              |
| NL                     | National Landscape                                                    |
| NSIP                   | Nationally Significant Infrastructure Project                         |
| OCTMP                  | Outline Construction Traffic Management Plan                          |
| PRoW                   | Public Rights of Way                                                  |
| PV                     | Photo-voltaic                                                         |
| RIES                   | Report on the Implications for European Sites                         |

| Acronym / Abbreviation | Meaning / Description                       |
|------------------------|---------------------------------------------|
| SAC                    | Special Area of Conservation                |
| SOAEL                  | Significant Observable Adverse Effect Level |
| SuDS                   | Sustainable Urban Drainage Systems          |
| WCAS                   | Wiltshire Council Archaeology Service       |
| WHS                    | World Heritage Site                         |

## 2. Executive Summary

- 2.1. As a Unitary Authority, Wiltshire Council provides a single tier of local government functions. It is the Highways Authority for all roads and public rights of way, which are not trunk roads. It is also the responsible authority for the implementation of a broad range of Government Regulation related to public protection and is the Local Planning Authority (LPA) for the area. The Council has regulatory responsibility for managing impacts on Wiltshire's natural environment, heritage assets and landscape. As the Lead Local Flood Authority (LLFA), Wiltshire Council has a number of duties and powers to control and minimise flood risk. Furthermore, the Wiltshire Council Archaeology Service (WCAS) has a statutory duty to advise the Local Planning Authority on the impact of development proposals on archaeological remains in the county.
- 2.2. Wiltshire Council is the primary Host Authority for the proposed Lime Down Solar Park development (Planning Inspectorate Reference: EN010168).
- 2.3. Wiltshire Council's Written Representation provides additional detail and information on the areas of concern, as identified in the council's Relevant Representation [[RR-4934](#)]. It should therefore be read in conjunction with the council's Relevant Representation and Local Impact Report, which will also be submitted into Examination at Deadline 1.
- 2.4. Wiltshire Council confirms that national energy policy clearly supports the delivery of renewable energy, including solar generation. However, the council emphasises that this support is not unconditional and must be balanced against environmental protection, sound planning principles, and demonstrable evidence that impacts have been properly assessed and mitigated.
- 2.5. With regards to landscape, visual and tranquillity considerations, Core Policy 51 of the Wiltshire Core Strategy requires development to protect and, where possible, enhance landscape character. Wiltshire Council concludes that the scheme is fundamentally not landscape-led. Instead, the Environmental Statement assesses the impacts of a predetermined site selection rather than demonstrating that landscape considerations informed the choice, scale, or configuration of development.
- 2.6. Two locations are used to illustrate these concerns in detail: the Fosse Way and the village of Norton. The proposal would introduce sporadic solar infrastructure on both sides of the Fosse Way for approximately five kilometres, including at points marking entry to and exit from the Cotswolds National

Landscape. The council considers this would industrialise a historic, tranquil route valued for recreation, landscape character and its role as an approach to the National Landscape.

- 2.7. Similarly, the village of Norton would be surrounded to the north, south and west by extensive solar arrays, cable corridors, and substantial battery energy storage infrastructure. The council considers that the scale and proximity of these elements would dominate the village's rural setting, fundamentally altering its landscape character and visual amenity.
- 2.8. Across the scheme, the council raises concern about the need for excessively tall mitigating hedgerows to screen panels, creating "tunnelling" effects along roads and Public Rights of Way, and about the lack of information on soil stockpiling and restoration. Tranquillity, identified as a special quality of the Cotswolds National Landscape, is considered inadequately assessed, with noise modelling failing to capture experiential and cumulative effects on residents and visitors within a high-sensitivity rural landscape.
- 2.9. With regards to ecological, biodiversity and hedgerow considerations, Wiltshire Council's Written Representation raises concern with the treatment of hedgerows within the Draft Development Consent Order [[APP-016](#)]. Schedule 12 of the draft DCO effectively lists all hedgerows within the Order Limits as potentially removable, allowing significant flexibility at later stages. The council considers this approach inconsistent with the Rochdale Envelope principles, undermining clarity, assessment transparency, and confidence that impacts have been fully assessed.
- 2.10. Although other documents within the application quantify likely hedgerow losses, these figures are not reflected within Schedule 12, nor are minimum or maximum extents of removal specified. This creates uncertainty and weakens enforceability. The council recommends that hedgerow removal should be tightly defined and controlled within the DCO to avoid unassessed impacts emerging post-consent.
- 2.11. Concerns also extend to the Habitats Regulations Assessment [[APP-275](#)] for the Bath and Bradford-on-Avon Bats Special Area of Conservation (SAC). The Council notes that baseline data are incomplete, with parts of the cable route corridor not having been subject to habitat survey and assumptions relied upon instead. Moreover, there has been no bat survey undertaken within the section of cable route corridor that coincides with the greater horseshoe bat consultation zone around the Box Mine component of the SAC. The council questions whether worst-case scenarios have genuinely been assessed, particularly in relation to cumulative hedgerow losses within the bat SAC consultation zone.
- 2.12. Furthermore, Wiltshire Council raises specific concerns in relation to ground-nesting birds, particularly skylark and yellow wagtail. The council disputes the suggestion that foraging habitat beneath solar panels can meaningfully compensate for the loss of breeding habitat and reiterates that

assessments should assume only poor-quality modified grassland beneath and between panels to remain precautionary.

- 2.13. For Great Crested Newts, while presence has been confirmed within the Solar PV sites, the licensing and mitigation strategy remains unclear. The council advises that the Examining Authority should seek clarification on whether appropriate licensing will be secured and how legal compliance will be ensured in relation to the Solar PV sites.
- 2.14. Although Biodiversity Net Gain is not yet mandatory for NSIPs, the Applicant has committed to achieving a minimum 10% gain. Wiltshire Council's review of the submitted BNG Metric [[PDA-008](#)] and BNG Assessment Report [[APP-273](#)] identifies multiple technical weaknesses: the absence of habitat reference numbers preventing verification, missing condition assessment data, the use of unusually large minimum mapping units, and inconsistencies in the treatment of irreplaceable habitats such as veteran trees. While some professional judgements appear reasonable, the council concludes that the evidence base is currently insufficiently robust or transparent.
- 2.15. From its role as Lead Local Flood Authority, Wiltshire Council cannot currently be satisfied that the scheme avoids increasing flood risk on-site or downstream. The core issue is the absence of quantitative, field-scale hydrological modelling capable of representing how solar arrays, access tracks, soil compaction and drainage infrastructure will interact across a very large and hydrologically connected area.
- 2.16. The council notes widespread local evidence of existing flooding problems, reinforced by community representations and expert observations, including during Storm Bert in November 2024. National Policy Statements (EN-1 and EN-3), Environment Agency standing advice, and precedent from other solar NSIPs all support the need for detailed modelling. Without this, the performance of proposed Sustainable Drainage Systems and exceedance routing cannot be verified.
- 2.17. Wiltshire Council therefore recommends that the Examining Authority require comprehensive hydrological modelling during the Examination or alternatively impose a DCO Requirement preventing commencement until such evidence has been prepared, approved, and independently verified.
- 2.18. In heritage terms, the council identifies potential harm to the setting of Grittleton House (Grade II\*) arising from construction compounds and cable routes (additional to other impacts identified previously), noting that this impact has not yet been fully assessed. Additional site visits and analysis are being pursued.
- 2.19. Furthermore, highways and transport impacts remain a substantial concern, particularly given the reliance on narrow rural roads during construction. The council considers damage to the local highway network highly likely and maintains that a formal agreement under Section 59 of the Highways Act or sufficient Protective Provisions should be secured to protect public assets.

- 2.20. The council also concludes that while county-wide economic effects may be limited, impacts on the local economy during construction and decommissioning would be significant.
- 2.21. The council commissioned an independent review from the University of Exeter Centre for Energy and the Environment to examine the Applicant's Climate Change chapter of the Environmental Statement [[APP-059](#)], and specifically the assessment of greenhouse gas (GHG) emissions. The independent report concludes that the Applicant's assessment likely underestimates the scheme's embodied and lifecycle carbon emissions and relies on unrealistic assumptions about future grid decarbonisation. Wiltshire Council acknowledges that large-scale solar generation has a role in supporting long-term decarbonisation, which comes with a 'cost' of greenhouse gas emissions. However, even when using the figures submitted by the Applicant, the scheme appears to have a much longer carbon payback time than similar projects which is a cause for concern, and potentially for further assessment. Furthermore, uncertainty remains regarding the carbon consequences of hedgerow loss, soil disturbance and land conversion, due to insufficient detail in the proposals.
- 2.22. The report also concludes that the significance of emissions impacts has been assessed too narrowly, using a comparison with the whole UK carbon budget for the power sector. It may be that a broader assessment, including consideration of impacts at multiple scales, including local carbon budget, sector-specific emissions and national policy would result in a different conclusion of the scheme's negative and positive impacts.
- 2.23. Public health considerations focus on mental health, community cohesion and the cumulative stress effects associated with prolonged construction, environmental change and perceived loss of rural identity.
- 2.24. Wiltshire Council's Written Representation also identifies proposed amendments to the draft DCO [[APP-016](#)] with regards to Requirements for Scheme Commencement, Phasing and commissioning, and Decommissioning and land restoration. The council's concerns have previously been identified within its Relevant Representation [[RR-4934](#)], however as a result of information portrayed by the Applicant at Issue Specific Hearing 1, additional refinement is considered necessary.
- 2.25. This Written Representation also identifies where further clarity is required with regards to land that the council owns or has an interest in. The Book of Reference [[APP-020](#)] and associated land plans should provide greater clarity as to the rights sought over each parcel of land, including their nature, extent and duration, and to ensure that only land which is demonstrably necessary and proportionate to the delivery of the proposed development is included within the Order land. Where the acquisition of rights over adopted highway land is proposed, the council considers that this should be limited to what is strictly required and, where appropriate, addressed through bespoke side agreements or protective provisions rather than through the compulsory acquisition powers of the DCO.

- 2.26. In conclusion, Wiltshire Council recognises the strategic importance of renewable energy generation but considers that the Lime Down Solar Park proposal is of a scale, configuration and location that would lead to substantial and inadequately mitigated harm. The council therefore does not support the scheme as submitted and considers that development consent should not be granted unless these issues can be and are comprehensively addressed through further evidence, scheme redesign and strengthened DCO Requirements.

### **3. Introduction and Context**

- 3.1. This document is Wiltshire Council's Written Representation in respect of the examination of the Development Consent Order (DCO) application to the Secretary of State for Energy Security and Net Zero by Lime Down Solar Park Limited under section 37 to the Planning Act 2008 (Planning Inspectorate Reference: EN010168).
- 3.2. As a Unitary Authority, Wiltshire Council provides a single tier of local government functions. It is the Highways Authority for all roads and public rights of way, which are not trunk roads. It is also the responsible authority for the implementation of a broad range of Government Regulation related to public protection and is the Local Planning Authority (LPA) for the area. The Council has regulatory responsibility for managing impacts on Wiltshire's natural environment, heritage assets and landscape. As the Lead Local Flood Authority (LLFA), Wiltshire Council has a number of duties and powers to control and minimise flood risk. Furthermore, the Wiltshire Council Archaeology Service (WCAS) has a statutory duty to advise the Local Planning Authority on the impact of development proposals on archaeological remains in the county.
- 3.3. As the primary Host Authority for the scheme, the council submitted a Relevant Representation [[RR-4934](#)] which set out its key areas of concern in relation to the Lime Down Solar Park proposal, including where there were outstanding questions that require answers during this process, and where there is a requirement for additional mitigation and compensation to be forthcoming in order to address or seek to address the council's concerns. The council's Relevant Representation also identified some additional or strengthened Requirements that are considered to be necessary.
- 3.4. Given the comprehensive nature of the council's Relevant Representation, this Written Representation does not repeat aspects raised within the Relevant Representation, instead the council has used this submission to provide additional detail and information, where appropriate, on those identified areas of concern. This Written Representation supplements rather than replaces the council's Relevant Representation.
- 3.5. This response is without prejudice to any further representations the council will make throughout the examination process, and it should be read in conjunction with the council's Relevant Representation [[RR-4934](#)] and its Local Impact Report, which will also be submitted into Examination at Deadline 1.

## **4. National and Local Policy Considerations**

- 4.1. Wiltshire Council has set out the National and Local Policy Context within its Relevant Representation and Local Impact Report.
- 4.2. However, since the council's Relevant Representation was submitted, on 27 February 2026, Wiltshire Council received a response from the Inspectors appointed by the Government to examine the Local Plan in relation to the proposed programme of work that had been submitted to them.
- 4.3. Having reviewed the council's proposed work programmes, the Inspectors set out two options for the council, to either (i) withdraw the Local Plan from examination or (ii) request that the Inspectors draft a final report (which would recommend non-adoption). Wiltshire Council are planning to take a report (recommending proceeding with one of these two options) to the scheduled Cabinet (6 May) and Council (19 May) meetings in May 2026.
- 4.4. The council remains firmly committed to ensuring that Wiltshire has a robust and up-to-date Local Plan in place as swiftly as possible, including its commitment to deliver a new Local Plan in line with Government expectations.
- 4.5. Following the elected member decision on how to proceed, the council will update the Examining Authority at the next available deadline opportunity.

## **5. Landscape and Visual Considerations**

- 5.1. Core Policy 51 Landscape is a key policy of the Wiltshire Core Strategy (2015) and remains extant. It should be considered a material consideration in the DCO application decision-making process. The policy requires that:

**Development should protect, conserve and where possible enhance landscape character and must not have a harmful impact upon landscape character, while any negative impacts must be mitigated as far as possible through sensitive design and landscape measures. Proposals should be informed by and sympathetic to the distinctive character areas identified in the relevant Landscape Character Assessment(s) and any other relevant assessments and studies.**

**In particular, proposals will need to demonstrate that the following aspects of landscape character have been conserved and where possible enhanced through sensitive design, landscape mitigation and enhancement measures (most relevant bullet points only):**

- i. **The locally distinctive pattern and species composition of natural features such as trees, hedgerows, woodland, field boundaries, watercourses and waterbodies.**

- ii. The locally distinctive character of settlements and their landscape settings.
- iv. Visually sensitive skylines, soils, geological and topographical features.
- vi. Important views and visual amenity.
- vii. Tranquillity and the need to protect against intrusion from light pollution, noise, and motion.
- viii. Landscape functions including places to live, work, relax and recreate.
- ix. Special qualities of Areas of Outstanding Natural Beauty (AONBs) and the New Forest National Park, where great weight will be afforded to conserving and enhancing landscapes and scenic beauty.

**Proposals for development within or affecting the Areas of Outstanding Natural Beauty (AONBs), New Forest National Park (NFNP) or Stonehenge and Avebury World Heritage Site (WHS) shall demonstrate that they have taken account of the objectives, policies and actions set out in the relevant Management Plans for these areas. Proposals for development outside of an AONB that is sufficiently prominent (in terms of its siting or scale) to have an impact on the area's special qualities (as set out in the relevant management plan), must also demonstrate that it would not adversely affect its setting.** (Wiltshire Council's Landscape Officer's emphasis)

- 5.2. Policy CP51 gives a useful outline of the requirements of the Environmental Statement (ES) Landscape and Visual Impact Assessment (LVIA) and those issues which will have to be addressed in that document. However, despite the Applicant's assertion throughout the ES, there is very little evidence that the setting of the Cotswolds National Landscape and the amenity of local residents, whilst being acknowledged, have been given due regard in the selection of the proposed development sites and the scale of the project as a whole. Thus, what has been provided by the Applicant is not landscape led and cannot be considered so, it is an assessment of a *fait accompli* in terms of the development sites selected. It is difficult to see how a project informed by a genuine 'landscape led' approach could reasonably conclude that development of the scale proposed was suitable to be introduced into an accepted high value landscape. Citing the South Downs National Park Adopted Design Guide 2022, the definition of a Landscape Led approach to design is:

*“Design which is strongly informed by understanding the essential character of the site and its context (the landscape), creates development which speaks of its location, responds to local character and fits well into its environment. It needs to conserve and enhance the natural beauty, wildlife and cultural heritage of the area and create sustainable and successful places for people.”*

Thus, a genuine landscape led scheme prioritises the existing natural, cultural and topographical features, using landscape character to guide design and location of development and infrastructure without disrupting or dominating the character of the receiving environment.

- 5.3. To illustrate the inherent failing of the project to be landscape led the Council has taken two examples: the Fosse Way route through the site and the landscape setting of the village of Norton, to demonstrate the shortcomings of the landscape and visual appraisal and mitigation measures considered in respect of the proposed development and how the development proposals, as far as they have been provided, pay no more than lip service to the character and visual amenity of the receiving landscape.

### The Fosse Way

- 5.4. The Fosse Way was a Roman Road linking Exeter with Lincoln and of approximately 370km in length. The section of the route through the Cotswolds is one of the most popular walking sections. Between west of Malmesbury and Bath, the route follows a linear north-east to south-west alignment. It is predominantly within the Cotswolds National Landscape (CNL), with a section between west of Foxley (north) and East Dunley (south), falling just outside the CNL boundary, but within the landscape setting of the National Landscape throughout. Across this area the route is defined by a mixture of minor roads and byways, running through an area of highly rural unspoilt countryside. It is extremely popular for recreation and an important wayfinding route to access and explore the CNL, but it is not a dedicated trail.
- 5.5. The proposal is to undertake sporadic solar development on both sides of the Fosse Way for the 5km distance between East Dunley and Foxley. The CNL's designated boundary crosses the Fosse Way at each end of this 5km length and denote entrance approaches and exit points to / from the CNL. Thus, the distinctive rural landscape of high value and high sensitivity of this section of the Fosse Way route and the setting of the CNL will be industrialised for a period of 60+ years creating a potentially irreversible change to the character and visual amenity of the landscape.
- 5.6. Key issues which have not been adequately addressed:
- Creation of 5 number major access points to construct Lime Down Solar Park areas A, B and C, taken off the Fosse Way as illustrated by 6.2 Environmental Statement Volume 2, Figure 13-11 Construction Access Locations: Solar PV Sites [\[APP-156\]](#), and use of 5 number access points taken off the Fosse Way for ongoing maintenance as illustrated by 6.2 Environmental Statement Volume 2, Figure 3-4-3.1 (Site C Sheet 1), Landscape and Ecology Mitigation Plan [\[APP-084\]](#), allowing uninterrupted views of solar development and infrastructure.

- Increased traffic flows along the Fosse Way during construction, operation and decommissioning, resulting in a loss of tranquillity and additional visual intrusion.
- Lack of consideration of the relationship of the Fosse Way within the receiving landscape of high value and sensitivity comprising the setting of, and approaches to and from the CNL, resulting in the industrialisation of a key part of the most popular part of the Fosse Way Route for recreation and travel between different areas of the CNL.
- Requirement to grow the relatively low existing field boundary hedges to at least 4.5m high to screen the solar panels, creating a tunnel-like effect along parts of the Fosse Way and screening the expansive rural views over the countryside towards the CNL.
- To the south-east of the Fosse Way panels located within Field C14 will be visible viewed over the low eastern roadside hedgerow (located outside DCO boundary limits) and over the railway cutting travelling south along the Fosse Way. These open views will remain for the life of development.
- There are no indicative details as to where the vast quantities of topsoil and subsoil will be stored or distributed for later use in land restoration. This could be on areas reserved for landscape and / or ecological mitigation and embedded mitigation, or close to high value features such as the Fosse Way.

5.7. As a result, Wiltshire Council recommends:

- The removal of all proposed solar development from the area between the Fosse Way and the CNL boundary, thus maintaining the high value rural character of the landscape and the relationship between the unspoilt landscapes of the CNL and that through which the Fosse Way passes.
- To the south-east of the Fosse Way there should be no solar infrastructure development close to the route (e.g. one field depth as a minimum). This will reduce the screening height requirement for the hedging lining the route and avoid creation of long visual tunnelling effects, whilst maintaining existing field boundary patterns.
- An accurate plan of vehicular movements affecting the Fosse Way route through the duration of the project will be required.
- Where long-term maintenance access is necessary from the Fosse Way, the planting of a secondary hedge inside the access points, although not ideal from a landscape character point of view, would restrict receptor views of the developed field parcels when passing the access points.
- The indicative locations, form/s and duration of topsoil and subsoil storage should be given more consideration by the Applicant at this

stage to demonstrate to the ExA that embedded mitigation measures, Biodiversity Net Gain (BNG) commitments, and other mitigation and enhancement measures being proposed are feasible and can still take place; that the proposed storage of these materials for future restoration does not create further, as yet, unassessed adverse landscape or visual effects for high value sensitive features or receptors; and to demonstrate to the ExA that suitable volumes of uncontaminated, healthy soils will be available for subsequent farmland restoration following decommissioning.

### The Settlement of Norton

- 5.8. Norton is a small village and civil parish located just outside the CNL and approximately 1km to the south-east of the Fosse Way. It is located almost centrally within the DCO application area on gently undulating farmland with hedges and trees / woodland forming an important component of, for the most part, an intimate landscape. The village is served by minor roads and is also accessed by several rural footpaths. Rural countryside views are in evidence in all directions from the village, often filtered by trees. No industrial or major development is visible or perceived from the village or its environs.
- 5.9. The proposed development would involve the construction of two major areas of solar panels and infrastructure to both the north and south of the village, Lime Down Solar Park Sites B and D respectively as well as a particularly large swathe of the cable route corridor located to the southwest of the village which includes a major construction compound. The distance of the development areas from Norton means that solar development will effectively dominate the village to the north, south and west, with a substantial area to the south, in Site D, on slightly rising ground being devoted to the energy storage Battery Energy Storage System (BESS) and possibly a substation site area. These are very large industrial developments in their own right, which the council considers have not been adequately assessed against the receiving landscape character and the visual amenity of the area, in particular the landscape setting of Norton and potential intervisibility.
- 5.10. Key issues which have not been adequately addressed:
- The construction of large areas of solar panel development immediately to the north and south of the village (Lime Down Solar Park Sites B and D) leading to their dominance in the rural setting.
  - The dominance of solar panels associated with Site B across the fields to the east of the access road leading to the village from the north, Eastern Grey approach.
  - The proposed construction route across fields to the northwest of the village running parallel to the Fosse Way (Byway section) in combination with the wide swathe of cable route corridor to the west of the village impact approaches and setting of the village from the north and west.

- Several hectares of land in Lime Down Solar Park Site D have been earmarked for energy storage and potentially substation facilities, which are major industrial features of the scheme and potentially have the greatest landscape and visual impacts being located on gently rising, slightly higher ground.
- Requirement to grow the existing relatively low field boundary hedges to at least 4.5m to screen the solar panels removing open views.
- Every Public Right of Way (PRoW) and every public road approaching and exiting the village of Norton will be impacted to varying degrees by the development at all stages of the project.
- There are no indicative details of where the vast quantities of topsoil and subsoil arising from the construction of the project and being relied upon for restoration will be stored or distributed. This could be on areas reserved for landscape / ecological mitigation and embedded mitigation or close to high value sensitive features or receptors.

5.11. As a result, Wiltshire Council recommends:

- The sites proposed for the solar development immediately to the north and south of the village should be reconsidered in light of the potential dominance of solar panels in the village's landscape setting. Areas close to both the north and south of the village should be pulled back from the settlement edge to reduce their visual dominance and the landscaped boundaries increased to mitigate and reduce potential views.
- To the north of the village, the solar panels in Lime Down Solar Park Site B will dominate the village entrance, where currently there are some of the most open views in the receiving landscape. The proximity of the panels close to the road and their orientation will result in significant, inadequately mitigated views, to an extent which will be dependent on their construction. Moving the panels away from the road and considerably increasing the landscape buffer will help to reduce the impact, although it will have to be accepted that currently available long views across the landscape will substantially change.
- The effects of the BESS and substation on the landscape setting and visual amenity of Norton, and the lanes linking through to Hullavington (south) and Eastern Grey (north), need to be assessed and suitable landscape mitigation and enhancement measures introduced to protect rural identity and setting to the village.
- At any site access points retained for future maintenance access of solar panel, BESS or substation areas, the planting of a secondary hedge inside the access, although not ideal from a character point of view, would restrict receptor views of the development when passing by the access points.

- The indicative locations, form/s and duration of topsoil and subsoil storage should be given more consideration by the Applicant at this stage to demonstrate to the ExA that embedded mitigation measures, BNG commitments, and other mitigation and enhancement measures being proposed are feasible and can still take place; that the proposed storage of these materials for future restoration does not create further, as yet, unassessed adverse landscape or visual effects for high value sensitive features or receptors; and to demonstrate to the ExA that suitable volumes of uncontaminated, healthy soils will be available for subsequent farmland restoration following decommissioning.

## **Soil Storage for Land Restoration**

- 5.12. Concern is raised in relation to as yet unknown excavated waste soil volumes anticipated to arise from the construction of access tracks and ditches; foundations for solar tracker panels; BESS, conversion units and substation compounds and associated foundations.
- 5.13. The project is likely to generate huge amounts of excess / waste soils which will need to be stockpiled on site for 60+ years pending their eventual re-use within land restoration plans. The likely soil volumes involved will be vast, requiring creation of substantial soil stockpiling areas within each site area (Lime Down Solar Park Sites A to E).
- 5.14. The 7.15 Outline Soil Resources Management Plan [[APP-280](#)] simply defers all matters of how much soil, where the soil will be taken from, and where the soil will be stored / stockpiled etc. onto a DCO requirement (3.1 Draft Development Consent Order [[APP-016](#)]) for the preparation of a detailed Soil Resources Management Plan (Requirement 17), after the DCO is granted.
- 5.15. The DCO application does not attempt to illustrate where, or in what form, the stockpiling of soils might be accommodated on Lime Down Solar Park Sites A to E. The council believes the issue of soil stockpiling for later use in restoration, should be given more consideration by the Applicant at this stage to demonstrate to the ExA that soil stockpiles will not impact delivery of proposed embedded mitigation measures, impact BNG commitments, or other mitigation and enhancement measures; demonstrate that the proposed storage of soils for future restoration use is unlikely to result in further, as yet unassessed adverse landscape or visual effects for high value sensitive features or receptors; and demonstrate to the ExA that sufficient volumes of uncontaminated, healthy soils will be available for subsequent farmland restoration following the decommissioning.
- 5.16. As an example, to further illustrate this point, the likely resulting excavated soil volumes arising from just the construction of the access tracks leading to the BESS site in Lime Down Solar Park Site D west from the railway bridge (western BESS access) and east from Norton Road (eastern BESS access) based on the illustrative drawing showing a typical cross section through the 'Access track to the BESS Area' (6.3 Environmental Statement Volume 3,

Appendix 3-3 Illustrative Drawings [[APP-184](#)]), the council estimates that the construction of just these two tracks will result in a soil stock pile requirement somewhere in the region of 4,500m<sup>3</sup> (without any bulking factor applied). This has been calculated based on the following assumptions:

- Total average construction depth below existing ground levels of 500mm.
- A track construction width of 6m (no widened bends).
- A cross-sectional road construction area of 3m<sup>2</sup>.
- Ditches each side with estimated cross-sectional ditch cut area of 0.6m<sup>2</sup>. (600mm deep x 500mm wide (bottom) 1,500mm wide (top) x 2).
- Western access track length to BESS area of 330 Linear metres.
- Eastern access track length to BESS area of 900 Linear metres.
- Total access track lengths 1,230 Linear metres.
- 3.6m<sup>3</sup> of resulting excavated soils (no bulking factor included) generated per Linear metre of BESS access track and ditches constructed.

5.17. This single access track would result in a minimum stockpile area requirement of at least 43m x 43m (based on recommended, maximum soil storage heights of 3m).

5.18. When this is combined with the additional soils generated from the construction of all the internal access tracks, BESS and substation compounds and foundations, this soil stockpile requirement will significantly increase. It is not clear how the Applicant plans to sensitively design or locate these long-term stockpiles or intends to integrate or incorporate these within the Outline Landscape and Ecology Mitigation plans.

### **Tranquillity Technical Note**

5.19. The 9.2 Tranquillity Technical Note [[PDA-010](#)] for Lime Down Solar Park was provided by the Applicant at Procedural Deadline A on 9 March 2026. The document is, in effect, a synopsis of 6.1 Environmental Statement Volume 1, Chapter 14 Noise and Vibration [[APP-066](#)]. It does not contain any new information but has a focus on the potential effects on the tranquillity of the Cotswold National Landscape (CNL), having been produced in response to Relevant Representations. Much of the text is purely a transfer of text for various disciplines, which means that the text which is actually relevant to tranquillity (Noise and Vibration) is quite scant in places. It is of concern that the document is so focused that it has not included assessments of the effects on the setting of the CNL, let alone the wider receiving landscape. No further survey work has been undertaken, but this is possibly unsurprising considering that the actual site layout is yet to be established despite the Rochdale Envelope requiring the establishing of maximum and minimum parameters.

5.20. The 6.1 Environmental Statement Volume 1, Chapter 14 Noise and Vibration [[APP-066](#)] was scoped by the Planning Inspectorate and was the subject of an engagement with Wiltshire Council Environmental Health Department.

Therefore, the scope and recommended parameters have been established outside the Landscape remit. This means that, although tranquillity is considered to be a considerable asset of landscape (Guidelines for Landscape and Visual Impact Assessment (LVIA) (3<sup>rd</sup> edition) glossary page 158) the survey work has been predicated on standard noise modelling methodology and acoustic modelling software (ISO 9613:2024) utilising the Lowest Observable Adverse Effect Level (LOAEL) and Significant Observable Adverse Effect Level (SOAEL) for construction and operational noise. However, in terms of the receiving landscape the sensitivity of the receptor, which in this case is 'High', is key when making what has to be a qualitative assessment of the effects of the noise from the development, throughout all its stages and duration, on the ambient or perceived tranquillity of the landscape as a whole and by residents and the visitors to the area. This is particularly pertinent as 'tranquillity' is identified to be a 'special quality' of the CNL and is relevant to its setting.

- 5.21. Although the majority of the calculated noise and vibration levels fall within the LOAEL and SOAEL acceptability levels, determining the much more subjective effects of increased noise levels on receptors across what is by its nature, a tranquil rural landscape, is a difficult process. The assessment required is to assess the effect of the industrial noise sources on the rural countryside environment whether or not they reach unacceptable decibel levels. These findings, which relate to the type of noise, even if difficult to quantify, should feed into the overall assessment of the effects of the development on the receiving landscape.
- 5.22. There is an acceptance by the Applicant of a level of increased noise during construction and decommissioning, although the duration of this could be several years in total, but during operation and maintenance, Chapter 14 Noise and Vibration [APP-066] states at 14.10.54 that: *"the effects arising from the operation and maintenance of the Scheme are likely to be not significant during both daytime and night-time periods."*
- 5.23. The Tranquillity Technical Note [PDA-010] hasn't answered the fundamental questions relating to how the potential noise from the proposed development from construction to decommissioning is going to affect the landscape as a resource and the receptors (residents and visitors) within the receiving landscape area/s. It is unlikely that this can be ascertained with any degree of certainty until a fully detailed development scheme is submitted.

## **6. Ecology and Biodiversity Considerations**

### **Draft Development Consent Order and Hedgerows**

- 6.1. As highlighted in Wiltshire Council's Relevant Representation [RR-4934], the 6.1 Environmental Statement Volume 1, Chapter 9 Ecology and Biodiversity [APP-061] does not specifically identify or discuss important hedgerows as defined by the Hedgerow Regulations 1997. Nonetheless, the location and extent of hedgerows within the Order Limits that meet the qualifying criteria

under the regulations have evidently been identified as an extensive list of important hedgerows is detailed in Part 2 of Schedule 12 of the 3.1 Draft Development Consent Order [APP-016] and substantive extents are illustrated on the 2.7 TPO and Hedgerow Plan [APP-011]. As such, it is expected that Chapter 9 of the ES should have likewise detailed these hedgerows and assessed the potential for effects on important hedgerows given the legal protection afforded to these important features.

- 6.2. Schedule 12, ('Hedgerows to be removed') Part 1 and 2 of the Draft DCO appears to have listed every hedgerow within the Order Limits. This, presumably, is to allow the Applicant total flexibility in respect of the number and locations where hedgerow removal may be required, such as for site accesses (both internal and from adjacent highways), should the Secretary of State grant approval of the DCO application. The underpinning rationale and intended restrictions on hedgerow removal set out within other plans and documents submitted as part of the DCO application are noted. Moreover, the provisions of Article 40, paragraph (4) in Part 6: *Miscellaneous and General* of the Draft DCO [APP-016] are recognised, and are as follows: *"The undertaker may, for the purposes of the authorised development or in connection with the authorised development and subject to paragraph (2), remove the hedgerows specified in the table in Part 1 and the table in Part 2 of Schedule 12 (hedgerows to be removed) to the extent set out in the landscape and ecological management plan approved pursuant to requirement 7 in Schedule 2 (requirements)."*
- 6.3. Although paragraph (4) of Article 40 requires hedgerow removal to be in accordance with that set out in the Landscape and Ecological Management Plan (LEMP), an outline version of which has been submitted with the DCO application [APP-283], the council's Ecology Officer remains concerned regarding the approach to Schedule 12. The Hedgerow Removal Plans include notes which specify that final decisions regarding hedgerow tree removal will be made during detailed site design and cable trench micro-siting. This may result in the Applicant opting to use the flexibility afforded by Schedule 12, leading to additional hedgerow and hedgerow tree removal taking place. It is also possible that refinements to the scheme design post DCO approval (if permission is granted) and prior to the commencement of construction, could result in additional hedgerow removal being detailed in the Final LEMP compared to the Outline LEMP. This, in turn, could give rise to objections from the council to the Final LEMP submitted at the discharge of DCO Requirements stage, and in practice it would be difficult for substantive issues with final documents and plans to be satisfactorily addressed and overcome at the discharge of DCO Requirements stage. Given that Wiltshire Council is not the ultimate determining authority for this proposal, it is possible that in real terms, the council would have limited ability to affect material alterations to the Final LEMP, even if it differs from the Outline LEMP in respect of hedgerow removal, and even if the associated DCO Requirement necessitates that the Final LEMP is broadly in line with the Outline LEMP. This could lead to an impasse where the council is not satisfied that the DCO Requirement can be discharged.

- 6.4. The council's Ecology Officer queries why paragraph (4) of Article 40 [APP-016] refers to only the LEMP and not also to the 7.19 Outline Ecological Protection and Mitigation Strategy (EPMS) [APP-284] and the Hedgerow Removal Plan(s) embedded within the EPMS and / or 6.2 Environmental Statement Volume 2, Figure 3-4-1 to 3-4-5.2 Landscape and Ecology Mitigation Plan [APP-084] and 6.3 Appendix 9-8 Schedule of Protective Ecological Buffers [APP-205]. It is deemed that citing other pertinent documents and plans in Article 40, paragraph (4) would serve to ensure that approved hedgerow removal is suitably prescriptive and that there is consistency across the documents and plans for the avoidance of doubt.
- 6.5. The concerns that Wiltshire Council's Ecology Officer maintains regarding Schedule 12 [APP-016] and that the extensive and apparently all-encompassing lists in Part 1 and 2 haven't been refined or reduced as the scheme design has progressed, are compounded by a number of interrelated and underpinning issues which are discussed in the subsequent paragraphs. These issues serve to undermine assurance that Article 40, paragraph (4) of the Draft DCO will be fully effective in securing minimal hedgerow removal, even if detailed in the Final LEMP.
- 6.6. It is noted that a Hedgerow Removal Plan(s) is included at Annex A within the 7.19 Outline Ecological Protection and Mitigation Strategy (EPMS) [APP-284]. It is somewhat obstructive that these important plans, which in effect comprise a part of the design and works package, were not submitted as a stand-alone set of plans in the DCO application to aid easy identification of their existence, rather than being embedded within the Outline EPMS. Furthermore, it is considered that the Outline EPMS doesn't actually constitute an appropriate document for the Hedgerow Removal Plans to be embedded within, given that the focus of the EPMS pertains to ecological protection and mitigation rather than to details of vegetation removal and site works.
- 6.7. In addition, paragraph 1.1.8 of the Outline EPMS [APP-284] states: "*A Hedgerow Removal Plan is provided within an Annex A at the end of this document. This plan provides the location and extent of all anticipated permanent and temporary hedgerow removal required as part of the Scheme.*" Contrary to what is stipulated in the Outline EPMS, the Hedgerow Removal Plan(s) does not, in fact, delineate or quantify the extent of hedgerow removal proposed either on the plan itself or in the associated key, and instead only illustrates the proposed locations.
- 6.8. Furthermore, Parts 1 and 2 of Schedule 12 of the Draft DCO [APP-016] do not provide the projected lengths of hedgerow that would be removed at each location (where removal proves necessary). A guideline minimum and / or maximum extent of hedgerow that would likely require removal at each location is not even provided. Instead, every description in column (2) (titled *Extent of removal*) of the tables contained within Part 1 and Part 2 of Schedule 12 allows complete flexibility by stating that there would be removal of 'part of' the hedgerow that is listed in column (1). For example, in Schedule 12, Part 2 relating to hedgerow ID SH238, the description in column (2) merely states: "*Removal of **part of** approximately 564m of hedgerow within the area identified*

*by an orange line on sheet 1 of the hedgerows plan.”* As the term ‘part of’ is not defined or quantified in Article 40, in effect there is no restriction placed on what that could comprise.

- 6.9. The reference to ‘the hedgerows plan’ within the above extract and throughout column (2) of Part 1 and 2 of Schedule 12 is referring to the TPO and Hedgerow Plan [\[APP-011\]](#) rather than the Hedgerow Removal Plan(s) embedded within the Outline EPMS [\[APP-284\]](#). Whilst there is logic in citing the TPO and Hedgerow Plan because it illustrates the location and extent of all the hedgerows within the Order Limits and so corresponds to Schedule 12 in terms of the hedgerow ID numbers, it does not illustrate or specify the extent of potential hedgerow removal within each of the hedgerows. Similarly, the Hedgerow Removal Plans show the approximate location of permanent and temporary hedgerow removal within the Solar PV Sites and temporary removal within the Cable Route Corridor (CRC) but also do not specify the extent of removal proposed at each discrete location.
- 6.10. Therefore, although strictly speaking, the tables in Schedule 12, Part 1 and 2 stipulate that parts of each of the hedgerows listed *will* be removed and cross references to the ‘hedgerows plan’, the reader finds that neither the TPO and Hedgerow Plan in Schedule 12, or the Hedgerows Removal Plan(s) within the Outline EPMS, quantifies hedgerow removal and nor does Schedule 12 itself.
- 6.11. Given that the scope of Schedule 12 has not been refined or reduced as the scheme design progressed in the run up to the DCO submission, and appears to include all hedgerows within the Order Limits thereby allowing total flexibility, the council’s Ecology Officer considers that at the very least, minimum and maximum extents of hedgerow removal could have been detailed in Schedule 12 and the Hedgerow Removal Plan(s), particularly as this information and level of detail is known to the Applicant and is provided elsewhere within the DCO application, as discussed below. The omission of any detail regarding extent of hedgerow removal within Schedule 12 and the Hedgerow Removal Plan(s), together with the failure to cite the latter plan within Schedule 12 or to cross reference to other DCO application documents that do specify the intended hedgerow removal extent, further undermines the council’s confidence in the approach to Schedule 12. There appears no sound reason to omit details regarding the extent of potential hedgerow removal from either Schedule 12 or the Hedgerow Removal Plan(s) aside from to allow complete flexibility, and to weaken the provisions in paragraph (4) of Article 40 in the Draft DCO [\[APP-016\]](#).
- 6.12. As aforementioned, other documents submitted as part of the DCO application do provide detail regarding proposed hedgerow removal, such as in 7.4 Design Principles and Parameters [\[APP-269\]](#) which states: “*The maximum width of Solar PV access tracks will be 3.5 m. The maximum width of Solar PV access tracks at passing places will be 6 m.*” This has been transposed into Chapter 9 of the ES [\[APP-061\]](#) which specifies in paragraph 9.9.7: “*Access for construction (at both the Solar PV Sites and the Cable Route Corridor) and operational maintenance has been specifically designed to utilise existing field entrances and gaps in hedgerows and other linear habitats wherever possible.*”

*This has been completed through collaboration between several technical disciplines, and through scrutinising OS, topographical and aerial imagery. Through this exercise, the need for new gaps in hedgerows or new ditch crossings has been minimised as far as possible. Internal access/maintenance tracks have also been routed so as to avoid designated ecological buffer zones wherever possible. New permanent gaps through hedgerows into fields are understood to measure approximately 3.5-6 m in width, in keeping with typical agricultural accesses (as set out within Chapter 3: The Scheme [EN010168/APP/6.1]) and the ecological mitigation measures determined to be necessary for the opening of gaps are set out within the Outline Ecological Protection and Mitigation Strategy (Outline EPMS) [EN010168/APP/7.19].”*

- 6.13. In addition, paragraph 1.8.2 of the 7.8 Biodiversity Net Gain (BNG) Assessment Report [\[APP-273\]](#) specifies that where permanent internal access tracks need to cross existing hedgerows, hedgerow losses will be between 3.5-6m in width at each crossing point. It also states that where new access points from the adjacent highway are required, or where the widening of an existing access from the highways is required, hedgerow removal of up to 18m would be required to allow for abnormal loads.
- 6.14. The BNG Assessment Report [\[APP-273\]](#) goes on to quantify the approximate total hedgerow removal for the Order Limits. In relation to the Solar PV Sites, paragraph 1.8.4 stipulates: *“In total, approximately 343 m of existing hedgerow is anticipated to be lost across the Solar PV Sites. All remaining hedgerows within the Solar PV Sites will either be retained or enhanced.”* In terms of the CRC (excluding Works No. 9), paragraph 1.8.5 states: *“In total, approximately 1.406 km of existing hedgerow is anticipated to be lost throughout the Cable Route Corridor, as shown on the Hedgerow Removal Plan provided in Annex A of DCO Volume 7, Outline Ecological Protection and Mitigation Strategy [EN010168/APP/7.19]. All remaining hedgerows within the Cable Route Corridor will be retained.”* Paragraph 1.8.11 also specifies: *“A small quantum (54 m) of hedgerow losses will not be reinstated, to allow for permanent access gaps for maintenance during operation.”*
- 6.15. As discussed earlier, and contrary to the suggestion in paragraph 1.8.5 of the BNG Assessment Report [\[APP-273\]](#), the Hedgerow Removal Plan does not actually stipulate the lengths of hedgerow removal as the plans are not annotated or marked up accordingly, and the associated description in the key does not indicate the extents of hedgerow removal shown on the plans. That aside, given the greater level of detail regarding proposed hedgerow removal provided within the BNG Assessment Report [\[APP-273\]](#), ES Chapter 9 [\[APP-061\]](#) and the 7.4 Design Principles and Parameters [\[APP-269\]](#), it is considered that this should have been transposed to Schedule 12 and that the level of flexibility currently afforded by the scope of Schedule 12, should not be required.
- 6.16. It is therefore deemed inappropriate for the Draft DCO [\[APP-016\]](#) to be approved in its current form, even if this all-encompassing approach has been used elsewhere, and that the approach adopted in the preparation of Schedule 12 constitutes a misuse of the ‘Rochdale Envelope’ approach. Government Guidance in the form of [NSIPs – Advice Note Nine: Rochdale Envelope](#)

(Republished July 2018 (version 3)), sets out criteria that Applicants opting to apply the 'Rochdale Envelope' approach should meet. It is considered that the DCO application has not wholly fulfilled and complied with the criteria or demonstrated a sound rationale for the approach taken to the Draft DCO contents, for the reasons already discussed. *Advice Note Nine*: specifies:

*"If flexibility is sought then it is essential that Applicants ensure the following is achieved:*

- that the approach is explained clearly for the purpose of **consultation and publicity at the Pre-application stage**;*
- that the Environmental Statement (ES) explains fully how the flexibility sought (sic) has been taken into account in the assessments and why it is required; and*
- that there is **consistency across the application documents** including any other relevant environmental assessments (e.g. Habitats Regulations Assessment (HRA) or Water Framework Directive (WFD) assessment)."*

6.17. Although Schedule 12 [\[APP-016\]](#) effectively sets out the worst-case scenario in line with the principles required when adopting the 'Rochdale Envelope' approach, this has not wholly informed or been assessed within Chapter 9 of the ES [\[APP-061\]](#), the 7.10 Habitats Regulations Assessment Report (HRA) [\[APP-275\]](#) or the recently submitted Statutory Biodiversity Net Gain (BNG) Metric [\[PDA-008\]](#) and the accompanying BNG Assessment Report [\[APP-273\]](#). This is because the assessments detailed within these documents and the information input into the Statutory BNG Metric have been based on the locations shown on the Hedgerow Removal Plans and the parameters discussed above; namely that where permanent internal access tracks need to cross existing hedgerows, hedgerow losses will be between 3.5-6m in width at each crossing point and that where the widening of an existing access from the highways is required, hedgerow removal of up to 18m would be required. This has facilitated the hedgerow loss calculations provided in paragraphs 1.8.4 and 1.8.5 of the BNG Assessment Report [\[APP-273\]](#) and which have been used to inform assessment conclusions in Chapter 9 of the ES [\[APP-061\]](#). As an aside, it is noted that Chapter 9 indicates that total hedgerow removal across the Solar PV Sites will be 327m and 1.43km within the CRC which is inconsistent with paragraphs 1.8.4 and 1.8.5 respectively of the BNG Assessment Report. Clearly there should be consistency of information across the DCO documents and plans. The assessments and BNG Metric have also assumed the implementation of avoidance and mitigation measures as set out in Chapter 9, ES Volume 2, Figure 3-4-1 to 3-4-5.2 Landscape and Ecology Mitigation Plans [\[APP-084\]](#), the Outline Ecological Protection and Mitigation Strategy (EPMS) [\[APP-284\]](#), and 6.3 Appendix 9-8 Schedule of Protective Ecological Buffers [\[APP-205\]](#).

6.18. It is therefore the case that despite Chapter 9 of the ES specifying that it has been based on a '*reasonable worst case scenario*', it is unclear what the assessed reasonable worst case scenario actually comprises seeing as the content of Schedule 12 of the Draft DCO hasn't been assessed, how it has been

derived, what plans representing the reasonable worst case scenario Chapter 9 and other ecological submissions have been based on, and how it relates to Schedule 12 to ensure that the worst case scenario has in fact been subject to assessment. Also, it is not evident how 'reasonable worst case' has been qualified or defined. As such, considerable uncertainty remains in this regard.

### **Habitats Regulations Assessment (HRA)**

- 6.19. In the interests of avoiding repetition, the council's Ecology Officer advises that the above comments pertaining to the Draft DCO [\[APP-016\]](#) and concerns regarding hedgerow removal are also relevant to, and for consideration by, the ExA in relation to the necessary preparation of a Report on the Implications for European Sites (RIES) to be undertaken by the ExA for the purposes of enabling the Secretary of State, as competent authority, to undertake its HRA.
- 6.20. The comments provided by the council herein in relation to the HRA Report [\[APP-275\]](#) are intended to supplement those provided in the council's Relevant Representation [\[RR-4934\]](#).
- 6.21. The HRA Report submitted by the Applicant includes a screening assessment and appropriate assessment in respect of the Bath and Bradford-on-Avon Bats Special Area of Conservation (SAC).
- 6.22. The ExA is requested to take into account that the version of the HRA [\[APP-275\]](#) submitted to PINS alongside the DCO application, hasn't been informed by full baseline information for the whole CRC as 17ha had not been subject to habitat survey, and so assumptions have been made about the un-surveyed habitats.
- 6.23. It is not evident that the HRA has been wholly based on the worst-case scenario as is required when relying on the Rochdale Envelope approach (please refer to earlier comments regarding the Draft DCO and hedgerow removal).
- 6.24. In terms of mitigation measures, including embedded mitigation measures, discussed within the HRA to minimise impacts to functionally linked land (FLL) within the CRC where it coincides with the 4km greater horseshoe bat consultation zone around the Box Mine component area of the Bath and Bradford-on-Avon Bats SAC, it needs to be borne in mind that the 10m maximum extents of hedgerow removal proposed, comprise the amount of removal that would be undertaken at a number of discrete locations. As such, there will be a number of such locations within the bat SAC consultation zone and therefore the total hedgerow removal within the consultation zone will evidently be greater. Also, although the HRA discusses that in the bat SAC consultation zone, the CRC working width will be reduced from the typical 25m to 12m at all locations where hedgerow removal will be required and that the extent of hedgerow that will be removed will be a maximum of 10m at each location, it does not provide detail regarding the expected total number of localised hedgerow breaches and the likely maximum total length of hedgerow within the area of the bat SAC consultation zone that coincides with the CRC. This information is provided in the ES Chapter 9 [\[APP-061\]](#) and so should have

been transposed into the HRA to provide as much information regarding proposed works as possible, thereby ensuring a robust and comprehensive assessment, and also for consistency across the DCO application documents.

- 6.25. In addition, although the Outline EPMS [\[APP-284\]](#) states that a maximum of 10m of hedgerow will be removed within the CRC where it coincides with the bat SAC consultation zone, this minimum distance isn't stipulated or shown on the relevant sheets of the Hedgerow Removal Plans (Sheets 40-45) or in the associated legends. This leads to a lack of certainty, assurance and consistency across the submitted documents and plans. Furthermore, the stipulation that hedgerow removal within the bat SAC consultation zone will be restricted to 10m has been omitted from the relevant rows of Schedule 12, namely the rows for the hedgerows that are shown on Sheets 40 to 45 of the Hedgerow Removal Plans.
- 6.26. A minor point of note is that Table 5 in the HRA [\[APP-275\]](#) incorrectly refers to Bechstein's bat in the row pertaining to lesser horseshoe bat.
- 6.27. The council maintains its stance that targeted bat survey within the section of the CRC that coincides with the bat SAC consultation zone should have been conducted to ensure the HRA was informed by sufficient baseline information and to provide confidence that the mitigation proposed is in fact sufficient and appropriate.

### **Outline Ecological Protection and Mitigation Strategy (EPMS)**

- 6.28. There appears to be a discrepancy between the section numbers cited in the contents page of the Outline Ecological Protection and Mitigation Strategy (EPMS) [\[APP-284\]](#) and the section numbers within the main body of the report.
- 6.29. Section 6 of the Outline EPMS is titled '*Method Statement 5: Permanent Habitat Removal (Solar PV Sites) - including Avoidance of Impacts on Protected Species*' (and is listed as Section 5 in the contents page on account of the aforementioned formatting error), which suggests that this section of the document pertains to the Solar PV Sites alone. Nonetheless, this section of the EPMS repeatedly discusses works within the CRC as well as the Solar PV Sites contrary to the suggestion in the section title. Presumably this is an error and instead should have just been discussed in Section 7 of the document which is titled '*Method Statement 6: Temporary Habitat Removal and Reinstatement (Cable Route Corridor) - including Avoidance of Impacts on Protected Species*'.

### **Breeding Birds**

- 6.30. The council's Relevant Representation [\[RR-4934\]](#) raised issues regarding the deliverability of the additional mitigation measures for ground nesting birds of open farmland proposed in paragraphs 9.12.31 - 9.12.32 of the ES Chapter 9: Ecology and Biodiversity [\[APP-061\]](#) which states: "*Skylark and yellow wagtail have overlapping nesting requirements, and so skylarks have been used as an umbrella species for this assessment. Of the 164 skylark territories recorded at baseline, 33 are retained in undeveloped fields, leaving 131 likely to be*

*displaced...The first way in which the impact of displacement on skylark (and yellow wagtail) will be reduced is through the large-scale creation of optimal foraging habitat in the form of diverse grassland types under / between Solar PV Panels and within buffer zones."*

- 6.31. In the Relevant Representation, the council's Ecology Officer highlighted that as had already been specified in the council's Statutory Consultation response to the PEIR, for the purposes of the ecological impact assessment (and the BNG Assessment) it should be assumed that only modified grassland of poor condition can be achieved underneath and between the solar panels.
- 6.32. Further to the comments in the Relevant Representation, the council has supplementary concerns regarding the statement in the above extract of Chapter 9 of the ES that the impact of displacement of skylark and yellow wagtail, will be reduced by the provision of foraging habitat within the Solar PV Sites. The council considers that the substantive displacement of these ground nesting bird species, which will occur as a result of the Scheme, will not be wholly mitigated or offset by the provision of foraging habitat, and that the adverse impacts upon these species due to permanent loss of their breeding habitat, cannot be substantially reduced by the provision of foraging habitat on underneath and between the solar panels. Displaced birds will still require adequate suitable open areas for ground nesting, and the provision of foraging habitat does not comprise like-for-like compensation for the loss of significant areas of nesting habitat. Natural England's standing advice specifies that there should be a suitable amount of replacement habitat to compensate for the displacement, and that for example, there should be no net loss of habitat; like-for-like replacement in the vicinity; alternative habitat that is better in quality or area than the habitat to be lost; and maintained habitat connection to allow normal bird movement.
- 6.33. Whilst it is recognised that paragraphs 9.12.31 - 9.12.32 of the ES Chapter 9 [\[APP-061\]](#) do not state that provision of foraging habitat would constitute like-for-like replacement, and that Chapter 9 does put forward other additional mitigation measures for breeding birds, it is nevertheless deemed that the suggestions in paragraph 9.12.32 of Chapter 9 that the impact of displacement will be reduced through the creation of foraging habitat under and between Solar PV Panels and within buffer zones is inaccurate and somewhat misleading, especially given that it is evident there will be significant effects on breeding birds.
- 6.34. In any case, as discussed above, the council maintains its stance that it should not be suggested that 'diverse grassland' can be attained underneath and between the Solar PV Panels, and that instead, not just the BNG Assessment [\[APP-273\]](#) but also the ecological impact assessment presented in ES Chapter 9, should be predicated on the assumption that only modified grassland of poor condition can be achieved in order for the assessments to be suitably precautionary and to reflect the worst case scenario, and also to ensure consistency of approach across the ecological documents and plans. Although modified grassland can have up to 9 species per m<sup>2</sup>, this is not considered to

constitute diverse grassland and as such the statement in paragraphs 9.12.31 - 9.12.32 is flawed.

### **Great Crested Newts and Mitigation Strategy for the Solar PV Sites**

- 6.35. ES Chapter 9 [[APP-061](#)] identifies that environmental DNA (eDNA) surveys have confirmed the presence of great crested newt (GCN) at two ponds within Sites Lime Down C and E, as well as within a further 14 ponds located within 250 m of the Solar PV Sites. It also details that a large number of ponds are present within 250 m of the CRC but that these ponds have not been subject to GCN surveys as the Scheme will adopt District Level Licensing (DLL) for works within the CRC.
- 6.36. ES Chapter 9 does not, however, discuss what decision was taken in respect of the Solar PV Sites and the potential need for acquisition of a GCN mitigation licence(s) to allow the works to legally proceed, how the decision was reached and what the justification for the determined approach comprises. There is a clear need for discussion regarding the Solar PV Sites and licensing to be provided, particularly in relation to Lime Down C and E where breeding ponds have been identified.
- 6.37. If the Applicant and their ecological consultant have decided to rely on the precautionary working methods detailed in Chapter 9 and the Outline EPMS [[APP-284](#)], then this should have been stated clearly in the ES Chapter 9. A robust rationale for the approach should have also been provided to demonstrate that it is appropriate, sufficient and would be legally compliant. Supporting evidence could have comprised use of Natural England's GCN rapid risk assessment tool in the GCN Mitigation Licence Method Statement template. Although this rapid risk assessment tool can be overly simplistic, it can still serve to provide a useful guide regarding the likelihood of an offence being committed and the need for acquisition of a mitigation licence to permit legal derogation from the Conservation of Habitats and Species Regulations 2017 (as amended).
- 6.38. It is therefore strongly recommended that the ExA requests further information regarding the proposed GCN mitigation strategy for the Solar PV Sites, as well as confirmation as to whether the Applicant intends to apply for a GCN mitigation licence; to apply to use DLL; or not apply for any type of GCN mitigation licence. If it's the latter, then further supporting evidence and a sound justification should be sought given the scale of the Scheme, the potential for adverse effects and the level of protection afforded to this European Protected Species (EPS) which utilises both aquatic and terrestrial habitat within the Solar PV Sites.

### **Biodiversity Net Gain (BNG)**

- 6.39. As part of the Applicant's response to Procedural Deadline A, a Statutory Biodiversity Net Gain (BNG) Metric [[PDA-008](#)] was submitted as an unlocked excel spreadsheet given that this had not been provided as part of the DCO

application as should have been the case. The submitted Statutory BNG Metric was published on the PINS website on 11th March 2026.

- 6.40. The omission of the Statutory BNG Metric as an unlocked excel spreadsheet from the DCO application was noted in Wiltshire Council's Relevant Representation [\[RR-4934\]](#) and it was highlighted that this prevented a full and proper review of this element of the proposals. As such, the council has reviewed the recently submitted metric alongside the BNG Assessment Report [\[APP-273\]](#) which was submitted as part of the DCO application.
- 6.41. DEFRA postponed the commencement date for mandatory BNG for NSIPs from November 2025 to May 2026, and on 15 April 2026 a further update was published which specified that DEFRA will implement a mandatory BNG framework for NSIPs from November 2026. Nevertheless, the Applicant has committed to providing at least 10% BNG for the Lime Down Solar Park project and Core Policy 50 of the Wiltshire Core Strategy (adopted January 2015) requires major development to deliver biodiversity gains. Policy NE2 to the Chippenham Without Neighbourhood Plan 2022 - 2036 requires development (where appropriate) to deliver BNG. Policy G11 to the Chippenham Neighbourhood Plan (2024) requires major development to demonstrate at least 10% BNG will be attainable. Similarly, Policy 13 to the Joint Melksham Neighbourhood Plan 2 (2025) requires all development to deliver at least 10% BNG and makes particular reference to this requirement extending to solar farms. It is however accepted that only part of the application site is covered by the respective community neighbourhood plans outlined above.
- 6.42. Furthermore, it is assumed that the Applicant has used the on-site post intervention projections presented in the metric to substantiate, quantify and evidence the habitat mitigation, enhancement and creation proposals discussed and relied upon in the DCO application, most notably (but not limited to) in the ES Volume 1, Chapter 9 Ecology and Biodiversity [\[APP-061\]](#), the Habitats Regulations Assessment Report (HRA) [\[APP-275\]](#), ES Volume 2, Figure 3-4-1 to 3-4-5.2 Landscape and Ecology Mitigation Plans [\[APP-084\]](#), the Outline Ecological Protection and Mitigation Strategy (EPMS) [\[APP-284\]](#) and 6.3 Appendix 9-8 Schedule of Protective Ecological Buffers [\[APP-205\]](#). Therefore, the habitat, hedgerow and watercourse baseline, creation and enhancement information detailed in the submitted Statutory BNG Metric should align with the aforementioned documents and plans, as well as any other relevant documents and plans that form part of the DCO application. For these reasons, the council has reviewed and commented on the BNG proposals despite BNG not yet being mandatory for NSIPs.
- 6.43. It is understood that it is the Applicant's intention to submit additional baseline information and reporting to the ExA following the completion of habitat surveys within the areas of the CRC which had not been subject to survey at the time the BNG Assessment Report [\[APP-273\]](#) and Statutory BNG Metric [\[PDA-008\]](#) were completed (despite the latter only being submitted in March 2026). This matter is discussed in paragraph 1.2.18 of the BNG Assessment Report. It is therefore expected that another version of the Statutory BNG Metric will be submitted to the ExA shortly, in which event the council will review the revised

metric and provide any additional observations on the BNG submissions at that juncture.

- 6.44. The BNG Metric submitted in March 2026 [\[PDA-008\]](#) has been reviewed and considered alongside the BNG Assessment Report [\[APP-273\]](#) and the rest of the DCO application, and observations are provided in the subsequent paragraphs.

#### Observation 1

- 6.45. It is not entirely clear which plans representing the worst case scenario, have been used to inform the metric and to therefore derive the on-site post intervention area habitat, hedgerow and watercourse units (which includes habitat retention, creation and enhancement) and the on-site net change in biodiversity units and total percentage net change for area habitat, hedgerow and watercourse.
- 6.46. Paragraph 1.1.5 of the BNG Assessment Report [\[APP-273\]](#) under the heading 'Assessment Scope', states: *"This report, including the above **Plates 3-7 and Plates 13-24**, provide a quantitative baseline of the biodiversity value of the Scheme. Together with **Plates 8-12 and ES Volume 2, Figure 3-4: Landscape and Ecology Mitigation Plan [EN010168/APAP/6.2]**, it also sets out the habitat creation, mitigation and enhancement measures that will be implemented to achieve BNG for the Scheme."*
- 6.47. In addition, paragraph 1.1.16 of the BNG Assessment Report [\[APP-273\]](#) specifies: *"For the purposes of this assessment, the locations and arrangements of Solar PV Panels and Associated Development have been taken from **ES Volume 2, Figure 3-1: Indicative Site Layout Plan [EN010168/APP/6.2]**."*
- 6.48. Although these descriptions within the BNG Assessment Report indicate which plans have been used for the purposes of the BNG Assessment and to inform the inputs into the metric, it isn't entirely apparent how it has been ensured that the metric and BNG Assessment Report have been completed on the basis of the worst case scenario as required, given that Applicant has opted to rely on the 'Rochdale Envelope' approach. It is considered that this matter needs to be clarified and addressed where applicable.

#### Observation 2

- 6.49. Habitat reference numbers have not been provided in the Irreplaceable Habitats, A-1 On-Site Habitat Baseline, A-2 On-Site Habitat Creation, A-3 On-Site Habitat Enhancement, B-1 On-Site Hedge Baseline, B-2 On-Site Hedge Creation, B-3 On-Site Hedge Enhancement, C-1 On-Site Watercourse Baseline, C-2 On-Site Watercourse Creation and C-3 On-Site Watercourse Enhancement tabs of the submitted BNG Metric [\[PDA-008\]](#).
- 6.50. The use of habitat reference numbers allows for the labelling of a habitat in the metric, so that it can be matched up with associated mapping provided.

Essentially, users should reference habitat parcels by unique codes on all applicable sheets in the metric. The inclusion of habitat reference numbers enables the reviewer to cross reference between the pre-intervention / baseline calculations in the metric and associated baseline / habitat plans, and between the post-intervention calculations in the metric and the post development plans so it can be verified that the metric and associated plans align and are correct.

- 6.51. Paragraph 1.11.1 of the BNG Assessment Report [\[APP-273\]](#) states: *“The information provided in the Metric are directly related to the Habitat Baseline Plans (Plates 3 – 7) and the Proposed Habitats Plans (Plates 8 – 12).”* Whilst these plans are helpful and have been used by the council’s Ecology Officer during the review process, because they do not include habitat reference numbers, it proved very difficult to ascertain exactly what is being proposed and where with sufficient degree of certainty.
- 6.52. In terms of the methodology applied, the BNG Assessment Report details a number of limitations but does not explicitly mention or discuss the omission of habitat reference numbers within the metric. A justification appears to be presented in paragraph 1.2.8 [\[APP-273\]](#) however, and states: *“The number of rows generated by the overlay of baseline and proposed habitats once mapped using QGIS approached 2,229 in the case of HU, 1,377 for HeU, and 138 for WU. As per the Statutory Metric QGIS template and GIS import tool User Guide (Ref 16), data have been consolidated into groups of identical values (i.e. multiple polygons with identical baseline values proposed to have identical outcomes) for simpler representation within the Metric. If requested, the raw data can be provided in full.”*
- 6.53. Whilst this limitation and the number of rows generated is acknowledged, it is considered that the size of the Scheme should not prohibit the preparation of comprehensive and appropriately marked up plans, BNG Assessment and metric; nor should it hinder the undertaking of a sound and thorough review of the BNG proposals, particularly by the ExA and host authority. As such, the explanation in the report is not deemed to comprise a suitably robust rationale for the omission of the habitat reference numbers.
- 6.54. The ExA is therefore advised that in the absence of habitat reference numbers accurately linking to appropriately marked up baseline / pre-intervention and post development plans, the council’s Ecology Officer cannot verify or corroborate the metric [\[PDA-008\]](#) and BNG Assessment Report [\[APP-273\]](#), despite the provision of the plates in the BNG Assessment Report. Instead, it was necessary to look at the plans at a higher level than is ideal and to make judgements. This is pertinent because even though mandatory BNG has not yet come into force for NSIPs, the metric effectively underpins the ecological impact assessment as it quantifies biodiversity losses and gains. Moreover, the BNG Assessment and metric have effectively been used to evidence and support the habitat mitigation, creation and enhancement proposals put forward in ES Chapter 9 [\[APP-061\]](#), the HRA [\[APP-275\]](#) and the other ecological documents and plans submitted as part of the DCO application.

### Observation 3

- 6.55. According to the BNG Assessment Report [[APP-273](#)], the Statutory BNG Metric covers the Solar PV Sites and the CRC. It is stated in paragraphs 1.1.9 of the report: *“Given that BNG calculations should be made based on the entire red line boundary of a site (Order Limits in the case of the Scheme), iterations of the BNG calculations have been provided for the Solar PV Sites (including Works No. 9) only (removing the temporary exempt areas, which elevate the baseline), and for the Solar PV Sites and Cable Route Corridor combined.”*
- 6.56. Evidently, the ecological consultant has completed the BNG metric twice; once for just the Solar PV Sites (including Works No. 9) which has not been submitted into Examination; and then a second iteration for the Solar PV Sites and CRC combined which comprises the iteration submitted to the ExA in March 2026 at Procedural Deadline A. Section 1.11 of the BNG Assessment Report [[APP-273](#)] includes screenshots of the Final Results tab of the metric for the Solar PV Sites (including Works No.9) alone and of the Final Results tab of the metric for the Scheme as a whole comprising both the Solar PV Sites and the CRC.
- 6.57. Given that the BNG Assessment Report includes the headline results and associated discussion for the metric relating to the Solar PV Sites alone, it is suggested that this iteration of the metric should have been submitted into Examination for completeness and transparency, and to permit a thorough review of this iteration of the metric alongside the discussion about this metric in the BNG Assessment Report. This is because merely providing a screenshot of the Final Results embedded within the BNG Assessment Report together with a short appraisal does not allow for it to be checked or interrogated and is as such somewhat futile without also providing the associated metric in an unlocked excel format.
- 6.58. Moreover, as discussed above, due to the omission of habitat reference numbers in the metric and on corresponding plans, it has not been possible for the council's Ecology Officer to accurately check and verify the metric, plans and BNG Assessment Report.
- 6.59. In addition, although the calculations in the metric completed for the Solar PV Sites (including Works No. 9) alone (for which, as aforementioned, the council has only seen a screenshot of the Final Results tab) can be analysed alongside the metric completed for the whole Scheme (Solar PV Sites and CRC) and the calculations regarding the projected gains in hedgerow units in the former metric can be subtracted from those in latter metric to ascertain what the projected hedgerow gain calculations are for the CRC, for completeness, it would have been preferable for the metric to be completed a third time for the CRC alone and for this to also be submitted. This is because, for the reasons already discussed, using the information provided, it is difficult to check for example, that the hedgerow losses and reinstatement within the CRC have been accurately recorded and that the post-intervention biodiversity unit calculations are correct.

- 6.60. Furthermore, in relation to the approach to the CRC, it has not been possible to corroborate that habitat enhancement has not been input into the metric and that habitat creation is proposed only where existing hedgerows will be reinstated following initial removal in accordance with paragraph 1.1.8 of the BNG Assessment Report [\[APP-273\]](#). Likewise, it is difficult to verify that the proposed hedgerow reinstatement within the CRC that has been recorded as habitat creation within the metric, has not been double counted and has first been counted as a loss on the baseline tab. It has also not been readily feasible to corroborate that the proposed hedgerow reinstatement within the CRC has been recorded as the same hedgerow type and condition as that provided for the baseline in accordance with paragraph 1.1.8 of the BNG Assessment Report. This is because only a combined metric for both the Solar PV Sites and CRC has been provided, and no habitat reference numbers have been included in the submitted metric and associated plans.
- 6.61. To provide some further detail in this regard, given that the hedgerow creation within the CRC relates only to the reinstatement of existing hedgerow features following their removal to permit the cable installation works, and that the reinstated hedgerow should be recorded as the same condition and type as that removed, the associated losses of approximately 1.406km of existing hedgerow within the CRC excluding Works No. 9, as quantified in paragraph 1.8.5 of the BNG Assessment Report, must be recorded as hedgerow lengths and therefore units lost in the metric. However, because the metric covers the Solar PV Sites and the CRC and doesn't include habitat reference numbers, the council cannot determine whether this has been accurately recorded in the metric. It is evident the metric has calculated that the Solar PV Sites alone would result in a total net percentage change (comprising a gain) in hedgerow units that is 7.04% greater than the total net percentage change (comprising a gain) calculated for the Solar PV Sites and CRC combined. Nevertheless, without seeing a metric for the CRC alone, and given that the submitted metric and plans don't provide habitat reference numbers, it is difficult to verify the exact breakdown and accuracy, and this is particularly relevant in respect of hedgerow losses and gains.

#### Observation 4

- 6.62. Condition assessment sheets have not been provided for the habitats assigned a condition in the submitted BNG metric and condition assessment information has likewise been omitted from the BNG Assessment Report. Paragraph 1.2.9 of the BNG Assessment Report [\[APP-273\]](#) provides the following explanation: *"Condition assessment information for each individual habitat parcel recorded has not been presented in this document, given the number of parcels recorded, as detailed above. Instead, summaries of the overall condition scores for each habitat, hedgerow, and watercourse type are provided in Tables 2 and 3."*
- 6.63. The omission of condition assessment sheets alongside the metric and condition assessment information in the BNG Assessment Report constitutes a deviation from *The Statutory Biodiversity Metric User Guide* (Last updated: 3 July 2025) (hereafter referred to as 'the User Guide') which states:

“You should conduct a condition assessment for all habitat parcels which require you to assign a condition to them in the biodiversity metric tool. You should use the biodiversity metric condition sheets to do this and provide these as evidence to support your assessment.

Biodiversity metric condition sheets can be used to evidence good, moderate or poor condition. Fairly good and fairly poor are intermediate condition categories. If you need to use these, you should:

- complete a biodiversity metric condition assessment sheet
- make site specific judgements using ecological expertise
- explain any deviations against specific condition criterion
- provide ecological reasoning”

6.64. Whilst paragraph 1.2.9 of the BNG Assessment Report [[APP-273](#)] attempts to justify the omission, the provided rationale is not augmented by the provision of a citation to demonstrate where in guidance this deviation has been advocated for certain circumstances. It is therefore suggested that the ExA interrogates this matter further. Furthermore, the ExA is advised that the absence of condition assessment information has meant that the council’s Ecology Officer has not been able to verify the condition of the habitats.

#### Observation 5

6.65. The ExA is requested to note that assumptions have been made in the Statutory BNG Metric [[PDA-008](#)] in respect of the 17ha of the CRC that had not been surveyed at the time the BNG Assessment Report was produced. This is discussed in the Limitations section in paragraph 1.2.18 of the aforementioned report [[APP-273](#)].

#### Observation 6

6.66. In terms of the Minimum Mapping Units (MMU) used for the BNG Assessment, paragraph 1.2.11 of the BNG Assessment Report [[APP-273](#)] states: “*Given the extent of the Solar PV Sites, the following Minimum Mappable Units (MMU) for UKHab classification were generally set at:*

- *Area features (HU) – 400 m<sup>2</sup> (20 m x 20 m); and*
- *Linear features (HeU and WU) – 20 m.”*

6.67. Paragraph 1.2.12 of the BNG Assessment [[APP-273](#)] presents a justification for this approach and the adoption of these MMU as follows: “*It should therefore be noted that some habitat parcels or features below the above MMU thresholds were not individually mapped and included within the BNG calculations. This approach is in line with UKHab guidance and is considered proportionate to the size of the Scheme. An exception to this general rule was made for ponds, as all ponds were individually mapped regardless of area.*”

- 6.68. The council has concerns about the large MMU applied and the potential for inaccuracies and the increased risk of significant errors as a result of adopting this approach to mapping the habitats. This is because using a large MMU for area features and linear features can result in smaller areas of high-value habitat being overlooked or subsumed into a lower-value category, resulting in a lower baseline score. This makes achieving the 10% BNG target easier but can fail to reflect the actual ecological baseline and can reduce the accuracy of the metric calculation.
- 6.69. Therefore, the council cannot corroborate the supposition put forward in paragraph 1.2.10 of the BNG Assessment Report [\[APP-273\]](#) which states: *"It is anticipated that a non-significant margin of error may occur throughout the mapping process, from collecting data in the field to mapping using QGIS software."*
- 6.70. Furthermore, paragraph 1.2.12 of the BNG Assessment Report [\[APP-273\]](#) states that the approach adopted for the MMU is in line with UKHab guidance. However, an exact citation for the UKHab guidance which advocates the adopted approach has not been provided in paragraph 1.2.12, and the 'References' section of the report also appears to omit the UKHab Classification document or any other UKHab reference. This is pertinent as contrary to what is stipulated in the BNG Assessment Report, it is understood that the 400m<sup>2</sup> MMU approach that has been applied for Lime Down Solar Park is not actually cited or recommended in the UKHab definitions or any other UKHab guidance, and neither is it discussed in the User Guide. Rather, it is understood to be an approach that has been adopted by practitioners on specific projects entailing landscape-scale surveys and for large-scale upland sites or extensive, uniform farmland sites.
- 6.71. Therefore, a robust and comprehensive rationale is required to justify the large MMUs used. Whilst paragraphs 1.2.11 and 1.2.12 [\[APP-273\]](#) refer to the extent and size of the Solar PV Sites, there is no discussion regarding the habitats across the Solar PV Sites and whether they are considered sufficiently homogeneous to warrant the approach to MMU adopted. The council therefore suggests that the ExA investigates this matter further and seeks further evidence of where this approach is supported in published guidance, and not just evidence of where this approach has been applied on other projects given that latter in itself does not render the approach to be in line with published standards and guidance.

#### Observation 7

- 6.72. Paragraph 1.2.11 of the BNG Assessment Report [\[APP-273\]](#) only refers to use of the discussed MMU in respect of the Solar PV Sites and no methodology is provided in relation to the CRC. It is assumed therefore that the stated MMU has also been applied to the CRC. It is considered that this information and supporting justification for the approach should have been provided within the Methodology. This is considered especially necessary as the proposed CRC is much narrower along the majority of its route than the Solar PV Sites and so using large MMU is likely inappropriate for the CRC. There is a need for the

adopted MMU to be applied consistently across the Order Limits given that the metric has been used for the CRC. Nonetheless, as discussed above, the council has concerns regarding the use of the stated MMU for the Solar PV Sites and so these concerns would likewise apply to the CRC in any case. It is recommended that the ExA seeks further information and supporting evidence and justification in respect of this matter.

#### Observation 8

- 6.73. The Irreplaceable Habitats tab of the BNG metric [\[PDA-008\]](#) has listed individual rural trees comprising veteran trees all in one row, effectively grouping them all together. This doesn't comply with the User Guide which requires one row per tree. In the User Guide under the heading 'Recording irreplaceable habitats', in respect of ancient and veteran trees it stipulates: *"You should record all ancient and veteran trees as individual trees separately on a single data entry row and mark these as an irreplaceable habitat. This includes ancient and veteran trees in woodlands that are not themselves ancient woodlands and those in hedgerows and lines of trees."*
- 6.74. Paragraph 1.3.6 of the BNG Assessment Report [\[APP-273\]](#) specifies: *"42 ancient and veteran trees were recorded within the Solar PV Sites."* Paragraph 1.3.7 states: *"A total of 10 ancient and veteran trees were recorded within the Cable Route Corridor and have therefore been categorised as Irreplaceable Habitat within the Metric."*
- 6.75. Each of the 52 ancient and veteran trees recorded within the Solar PV Sites and CRC should have been listed in a separate row in the Irreplaceable Habitats tab of the metric [\[PDA-008\]](#) in line with the User Guide. There is no explanation in the 'user comments' column in the metric to justify why the trees have been grouped together in one row and no explanation has been provided within paragraphs 1.3.6-1.3.7 or the Limitations section of the BNG Assessment Report [\[APP-273\]](#). The number of ancient and veteran trees recorded isn't so large that it warrants deviation from the User Guide.
- 6.76. It is also not apparent how the veteran tree total area at baseline of 3.10 hectares has been derived given that all these trees have been grouped together and the Tree Helper tool on the Main Menu tab of the metric [\[PDA-008\]](#) has not been completed, as would have been expected. The council recommends that the ExA request these matters be addressed and for clarity and information, the User Guide states: *"For individual trees, the biodiversity metric tool contains a 'tree helper' which generates an area value based on the tree's diameter at breast height (DBH)."*

#### Observation 9

- 6.77. There are Individual Trees habitats for which the User Comments in the Metric [\[PDA-008\]](#) has been left blank. Three habitats are area habitats, spanning the area covered by the individual trees. The User Guide stipulates that Applicants are required to enter the number of trees contributing to the area habitat in the User Comments. Individual trees habitats without user comments comprise

baseline habitat reference 46, 48 and 49 on the On-Site Habitat Baseline tab (A-1) and habitat reference 11 on the On-Site Habitat Creation tab (A-2).

#### Observation 10

6.78. There is one error in the metric [[PDA-008](#)] on account of the Trading Rules not having been satisfied in respect of area habitats. This is because there are net losses of medium distinctiveness *area habitats* in one broad habitat group, and too few gains at higher distinctiveness categories to offset these losses. The broad habitat group concerned is: Cropland, which loses 14.53 biodiversity units (BU), from “Cropland - Arable field margins game bird mix” (16.59 BU pre-intervention, and 0.0 BU post-intervention, so a loss of 16.59 BU) and “Cropland - Arable field margins pollen and nectar” (4.2 BU pre-intervention, and 0.0 BU post-intervention, so a loss of 4.2 BU).

6.79. In terms of how this Trading Rule error has been addressed in the BNG Assessment Report [[APP-273](#)], it states:

*“1.1.15 The permanent grassland habitats provided, particularly areas of ONG, will also create opportunities for similar species as arable field margins, such as for pollinators, birds, mammals, reptiles and amphibians, whilst suitable habitat for arable weed species present within the arable field margins will be provided in the fields of permanent set-aside.*

*1.11.16 In these instances, it is therefore considered that whilst the Metric reports a failure of the trading rules for ‘Cropland’ habitats, the proposed habitat creation on-Site will actually result in the real-world provision of equivalent habitats for this habitat type, and therefore, taking into account professional judgement, the BNG assessment is considered to be fully compliant with all trading rules.”*

6.80. In order to give a suitably informed view on the validity and robustness of the justification provided for how the Trading Rule error can be overcome, the reviewer should ideally be able to accurately cross reference between the metric and associated plans using habitat reference numbers. However, as already discussed, these have not been included in the metric and associated plans. In the absence of this level of information and detailed plans, the council’s Ecology Officer advises the ExA that they may wish to seek further information, but also advises that the rationale provided sounds reasonable.

#### Observation 11

6.81. As detailed in the Council’s Relevant Representation [[RR-4934](#)] and discussed with the Applicant prior to the DCO application being submitted, the BNG Assessment Report and metric should be prepared on the basis that only modified grassland of poor condition will be attainable underneath and between the solar panels. Whilst the council has reviewed the plates in the BNG Assessment Report [[APP-273](#)], this has not permitted a full review and verification of the habitats proposed because plans with habitat reference numbers that correspond with the metric have not been provided.

- 6.82. As such, the council's Ecology Officer is unable to confirm that across the entirety of the Solar PV Sites only modified grassland of poor condition has been proposed underneath and between the panels, although this does seem to be broadly shown on Plates 8-12 within the BNG Assessment Report. It isn't possible to verify this in detail. It is recognised however, that paragraph 1.7.33 of the BNG Assessment Report [[APP-273](#)] details the proposed grassland habitat types and conditions which aligns with the council's required approach.

## **7. Hydrology, Flood Risk and Drainage Considerations**

- 7.1. On the information before the Examination, the Lead Local Flood Authority (LLFA) cannot be satisfied that the proposed development avoids an increase in surface water runoff rates or volumes, nor that flood risk will not be exacerbated either on-site or off-site.
- 7.2. The core evidential gap is the absence of quantitative, field-scale hydrological modelling capable of representing:
- Panel-row hydrology
  - Between-row channelisation
  - Access track preferential flow paths
  - Soil compaction from construction
  - Catchment connectivity across multiple parcels
  - SuDS performance under design storm conditions
  - Safe exceedance routing.
- 7.3. The [Overarching National Policy Statement for Energy \(EN-1\)](#) requires evidence-led assessment demonstrating that development does not increase flood risk elsewhere; the [National Policy Statement for Renewable Energy Infrastructure \(EN-3\)](#) reinforces this for solar PV schemes. The scheme's scale and hydrological sensitivity mean quantitative hydrological assessment is necessary.
- 7.4. Substantial flooding concerns have been raised by residents, organisations, parish councils and expert local stakeholders within the Relevant Representations submitted to the Planning Inspectorate for Lime Down Solar Park. These representations describe widespread flooding, rapid runoff, ditch overtopping, saturated land and repeated annual flood events across the catchment.
- 7.5. The LLFA considers that quantitative hydrological modelling is essential during the Examination to resolve flood risk uncertainties.

## Policy and Legal Framework

- 7.6. National Policy Statement EN-1 requires applicants to present evidence-led assessments demonstrating that development:
- Does not increase flood risk elsewhere
  - Manages surface water safely
  - Is supported by adequate environmental information.
- 7.7. EN-1 requires assessment of flood risk “from all sources”, including surface water, and requires quantitative evaluation where hydrological change is reasonably foreseeable.
- 7.8. EN-3 confirms EN-1 applies fully to renewable energy schemes. Solar PV arrays can modify infiltration, overland flow and catchment connectivity, requiring quantitative, proportionate modelling.
- 7.9. EN-1 requires the Secretary of State to be satisfied at the point of decision that flood risk impacts have been assessed and appropriately mitigated. Where impacts depend on flow behaviour, exceedance or downstream interaction, this assessment cannot be deferred. In the absence of appropriate modelling, compliance with EN-1 cannot be demonstrated.
- 7.10. Furthermore, [Environment Agency Standing Advice](#) – *Check if a flood risk assessment is needed and one is provided* (updated 2025) confirms that major development affecting surface water pathways or watercourses must provide:
- A site-specific Flood Risk Assessment (FRA)
  - Surface water drainage assessment
  - LLFA consultation.
- 7.11. The council considers that the Lime Down Solar Park scheme clearly triggers these requirements.

## Evidence and Best Practice

- 7.12. Local Authority guidance, for example surface water drainage guidance from the [Essex Design Guide](#) and the Doncaster LLFA [Solar Farm Drainage and Flood Risk Guidance](#) identifies that large solar arrays:
- Concentrate runoff beneath panels
  - Increase flow velocity downslope
  - Generate erosion / gullies
  - Increase runoff where soils are compacted
  - Require modelling-supported drainage strategies.
- 7.13. Wiltshire Council considers that these risks apply directly for the Lime Down Solar Park scheme as solar farms alter:

- Interception
- Infiltration
- Sheetflow and channelised flow
- Catchment boundaries
- Track drainage behaviour.

7.14. Therefore, modelling is required to quantify these interactions across the scheme area, which is in excess of 1,000 hectares.

7.15. SuDS must be:

- Sized using hydrological inflow modelling
- Tested under 1:30, 1:100, and 1:100 + Climate Change (CC) storms
- Assessed for exceedance routing.

7.16. Qualitative designs cannot verify performance as industry guidance emphasises risks of:

- Dripline flow convergence
- Track diversion of flows
- Rill / gully erosion
- Underestimated runoff peaks.

7.17. Therefore, a quantified hydrological assessment is justified.

### **NSIP Precedent**

7.18. Large solar NSIPs, including Longfield Solar Farm ([EN010118](#)) and Green Hill Solar Farm ([EN010170](#)), were examined on the basis of quantitative modelling to inform decision-making under EN-1. In those examinations, quantitative modelling formed part of the evidential base relied upon by the Examining Authority to assess flood risk and surface water impacts, including:

- Flow modelling to define surface water behaviour during design and extreme events;
- Exceedance mapping to identify flow paths, ponding areas, and interactions with adjacent land;
- Climate change sensitivity testing to demonstrate scheme performance under projected future rainfall scenarios; and
- Construction-phase hydrology assessment to evaluate temporary changes in runoff and drainage conditions.

7.19. In each case, this modelling was available at Examination stage and informed the Examining Authority's assessment, enabling the Secretary of State to be satisfied that flood risk impacts had been assessed in accordance with EN-1

(paragraph 7.9 above), rather than deferring assessment of acceptability in principle to post-consent discharge.

- 7.20. A consistent evidence standard across NSIPs therefore requires field-scale modelling for the Lime Down Solar Park scheme.
- 7.21. Furthermore, a very high proportion of the Relevant Representations received for the Lime Down Solar Park scheme reference flooding concerns. These include:
- Repeated annual flooding of lanes, roads and fields
  - “Deep floodwaters” on local roads
  - Ditch overtopping following moderate rainfall
  - Surface water flowing into properties
  - Fast runoff from agricultural land into villages.
- 7.22. Residents from Sherston, Hullavington, Easton Grey, Luckington, Malmesbury, Grittleton and Foxley have raised detailed concerns about:
- Accelerated runoff from slopes
  - Soil saturation
  - Reduced infiltration capacity
  - High flows entering ditches and culverts that already struggle in storm conditions.
- 7.23. Storm Bert (23-24 November 2024) further intensified flooding concerns, with widespread flooding reported across the area, reinforcing existing evidence of catchment sensitivity to prolonged rainfall events.
- 7.24. Organisations, including the Environment Agency [\[RR-1394\]](#), Wiltshire Council (as the LLFA and LPA) [\[RR-4934\]](#) and numerous Town and Parish Councils (Sherston Parish Council [\[RR-4350\]](#), Luckington and Alderton Parish Council [\[RR-2873\]](#), Melksham Without Parish Council [\[RR-3141\]](#), Easton Grey Parish Meeting [\[RR-1220\]](#), Grittleton Parish Council [\[RR-1742\]](#), Kington St Michael Parish Council [\[RR-2701\]](#), Yatton Keynell Parish Council [\[RR-4941\]](#) and others) expressed flood risks concerns in their Relevant Representations. These bodies cited:
- Saturated catchments
  - Recurrent flooding
  - Ditch and culvert limitations
  - Potential downstream impacts to Avon catchment towns
  - Need for proper hydrological modelling.
- 7.25. The council considers that the institutional evidence should carry significant weight and the concerns identified by residents and landowners should be considered as material evidence for the Examination.

## Site-Specific Risk Pathways

- 7.26. The proposed Lime Down Solar Park development spans numerous hydrologically connected parcels, with varied slopes, overland flow paths and watercourses.
- 7.27. With regard to panel-row hydrology, the 6.1 Environmental Statement Volume 1, Chapter 11 Hydrology, Flood Risk and Drainage [\[APP-063\]](#) identifies slopes and soils that favour concentrated flow. Quantification of flow rates, velocities and erosion potential is required because EN-1 decision-stage assessment depends on demonstrable understanding of flow rates, velocities, depths and erosion potential, without which the scale and acceptability of flood risk impacts under exceedance and climate-change conditions cannot be evidenced.
- 7.28. The access tracks may divert flow, creating unintended catchment transfers. This risk is widely raised in resident Relevant Representations.
- 7.29. In terms of catchment connectivity, ES Chapter 11 [\[APP-063\]](#) identifies multiple downstream ditches, culverts and watercourses. The Applicant's Flood Risk Assessment and Drainage Strategy [\[APP-210\]](#) to [\[APP-218\]](#) includes mapping that overlay Environment Agency fluvial flood risk datasets onto the proposed development parcels, showing fluvial flood risk zones intersecting parts of the site; however, no quantitative modelling of hydrological connectivity or downstream flow propagation has been undertaken.
- 7.30. The council notes that the Applicant's SuDS are conceptual. Without modelling inflows, storage, spillway behaviour and exceedance routing, performance cannot be verified.
- 7.31. Furthermore, with regards to the Applicant's ES and FRA sensitivity, overland flow cells identified in 6.1 Environmental Statement Volume 1, Chapter 11 Hydrology, Flood Risk and Drainage [\[APP-063\]](#) reinforce the need for quantitative data.

## Weight and Probative Value

- 7.32. Wiltshire Council considers that the combined weight of national policy requirements, including NPPF paragraphs 159-161 and the decision-stage requirements of EN-1 and EN-3, Environment Agency guidance on surface-water flood risk and exceedance flow routes, local authority drainage guidance as applied to large-scale solar developments, and established NSIP precedent, specifically Longfield Solar Farm ([EN010118](#)) and Green Hill Solar Farm ([EN010170](#)), which were examined on the basis of Flood Risk Assessments supported by quantitative surface-water assessment, establishes a clear need for quantitative hydrological modelling. This is further supported by community evidence contained within Relevant Representations and by the Applicant's own Flood Risk Assessment, contained within 6.3 Environmental Statement Volume 3, Appendix 11-8 Flood Risk Assessment and Drainage Strategy – Lime Down E2 [\[APP-217\]](#) together with associated flood-risk mapping

presented in Environmental Statement Volume 2 figures and relied upon within that assessment.

7.33. Without modelling, the LLFA cannot determine that flood risk will not increase.

### **Recommendations to the Examining Authority**

7.34. The LLFA requests that the ExA require the Applicant to submit field-scale hydrological modelling (see Appendix A for Modelling Parameters) during the Examination, to include:

- Panel-row hydrology
- Access track hydrology
- Soil compaction effects
- Construction and operational phases
- Climate change sensitivity
- SuDS performance
- Exceedance routing
- Calibration using Storm Bert observations (where practicable).

7.35. If modelling is not provided during the Examination, the council considers that a Requirement should prohibit commencement until modelling, drainage strategy, Construction Surface Water Management Plan (CSWMP) and FRA updates are approved, with post-construction verification.

7.36. The full legislative text of the Requirement should be as follows:

### **Hydrological Modelling (1D-2D) and Exceedance Assessment**

No development shall commence until a single, integrated Hydraulic Modelling and Exceedance assessment has been submitted to and approved in writing by the local planning authority. The assessment shall be prepared in accordance with the Environment Agency's "Using modelling for flood risk assessments" and river modelling technical standards and shall:

- (a) provide 2D surface water modelling for the pre-construction, construction (temporary works), operational and decommissioning states for each PV area (A-E) and all hydrologically connected land within the Order limits, together with an appropriate buffer (minimum 100m), merged into contiguous domains where flow connectivity exists;
- (b) include 1D–2D coupled fluvial modelling for all ordinary watercourses within or adjacent to the Order limits, to define Flood Zone 3b (functional floodplain) and interactions with site works;
- (c) assess, as a minimum, the 1 in 30-year, 1 in 100-year and 1 in 100-year plus climate change events, including sensitivity testing for rainfall duration, culvert blockage and ground-condition roughness for pre-works, temporary works and operational states;

- (d) demonstrate how exceedance routes are identified and safeguarded from sensitive receptors (including dwellings, highways, watercourses and Public Rights of Way), and that the proposed drainage and earthworks would not increase flood risk elsewhere;
- (e) provide model outputs include depth, velocity, hazard mapping and flow vectors, together with GIS layers; and
- (f) include a quality assurance statement demonstrating compliance with the Environment Agency modelling standards, together with a Model Review Note responding to Environment Agency and Lead Local Flood Authority's comments.

Where the Applicant demonstrates that a specific parcel of land is hydraulically isolated and does not influence Flood Zone 3b definition or exceedance routing, the local planning authority may agree a proportionate reduction in model coverage for that parcel.

### **Scope of the Scheme**

The Scheme must include, as a minimum:

- (a) **Field-scale hydrological modelling** representing, for construction and operation:
  - (i) Panel-row hydrology (including dripline concentration and between-row routing),
  - (ii) Access track hydrology (including preferential flow pathways),
  - (iii) Soil compaction and ground condition changes from construction and maintenance activities,
  - (iv) Catchment connectivity to ditches, culverts and watercourses,
  - (v) SuDS performance (conveyance, attenuation, treatment and drain-down), and
  - (vi) Exceedance routing for the 1 in 100 year event with climate change, using survey-grade topographic data.
- (b) **Climate change and storm sets:** assessment of multiple critical storm durations (short, medium and long duration events) for the 1 in 30 year, 1 in 100 year and 1 in 100 year + climate change scenarios, with allowances consistent with current policy and guidance at the time of submission.
- (c) **Control points and performance targets:** demonstration that there is **no increase in greenfield runoff rates and volumes at all agreed control points** for the operational phase, and that exceedance routes avoid sensitive receptors and critical infrastructure.
- (d) **A Revised Flood Risk Assessment and Integrated Drainage Strategy:** integrating modelling outputs into final SuDS sizing, layout, exceedance pathways, spillway behaviour, and (where relevant) watercourse crossing hydraulics, with plans, long-sections, and details sufficient for technical approval.

- (e) **A Construction Surface Water Management Plan (CSWMP):** covering temporary drainage, sediment and pollution control, earthworks phasing, haul-route management, wheel-wash, emergency contingencies and inspection / maintenance during construction.
- (f) **Maintenance and management:** a SuDS maintenance plan identifying asset ownership, access, inspection frequencies, performance monitoring and funding arrangements for construction, operation and decommissioning.
- (g) **Verification and monitoring:** proposals for pre-operation verification (including survey and performance checks) and an approach to **post-construction monitoring** and remediation if required, proportionate to risk.
- (h) **Consents interface:** confirmation of the Applicant's strategy for any **ordinary watercourse consents** or other approvals required by law for works affecting ordinary watercourses, culverts or their by-pass / overflow arrangements, and how those will interface with the Scheme.

### **Implementation**

The authorised development must be **constructed and maintained** in accordance with the approved Scheme. Any variation must be approved in writing by the relevant planning authority, following consultation with the Lead Local Flood Authority and the Environment Agency.

### **Pre-operation Verification**

**Prior to first operation**, the undertaker must submit an **as-built verification report** to the relevant planning authority confirming:

- (a) SuDS assets and watercourse works have been constructed as approved (as-built plans and levels);
- (b) Storage volumes, hydraulic controls and outfalls accord with the Scheme;
- (c) Exceedance routes are in place and free from obstruction; and
- (d) Maintenance responsibilities have been transferred / established.

Operation must not commence until the verification report is **approved in writing** by the relevant planning authority, following consultation with the Lead Local Flood Authority.

### **Purpose and Interpretation**

This Requirement secures **evidence-led** hydrology and drainage outcomes consistent with **EN-1** (no increase in flood risk elsewhere; adequate environmental information) and **EN-3** (renewables must demonstrate robust assessment and resilience), and with the Environment Agency's standing advice for major development and surface water drainage management.

## **8. Built Heritage Considerations**

- 8.1. From a built heritage perspective, the council's position remains as advised in its Relevant Representation [[RR-4934](#)]. However, following on from the council's review of Interested Party Relevant Representations, and specifically [[RR-3086](#)], a further potential issue was identified:
- 8.2. The potential impact on its setting from the temporary construction compound and cable route (Works No. 5A) to the east of the Grade II\* listed Grittleton House appears to have been insufficiently assessed. The current assessment focuses on the impact of Lime Down Solar Park Site C to the north and on the impact of the cable route on the Conservation Area. However, it does not assess impact on the significance of Grittleton House specifically.
- 8.3. The council considers this merits further assessment and it has been agreed with the Applicant's heritage team that a site visit would be useful to inform the assessment. It is understood that this is to be arranged for April 2026.
- 8.4. Furthermore, the council's Built Heritage and Conservation officer is aware that the Applicant is proposing some changes to the outline management plans to address comments in the council's Relevant Representation and will also be providing additional analysis in respect of the impact from the scheme on views from Bradfield Manor. The council will review and provide comment on these documents once they have been submitted into the examination.

## **9. Highways and Transport Considerations**

- 9.1. As will be clear from the Highways Development Management concerns raised in both the council's Relevant Representation [[RR-4934](#)] and Local Impact Report, the potential damage to the local highway asset because of the regular HGV trafficking which will ensue over the two-year construction period is a major concern. Following a further site visit made since the submission of the council's Relevant Representation, it was readily noted that many of the very minor narrow lanes in the area are in a relatively poor condition. However, the carriageway along the Alderton Road / Fosse Way route and the unnamed road between the end of the Fosse Way and Sherston (so the Lime Down Solar Park sites A-C access route) did not seem to be in a poor structural condition now, or indeed the minor road between Dyson Roundabout and Bradfield Cottages (Lime Down Solar Park site D access route). However, these carriageways are not currently subject to a lot of HGV usage, so how they will stand up to the high axle loadings from regular articulated and rigid HGV construction trafficking during the build-out of the Lime Down Solar Park sites is a big unknown and concern. As such, the level of damage risk could include areas of total structural pavement failure, where the construction depth of these minor roads is relatively thin and not potentially designed or adequate for sustained heavy vehicle axle loadings.

- 9.2. In short, highway damage and remedial costs could be very substantive and widespread and not necessarily limited to verge over-run or edge damage caused by passage issues for two HGVs, or even a car / HGV along specific lengths. It is accepted that the submitted 7.22 Outline Construction Traffic Management Plan (OCTMP) [APP-287] proposes that pre-construction condition surveys would be undertaken, albeit the extents are still to be agreed. However, if defects picked up show that the baseline condition is poor in certain locations, then it is not inconceivable that an unacceptable level of damage might well occur with HGV trafficking during the construction phase. It is thus unclear what the Applicant would be required to do under the DCO in this circumstance during the construction phase, so short-term remedials necessary to make the highway safe. It should not fall on Council budgets to do this.
- 9.3. Within the Local Impact Report, and mindful of the above, the council has made clear its view that a formal **s59 Agreement** (Highways Act 1980) should be included as a DCO Requirement to cover highway damage liability, so not something the Applicant 'might' be prepared to entertain or agree to. Furthermore, a set of pre-construction and post-construction surveys won't cover what may need to be done to address unacceptable damage and potential safety issues should this happen during the construction period. "Exceptional traffic" on a highway, often legally referred to as extraordinary traffic under UK law (Section 59 of the Highways Act 1980), refers to traffic that is so exceptional in quality or quantity, or so unusual in ordinary occurrence, that it causes damage to the road beyond what is common. It is not defined by a specific vehicle type, but rather by the damage it causes and how it differs from the average traffic on that specific road. It is clearly a question of fact to be determined for each case, but it would seem to the council that it would be difficult for the Applicant to argue that the level of HGV trafficking needed to construct the Lime Down Solar Park sites would be anything other than 'extraordinary' on the minor roads being used for proposed construction access.
- 9.4. It is not the purpose of the Written Representation to set out the precise content to be covered in a s59 Agreement for the Lime Down Solar Park scheme. However, it is considered the following should be covered as a minimum:
- The required network extent of comprehensive 'independent' highway pre-condition surveys. Road lengths considered as a necessary 'minimum' by Wiltshire Council have been set out in its Local Impact Report.
  - Agreement to do some pre-emptive works if necessary if the said pre-condition surveys reveal defects which could lead to early failure with the level of HGV construction traffic envisaged.
  - Linked to the above, a mechanism to do necessary repairs at no cost to the council during the construction / decommissioning phase. This would require details of remedial works proposed to be firstly approved by the council, and the completed works subject to an inspection regime.

- Agreement to return the roads covered and used for HGV construction trafficking to 'at least' as good a condition as they were at outset after the construction / decommissioning phase.
- 9.5. The council is also in discussions with the Applicant regarding the inclusion of bespoke Protective Provisions within the draft DCO [\[APP-016\]](#) for the benefit of the local highway authority and other amendments required to address the council's concerns with current DCO drafting as raised within its Relevant Representation [\[RR-4934\]](#).
- 9.6. One specific point made by other respondents on the OCTMP [\[APP-287\]](#) and expressly access to Lime Down Solar Park areas A-C, is how it will be 'policed' and 'managed' and any potential HGV construction routing non-compliance dealt with. The very valid concern, which is recognised and supported by Wiltshire Council [\[PDA-014\]](#), is with access from the east to the Lime Down Solar Park sites A-C areas. This is because the prescribed route westwards to M4 Junction 18 and then back eastwards along the B4040 / B4039 to Grittleton is considerably longer than exiting at M4 Junction 17 and using either 'The Street' through Hullavington to get to Grittleton or the Lime Down Solar Park site D route beyond Bradfield Cottages to Fosse Way via Norton. Given the significant reduction in mileage with exiting at M4 Junction 17, it is considered there could be considerable incentive for HGV drivers seeking to access the Lime Down Solar Park A-C sites from this direction to do it. Whilst the council will inevitably be alerted to any noticeable increase in HGV trafficking along 'The Street' through Hullavington by residents, it may be more difficult to pick this up on the route up to Bradfield Cottages where a lot of HGV trafficking linked to Lime Down Solar Park site D will be expected anyway. However, it is equally likely that residents in Norton will be equally quick to identify any HGV construction traffic routing via the village to reach Lime Down Solar Park sites A-C. Notwithstanding dealing with the level of complaints which will inevitably ensue if this non-compliance routing occurs, it would also introduce HGV trafficking onto minor roads which are unsuitable and in potentially a poorer existing condition than those set out in the OCTMP. Therefore, the council will require regular monitoring of flows at Norton and through Hullavington by the Applicant.
- 9.7. As noted at the start of this Section, these comments are additional to the detailed highway comments made in the council's Relevant Representation [\[RR-4934\]](#). The latter covers the main key issues of concerns with 'Highways and Transport'. These may be broadly summarised as follows:

#### **Draft DCO Provisions:**

- 1) The council's Highway Development Management (HDM) team remain concerned over the ability of the council to control works being undertaken within the public highway, notably its normal powers to assure that proposed site access and other construction works will meet the council's adoptable standard. Other concerns have also been raised by the council's Network Management team about the powers conferred

by the DCO to enter onto the public highway and the Permit scheme, so how Traffic Regulation Matters and expressly temporary Orders necessary to execute the works are proposed to be administered under the DCO.

### **HGV Construction Routes and Two-Way Passage**

- 2) There remain major concerns over potential highway operating and safety issues associated with the inability to pass two HGVs on most of the minor roads proposed for construction access to the Lime Down Solar Farm sites, notably as the existing passing point opportunities have not even been assessed or any mitigation proposed. The highway damage consequences of this where verges are regularly over-run is also a concern, which as submitted analysis show, could happen with HGV / car passage along many sections where the carriageway width is inadequate to accommodate even this. The additional comments in this Written Representation expand and re-iterate the concerns over highway damage risk, which could in the council's view be very significant.

### **HGV Volumes – Solar Farm Sites (Construction Phase)**

- 3) The predicted volumes of HGVs expected during the construction phases for each of the Lime Down SF sites (A-E) is still a point of discussion, with some clarification sought on these estimates following DCO application document review. The supporting calculations undertaken for Modules and Mounting Structures for each Lime Down site have not been fully provided or verified by evidence from existing solar farm sites. For example, whilst the total number of assumed PV Modules for each of the Lime Down sites (A-E) has been provided, it is unclear how these quantities have been derived. The area occupied by panels on each site will be known (Works Area 1), but the density / ha assumed and how this compares with the assumptions adopted for other consented solar farm sites or those in operation is unknown. The same query applies to module mounting structures, as assumptions made regarding the type of mounting structures or foundations / supports are also absent. Similarly, aggregate volumes are not determined on a Lime Down site-by-site basis, or on what basis, so the total access track lengths and their width / depth of construction. It is further noted the 'waste' calculations account for only removal of packaging, so seemingly exclude any allowance for removal of excavated 'spoil' material associated with the construction of the access trackways, the construction compounds and the foundation bases for the BESS and 440kV and 132KV substations. Clearly, any under-estimates in components or need for the export of spoil could significantly increase the volume of predicted HGV movements needed over the construction period, so adding to the highway safety and damage concerns.

## 10. Economic Considerations

- 10.1. Wiltshire Council disagrees with the Applicant on whether the Lime Down Solar Park scheme will have a significant or an adverse effect on the local economy. This is as set out within the council's Relevant Representation [\[RR-4934\]](#) and its Local Impact Report, which will also be submitted at Deadline 1.
- 10.2. Whilst the impact on the whole of Wiltshire resulting from the scheme may only be adverse, for the local area in which the scheme is situated, Wiltshire Council maintains that the impact will be significant, particularly during the construction and decommissioning phases.

## 11. Climate Change Considerations

- 11.1. Further to the Wiltshire Council's Relevant Representation [\[RR-4934\]](#) and Local Impact Report, the council has sought independent advice on the proposal for Lime Down Solar Park and the associated carbon emissions. The council commissioned University of Exeter, Centre for Energy and the Environment (CEE) to review the greenhouse gas (GHG) emissions calculations and methodology submitted by the Applicant as part of its DCO application (6.1 Environmental Statement Volume 1, Chapter 7 Climate Change [\[APP-059\]](#)).
- 11.2. This independent report produced by the University of Exeter CEE has been appended to the council's Written Representation at Appendix B.

### Carbon Payback Time

- 11.3. The commissioned University of Exeter CEE report has confirmed the council's previous representation that the carbon emissions of the scheme would take a long time to be offset by the emissions saved by the scheme, if they are able to break even at all. The independent report has appraised the methodology and calculations used by the Applicant and finds that the estimated carbon emissions are likely to be underestimated, and that the project may not break even in terms of carbon emissions during the project lifetime.
- 11.4. The Applicant's projected carbon savings from the project were based on the premise that grid emissions are frozen at 2029 levels for the following 60 years. This was not considered realistic and does not reflect current trends in grid emissions or the direction of successive government policies. In addition, the review questioned elements of the methodology in terms of its completeness and found a number of inconsistencies and numerical errors.
- 11.5. The 6.1 Environmental Statement Volume 1, Chapter 7 on Climate Change [\[APP-059\]](#) should provide a transparent assessment of greenhouse gas emissions and assessment of significance, using an approach aligned with the Institute of Environmental Management and Assessment (IEMA) (Table 7-1, ES Chapter 7). The assessment of significance used by the Applicant is limited. It is accepted that it is appropriate to consider the national Carbon Budgets,

however IEMA guidance also recommends drawing on multiple sources of evidence to come to a view about significance in relation to a range of contexts, for example local carbon emissions and targets, national policy and sector-based emissions. The focus of this Environmental Statement report is somewhat narrower and considers the calculation of the project emissions and the potential for emissions reduction. This approach leads to a narrow assessment of significance, but also a narrow consideration of the benefits, which has led to questioning whether the project pays back in terms of carbon.

- 11.6. Notwithstanding this, it is important to state that ground-mounted solar still has a role to play in decarbonisation of the electricity grid, which in turn enables deeper carbon emissions reductions for example by enabling low carbon heating of homes and electrification of transport.
- 11.7. This reiterates the point made that, the scheme has potentially significant net benefits in terms of carbon emissions reduction, when looking at the bigger picture. It is acknowledged that acceleration of solar farm delivery is part of the government's plans to achieve clean electricity generation and are part of wider transition to a low carbon future. The existing national and local planning policy does not require renewable energy projects to demonstrate need or demand as the need for renewable and low-carbon energy is already established nationally and does not need to be considered at the level of individual development proposals. National independent analysis (CCC 6<sup>th</sup> carbon budget) and national government plans (Solar Roadmap and Land Use Framework) make it clear that renewable energy will not take more than 1-2% of land area, and that this will not threaten food security.

#### Impact versus Benefits

- 11.8. The key issue that remains is whether an infrastructure project of this scale is suitable at this location, given the local impacts. In the absence of a Strategic Spatial Energy Plan, it is not clear how the Examining Authority (ExA) will come to a decision as to whether this part of Wiltshire is to be prioritised as a strategic location, and whether this project is a priority use of the 4<sup>th</sup> and 5<sup>th</sup> Carbon Budget.
- 11.9. The independent report looks at the methodology used by the Applicant to determine significance of the scheme's emissions in comparison to the national Carbon Budget for the electricity sector during the relevant period. Section 6.1 of the report at Appendix B states:

*"The determination of significance on the basis of these national percentages alone is subjective and should probably be presented in terms of the contribution to the national demand for electricity. For reference, UK electricity demand in 2024 according to DUKES was 284,986 GWh, if we assume for a moment that demand is broadly similar in 2029 (it will more than likely increase), the maximum generation of 438,000 MWh by the project in 2029 would provide about 0.15% of the power for 0.49% of the sector emissions. Whether this is significant may also be subjective but perhaps looks like less good value.*

*The IEMA guidance suggests that good practice entails drawing on multiple sources of evidence (Figure 6) so the question of significance should be based on consideration of emissions in a range of context including for instance local emissions targets and contributions to policy objectives (Figure 6)."*

### Impact of Land Use Change

- 11.10. Representations have been submitted by Interested Parties, which ask for an assessment of the impacts of change of land use in terms of carbon emissions. The Applicant has not provided this as part of the 6.1 Environmental Statement Volume 1, Chapter 7 Climate Change [\[APP-059\]](#), and the council's commissioned independent report makes some comments as to the potential for a change of use from arable farmed land to unimproved grassland to have a net benefit for carbon sequestration, with additional net benefits if there is currently livestock being farmed. The report at Appendix B also makes some suggestions of the implications of different densities of hedgerows on the carbon sequestration potential. If the scheme removes substantial hedgerows (and associated significant trees), this will impact on the carbon sequestration potential of the land. However, the current proposals are not specific in the extent of hedgerows which will be removed, so the impact on carbon sequestration is unknown.

### Conclusion

- 11.11. The council's position in relation to climate change impacts of the Lime Down Solar Park scheme remain, that it is clear that solar has a role to play in the decarbonisation of the electricity grid and to enable deep carbon emissions reductions. However, the greenhouse gas emissions assessment submitted by the Applicant shows significant greenhouse gas emissions resulting from this project, which will impact on both local and national carbon budgets, and the significance of this is assessed in a narrow context.
- 11.12. The appropriateness of the scale and location of this scheme could be informed by the emerging Strategic Spatial Energy Plan. However, in its absence, the council urges the ExA to seek additional evidence about the appropriateness of scale and location of this scheme in relation to national strategic plans for renewables deployment, for example from the National Energy System Operator (NESO) or the Climate Change Committee, in order to inform a decision and to determine the significance of the scheme's emissions in the context of multiple factors, including local area carbon emissions targets, national carbon budgets and sector-based emissions to weigh the overall benefit against the impacts (please see report at Appendix B, especially Section 6.1).

### **Applicant's Response to Wiltshire Council Relevant Representation**

- 11.13. The 9.1 Applicant's Response to Relevant Representations (Part 1) [\[PDA-009\]](#) submitted at Procedural Deadline A, implies at reference WC-002 that the council's Relevant Representation has double counted the carbon emissions. This is a misunderstanding of the council's representation. The point being

made is that even though the scheme has long-term net carbon savings, the short-term emissions are significant (during the first two years of construction), at a time when the county and the nation need to be reducing emissions at pace.

- 11.14. The University of Exeter report (appended at Appendix B to this submission), discusses the carbon emissions in more detail, including a comparison of the potential for emissions savings over time at projected grid carbon intensity figures. The analysis shows that, even over its full lifetime, the project does not save enough carbon through the electricity it generates to make up for the carbon emissions created during its construction and operation, when compared against expected future electricity grid emissions.
- 11.15. The Applicant's point on the impact on Wiltshire's territorial emissions is accepted. The overall project emissions were stated by the council to be approximately 4% of Wiltshire annual emissions, and it is acknowledged that not all of these emissions would occur in Wiltshire. However, it is still a significant comparison to make, to provide a sense of scale of the emissions of the project. As the independent report states (in Section 6), good practice in determining significance of impacts entails drawing on multiple sources of evidence, including a consideration of emissions in a range of contexts including local emissions targets.
- 11.16. The council's point about the date that the scheme would break even in terms of carbon was made to highlight the fact that the carbon payback time (CPBT) had not been discussed in the submission, and regardless of the precise payback period, the fact remains that embodied carbon and accurate net carbon emissions savings are of public interest and a key piece of evidence that should be published as part of transparent decision-making.
- 11.17. With respect to the Applicant's comment at WC-028, the council welcomes the establishment of a community benefit fund.
- 11.18. Regarding the Applicant's response at WC-032, it was already understood that the figures for net saving of tCO<sub>2</sub>e represent cumulative benefit across the entire 60-year lifecycle.
- 11.19. In response to the point made that "the GHG emissions during construction, operation and decommissioning of the Scheme can be considered to be 'offset' by the net positive impact of the Scheme on GHG emissions and the UK's ability to meet its carbon targets", the council draws on the independent review where it suggests that the carbon benefit from electricity generated by the scheme through the construction and operation phases is insufficient to repay the carbon debt incurred, based on figures submitted by the Applicant. However, it acknowledges that renewable energy, including utility-scale solar schemes such as this scheme, are established in national policy as part of the necessary transition towards the decarbonisation of grid electricity which in turn will provide a route to net zero, in particular through the electrification of energy demands associated with heat and transport. As established in national policy, schemes of this type are considered to be a benefit, despite their contribution

to carbon emissions. Based on the submitted figures, however, this scheme appears to have unusually high carbon emissions, compared to similar schemes and it is therefore unclear whether this is an accurate assessment or whether a different methodology or accounting boundary would lead to a different conclusion in relation to the amount of carbon emissions or the ability of the scheme to offset them.

- 11.20. The Applicant's response to the council's Relevant Representation paragraph 7.5 (WC-033) states that most of the scheme's emissions are likely to take place outside of Wiltshire's borders, whilst the energy generated and carbon emissions saved will be within Wiltshire. It is, however, incorrect to suggest that using global rather than UK territorial emissions represents a *conservative* approach to emissions accounting. It is simply a different metric and accounting boundary. Territorial emissions estimates (based on geographical borders) and consumption emissions (used in carbon footprinting) which include overseas emissions and those from shipping, are simply different metrics designed to highlight different aspects of emissions patterns (see for example ['Measuring UK greenhouse gas emissions' from the Office for National Statistics](#)).

## 12. Public Health Considerations

- 12.1. The proposed development raises notable concerns for public health and community wellbeing. The most significant issue identified is the potential impact on community identity and culture, which could lead to frustration, stress, anxiety, and associated mental health challenges for residents. These risks are particularly linked to poor community engagement during the construction phase, with similar concerns persisting through operational and decommissioning stages. While no positive or neutral impacts were recorded, the negative effective on mental health and social cohesion are considered material and have the potential to cause harm.
- 12.2. To mitigate these impacts, Wiltshire Council recommends enforceable requirements, including a comprehensive communication strategy with measurable outcomes and an Outline Decommissioning Strategy addressing community identity and resilience. These measures aim to safeguard wellbeing and ensure effective engagement throughout the project lifecycle.
- 12.3. Public Health have focused on the human health aspects of the application but recognise that the proposals will significantly impact the amenity of the countryside including public rights of way, recreational pace, general environmental change and interferences with character of the area. There are also numerous concerns about other environmental issues such as noise, vibration, pollution, fire risks, flooding, construction traffic and the mental impact from the detriment caused. Public Health recognise and share the concerns about the mental health and impact from the range of stressors from the proposals. Although the mitigations are primarily sought by environmental controls and adjustments from other departments, the council's Public Health team strongly support all protections and mitigations to protect the mental health of the local population.

## 13. Other Matters

### Scheme Commencement and Commissioning

- 13.1. Wiltshire Council has been in discussions with the Applicant regarding the issues raised within its Relevant Representation [\[RR-4934\]](#) on the 3.1 Draft Development Consent Order [\[APP-016\]](#), and specifically with regards to Requirements to address Scheme commencement, phasing and the date of final commissioning.
- 13.2. However, as a result of information relayed by the Applicant at Issue Specific Hearing 1 on 22 April 2026, the council's previously requested wording is considered insufficient to suitably mitigate against the two grid connection timeframes and the resultant impact this could have on scheme implementation and the associated environmental effects, of which the council was previously unaware.
- 13.3. Whilst the council reserves the right to comment further on this matter, once it has had a chance to review the Applicant's response at Deadline 1A as requested by the ExA, based on the information currently available, the council considers that the following Requirements should be included within the Draft DCO [\[APP-016\]](#).

#### **“Commencement of the authorised development**

2.—(1) The authorised development, or any part thereof, must not be commenced after the expiration of the period of five years beginning with the day this Order comes into force.

#### **Phasing of the authorised development and date of final commissioning**

3.—(1) No part of the authorised development may commence until a written scheme setting out the phase or phases of construction of the authorised development has been submitted to and approved by the relevant planning authority.

(2) The scheme submitted pursuant to sub-paragraph (1) must include a timetable for the construction of the phase or phases of the authorised development and a plan identifying the phasing areas.

(3) The scheme timetable and plan submitted pursuant to sub-paragraph (2) must correspond with confirmed grid connection date(s) and the required construction timeframe of that phase or phases of the authorised development.

(4) The scheme submitted and approved pursuant to sub-paragraph (1) must be implemented as approved.

(5) The undertaker must notify the relevant planning authority within fourteen days of the date of final commissioning for a part or parts of the

authorised development that the final commissioning of that part or parts has taken place.”

## **Decommissioning and Land Restoration**

- 13.4. Wiltshire Council has previously raised concerns regarding decommissioning and land restoration, including the need for a financial bond and / or charge on the land to be secured, in its correspondence with the Applicant on the 3.1 Draft Development Consent Order [\[APP-016\]](#) and as contained within its Relevant Representation [\[RR-4934\]](#).
- 13.5. However, as a result of information relayed by the Applicant at Issue Specific Hearing 1 on 22 April 2026 regarding the potential for scheme elements to be decommissioned significantly in advance of the proposed 60-year scheme life as result of differences in the length of scheme land leases, the council has identified additional concerns than those previously raised. A phased decommissioning approach in this manner could result in additional environmental effects than had previously been identified and mitigation proposed for. The council wishes to advise the ExA that it was previously unaware that decommissioning in the above manner had the potential to occur.
- 13.6. Whilst the council reserves the right to comment further on this matter, once it has had a chance to review the Applicant’s response at Deadline 1A as requested by the ExA, based on the information currently available, the council considers that Requirement 20 of the 3.1 Draft Development Consent Order [\[APP-016\]](#) should be amended as follows.

### **“Decommissioning and restoration**

20.—(1) The authorised development, or any part thereof, must not commence until a Decommissioning Financial Security Scheme which has a duration of the scheme’s lifetime, has been submitted to and approved in writing by the relevant planning authority, in consultation with the Secretary of State.

(2) The date of decommissioning for any part of the authorised development must be no later than 60 years following the first date of final commissioning for the authorised development as a whole.

(3) Unless otherwise agreed with the relevant planning authority, no later than 12 months prior to the date the undertaker intends to decommission any part of the authorised development, the undertaker must notify the relevant planning authority of the intended date of decommissioning for that part of the authorised development.

(4) Unless otherwise agreed with the relevant planning authority, no later than 12 weeks prior to the intended date of decommissioning or any part of the authorised development notified pursuant to sub-paragraph (3), the undertaker must submit to the relevant planning authority for that part a decommissioning plan for approval.

(5) The decommissioning plan must be substantially in accordance with the outline decommissioning strategy and must include a timetable for its implementation.

(6) The decommissioning plan referred to in sub-paragraph (5) must demonstrate that the decommissioning of the authorised development, or any part thereof, would not give rise to any materially new or materially different environmental effects in comparison to those reported in the environmental statement.

(7) No decommissioning works must be carried out until the relevant planning authority has approved the decommissioning plan submitted in relation to those works, in consultation with South Gloucestershire Council and the Environment Agency.

(8) The decommissioning plan must be implemented as approved.

(9) Within 14 days of any part of the authorised development permanently ceasing to generate electricity on a commercial basis, the undertaker must notify the relevant planning authority.

(10) This requirement is without prejudice to any other consents or permissions that may be required to decommission any part of the authorised development.”

- 13.7. The council is also concerned regarding the potential adverse impacts that a phased approach to decommissioning could have on the Applicant’s benefit assessment and considers that this should be explored further during the Examination.

### **Book of Reference and Land Matters**

- 13.8. The 4.3 Book of Reference [\[APP-020\]](#) and 3.1 draft Development Consent Order [\[APP-016\]](#) do not clearly specify the nature, extent, or duration of the rights sought over land owned by the council or vested in the council as local highway authority, or the implications for the council’s statutory functions and property interests:

- a) The entries highlighted yellow in the table at Appendix C (based on the information provided in the Book of Reference) are those where the council have been unable to confirm whether the land is or, is likely to form part of the maintainable highway (based on the local highway authority’s records) and where the council has been unable to verify what rights or interests the council may have in the land;
- b) Land parcels 03-004, 03-007 and 03-009 (highlighted orange in the table at Appendix C) are not mentioned in the Book of Reference at all, and appear to comprise, in part, an adopted footpath, so it is assumed that additional rights are sought over those parcels; and

- c) Land parcel 03-049 in which the council is stated to have an interest is in fact part of the railway and therefore likely owned by Network Rail or derivative party.
- 13.9. Clarification is required in order for the council to understand whether the inclusion of land within the Order Land, and the acquisition of rights over that land, satisfies the established necessity and proportionality tests under the draft DCO regime. In particular, the Book of Reference and draft DCO do not clearly identify the specific rights sought, whether those rights are temporary or permanent, or the extent to which they are required to deliver the Proposed Development. Without this information, the council is unable to assess whether the proposed acquisition of rights over highway land and other affected parcels is no more than is reasonably necessary, or whether the scope of the Order land could be reduced or refined without prejudice to the scheme.
- 13.10. Wiltshire Council therefore requests that the Book of Reference [\[APP-020\]](#) and associated land plans be reviewed and amended to provide greater clarity as to the rights sought over each parcel of land, including their nature, extent and duration, and to ensure that only land which is demonstrably necessary and proportionate to the delivery of the Proposed Development is included within the Order Land. Where the acquisition of rights over adopted highway land is proposed, the council considers that this should be limited to what is strictly required and, where appropriate, addressed through bespoke side agreements or protective provisions rather than through the compulsory acquisition powers of the DCO.

## **14. Conclusion**

- 14.1. As the primary Host Authority for the scheme, the council submitted a Relevant Representation [\[RR-4934\]](#) which set out its key areas of concern in relation to the Lime Down Solar Park proposal, including where there were outstanding questions that require answers during this process, and where there is a requirement for additional mitigation and compensation to be forthcoming in order to address or seek to address the council's concerns. The council's Relevant Representation also identified some additional or strengthened Requirements that are considered to be necessary.
- 14.2. Given the comprehensive nature of the council's Relevant Representation, this Written Representation does not repeat aspects raised within the Relevant Representation, instead the council has used this submission to provide additional detail and information, where appropriate, on those identified areas of concern. This Written Representation supplements rather than replaces the council's Relevant Representation.
- 14.3. However, Wiltshire Council hopes that the information contained within its Written Representation is helpful to the Examining Authority in identifying some of the issues, which the council considers should be explored further during the Examination.

- 14.4. This response is without prejudice to any further representations the council will make throughout the examination process, and it should be read in conjunction with the council's Relevant Representation [[RR-4934](#)] and its Local Impact Report, which will also be submitted into Examination at Deadline 1.
- 14.5. It is also important to note that Wiltshire Council's administration is opposed to this proposed development due to its significant scale and adverse environmental impacts, which would result in the industrialisation of the countryside. Therefore, as a result of the issues identified, Wiltshire Council does not support the proposal as it stands and considers that development consent should not be granted for the Scheme as submitted.

## **Appendix A**

### **Surface Water Hydraulic Modelling Parameters**

#### **Purpose:**

To define the minimum scope and deliverables for the hydrological modelling necessary to evidence safe surface water management, compliance with EN-1 / EN-3, and alignment with Environment Agency standing advice for major development.

#### **A.1 Baseline and Scenarios:**

The model must include, as applicable:

1. **Baseline (pre-development / greenfield)** hydrology for each hydraulically distinct catchment and sub-catchment within the order limits.
2. **Construction phase:** soil stripping, temporary compaction, haul routes, compounds, culvert diversions / temporary works and interim SuDS / controls.
3. **Operational phase:** panel-row behaviour, track network, permanent SuDS and watercourse works.
4. **Decommissioning phase:** temporary drainage controls and reinstatement proposals (proportionate to risk).
5. **Climate change allowances** applied to rainfall / runoff per current policy / guidance at submission.

#### **A.2 Hydrological Representation (Arrays and Tracks)**

The model must explicitly represent:

1. **Panel-row hydrology:** dripline concentration, between-row channelisation, vegetative roughness and micro-topography influencing flow direction / velocity.
2. **Access tracks:** crossfall / longitudinal gradients, porous / non-porous construction, interception potential and **preferential flow pathways**.
3. **Soils / compaction:** parameterisation of reduced infiltration during construction and long-term changes from maintenance access; sensitivity ranges where data is uncertain.
4. **Slope sensitivity:** testing of adverse alignments (e.g., perpendicular to contours) versus mitigated layouts.
5. **Connectivity:** mapping of pre- and post-development connectivity to all **ditches, culverts and watercourses**, including any cross-boundary transfers.

#### **A.3 SuDS and Exceedance Tests**

**Inflow hydrographs** to each SuDS unit based on modelled overland / pipe inflows (not fixed “assumed” rates).

**Storage and conveyance** sizing for the **1 in 30** design event; containment and safe performance for the **1 in 100 + Climate Change (CC)** event; treatment drains where required.

**Exceedance routing** based on **surveyed ground data**, demonstrating that flows are directed away from buildings, substations, inverters, Public Rights of Way (PRoW) and off-site receptors; provide long-sections / cross-sections for exceedance corridors and simple capacity checks where relevant.

**Resilience checks:** drain-down performance, blockage sensitivity at inlets / outlets, and emergency overflow / spillway behaviour with safe re-entry to the watercourse.

#### **A.4 Crossings and Downstream Receptors**

Hydraulic assessment of **temporary and permanent watercourse crossings** (including culvert sizing to appropriate standards), demonstrably maintaining or improving existing conveyance.

**Downstream impact review:** peak flow / volume changes at agreed control points; check for **no increase in greenfield rates / volumes** and no adverse effect on downstream receptors under design and exceedance events.

**Cumulative effects:** where multiple parcels drain to the same receptor, test combined responses.

#### **A.5 Deliverables**

Provide:

1. **Model files** (inputs / outputs) and **assumptions register**.
2. **Plan figures:** peak depths, velocities, flow paths and exceedance routing for the tested events.
3. **Time-series** at control points (flows, stages, volumes, freeboard where relevant).
4. **Revised Flood Risk Assessment (FRA) and Integrated Drainage Strategy:** drawing set with levels, schedules and asset registers sufficient for technical approval / adoption.
5. **Construction Surface Water Management Plan (CSWMP):** construction drainage controls, monitoring and trigger-based responses.
6. **Maintenance plan:** asset ownership, inspection frequencies and funding arrangements.

## **Appendix B**

### **GHG Emissions at Lime Down Solar Park: Methodology Review**

By

**University of Exeter Centre for Energy and the Environment**



University  
*of* Exeter

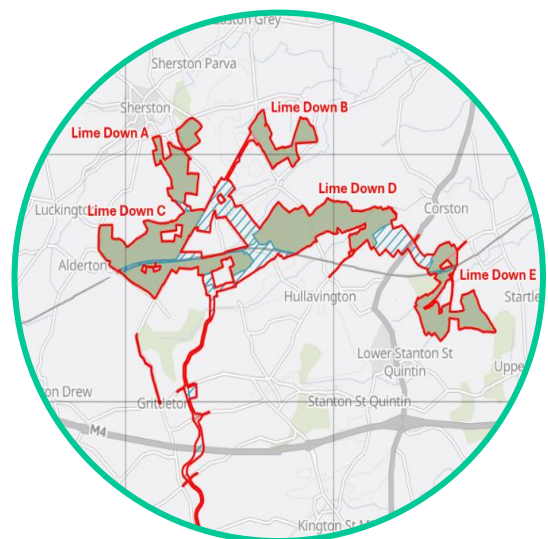
Centre for Energy  
and the Environment

# GHG emissions at Lime Down Solar Park: methodology review

Centre for Energy and the Environment

Contract Document 346

April 2026





University  
of Exeter

Centre for Energy  
and the Environment

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*Cover image:*  
*Lime Down Solar Park site boundary*  
[www.limedownsolar.co.uk/project](http://www.limedownsolar.co.uk/project)

## Management summary

The Centre for Energy and the Environment (CEE) is a multidisciplinary built environment research group at the University of Exeter. It is the coordinating member of a research partnership with local authorities and public sector organisations called the South West Energy and Environment Group (SWEEG). Research is directed to reflect the needs of members and includes carbon, energy and land-based environmental assessments to support strategic planning and decision making.

This report provides a review of the greenhouse gas (GHG) assessment methodology for Lime Down Solar Park, a proposal for a 500 MW solar installation to the north of Chippenham in Wiltshire. The report was commissioned by Wiltshire Council to support their understanding of the emissions associated with the project and to provide some background information on the deployment of solar energy in the UK to provide some wider context.

Solar photovoltaics (PV) is an important technology in the transition to a zero carbon grid which is anticipated by 2035. According to the Digest of UK Energy Statistics (DUKES), renewable energy provided 50% of all UK electricity in 2024 of which 5% was solar (14,364 GWh) and there is good evidence that this will continue to increase.

All major infrastructure projects will generate GHG emissions but monitoring and accounting is needed to manage and mitigate those emissions. Within the Climate Change chapter of the Environmental Statement (Volume 1, Chapter 7: Climate Change) [1] the applicant for Lime Down Solar Park has submitted a series of calculations which aim to quantify project emissions over its lifetime. Best practice and the standards associated with life cycle assessments (LCAs) require the method used to be transparent, comprehensive and to prioritise the use of scientific methods.

This review has found that the underlying methodology is reasonable in that it clearly sets out the boundaries and scope, but that the execution in places could be better and potentially undermines the emissions figures it has produced. Arithmetic errors and inconsistent reporting in the text are common, and sources for figures used (including emissions factors) are not always clear. It is claimed that the emissions associated with delivering the project are small at between 0.44–0.49% of the annualised UK carbon budgets and are therefore not significant. For reference, the annual generation of the project in 2029 is approximately 0.15% of UK electricity demand in 2024 so whether this alone represents a good return for 0.44–0.49% of the power sector emissions remains something of a judgement call.

Anticipated emissions during the construction phase for example were given as 237,149 kgCO<sub>2</sub>e and presented as a worst-case scenario. Shortfalls were identified in the methodology which are believed to underestimate emissions by focussing on the embodied emission of raw materials, ignoring those required for manufacture and assembly. Attempts to validate the emissions in this review have made use of Environmental Product Declarations (EPDs) for comparable products and suggest that emissions of 441,983 kgCO<sub>2</sub>e could be possible in this phase.

The review concludes that the initial carbon debt is unlikely to be repaid within the project lifetime due to falling grid emissions and a regular replacement cycle for key components such as panels and inverters. This conclusion should not undermine solar as a technology or its role in decarbonising UK electricity. Consideration of the project with a different scope and boundaries is likely to capture the wider environmental and societal benefits.

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# 1 Introduction

Lime Down Solar Park is a proposal for a 500 MW solar photovoltaic (PV) project near Hullavington, approximately 10 km to the north of Chippenham (Figure 1). The solar PV and battery energy storage system (BESS) will occupy around 750 Ha with a cable route corridor running 22 km to the south to connect to the grid at the Melksham Substation.

Wiltshire Council have commissioned CEE to review the greenhouse gas (GHG) emissions calculations and methodology submitted by the applicant as part of its Environmental Statement (Volume 1, Chapter 7: Climate Change) [1]. The report was also to provide some context for solar generation in the UK including national policies and the solar resource in Wiltshire. References to relevant paragraphs within the Volume 1, Chapter 7 of the Environmental Statement are included in parenthesis (e.g. *ES Para X.X.X*).

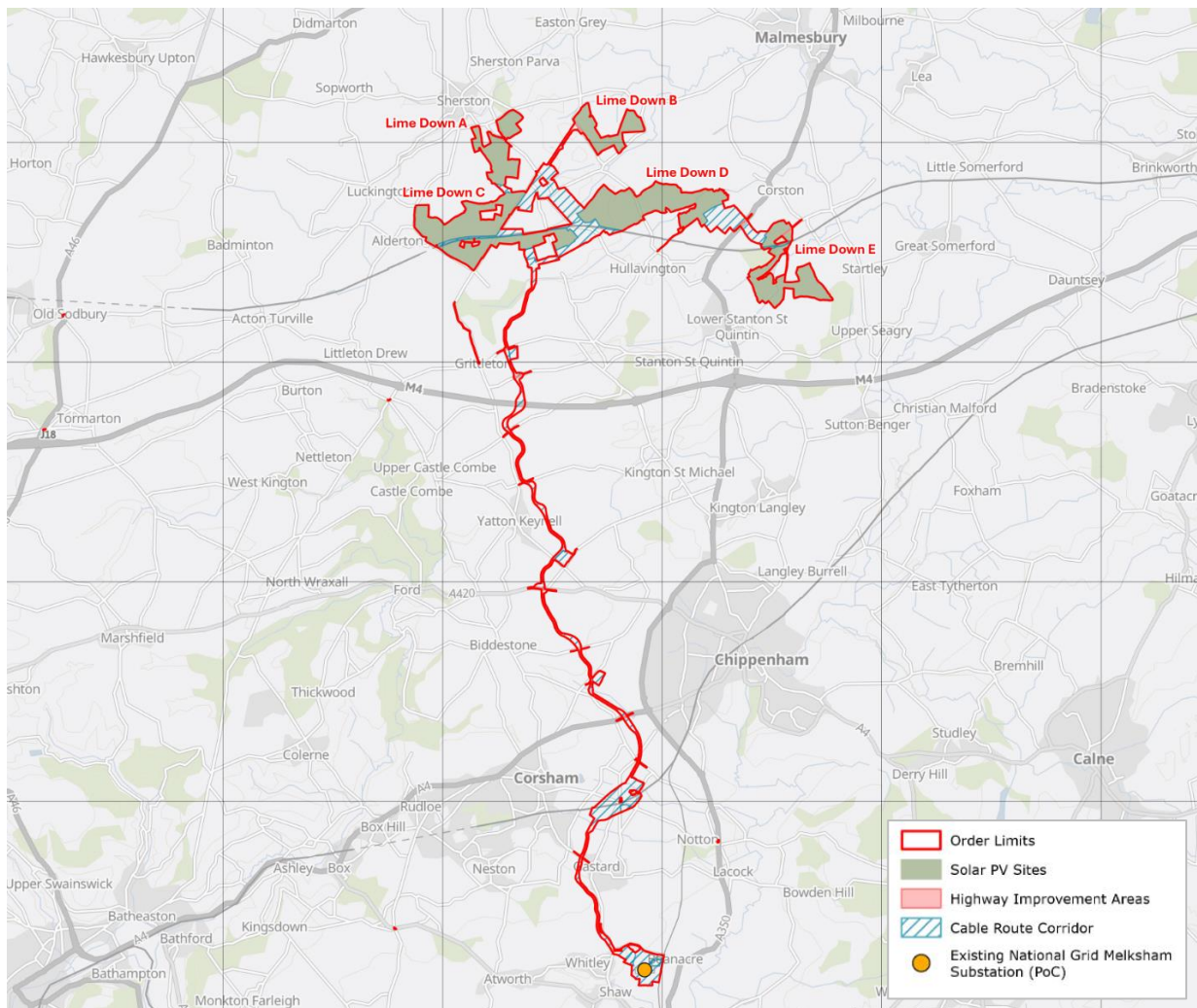


Figure 1. Lime Down Solar Park – indicative illustration of PV sites and cable route (June 2025).  
Image source: 6.2 Environmental Statement Volume 2, Figure 2-1 Elements of the Site

# 2 UK solar energy in context

The UK Government is currently committed to decarbonising all sectors of the economy by 2050, resulting in net zero emissions of greenhouse gases (GHGs). A key component of this

policy will be the decarbonisation of the electricity grid which unlocks opportunities for low carbon heat and transport through electrification.

The Clean Power 2030 Action Plan<sup>1</sup> aims to deliver 95% of generation from clean sources by 2030 (with the remaining 5% arising from unabated gas). As of January 2026, UK solar capacity is estimated at 21.8 GW<sup>2</sup> (including 6.4 GW of domestic capacity) which represents approximately 5% of all UK electricity generation<sup>3</sup> (Figure 2). Modelling from DESNZ suggests solar capacity could increase to 45–47 GW in 2030, while the National Energy System Operator (NESO), through the Future Energy Scenarios (FES), say this could increase to 69 GW by 2035. The Balanced Pathway in Climate Change Committee (CCC) Seventh Carbon Budget, which provides advice on the least cost path to Net Zero suggests that solar capacity could increase to 82 GW by 2040 [2]. Conservative estimates from the CCC Balanced Pathway suggest that solar could occupy around 1% of UK land but could be reduced further through the expansion of domestic and non-domestic rooftop solar. The relative contribution of sub-50 kW solar installations is currently around 37% so it is unlikely to negate the requirement for utility scale altogether.

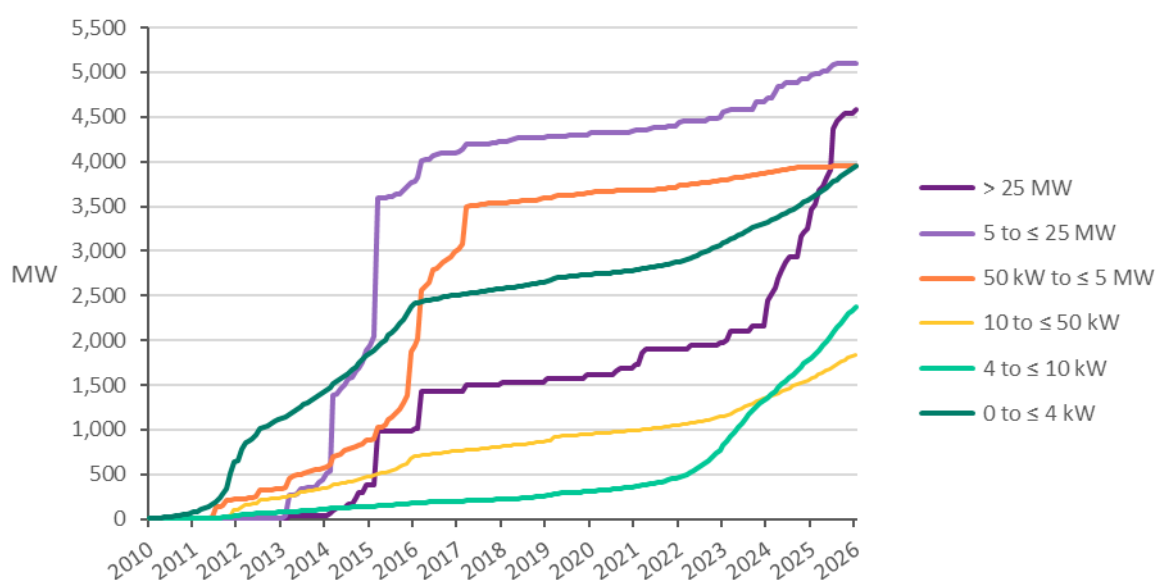


Figure 2. Cumulative capacity of UK solar since 2010 by installed capacity

The rapid expansion of large non-domestic plants up to 5 MW has stalled somewhat since 2017, the Feed-In Tariff scheme which supported these installations ended in April 2019 after a period of rapid tariff degenerations for new standalone capacity. The expansion in capacity in the past couple of years has been driven by the largest installations (> 25 MW), although increases in installations up to 10 kW have also been notable, these are likely to be dominated by larger domestic installations. It should be noted that the proportion of UK solar which is

<sup>1</sup> [www.gov.uk/government/publications/clean-power-2030-action-plan](http://www.gov.uk/government/publications/clean-power-2030-action-plan)

<sup>2</sup> [www.gov.uk/government/statistics/solar-photovoltaics-deployment](http://www.gov.uk/government/statistics/solar-photovoltaics-deployment)

<sup>3</sup> Based on 2024 figures from the Digest of UK Energy Statistics 2025 (DUKES), Chapter 6: Renewable sources of energy, [www.gov.uk/government/statistics/renewable-sources-of-energy-chapter-6-digest-of-united-kingdom-energy-statistics-dukes](http://www.gov.uk/government/statistics/renewable-sources-of-energy-chapter-6-digest-of-united-kingdom-energy-statistics-dukes) Electricity

unaccredited, i.e. unsupported by government incentives, has been growing consistently since about 2016 and currently stands at around 40%.

Enabling deployment at the scale and pace anticipated by the Clean Power Action Plan will mean reforming the grid connection process. The existing system is based on a ‘first-come-first-served’ basis, which has resulted in complex projects holding up the queue over those which are considered ‘shovel-ready’. These so-called ‘zombie’ projects have effectively stalled yet retain connection offers. Proposed changes to the connections process will remove unviable projects and re-order the queue to reflect strategic priorities and support network design and planning. Details on meeting the specific challenges for UK solar are covered in the DESNZ Solar Roadmap [3].

### 3 The role of storage

The transition to an electricity grid that is increasingly dominated by intermittent sources such as solar and wind will create additional challenges for NESO and the Distribution System Operators (DSOs). Large scale battery storage is expected to be a primary means by which the low carbon grid will be managed along with smarter systems that promote demand management and load shifting. Modelling and planning have taken place over a number of years through the Future Energy Scenarios (FES)<sup>4</sup> and associated Distributed Future Energy Scenarios (dFES)<sup>5</sup>. Outcomes from the modelled scenarios result in 2,700 MW to almost 3,300 MW of battery capacity in the Scottish and Southern Electricity Networks (SSEN) Southern England licence area by the early 2030s, with scope to expand further to 3,800 MW by 2050 [4] (Figure 3). Large storage capacity in 2025 was estimated at 589 MW with a pipeline of projects reaching 14,650 MW (3.8 times the estimated 2050 capacity requirement). Although not all projects are expected to be realised 2,367 MW have been granted planning permissions and 1,262 MW have won capacity agreements through Capacity Market auctions (for which there are penalties for non-delivery).

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<sup>4</sup> [www.neso.energy/publications/future-energy-scenarios-fes](http://www.neso.energy/publications/future-energy-scenarios-fes)

<sup>5</sup> [www.ssen.co.uk/about-ssen/dso/whole-system/forecasting-future-needs](http://www.ssen.co.uk/about-ssen/dso/whole-system/forecasting-future-needs)

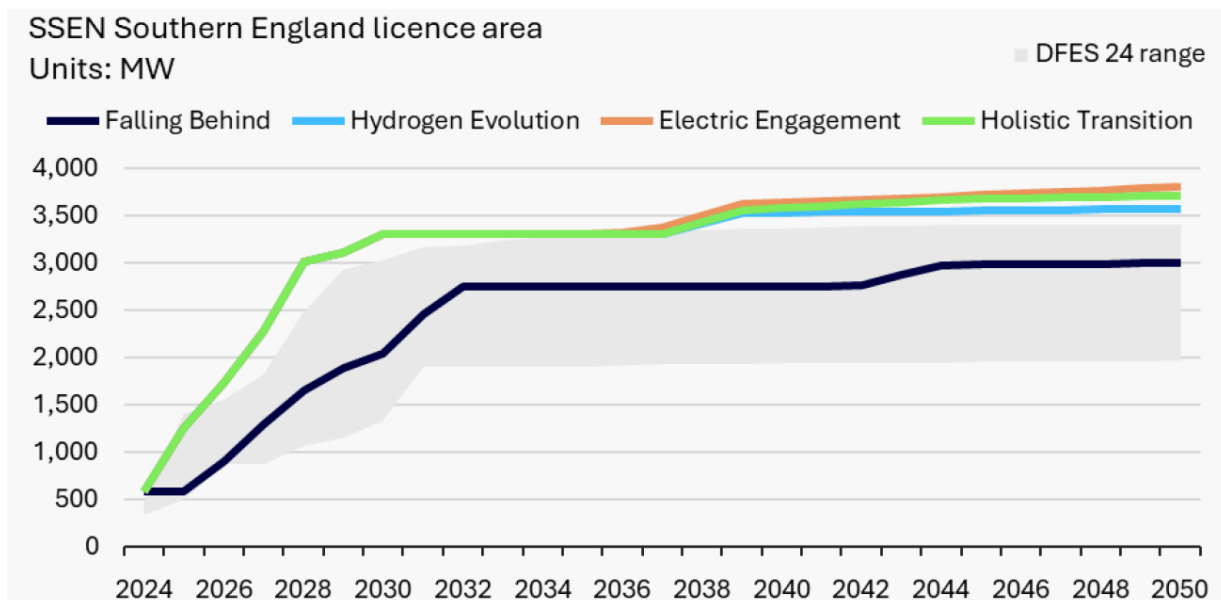


Figure 3. Large scale battery storage capacity by scenario (SSEN/Regen 2025)

Large scale storage helps to ensure the availability of electricity when output is intermittent but can also provide balancing services to absorb or release generated electricity at short notice to maintain grid voltages and frequencies within prescribed limits (within 6% under and 10% over 230V, and 50 Hz  $\pm$  0.5 Hz). Operators of batteries and other flexibility assets can also use available capacity to purchase energy directly from the grid when prices are low (e.g. where there is excess supply) and sell back when prices are high (e.g. during peaks in demand) in a practice known as arbitrage.

## 4 Solar resource in Wiltshire

Maps showing the relative performance of optimally inclined solar installations are available through the Photovoltaic Geographical Information System (PVGIS) developed by the EU Joint Research Centre (JRC) which supports the scientific basis of EU policy development (Figure 4). Annual output for 1 kW<sub>p</sub> of PV capacity<sup>6</sup> is clearly higher in Cornwall and along the south coast than in the Midlands but is sufficiently high to make the environmental and economic case for deployment across much of the UK. PVGIS also provides a web platform from which to explore the potential output of PV installations across the globe<sup>7</sup>. The CEE has verified the performance of PVGIS against monitored installations and has noted that annual agreement is generally good, although summer output tends to be slightly underestimated and winter output slightly overestimated in the South West.

<sup>6</sup> Solar capacity expressed as kW<sub>p</sub> (kilowatt 'peak') represents the maximum output of a PV module under standard test conditions (irradiance of 1000 W/m<sup>2</sup> perpendicular to the plane at a temperature 25°C). These conditions cannot be met at UK latitudes so actual power output will generally be lower.

<sup>7</sup> [https://re.jrc.ec.europa.eu/pvg\\_tools/en](https://re.jrc.ec.europa.eu/pvg_tools/en)

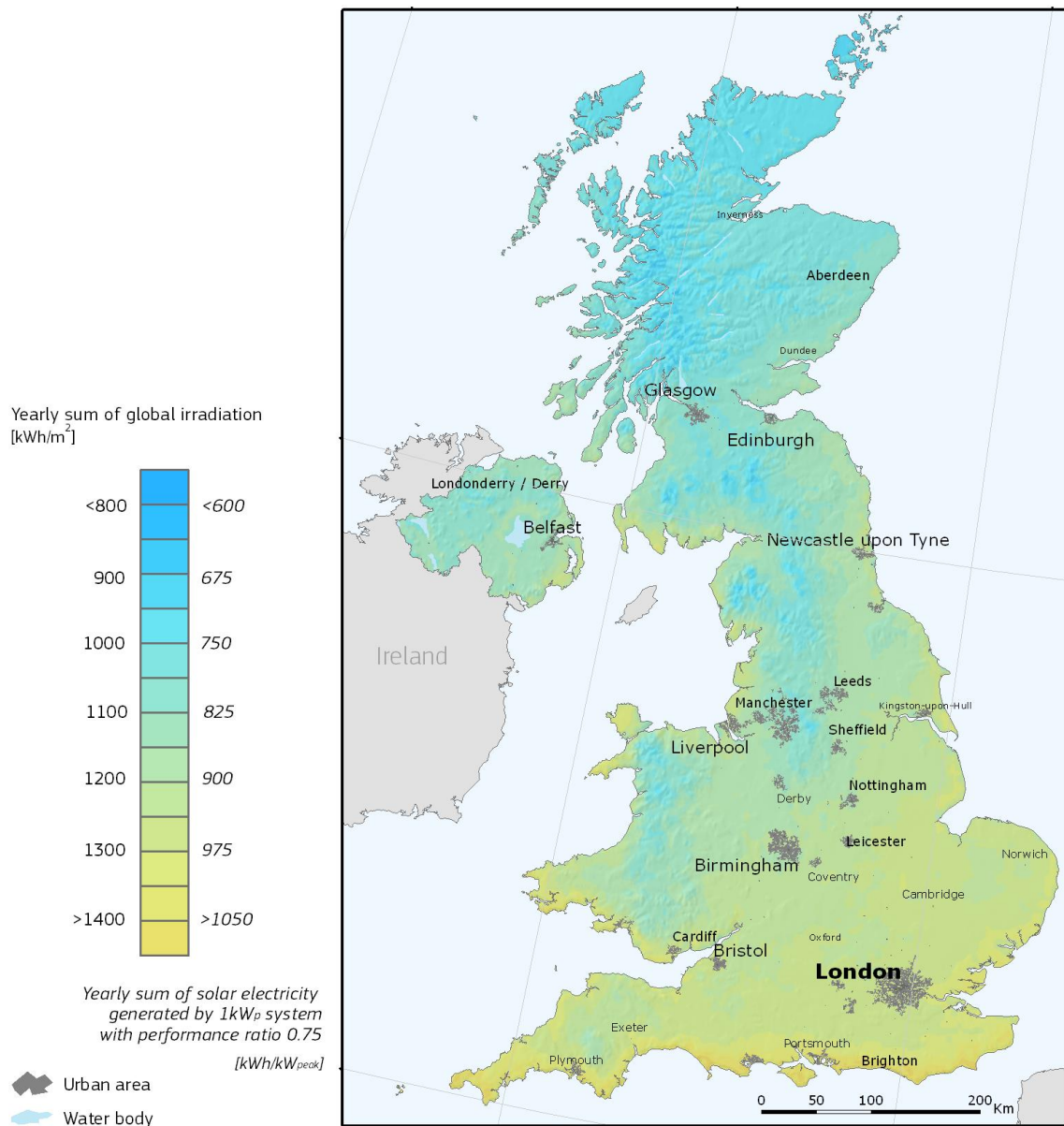


Figure 4. PVGIS - Global irradiation and solar electricity potential for optimally inclined PV modules

In the area around Hullavington, PVGIS suggests annual output of approximately 1,020 kWh/kW<sub>p</sub> for an optimally aligned, fixed axis, standalone system which rises to 1,310 kWh/kW<sub>p</sub> for a single (horizontal) axis tracking system. By way of comparison, output in the area around Penzance might be expected to reach 1,120 kWh/kW<sub>p</sub> for a fixed system and 1,440 kWh/kW<sub>p</sub> for a tracking system (an additional 10%).

PVGIS makes generic assumptions about system losses and uses a solar horizon based on underlying geography (rather than local conditions – trees, buildings etc.) so it cannot be expected to replicate detailed modelling that may be carried out by developers. It does however provide a useful sense check of PV potential.

Output from PV will also vary according to the solar resource which varies from one year to the next as can be seen in Met Office historical data<sup>8</sup>. In the Central Southern and South East region, the number of bright sunshine hours over the last 30 years has varied from 16.8% over

<sup>8</sup> [www.metoffice.gov.uk/research/climate/maps-and-data/uk-and-regional-series](http://www.metoffice.gov.uk/research/climate/maps-and-data/uk-and-regional-series)

the average for the period to 11.4% under. The load factor (or capacity factor) of a PV installation is the ratio of generated energy against the theoretical maximum output based on the installed capacity. Load factors for PV have varied between 9.5–11.4% over the period 2015–2024<sup>9</sup>.

The predicted output by PVGIS in Hullavington would result in a load factor of 11.6% for fixed panels (15.0% for tracking panels), which is at the upper end of load factors over the last 10 years. The applicant has suggested that the 500 MW Lime Down project would generate 438,000 MWh/year with fixed panels and 415,000 MWh/year with tracking panels (*ES Para 7.10.73*) although tracking panels would be expected to generate more so these figures appear to be the wrong way round. These figures would correspond to load factors of 9.5% to 10.0% which is in keeping with national averages, though marginally lower.

## 5 Measuring whole life carbon

The GHG assessment in the application is aligned with project lifecycle phases or modules as illustrated in Figure 5. This is reproduced from the London Energy Transformation Initiative (LETI) Embodied Carbon Primer [5] which in turn draws from BS EN 15978:2011 (Sustainability of construction works) [6]. Whole life carbon is captured in Stages A to C and includes embodied carbon and operational carbon:

- Embodied carbon
  - Product Stage (A1–A3) – often referred to as ‘cradle-to-gate’
  - Construction Stage (A4–A5)
  - In-use Stage (B1–B5)
  - End of life Stage (C1–C4)
- Whole life carbon additionally includes:
  - Operational carbon (B6–B7)

Beyond the whole life cycle carbon there may be an interest in quantifying benefits and loads that flow beyond the system boundary or project duration including activities which support the circular economy (D).

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<sup>9</sup> Digest of UK Energy Statistics 2025 (DUKES), Chapter 6: Renewable sources of energy, Section 6.3: Load factors for renewable energy generation  
[www.gov.uk/government/statistics/renewable-sources-of-energy-chapter-6-digest-of-united-kingdom-energy-statistics-dukes](https://www.gov.uk/government/statistics/renewable-sources-of-energy-chapter-6-digest-of-united-kingdom-energy-statistics-dukes)

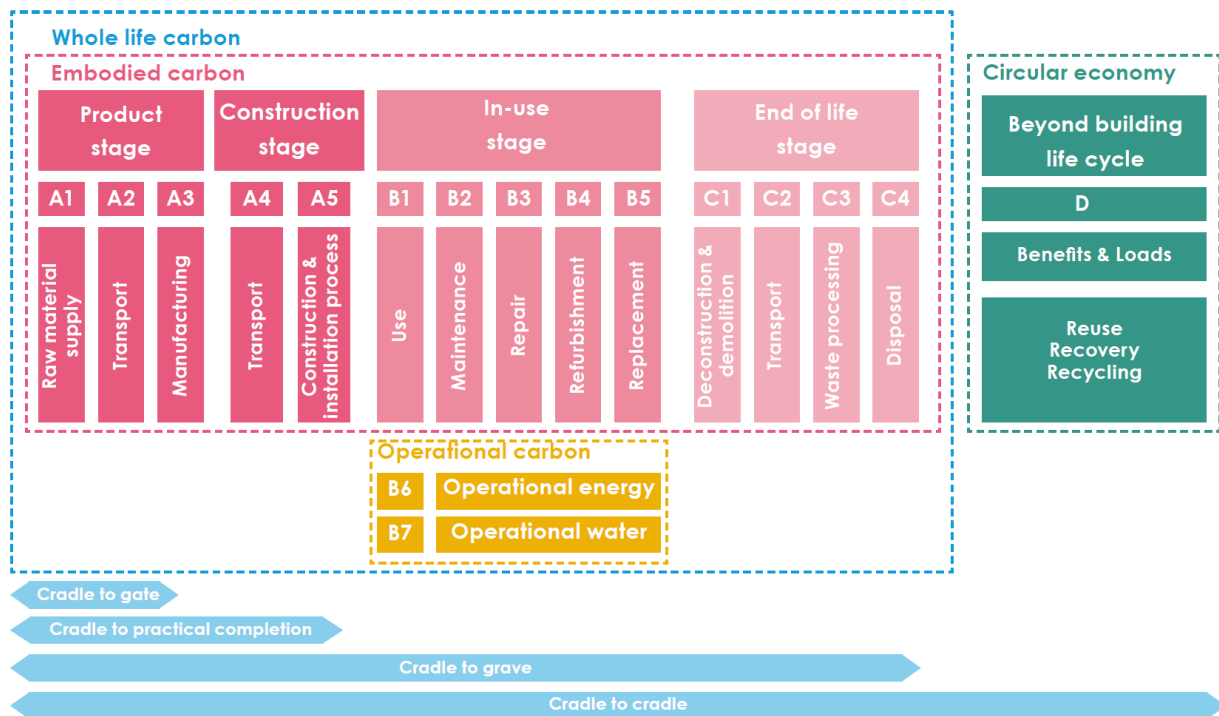


Figure 5. System boundaries and life cycle stages defined by EN 15978:2011 (LETI)

Gathering data on whole life carbon for the project is not same as a Life Cycle Assessment (LCA), it is part of a Life Cycle Inventory (LCI) which can be analysed subsequently to feed into an LCA. Full details of the LCA approach are found in BS EN ISO 14040:2006 [7] and BS EN ISO 14044:2006 [8]. Underlying LCA principles that are shared include:

- Transparency – the inherent complexity in LCAs is addressed with methods that are clear and well-referenced.
- Comprehensiveness – all aspects of the project/product cycle are considered.
- Prioritisation of the scientific approach – making use of the best available data and methods, being clear about assumptions and value judgements.

Developing inventories can also be developed iteratively whereby results from other phases can inform and develop progress in another. This is consistent with the requirements to provide comprehensive inputs and to follow the scientific method. Ultimately it should be possible to understand and follow the process sufficiently well to be able to repeat it and/or make improvements.

The LCI/LCA method provides a framework for developing carbon assessments, but it is not perfect. Elements of the standard may be interpreted differently and making comparisons and generalising from LCAs can be frustrated where system boundaries do not align. Practitioners may access different repositories or versions of life cycle inventory databases (e.g. Ecoinvent<sup>10</sup>, the Inventory of Carbon and Energy (ICE)<sup>11</sup>) which can also affect outputs and conclusions.

The difficulty and expense associated with detailed LCAs means that it is important to develop the quality of carbon assessments within the supply chain. The standard BS EN ISO 14025:

<sup>10</sup> <https://ecoinvent.org>

<sup>11</sup> <https://circularecology.com/embodied-carbon-footprint-database.html>

2010 [9] provides a consistent framework that enables Environmental Product Declarations (EPDs) to be made which can be combined in a modular fashion to build an environmental inventory of a project or product from its component parts. As well as improving the quality of the assessments (suppliers are better placed than outsiders to make carbon declarations about their own products), the production of EPDs avoids duplication of effort. Ultimately the aim is to promote the supply and demand for products with verifiable and comparable environmental information.

## 6 Assessment of emissions calculations

### 6.1 Significance of GHG emissions

The applicant has referenced guidance from Institute of Environmental Management & Assessment (IEMA) [10] which in turn references the boundaries and life cycle stages illustrated in Figure 5, as well as the standards referenced in Section 5. This is a good source presenting a comprehensive overview of the process of evaluating GHG emissions and goes into some detail on assessing the significance of GHG emissions associated with a project. The applicant has assessed what it considers to be the worst-case scenario for project emissions and then determined the significance on the basis of the proportion of the UK carbon budget with respect to emissions in the power sector. Emissions for each budget period have been annualised and the project emissions shared between budget periods. Using these figures, project emissions are calculated at 0.44% and 0.49% of the annual budget in 2027 and 2028 (*ES Para 7.10.88*).

The determination of significance on the basis of these national percentages alone is subjective and should probably be presented in terms of the contribution to the national demand for electricity. For reference, UK electricity demand in 2024 according to DUKES was 284,986 GWh, if we assume for a moment that demand is broadly similar in 2029 (it will more than likely increase), the maximum generation of 438,000 MWh by the project in 2029 would provide about 0.15% of the power for 0.49% of the sector emissions. Whether this is significant may also be subjective but perhaps looks like less good value.

The IEMA guidance suggests that good practice entails drawing on multiple sources of evidence (Figure 6) so the question of significance should be based on consideration of emissions in a range of contexts including for instance local emissions targets and contributions to policy objectives (Figure 6).

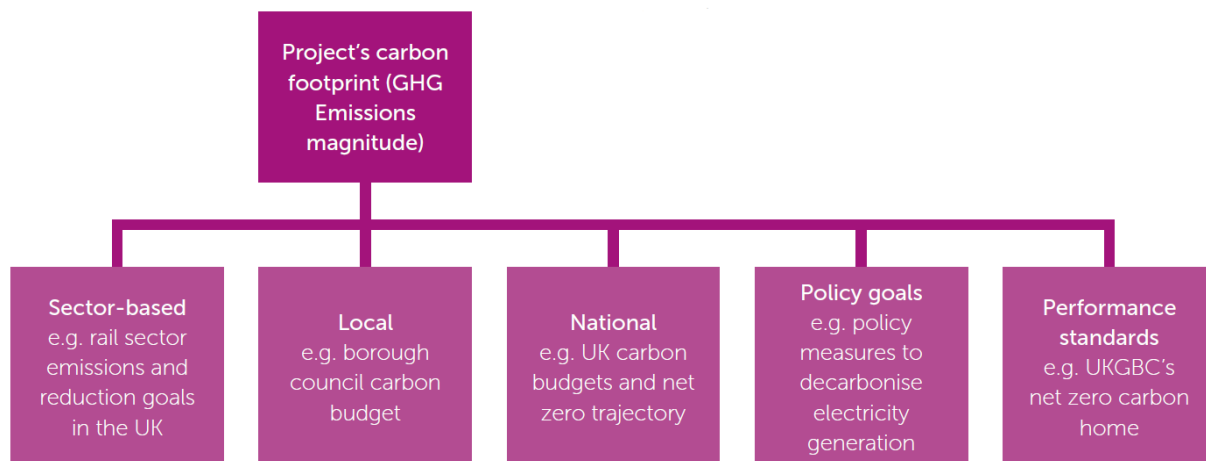


Figure 6. IEMA good practice approaches for contextualising project GHG emissions

It is beyond the scope of this report to determine significance as the weighting applied to each of the contexts above requires due consideration of all the evidence. The focus of this report is somewhat narrower and considers the calculation of the project emissions and the potential for emissions reduction.

## 6.2 Emissions during construction (2027 – 2028)

Construction emissions arise in modules A4–A5 of the framework outlined in Figure 5 but are preceded by the embodied emissions in the Product Stage (modules A1–A3). The applicant has generally presented a bottom-up analysis based on the raw materials in the component parts of the installation. This approach presupposes that the applicant (an installer/developer) has good knowledge of the upstream supply chain and the manufacturing process. The risk is that some materials or processes are omitted resulting in an underestimate of component emissions. This is potentially risky where there are a large number of components, for example almost 600,000 panels are envisaged in the initial construction (*ES Para 7.10.11*).

### Solar panels

The embodied emissions for solar panels as calculated by the Applicant are based on an assumed weight (38.3 kg) and area (3.1 m<sup>2</sup>). Panels are assumed to consist primarily of silicon, steel and glass. The Applicant estimates for raw materials include an assumption of the weight of a single silicon cell (11 g) which would only have to be a gram or so out for the quantity of silicon in the project by to be over/underestimated by 100 tonnes. The source used for the embodied emissions of silicon cells is an industry paper which appears to focus on the production of chlorosilane used in the manufacture of solar grade silicon, rather than the production of the cells themselves.

A single glass sheet with a thickness of 3.5 mm is assumed which suggests that bifacial panels are not being used. Bifacial panels which aim to capture more diffuse sunlight have glass on both sides which would give 2 mm front and back (so 4 mm overall). The embodied emissions

for glass are drawn from the 'Material use' tab of the DESNZ carbon factors used for company reporting<sup>12</sup> which is reasonable.

The Applicant has determined that the remaining mass is mostly steel which is likely to be incorrect as PV module frames are almost always made of an aluminium alloy rather than steel. DESNZ carbon factors are referenced although 'Steel' is not referenced explicitly in this document so the source of the carbon factor for steel is unknown. A database of emissions factors for construction materials known as the Inventory of Carbon and Energy (ICE) was developed with the support of Innovate UK and is now managed by Circular Ecology<sup>13</sup>, it is regularly updated and fully sourced. According to ICE the embodied emissions of steel can vary from 1.6–2.9 kgCO<sub>2</sub>e/kg so the 2.71 kgCO<sub>2</sub>e/kg that is cited (*ES Para 7.10.16*) is not necessarily wrong but just unsourced. Extruded aluminium however is considerably more carbon intensive than steel at 6.8 kgCO<sub>2</sub>e/kg which would affect the carbon footprint considerably.

The calculation of the carbon footprint of the panels is described in the text rather than being presented in a table or spreadsheet and unfortunately contains a combination of typos and/or arithmetic errors – the carbon in silicon is stated as 6,160 tCO<sub>2</sub>e (*ES Para 7.10.14*) while a calculation based on the description in the text would give 9,757 tCO<sub>2</sub>e.

As well as ignoring the electronic elements of the PV panel this estimate excludes the carbon cost of manufacture and assembly of components and of the panels themselves. In this respect the estimate only attempts to cover module A1 in the embodied carbon diagram where it should be considering A1–A3.

Capturing this data with sufficient accuracy is time consuming and technically challenging, so it is perhaps surprising that the applicant has not considered referencing a suitable EPD from one of the many panel suppliers that have had their products certified to BS EN ISO 14025: 2010. A review of high-capacity panels (> 650 W<sub>p</sub>) with comparable weights and dimensions (32–38 kg) found emissions factors for PV panels covering modules A1–A3 of the life cycle of between 0.32–0.37 kgCO<sub>2</sub>e/kW<sub>p</sub><sup>14, 15</sup>. This would put the embodied emissions from PV panels at between 160,00–186,500 tCO<sub>2</sub>e rather than the 44,202 tCO<sub>2</sub>e claimed in the text from the sum of the silicon (6,160 tCO<sub>2</sub>e) (*ES Para 7.10.14*), glass (22,772 tCO<sub>2</sub>e) (*ES Para 7.10.15*) and steel (15,320 tCO<sub>2</sub>e) (*ES Para 7.10.16*). If the EPDs selected are representative of the type of panels that might be deployed in a project of this scale, then the emissions could be out by up to a factor of four.

### Mounting structures

Little detail is given of mounting structures other than an assumption that each MW of installed capacity requires 40 tonnes of steelwork (*ES Para 7.10.17*). While this might be based on the expertise/experience of the applicant, some indication of how the figure is derived would have been helpful. The emissions factor for steel of 2.71 kgCO<sub>2</sub>e/kg (*ES Para 7.10.18*) is

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<sup>12</sup> Greenhouse gas reporting: conversion factors 2024

[www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2024](http://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2024)

<sup>13</sup> <https://circularecology.com/embodied-carbon-footprint-database.html>

<sup>14</sup> EPD reference number: NEPD-14343-14741

<sup>15</sup> EPD reference number: NEPD-9552-9211

again unsourced and ignores the fact that the majority of these structures are likely to be made of galvanised (or at least electroplated) steel. In the ICE database cold rolled steel has an emissions factor of 2.47 kgCO<sub>2</sub>e/kg while for hot-dip galvanised steel the figure rises to 2.62 kgCO<sub>2</sub>e/kg. The focus on raw materials again omits the carbon cost of manufacture (modules A2–A3). Attempts to find a relevant product with an EPD were unsuccessful so it was not possible to build on the applicant estimate of 54,200 tCO<sub>2</sub>e (*ES Para 7.10.18*).

### **Transformers, inverters and switchgear**

Embodied emissions for 174 transformers and inverters are based on a source which gives a notional breakdown of the materials used in a transformer (steel, copper, plasterboard, oil) which is combined with the weight of transformers used by the applicant in similar projects (2,051 kg) (*ES Para 7.10.23*). With the amount of detail provided it is difficult to analyse the emissions much further, although it is fair to say that the emissions associated with manufacture have been ignored. The relatively crude materials list ignores the use of specialist materials such as amorphous steels which can be found in transformers. These materials are more carbon intensive to manufacture but have better electrical characteristics and can reduce losses through hysteresis (due to heating in the cores).

It is difficult to identify suitable products within the EPD databases due to the lack of technical detail given in the text (*ES Para 7.10.21*), but a 400 kVA oil-filled transformer<sup>16</sup> was found which potentially shares some properties and materials with the equipment anticipated in the project. This transformer weighs 1,714 kg with an associated carbon footprint of 8,199 kgCO<sub>2</sub>e and if the proportion of embodied carbon to weight is similar, it might be expected that the 2,051 kg mass of transformers in this project. would have embodied carbon of about 9.8 tCO<sub>2</sub>e – considerably lower than the 4,445 tCO<sub>2</sub>e (*ES Para 7.10.23*) calculated by the applicant. It may be that the EPD selected is an unreliable proxy for the equipment that will be used on site, or that the mass of transformers is incorrect – at a little over 2,000 tonnes the average weight of 174 transformers (*ES Para 7.10.21*) would be around 11.8 kg which feels low. Without more information however it is difficult to challenge the embodied carbon figure.

### **Electrical cables**

Embodied emissions for electrical cables are based on a weight/per metre of steel, aluminium and polyethylene (PE) and an anticipated total cable length of 2,755 km (*ES Para 7.10.24*). Emissions factors for these materials are not included in the DEZNZ carbon factors which are given as the reference (LDPE and HDPE are included in the plastics section but the not with a recognisable carbon factor). It is not possible to reproduce the embodied emissions calculation with the information provided and again the emissions from manufacture are omitted.

An EPD from an Italian manufacturer of solar cables<sup>17, 18</sup>, including armoured cable up to 10.7 mm in diameter gives a range of emissions factors from 0.61–0.90 kgCO<sub>2</sub>e/m. If these cables represent a realistic proxy for the cables used in the project, then the associated

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<sup>16</sup> EPD reference number: EPD-IES-0028473:002

<sup>17</sup> EPD reference number: EPD-IES-0019617

<sup>18</sup> EPD reference number: EPD-IES-0019615

embodied emissions would be 1,686–2,482 kgCO<sub>2</sub>e which is between 1.9–2.8 times the 876 tCO<sub>2</sub>e suggested (*ES Para 7.10.29*).

### **Battery Energy Storage System (BESS) containers**

The applicant has assumed 100 kgCO<sub>2</sub>e per kWh for the BESS on the site although no source is provided (*ES Para 7.10.30*). The project suggests that a BESS with capacity of 1,000 MWh will be installed (*ES Para 7.10.30*) with an embodied footprint of 100,000 tCO<sub>2</sub>e which is presented as a worst-case scenario (*ES Para 7.10.31*). The EPD database includes comparable battery containers that are both air-cooled<sup>19</sup> and liquid cooled<sup>20</sup>. Each BESS in the EPD database weighs over 30 tonnes and has energy storage capacities of 2,700 kWh and 4,073 kWh respectively. The associated embodied carbon factors of 79.6–140.7 kgCO<sub>2</sub>e/kWh would give embodied emissions for the project of between 79,572–140,700 tCO<sub>2</sub>e which is broadly in line with the estimate given but considerably larger than the worst case suggested.

### **Shipping**

It is assumed that all 58,855 tonnes of materials and components are shipped from China (Shanghai) to Dover, with a quoted distance of 21,880 km (*ES Para 7.10.32*). The distance can vary depending on the route taken (19,250–31,700 km) but the method otherwise uses emissions factors for freight from DESNZ in the 'Average cargo' category to give 17,011 tCO<sub>2</sub>e (*ES Para 7.10.32*). If well-to-tank (WTT) emissions for freight are included, this figure increases by about 23% to 20,252 tCO<sub>2</sub>e. From the sum of total tonnage shipped it appears that the weight of the BESS has been excluded (and possibly that of the inverters) but this cannot be derived from the information provided as no indication of weight is provided for the BESS. Using EPD certificates as a guide for the likely weight, BESS with a capacity of 1,000 MWh could weigh up to 13,556 tonnes. If this additional weight is included, the emissions for shipping rise further to 25,686 tCO<sub>2</sub>e.

### **Haulage**

Transporting materials to Dover is said to occur over 26,086 two-way trips (*ES Para 7.10.35*). Although no detail of the logistics is included, this is within the carrying capacity of the HGVs making the trips (some loads may be restricted by volume, others by weight). The distance to the site is given as 588.4 km (*ES Para 7.10.35*) and the load is split evenly between articulated and rigid vehicles. An assumption that vehicles are 50% laden is sensible and allows for the fact that some HGVs will return empty. Emissions factors for freight are provided by DESNZ for a variety of haulage vehicles and weights and the final emissions figure of 10,648 tCO<sub>2</sub>e is reasonable (*ES Para 7.10.35*), although the addition of WTT emissions which are omitted would raise this figure to 13,220 tCO<sub>2</sub>e.

### **Movement of workers**

Transport of workers is based on an average one-way commuting distance of 31.36 km and 1,390 worker movements (two-way trips) per day over the duration of the construction period which is said to be 529 days (*ES Para 7.10.33*, *ES Para 7.10.34*). Worker movements are said to occur by bus (20 workers per bus) and by car (1.5 workers per car) with 32 two-way bus trips

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<sup>19</sup> EPD reference number: EPDITALY0610

<sup>20</sup> EPD reference number: MR-EPDITALY0103

and 416 two-way car trips per day (*ES Para 7.10.34*). There appear to be some minor arithmetic errors in the calculation which can only be made to meet the 2,538 tCO<sub>2</sub>e emissions figure given (*ES Para 7.10.34*) if the daily number of bus trips increases to 38/day and the number of car trips increases to 420/day.

The choice of emissions factors is a little careless but only has a marginal effect on the total. An average car and a medium car are confused for example (an 'average' car has marginally lower emissions than a 'medium' car) and the method assumes that all cars are running on diesel where a petrol/diesel mix would be better. Alternatively, use of the 'unknown' fuel category would include an assumed mix. The method states that it includes WTT emissions for fuel, but the emissions factor chosen shows that it does not. Finally, worker trips are defined as two-way not one-way which means that the distance covered on each trip is 62.72 km. This effectively doubles the associated emissions for movement of workers.

Taking account of the inconsistencies outlined above, the emissions from worker movements during construction are estimated to be 6,342 tCO<sub>2</sub>e, approximately 2.5 times the figure provided by the Applicant.

## **Waste**

The primary source of emissions from waste is sewage although the underlying assumptions for the figure of 16,376 m<sup>3</sup> are not shared. The emissions factor for water treatment is correct giving emissions of 3.0 tCO<sub>2</sub>e (*ES Para 7.10.38*).

Another source of waste is said to be broken 'concrete feet', 78.5 tonnes representing 5% of the concrete total and 100 kgCO<sub>2</sub>e (*ES Para 7.10.40*). It is not clear where the other 95% (1,570 tonnes) are deployed or why they have not featured elsewhere in the emissions inventory.

This analysis of waste does not feel complete, although it is hard to envisage sources without a better understanding of the workflow. However other sources of waste could include other damaged goods, offcuts, and general waste generated by the workforce.

## **Water**

Water use in construction includes potable and non-potable water for drinking and sanitary purposes as well as cleaning vehicles and equipment. A figure of 17.8 million litres is proposed but without underlying assumptions. The DESNZ carbon factor for water supply is applied to give emissions of 2.7 tCO<sub>2</sub>e (*ES Para 7.10.42*).

## **Energy**

Energy use on site is estimated at 1,062,030 kWh although no underlying assumptions are provided (*ES Para 7.10.43*). The emissions factor for electricity consumed in 2027/2028 should probably use those projected by the Treasury Green Book guidance rather than a factor from 2024 from which transmission and distribution (T&D) and WTT emissions have been omitted. The Green Book emissions factors for electricity includes emissions from T&D which at 0.07 and 0.061 kgCO<sub>2</sub>e/kWh would reduce the emissions from electricity consumption from 220 tCO<sub>2</sub>e to 70 tCO<sub>2</sub>e.

## Packaging

The consumption/material use of packaging should be accounted for as part of the procurement of goods, indeed EPDs will generally include a detailed breakdown of the nature and quantity of packaging. Volumes of waste are provided along with densities which are calculated correctly even if the source of the data is not clear.

Disposal of waste packaging uses the default open-loop disposal emissions factor of 6.41 kgCO<sub>2</sub>e/tonne from DESNZ which also covers combustion where energy (primarily electricity) is recovered from the incineration of waste.

## Summary of emissions from construction

A summary of the sources of construction emissions as provided by the applicant is provided in Table 1 alongside estimates from this analysis where there is reason to believe that alternative calculation methods might yield more accurate results.

*Table 1. Summary of emissions from the product and construction phases (A1–A5)*

| Emissions category | Applicant data (as presented) | Current analysis (worst case) |
|--------------------|-------------------------------|-------------------------------|
|                    | tCO <sub>2</sub> e            | tCO <sub>2</sub> e            |
| BESS               | 100,000                       | 140,700                       |
| Mounts             | 54,200                        | 54,200                        |
| Panels             | 44,260                        | 186,500                       |
| Shipping           | 17,011                        | 25,686                        |
| Haulage            | 10,641                        | 13,220                        |
| Transformers       | 4,443                         | 9,809                         |
| Inverters          | 2872                          | 2,872                         |
| Worker transport   | 2,538                         | 6,342                         |
| Energy             | 219.9                         | 70                            |
| Cables             | 876                           | 2,482                         |
| Packaging          | 75.9                          | 76                            |
| Waste              | 3.1                           | 3                             |
| Water              | 2.7                           | 3                             |
| <b>Total</b>       | <b>237,144</b>                | <b>441,983</b>                |

It was noted that the summary presented included a separate figure for inverters, although this did not seem to have been explored explicitly in the text.

The current analysis has found that the emissions in the product and construction phases, in the worst case *could* be as much as 86% higher than those presented by the applicant. This is not to say that data presented by the applicant is necessarily wrong, just that there is often insufficient detail to be able to verify the outcomes. Large differences are apparent with BESS and particularly with the embodied emissions of the panels themselves. Data submitted by the applicant covers a proportion of the raw materials used for panels, but omits the emissions associated with the transport of raw materials and manufacturing. The current analysis has used EPD certificates for comparable products wherever possible to sense check the magnitude of emissions, but has also found arithmetic errors, some inconsistency with sources and potential omissions from the methodology. The combined effect of some of these errors

may be relatively minor but they have the potential to undermine trust in the figures as presented.

Results from Table 1 are presented as stacked column charts in Figure 7 which highlights differences and similarities between the data presented by the applicant and that in the current analysis.

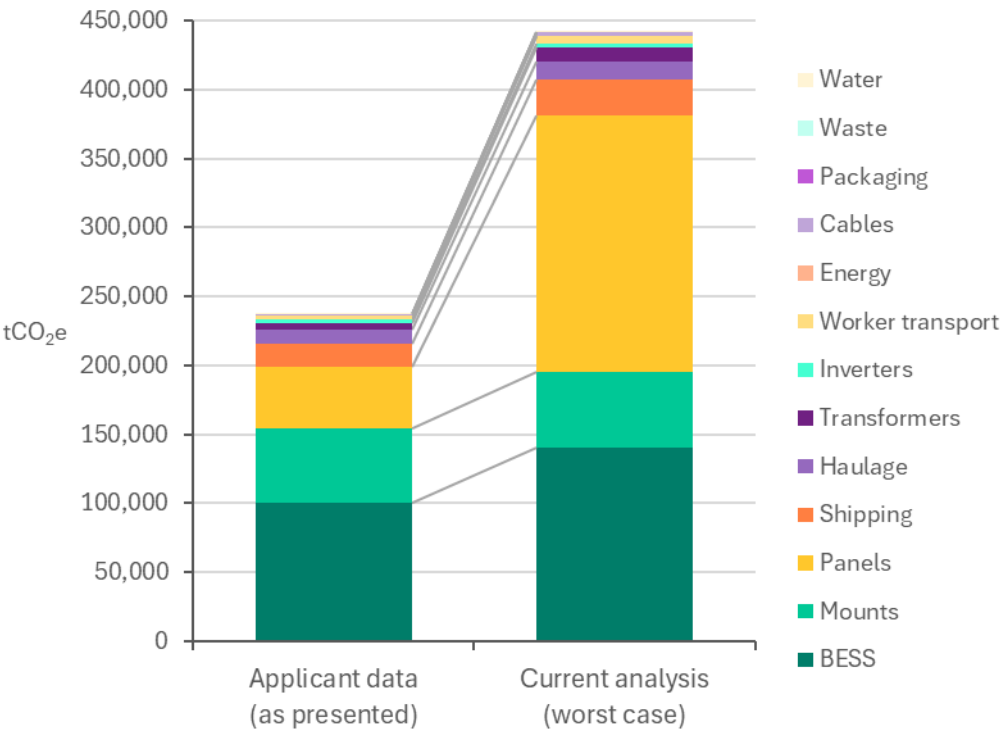


Figure 7. Graphical summary of emissions from product and construction phases (A1–A5)

It is clear for example that while emissions associated with shipping from China and haulage from Dover are significant (up to 11.7% in the applicant data), opportunities for minimising those emissions are currently limited given the dominance of China in the manufacture of components for solar power. According to the International Energy Agency (IEA), China provides 96.8% of silicon wafers globally, 85.1% of solar cells and 74.7% of solar modules<sup>21</sup>. Chinese manufacturing is also highly cost competitive, it is said to be 10% lower than in India, 20% lower than in the United States, and 35% lower than in Europe, leaving little margin for manufacturers closer to home to compete on price, even if emissions intensities are likely to be lower.

### 6.3 Operational emissions (2029 – 2089)

Emissions calculations from construction carried out by the Applicant have been analysed in some detail over the previous subsections. Many of the underlying assumptions and methods are used to calculate operational emissions are the same (e.g. in maintenance, replacement of components, worker movements) so the comments associated with these methods will not be repeated.

<sup>21</sup> [www.iea.org/reports/solar-pv-global-supply-chains/executive-summary](http://www.iea.org/reports/solar-pv-global-supply-chains/executive-summary)

## Sulphur hexafluoride

Sulphur hexafluoride (SF<sub>6</sub>) is used to insulate circuit breakers, switches and transformers but despite its high Global Warming Potential (GWP), 23,500 in the DESNZ 2024 emissions factors (rather than the 23,900 quoted) (*ES Para 7.10.53*), emissions from leakage are considered a low risk if good practice guidance is followed<sup>22</sup> (*ES Para 7.10.54*). Regular monitoring and testing should provide a basis for making assumptions about leakage in the future if it is not understood now. For reference there is a 1% of emissions threshold beyond which guidance suggests SF<sub>6</sub> emissions ought to be quantified. With total operational emissions over 60 years estimated by the Applicant of 686,982 tCO<sub>2</sub>e (*ES Para 7.10.71*), the 1% threshold would be met if leakage of more than 4.9 kg of SF<sub>6</sub> per year was detected.

## Workforce travel for maintenance

A worst-case scenario is proposed where movements for maintenance are the same as those during the construction period, this would be based on the 2,538 tCO<sub>2</sub>e (*ES Para 7.10.34*) over two years of construction multiplied by the operational lifetime which is assumed to be 60 years. This should yield 76,155 tCO<sub>2</sub>e/year although a figure of 74,859 tCO<sub>2</sub>e is quoted (*ES Para 7.10.55*).

Small differences from relatively simple arithmetic are common throughout the document and while they will be highlighted, subsequent modelling in Section 7 will be based on the figures presented to avoid generating multiple versions of the analysis prematurely. Where differences are likely to affect outcomes or conclusions they will be flagged.

Emissions from travel and other sources are likely to decrease over this time frame as cars and buses become more efficient and the penetration of electric vehicles increases and will be accounted for in Section 7 using guidance from the Royal Institution of Chartered Surveyors (RICS).

## Replacement of components

Key electrical components such as the BESS and inverters are expected to be replaced after 10–15 years (*ES Para 7.10.57*). In the worst case, replacement every 10 years is required and will include embodied and transport emissions. Transformers and solar panels are expected to be replaced at least once in the lifetime of the project with an additional 10% having to be replaced due to damage or failure. In each case the emissions for replacements mirror those in the construction process. Applicant calculations for emissions at replacement (including transport) have been derived (*ES Para 7.10.57–7.10.59*), shipping rates for inverters were not included in the construction analysis and it was not possible to disaggregate the transport emissions for panels during the construction phase because the haulage mode was not known so figures have been derived from the information presented in this section of the text. Emissions for replacement of components as determined by the Applicant's figures are summarised in Table 2.

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<sup>22</sup> [www.gov.uk/guidance/how-to-operate-or-service-high-voltage-switchgear-containing-sf6](https://www.gov.uk/guidance/how-to-operate-or-service-high-voltage-switchgear-containing-sf6)

Table 2. Replacement rates of key components and associated emissions (including transport)

| Component                        | Replacement rate (years) | Emissions at replacement (tCO <sub>2</sub> e) |
|----------------------------------|--------------------------|-----------------------------------------------|
| BESS                             | 10                       | 106,171                                       |
| Inverters                        | 10                       | 3,041                                         |
| Transformers                     | 30                       | 5,038                                         |
| Panels (replaced over two years) | 30                       | 51,854                                        |
| Panels (annual replacement)      | 1                        | 86.4                                          |

### Water consumption

As well as drinking water on site, panels are assumed to be cleaned annually with water which will require 0.42 million litres per annum and 25.2 million litres over the life of the project (*ES Para 7.10.56*). The calculation shows that an emissions factor of 153.1 kgCO<sub>2</sub>e/million litres has been used (rather than the 149 kgCO<sub>2</sub>e/million litres stated in the text). The former figure is consistent with the DESNZ emissions factor used in the construction phase and is assumed to be correct giving annual emissions from water use of 0.06 tCO<sub>2</sub>e or 3.86 tCO<sub>2</sub>e over the life of the project.

### Operational waste and packaging

The same wastewater methodology used for construction is said to have been used to determine wastewater rates although it is not clear how one figure related to another. The annual requirement is said to be 743.13 m<sup>3</sup> with total emissions incorrectly calculated as 44.6 tCO<sub>2</sub>e (*ES Para 7.10.62*). This is incorrect and should be 44.6 m<sup>3</sup> of wastewater which gives rise to 8.3 tCO<sub>2</sub>e in total or 0.14 tCO<sub>2</sub>e/year.

Disposal of packaging for replacement products is said to emit 51.77 tCO<sub>2</sub>e although there is no source for the data or an explanation of where the waste arises. It will be assumed to arise in proportion to the emissions of the replacement parts.

### Operational energy use

Operational energy use is given as 79,650,900 kWh (*ES Para 7.10.64*), giving annual consumption of 1,328 kWh. The figure is provided without explanation and suggests use of a static grid emissions factor of 0.0489 kgCO<sub>2</sub>e/kWh corresponding to the start of operations. This is an incorrect assumption as grid emissions will fall over time and when variable emissions factors from DESNZ as recommended by the Treasury Green Book are used the figure falls to 731 tCO<sub>2</sub>e.

### Additional carbon reductions from BESS

The applicant has claimed that the operation of the BESS will deliver additional carbon savings of 245,696 tCO<sub>2</sub>e (*ES Para 7.10.67*) although the evidence supporting the figure is weak. The BESS will provide operational benefits and potentially additional revenue streams, and it is possible that stored energy could displace more carbon intensive forms of energy at peak times. It is impossible however to model this without hourly/half hourly demand profiles, the electricity generation fuel mix at a given time and a simple model of the battery that allows time for charging and discharging. This analysis assumes instead that all solar energy is absorbed into the grid, either directly or indirectly through the BESS. Carbon savings from

indirect transmission of electricity to the grid through the BESS will therefore not be treated as additional.

The operational importance of storage in a low carbon grid cannot be understated, but elsewhere the argument has been put forward that intermittent sources ought to contribute to the cost of reserve sources which provide their back up. Including storage within large scale deployments would perhaps be one way of mitigating such criticism.

### Operational emissions summary

A summary table of operational emissions (Table 3) is provided for the Applicant data (ES Para 7.10.71) but does not quite sum to the total at the bottom, this may be due to rounding errors but the prevalence of other inaccuracies and inconsistencies in the calculation means that this is not necessarily the case. The final column in Table 3 summarises the findings on the current analysis which is derived from the review of the construction phase analysis in Section 6.2, and on this basis estimates an increase in operational emissions of about 71%.

*Table 3. Summary of emissions from the operational phase of the project*

|                            | Applicant data (as presented) | Current analysis (worst case) |
|----------------------------|-------------------------------|-------------------------------|
| Emissions source           | tCO <sub>2</sub> e            | tCO <sub>2</sub> e            |
| BESS replacement           | 530,853                       | 739,940                       |
| Worker transport           | 74,859                        | 190,254                       |
| PV panel replacements      | 57,039                        | 218,691                       |
| Inverter replacements      | 15,206                        | 15,973                        |
| Transformer replacements   | 5,038                         | 10,911                        |
| Energy use on site         | 3,896                         | 731*                          |
| Packaging                  | 52                            | 52                            |
| Operational waste (sewage) | 45                            | 8                             |
| Water use                  | 4                             | 4                             |
| <b>Total</b>               | <b>686,992</b>                | <b>1,176,564</b>              |

*\*Based on Treasury Green Book falling grid emissions factors over time*

The largest discrepancies are for BESS replacement where the mass appears to have been omitted from shipping, the replacement of PV panels where module emissions did not account for manufacturing, emissions and worker movements where WTT emissions for fuel were omitted and only half of the trip distance was included. The results from Table 3 are shown graphically in Figure 8.

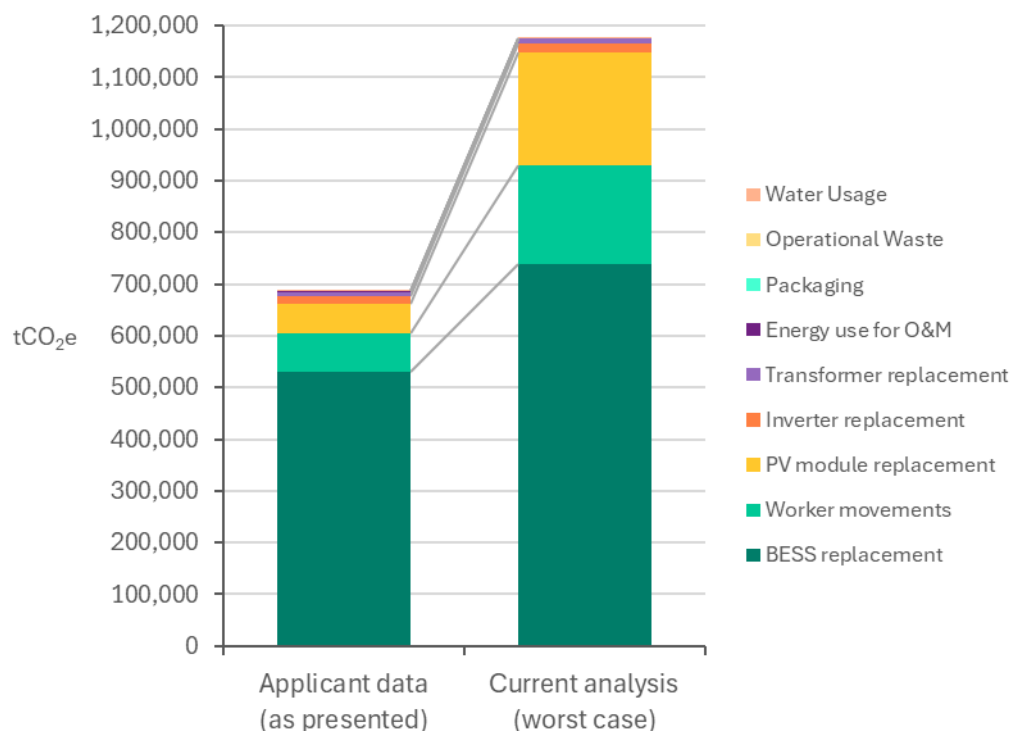


Figure 8. Graphical summary of emissions from the operational phase

## 6.4 Emissions from decommissioning (2089 – 2091)

Decommissioning is expected to generate fewer emissions than construction, with activities dominated by dismantling and removal from the site rather than manufacturing. By 2089 emissions for many activities are expected to be lower. Both of these are reasonable assumptions.

The description of the decommissioning process is a little light on detail but suggests worker transport, energy and water use, and waste are broadly in line with the construction phase. Movements of HGVs are assumed to be half those of the construction phase. The emissions from worker transport are about twice that of those carrying out annual maintenance which is in line with the decommissioning period taking place over two years. A summary is given in Table 4.

Operational emissions and those from decommissioning are not especially transparent and while the underlying methodology is based on the construction phase, which has been considered in some detail, where there were various inconsistencies and inaccuracies.

Table 4. Summary of emissions from decommissioning

| Emissions source            | Emissions (tCO <sub>2</sub> e) |
|-----------------------------|--------------------------------|
| Removal of onsite materials | 5,324                          |
| Worker transport            | 2,582                          |
| Waste                       | 876                            |
| Energy use                  | 220                            |
| Water use                   | 1                              |
| <b>Total</b>                | <b>9,002</b>                   |

## 7 Cumulative emissions modelled over time

The applicant wishes to assess the emissions for the scheme over its lifetime against a fixed grid emissions factor in 2029. It is argued that this avoids uncertainties in future energy markets. While there are indeed uncertainties in the future it does not seem appropriate to assess emissions over a 60-year period against a fixed grid emissions factor when all current policies, predictions and future modelling have assumed that grid emissions factors will fall.

Future emissions factors provided by DESNZ support the Treasury Green Book against which all policy impact assessments are considered. Alongside the tables there is published guidance which explains the creation of use of the figures provided. Of particular relevance to this project are the long run marginal emissions factors (Figure 9) which are developed using a dynamic dispatch model and designed to reflect projects which may lead to changes in the way that energy is consumed but do not individually lead to direct changes in the energy system.

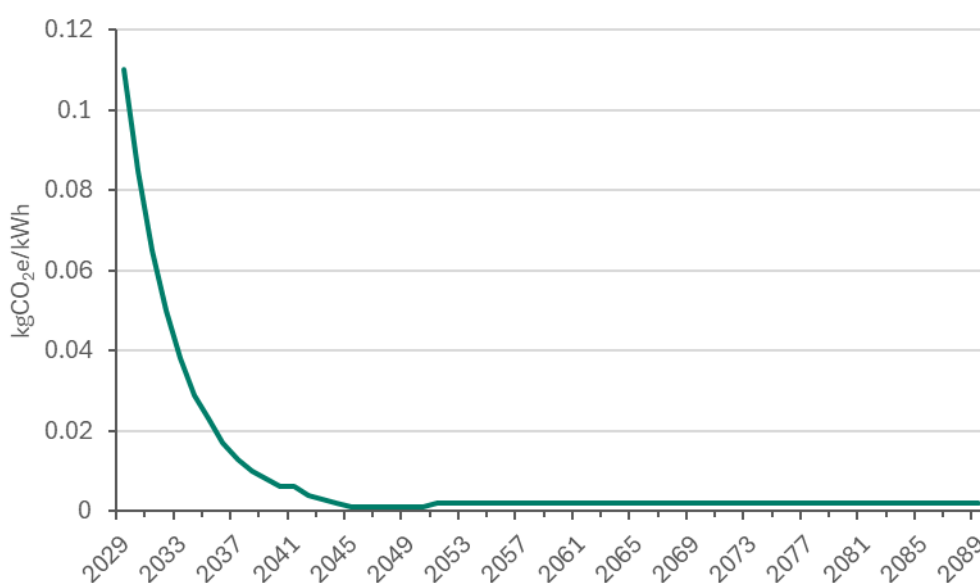


Figure 9. Long run marginal emissions factors for generation

This is a very large solar project, but the relative impact of a single project against a background of increasing renewable capacity has already been seen in Section 6.1. The electricity the project generates on its own will not lead to changes in wider electricity markets in the same way that a policy intervention might lead to a wholesale shift in the way that energy is generated or consumed. The use of long run marginal emissions factors for generation at this scale therefore seems entirely appropriate.

It is clear from Figure 9 that falling emissions factors will mean that ‘paying back’ an initial emissions debt from construction with ongoing maintenance will be much harder on the basis of generation alone. Instead, the impact of counterfactuals and downstream emissions will have to be considered more carefully. The electrification of heat and transport, for example, is unlikely to be realised unless there is widespread distributed generation with grid emissions that are close to zero.

The point has been made in Section 6.3 that future emissions based on current emissions factors are likely to overestimate the effects and while this is difficult to account for directly,

guidance from RICS has prepared guidance for building and infrastructure projects which introduces a simple decarbonisation escalator which increases over time reducing the emissions associated with an activity over periods up to 120 years [11]. Aimed specifically at replacement (B5), the method decreases emissions by a factor of 1.66 times the year in which the change occurs up to 30 years, after which decarbonisation is assumed to be 50% of the value in year zero.

Combining the project emissions from construction, operation and decommissioning, with avoided emissions accrued at the rate of the falling marginal emissions factors and declining panel performance, and including the RICs adjustment factors for future decarbonisation for all replacement and maintenance, shows that the project never fuller recovers its initial carbon debt through generation alone (Figure 10). All of the component emissions for replacement and maintenance are based on the figures provided by the applicant rather than those recalculated as part of this review. Under the falling grid emissions required by the Green Book, this trajectory would represent the best case as the majority of sources of emissions that have been reviewed would have increased, giving a much greater carbon debt to overcome.

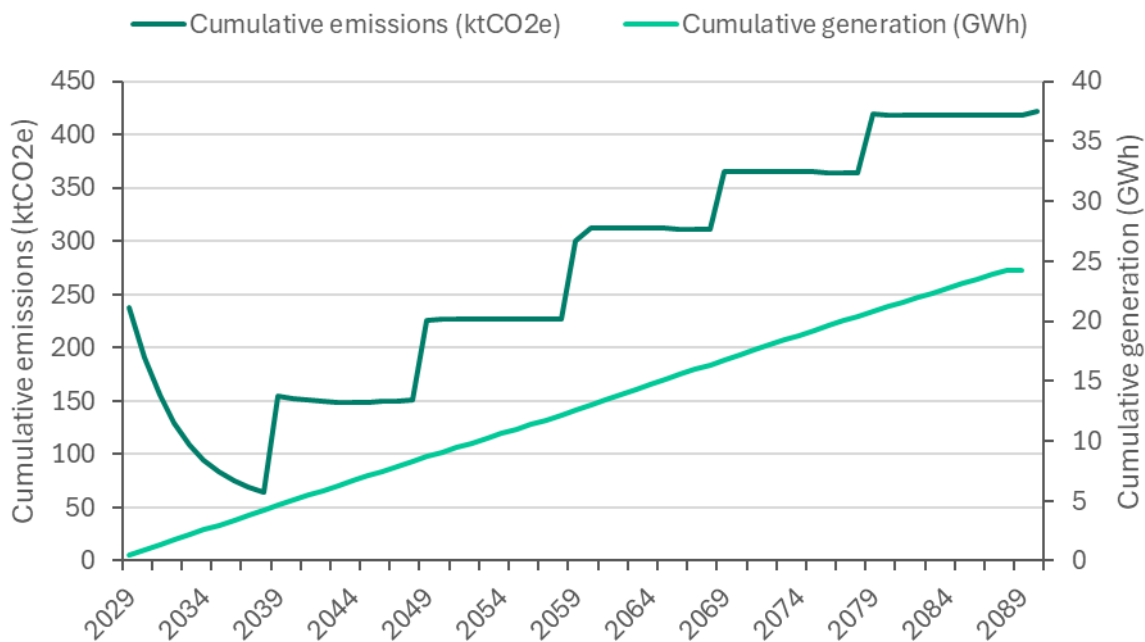


Figure 10. Cumulative emissions for the 500 MW solar plant incorporating, falling emissions factors, panel degradation, and an adjustment for falling emissions from replacement and maintenance

This figure assumes generation of 438,000 MWh in the first year from tracking panels and while emissions fall over the first 10 years due to higher grid emissions factors, the first tranche of inverter replacements see a step change in emissions which it struggles to recover from as grid emissions approach zero.

### 8 Land based emissions

The emissions baseline at the site is considered by the applicant to be zero on the understanding that the land is largely arable with managed trees and hedgerows. Although a detailed assessment is beyond the scope of this report, it is worth noting that farmland can act

as a carbon sink and a carbon source. The way that the land is used and managed with respect to soil disturbance, planting and grazing by livestock will greatly impact the carbon balance.

A substantial review of the potential for carbon storage and sequestration by habitat was carried out by Natural England and published in 2021 [12]. The report finds that arable and improved grassland systems are difficult to characterise because they can occupy a wide range of soil types with different properties and carbon dynamics. Years of cultivation means that carbon stocks in agricultural topsoils are lower than those in semi-natural habitats. Reversion to a semi-natural state can allow grasslands to become an important carbon stock although data on carbon fluxes is limited.

Hedgerow biomass sequesters and stores carbon (approximately half of it underground) but has also been shown to increase soil organic carbon (SOC) at and near the boundary (up to 3.4 m). The width and height of hedgerows directly influence the amount of carbon they can store and while management such as trimming can release carbon, managed hedges tend to store more carbon than unmanaged ones which can suffer damage and become gappy. Taller and wider hedgerows will accumulate more carbon, and it was estimated that raising heights from 2.0 m to 2.7 m for a range of different widths would increase the extent of managed hedgerows by 70%. Improvements in biodiversity and reduced run-off and soil erosion are regularly reported and are also associated with increased carbon stocks. Landscapes that are characterised with a high density of hedges (200 m/ha) have been measured with total SOC of 117 tC/ha with an estimated 'hedge effect' of 38%. By contrast lower density hedge networks (50 m/ha) show mean total SOC of 84 tC/ha, with hedges providing 13%.

Forests and woodland are the largest carbon sinks in the UK, although the rates of sequestration can vary between species and according to soil and climate. Generally broadleaved species sequester more carbon than conifers, although in wetter areas with more acidic soils some conifers may sequester more. Successful planting regimes will consider climate and soil when determining species and diversity.

The carbon dynamics of woodland are characterised by rapid sequestration rates initially which level off as trees mature (Figure 11). An established woodland will hold a significant store of carbon, but sequestration rates will be low.

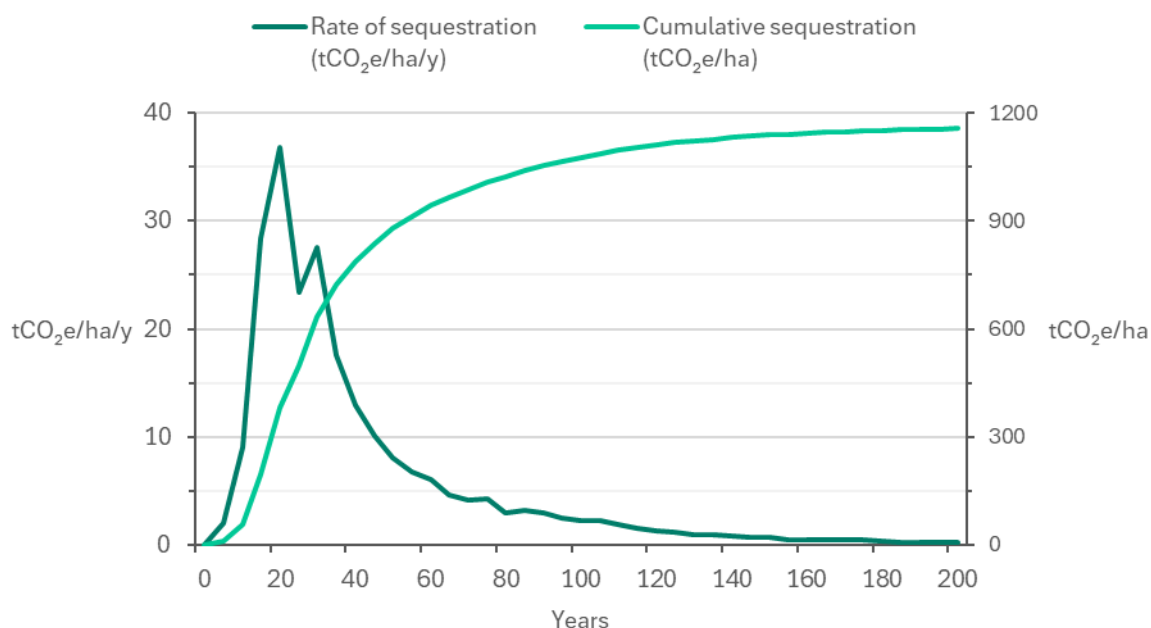


Figure 11. Illustrative sequestration rates and accumulation of carbon for 1 ha of mixed broadleaf trees

Recording of soil carbon storage and sequestration is complicated and confidence in the available data can vary, but current estimates for a selection of habitat types from the Natural England are shown in Table 5.

Table 5. Estimated carbon storage and sequestration for different land management (Natural England)

| Habitat type                                    | Soil carbon (tCO <sub>2</sub> e/ha) | Carbon in vegetation (tCO <sub>2</sub> e/ha) | Carbon flux (tCO <sub>2</sub> e/ha/y) | Confidence |
|-------------------------------------------------|-------------------------------------|----------------------------------------------|---------------------------------------|------------|
| Arable/cultivated land to a soil depth of 30 cm | [28 to 88]                          | Biomass removed                              | +0.29                                 | Low        |
| Improved grassland to a soil depth of 30 cm     | [72 to 204]                         | Biomass removed                              | -0.36<br>[-1.28 to +0.92]             | Low        |
| Arable reversion to low input grassland         | —                                   | —                                            | -1.590                                | Low        |
| Hedgerows (minimally managed)                   | 98.7<br>[67 to 112]                 | 45.8                                         | -3.67 to -1.67                        | Low        |
| Mixed woodland (30 years) to soil depth of 1 m  | 151<br>[108 to 173]                 | 114<br>[22 to 204]                           | -14.5<br>[-2.5 to -25.5]              | Medium     |

For reference, the CCC net zero scenarios include opportunities for increasing woodland cover from 13% to 17% (30,000 ha of new woodland each year), developing agro-forestry on 10% of agricultural land and increasing hedgerow length by 40% by 2050 [13].

More detailed work on land-based emissions can be carried out using GIS tools in conjunction with resources such as the Land Cover Maps from the UK Centre for Ecology and Hydrology (UKCEH)<sup>23</sup> and through the soil maps developed by the Cranfield Environment Centre (CEC)<sup>24</sup>.

<sup>23</sup> [www.ceh.ac.uk/data/ukceh-land-cover-maps](http://www.ceh.ac.uk/data/ukceh-land-cover-maps)

<sup>24</sup> [www.landis.org.uk/data/natmap.cfm](http://www.landis.org.uk/data/natmap.cfm)

To provide some context for land-based emissions the figures in Table 5 can be used to provide illustrative emissions for the site. In the absence of evidence for land management practices it might be assumed for example that half of the land is arable and half is improved grassland. Under this scenario, the 750 ha site would generate 6,525 tCO<sub>2</sub>e from arable soils over 60 years, while the remaining half could sequester 8,100 tCO<sub>2</sub>e, resulting in net sequestration of 1,575 tCO<sub>2</sub>e over the period. A more complete assessment would also try to account for current management, livestock emissions and the changes in land management practices that become necessary because of the project.

## 9 Conclusions

The applicant has set out their anticipated GHG emissions over three phases, construction operation and decommissioning following IEMA guidelines which broadly follow the system boundaries and lifecycle stages illustrated in Figure 5. A framework and approaches lifecycle reporting are covered in BS EN ISO 14040:2006 [6] and BS EN ISO 14044:2006 [7]. Among the overriding principles for lifecycle reporting are transparency, comprehensiveness and prioritising a scientific approach. Adherence to these principles enables a third party to follow and replicate the method used.

The list of references provided by the Applicant supporting the work reveals a good proportion of primary and high-quality sources, although the referencing itself is not clear in places. Embodied emissions of raw materials often cite DESNZ carbon factors which includes only a subset of common materials. Elements such as copper and steel are not included in the 'Material use' section and the sources used were not provided. The application of DESNZ WTT carbon factors lacks consistency, in some places the text says that WTT emissions are included but use of WTT factors does not filter into the calculation, elsewhere they are not used at all.

Where the applicant draws on their own expertise and prior experience to provide supporting data it would be helpful to include more detail on the relevance of the source and how figures have been apportioned or otherwise adjusted to inform the current project. Without this additional detail, it can be difficult to reconcile and justify the subsequent emissions.

Within the construction phase embodied emissions from components are often built up from estimates of the raw material content. For some materials it may be the case that raw materials are the dominant source of emissions, but for more complex components such as solar panels and other electronic equipment it can be difficult to anticipate all of the component materials and to appreciate the amount of effort and energy required for manufacturing and assembly. This approach risks missing important sources of emissions which will affect the accuracy of the reporting and the ability to understand and mitigate supply chain emissions.

A better alternative, where they are available, is to reference Environmental Product Declarations (EPDs) which are supported by standards (BS EN ISO 14025-2010) and provide an open and transparent means to assess the emissions and environmental performance of products in the supply chain, including elements such as packaging, and shipping. Supporting businesses that take the time to get their products certificated will encourage others to do the same, enlarging the EPD product databases and improving the ability to account for supply chain emissions.

Aspects of the carbon assessment lack of rigor in the calculations and many arithmetic errors and inconsistencies have been found in the text which risks undermining the analysis. This has the potential to weaken any case the applicant wishes to make and where faith in the analysis is limited decision making becomes more complicated.

Construction emissions are said to include preparation of the site, installing access tracks, erection of security fencing, as well as the assembly and erection of the PV panels, installation of the inverters/transformers and connection to the grid, however, there does not seem to be a carbon analysis of the of site preparation which might be expected to include preparation of the cable route to the substation or an assessment of land use change. It is difficult to anticipate all sources of emissions without a more detailed description of the project processes and workflow, but elements such as access tracks, foundations for the BESS cabinets and infrastructure and security fencing all appear to be absent.

In terms of the overall emission assessment and within the project boundary (modules A1–C4), this review has shown that falling grid emissions factors will make it almost impossible for the project to cover its initial carbon debt before it is decommissioned. The alternative assessment proposed by the applicant using a fixed emission factor is not considered a reasonable approach to assessing emissions over a 60-year period and does not address future uncertainty in energy markets which is given as a reason for doing so. The rationale and methodology for the use of long-term marginal grid emissions factors however is well-documented and supports their use for projects such as this.

This finding should not undermine solar as a technology or its potential to support the transition to net zero. The benefits of a low carbon grid will accrue beyond the current boundary by facilitating the electrification of heat and transport. Apportioning the subsequent emissions savings to individual projects, even those as large as Lime Down is complicated and will require a different approach and definitions of scopes and boundaries.

## 10 References

- [1] Lime Down Solar Park, Environmental Statement, Volume 1 Chapter 7 - Climate Change, Revision 1, 2025.
- [2] Climate Change Committee, The Seventh Carbon Budget Advice for the UK Government, 2025. [www.theccc.org.uk/publications](http://www.theccc.org.uk/publications).
- [3] Department for Energy & Net Zero (DESNZ), Solar Roadmap: United Kingdom Powered by Solar, 2025. [www.gov.uk/government/publications/solar-roadmap](http://www.gov.uk/government/publications/solar-roadmap).
- [4] SSEN/Regen, SSEN Distribution Future Energy Scenarios 2025 Southern England: Technology change logs, 2025. [www.ssen.co.uk/about-ssen/dso/whole-system/forecasting-future-needs/](http://www.ssen.co.uk/about-ssen/dso/whole-system/forecasting-future-needs/).
- [5] London Energy Transformation Initiative, LETI Embodied Carbon Primer: Supplementary guidance to the Climate Emergency Design Guide, 2020. [www.leti.uk/ecp](http://www.leti.uk/ecp).
- [6] BSI, BS EN 15978-2011: Sustainability of construction works, 2011.
- [7] BSI, BS EN ISO 14040-2006: Environmental management - Life cycle assessment principles and framework, 2006.
- [8] BSI, BS EN ISO 14044-2006: Environmental management - Life cycle assessment requirements and guidelines, 2006.
- [9] BSI, BS EN ISO 14025-2010: Environmental labels and declarations, 2010.
- [10] Institute of Environmental Management, & Assessment (IEMA), Assessing Greenhouse Gas Emissions and Evaluating their Significance, 2022. [www.isepglobal.org/content/iema-guide-assessing-greenhouse-gas-emissions-and-evaluating-their-significance](http://www.isepglobal.org/content/iema-guide-assessing-greenhouse-gas-emissions-and-evaluating-their-significance).
- [11] RICS, Whole life carbon assessment for the built environment, R. Inst. Chart. Surv. Prof. Statement. (2024) 204. [https://www.rics.org/content/dam/ricsglobal/documents/standards/Whole\\_life\\_carbon\\_assessment\\_PS\\_Sept23.pdf](https://www.rics.org/content/dam/ricsglobal/documents/standards/Whole_life_carbon_assessment_PS_Sept23.pdf).
- [12] R. Gregg, J.L. Elias, I. Alonso, I.E. Crosher, P. Muto, M.D. Morecroft, Carbon storage and sequestration by habitat: a review of the evidence. Natural England Research Report NERR094., 2021. <https://publications.naturalengland.org.uk/publication/5419124441481216>.
- [13] Committee on Climate Change, Land use: Policies for a Net Zero UK, Comm. Clim. Chang. (2020) 1–123. <https://www.theccc.org.uk/publication/land-use-policies-for-a-net-zero-uk>.

## **Appendix C**

### **Wiltshire Council Book of Reference Land**

| <b>Plan Reference</b> | <b>Rights Claimed</b>                     | <b>Temporary or Permanent Rights Claimed</b> | <b>Owner or Occupier (as Local Highway Authority)</b>                                                                                                                                                                                        |
|-----------------------|-------------------------------------------|----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 01-003                | Right to use / carry out protective works | Temporary                                    | Occupier as highway authority footpath SHER15                                                                                                                                                                                                |
| 01-004                | Right to use / carry out protective works | Temporary                                    | Occupier as highway authority SHER15                                                                                                                                                                                                         |
| 01-005                | Acquire right to use / carry out works    | Possibly both                                | Occupier as highway authority only extent of highway unknown                                                                                                                                                                                 |
| 01-006                | Temporary possession                      | Temporary                                    | Occupier as highway authority                                                                                                                                                                                                                |
| 01-007                | Acquire right to use / carry out works    | Temporary                                    | Unregistered strip of land adjacent to highway – not shown as part of the Wiltshire Council maintainable highway record (see Figure 1 Farhill Lane)                                                                                          |
| 01-008                | Right to use / carry out protective works | Temporary                                    | Unregistered strip of land adjacent to highway but difficult to ascertain precisely as the strip is very small / narrow. Note that 01-011 is part of the same adjacent strip and referred to in the Book of Reference – Part 1 as “unknown”. |
| 01-009                | Temporary possession                      | Temporary                                    | Occupier as highway authority – part of Wiltshire Council maintainable highway                                                                                                                                                               |
| 01-012                | Right to use / carry out protective works | Temporary                                    | Occupier as highway authority only bridleway SHER15                                                                                                                                                                                          |
| 01-020                | Freehold Acquisition                      | Permanent                                    | Occupier as highway authority bridleway SHER16 and footpath SHER17                                                                                                                                                                           |
| 01-038                | Acquire right to use / carry out works    | Temporary                                    | Not shown as part of Wiltshire Council maintainable highway record                                                                                                                                                                           |
| 01-039                | Acquire right to use / carry out works    | Temporary                                    | Not shown as part of Wiltshire Council maintainable highway record                                                                                                                                                                           |
| 01-042                | Freehold Acquisition                      | Permanent                                    | Occupier as highway authority footpath SHER18                                                                                                                                                                                                |

| <b>Plan Reference</b> | <b>Rights Claimed</b>                  | <b>Temporary or Permanent Rights Claimed</b> | <b>Owner or Occupier (as Local Highway Authority)</b>                                        |
|-----------------------|----------------------------------------|----------------------------------------------|----------------------------------------------------------------------------------------------|
| 01-044                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                                                |
| 01-045                | Freehold Acquisition                   | Permanent                                    | Occupier as highway authority footpath HULL26                                                |
| 01-047                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                                                |
| 01-051                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority public byway SHER37                                            |
| 01-052                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                                                |
| 01-053                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority footpath SHER37                                                |
| 01-057                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                                                |
| 02-001                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority footpath                                                       |
| 02-002                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                                                |
| 02-010                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                                                |
| 02-011                | Freehold Acquisition                   | Permanent                                    | Not shown as part of Wiltshire Council maintainable highway record – see Figure 2 Honey Lane |
| 02-012                | Freehold Acquisition                   | Permanent                                    | Not shown as part of Wiltshire Council maintainable highway record – see Figure 2 Honey Lane |
| 02-015                | Freehold Acquisition                   | Permanent                                    | Occupier as highway authority footpath NORT1                                                 |

| <b>Plan Reference</b> | <b>Rights Claimed</b>                  | <b>Temporary or Permanent Rights Claimed</b> | <b>Owner or Occupier (as Local Highway Authority)</b>                                          |
|-----------------------|----------------------------------------|----------------------------------------------|------------------------------------------------------------------------------------------------|
| 02-016                | Freehold Acquisition                   | Permanent                                    | Occupier as highway authority footpath NORT1                                                   |
| 02-017                | Freehold Acquisition                   | Permanent                                    | Occupier as highway authority footpath NORT1                                                   |
| 03-001                | Freehold Acquisition                   | Permanent                                    | Occupier as highway authority (part only) footpath SHER18                                      |
| 03-004                | Unknown                                | Unknown                                      | Occupier as highway authority (part only) footpath SHER18 – Not mentioned in Book of Reference |
| 03-006                | Freehold Acquisition                   | Permanent                                    | Occupier as highway authority (part only) footpath SHER18                                      |
| 03-007                | Unknown                                | Unknown                                      | Occupier as highway authority (part only) footpath SHER18 - Not mentioned in Book of Reference |
| 03-008                | Freehold Acquisition                   | Permanent                                    | Occupier as highway authority footpath SHER19                                                  |
| 03-009                | Unknown                                | Unknown                                      | Occupier as highway authority (part only) footpath SHER18 - Not mentioned in Book of Reference |
| 03-011                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority byway SHER35 and potentially footpath SHER18 (plan not clear)    |
| 03-024                | Freehold Acquisition                   | Permanent                                    | Occupier as highway authority                                                                  |
| 03-044                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority byway LUCK57                                                     |
| 03-048                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                                                  |
| 03-049                | Freehold Acquisition                   | Permanent                                    | Not shown as part of Wiltshire Council maintainable highway record – see Figure 3              |

| Plan Reference | Rights Claimed                         | Temporary or Permanent Rights Claimed | Owner or Occupier (as Local Highway Authority)                                                                                                                                                          |
|----------------|----------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                |                                        |                                       | Fosse Way Railway Bridge. Railway Land (Network Rail?)                                                                                                                                                  |
| 03-056         | Acquire right to use / carry out works | Temporary                             | Occupier as highway authority possible bridge over railway line                                                                                                                                         |
| 03-058         | Acquire right to use / carry out works | Temporary                             | Occupier as highway authority possible bridge over railway line                                                                                                                                         |
| 03-059         | Freehold Acquisition                   | Permanent                             | Mainly unregistered strip of land adjacent to highway but bottom end may be within maintained highway – see Figure 4 Fosse Way Railway Bridge 2. Subsoil (part) belonging to owner of East Dunley farm? |
| 03-060         | Acquire right to use / carry out works | Possibly both                         | Occupier as highway authority                                                                                                                                                                           |
| 03-061         | Acquire right to use / carry out works | Possibly both                         | Not shown as part of Wiltshire Council maintainable highway record – see Figure 4 Fosse Way Railway Bridge 2                                                                                            |
| 03-062         | Acquire right to use / carry out works | Possibly both                         | Occupier as highway authority                                                                                                                                                                           |
| 03-063         | Acquire right to use / carry out works | Possibly both                         | Occupier as highway authority                                                                                                                                                                           |
| 03-064         | Acquire right to use / carry out works | Possibly both                         | Unregistered strip of land adjacent to highway – not shown as part of Wiltshire Council maintainable highway record (sub soil likely to be owned by owner of Manor farm)                                |
| 03-065         | Acquire right to use / carry out works | Possibly both                         | Occupier as highway authority                                                                                                                                                                           |
| 04-001         | Acquire right to use / carry out works | Possibly both                         | Occupier as highway authority                                                                                                                                                                           |

| <b>Plan Reference</b> | <b>Rights Claimed</b>                  | <b>Temporary or Permanent Rights Claimed</b> | <b>Owner or Occupier (as Local Highway Authority)</b>                                                                                                          |
|-----------------------|----------------------------------------|----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 04-003                | Freehold Acquisition                   | Permanent                                    | Occupier as highway authority footpath HULL25                                                                                                                  |
| 04-009                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority footpath HULL20                                                                                                                  |
| 04-010                | Freehold Acquisition                   | Permanent                                    | Unregistered strip of land adjacent to highway – not shown as part of Wiltshire Council maintainable highway record – see Figure 5 Pig Lane Railway Bridge     |
| 04-011                | Freehold Acquisition                   | Permanent                                    | Mainly unregistered strip adjacent to highway but bottom end may be within maintainable highway – see Figure 5 Pig Lane Railway Bridge                         |
| 04-012                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                                                                                                                  |
| 04-013                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                                                                                                                  |
| 04-014                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                                                                                                                  |
| 04-015                | Freehold Acquisition                   | Permanent                                    | Unregistered strip of land adjacent to highway – not shown as part of the Wiltshire Council maintainable highway record – see Figure 5 Pig Lane Railway Bridge |
| 04-016                | Freehold Acquisition                   | Permanent                                    | Occupier as highway authority footpath HULL23                                                                                                                  |
| 04-023                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority footpath HULL24                                                                                                                  |
| 04-024                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority footpath HULL23                                                                                                                  |

| <b>Plan Reference</b> | <b>Rights Claimed</b>                  | <b>Temporary or Permanent Rights Claimed</b> | <b>Owner or Occupier (as Local Highway Authority)</b>      |
|-----------------------|----------------------------------------|----------------------------------------------|------------------------------------------------------------|
| 04-027                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority footpath HULL24              |
| 04-028                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority footpath HULL24              |
| 04-029                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                              |
| 04-031                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                              |
| 04-032                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                              |
| 04-036                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                              |
| 04-047                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                              |
| 04-058                | Freehold Acquisition                   | Permanent                                    | Occupier as highway authority footpath HULL1 and NORT10    |
| 05-001                | Freehold Acquisition                   | Permanent                                    | Occupier as highway authority footpath HULL1               |
| 05-006                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                              |
| 05-007                | Freehold Acquisition                   | Permanent                                    | Occupier as highway authority footpath HULL2               |
| 05-008                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                              |
| 05-009                | Freehold Acquisition                   | Permanent                                    | Occupier as highway authority footpath HULL2, HULL4, HULL5 |
| 05-014                | Freehold Acquisition                   | Permanent                                    | Occupier as highway authority footpath HULL2, HULL4, HULL6 |
| 05-015                | Freehold Acquisition                   | Permanent                                    | Occupier as highway authority footpath HULL4, HULL5        |

| <b>Plan Reference</b> | <b>Rights Claimed</b>                  | <b>Temporary or Permanent Rights Claimed</b> | <b>Owner or Occupier (as Local Highway Authority)</b>                      |
|-----------------------|----------------------------------------|----------------------------------------------|----------------------------------------------------------------------------|
| 05-021                | Freehold Acquisition                   | Permanent                                    | Occupier as highway authority footpath HULL6                               |
| 05-022                | Freehold Acquisition                   | Permanent                                    | Occupier as highway authority footpath HULL6                               |
| 05-025                | Freehold Acquisition                   | Permanent                                    | Occupier as highway authority footpath MALW50                              |
| 05-027                | Freehold Acquisition                   | Permanent                                    | Occupier as highway authority footpath HULL6                               |
| 05-033                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority bridleway HULL7                              |
| 05-034                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority bridleway HULL7 and footpath HULL6           |
| 05-035                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                              |
| 05-038                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                              |
| 05-039                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority bridleway HULL7 and footpath HULL8           |
| 05-043                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority footpath HULL8, MALW52                       |
| 06-001                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                              |
| 06-002                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                              |
| 06-003                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                              |
| 06-004                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority bridleway MALW54                             |
| 06-005                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority bridleway MALW54, footpath MALW53 and MALW55 |

| <b>Plan Reference</b> | <b>Rights Claimed</b>                  | <b>Temporary or Permanent Rights Claimed</b> | <b>Owner or Occupier (as Local Highway Authority)</b>                                                                                                                |
|-----------------------|----------------------------------------|----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 06-006                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority bridleway MALW55                                                                                                                       |
| 06-007                | Freehold Acquisition                   | Permanent                                    | Occupier as highway authority bridleway MALW54 and footpath MALW60                                                                                                   |
| 06-014                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                                                                                                                        |
| 06-015                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                                                                                                                        |
| 06-016                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                                                                                                                        |
| 06-017                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                                                                                                                        |
| 06-018                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                                                                                                                        |
| 06-024                | Acquire right to use / carry out works | Possibly both                                | Unregistered strip of land adjacent to highway – not shown as part of the Wiltshire Council maintainable highway record – se Figure 6 Rodbourne Track Railway Bridge |
| 06-027                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                                                                                                                        |
| 06-030                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority bridleway MALW59 MALW61 and footpath MALW63                                                                                            |
| 06-039                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority bridleway MALW59                                                                                                                       |
| 07-001                | Freehold Acquisition                   | Permanent                                    | Occupier as highway authority bridleway MALW59                                                                                                                       |
| 07-009                | Freehold Acquisition                   | Permanent                                    | Occupier as highway authority bridleway MALW59                                                                                                                       |

| <b>Plan Reference</b> | <b>Rights Claimed</b>                  | <b>Temporary or Permanent Rights Claimed</b> | <b>Owner or Occupier (as Local Highway Authority)</b>                         |
|-----------------------|----------------------------------------|----------------------------------------------|-------------------------------------------------------------------------------|
| 07-017                | Freehold Acquisition                   | Permanent                                    | Occupier as highway authority footpath MALW62 and SSTQ5                       |
| 07-018                | Freehold Acquisition                   | Permanent                                    | Occupier as highway authority footpath MALW62                                 |
| 07-022                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority bridleway MALW61                                |
| 07-024                | Freehold Acquisition                   | Permanent                                    | Occupier as highway authority footpath MALW62                                 |
| 07-025                | Freehold Acquisition                   | Permanent                                    | Occupier as highway authority footpath MALW62                                 |
| 07-026                | Freehold Acquisition                   | Permanent                                    | Occupier as highway authority bridleway MALW61                                |
| 07-027                | Freehold Acquisition                   | Permanent                                    | Occupier as highway authority footpath MALW62                                 |
| 07-032                | Freehold Acquisition                   | Permanent                                    | Occupier as highway authority bridleway MALW61 and footpath MALW62            |
| 07-033                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority bridleway MALW61                                |
| 07-034                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority bridleway MALW62                                |
| 07-035                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority bridleway MALW61                                |
| 08-001                | Acquire right to use / carry out works | Possibly both                                | Not shown as part of the Wiltshire Council maintainable highway record - Pond |
| 08-002                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                                 |
| 08-003                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority byway HULL19 and footpath HULL13                |

| <b>Plan Reference</b> | <b>Rights Claimed</b>                  | <b>Temporary or Permanent Rights Claimed</b> | <b>Owner or Occupier (as Local Highway Authority)</b> |
|-----------------------|----------------------------------------|----------------------------------------------|-------------------------------------------------------|
| 08-005                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority bridleway GRIT22        |
| 09-001                | Temporary Possession                   | Temporary                                    | Occupier as highway authority footpath GRIT8, GRIT11  |
| 09-004                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                         |
| 09-005                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                         |
| 09-006                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                         |
| 09-007                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                         |
| 09-008                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                         |
| 09-010                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority footpath GRIT20         |
| 09-011                | Temporary Possession                   | Temporary                                    | Occupier as highway authority footpath GRIT21         |
| 09-013                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                         |
| 09-014                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                         |
| 09-022                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                         |
| 10-001                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                         |
| 10-002                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                         |
| 10-004                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority footpath YKEY6          |
| 10-005                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                         |
| 10-006                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority footpath YKEY6          |
| 10-008                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                         |

| <b>Plan Reference</b> | <b>Rights Claimed</b>                  | <b>Temporary or Permanent Rights Claimed</b> | <b>Owner or Occupier (as Local Highway Authority)</b>                                                                                       |
|-----------------------|----------------------------------------|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 10-009                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                                                                                               |
| 10-010                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                                                                                                               |
| 10-011                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority footpath YKEY8                                                                                                |
| 10-013                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority footpath YKEY9                                                                                                |
| 11-006                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                                                                                                               |
| 11-010                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                                                                                               |
| 11-012                | Temporary Possession                   | Temporary                                    | Unregistered strip of land adjacent to highway – not shown as part of the Wiltshire Council maintainable highway record – see Figure 7 A420 |
| 11-013                | Acquire right to use / carry out works | Possibly both                                | Unregistered strip of land adjacent to highway – not shown as part of the Wiltshire Council maintainable highway record – see Figure 7 A420 |
| 11-014                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                                                                                               |
| 11-015                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                                                                                                               |
| 11-016                | Temporary Possession                   | Temporary                                    | Owner and Occupier as highway authority footpath BIDD16                                                                                     |
| 11-017                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                                                                                                               |
| 11-018                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                                                                                               |
| 11-019                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                                                                                               |

| <b>Plan Reference</b> | <b>Rights Claimed</b>                  | <b>Temporary or Permanent Rights Claimed</b> | <b>Owner or Occupier (as Local Highway Authority)</b> |
|-----------------------|----------------------------------------|----------------------------------------------|-------------------------------------------------------|
| 11-020                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                         |
| 11-021                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority bridleway BIDD17        |
| 12-001                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority bridleway BIDD17        |
| 12-002                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority bridleway BIDD23        |
| 12-008                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                         |
| 12-009                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                         |
| 12-010                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                         |
| 12-015                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                         |
| 12-016                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                         |
| 12-017                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                         |
| 13-004                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                         |
| 13-005                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                         |
| 13-006                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                         |
| 13-007                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                         |
| 13-008                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                         |
| 13-009                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                         |
| 13-010                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                         |
| 13-011                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                         |
| 13-012                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                         |
| 13-013                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                         |

| <b>Plan Reference</b> | <b>Rights Claimed</b>                  | <b>Temporary or Permanent Rights Claimed</b> | <b>Owner or Occupier (as Local Highway Authority)</b> |
|-----------------------|----------------------------------------|----------------------------------------------|-------------------------------------------------------|
| 13-014                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                         |
| 13-015                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                         |
| 13-016                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                         |
| 13-019                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority byway CORM122           |
| 13-024                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                         |
| 13-026                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                         |
| 13-027                | Temporary Possession                   | Temporary                                    | Owner and occupier as highway authority               |
| 13-028                | Temporary Possession                   | Temporary                                    | Owner and occupier as highway authority               |
| 13-029                | Temporary Possession                   | Temporary                                    | Owner and occupier as highway authority               |
| 13-030                | Temporary Possession                   | Temporary                                    | Owner and occupier as highway authority               |
| 13-031                | Acquire right to use / carry out works | Possibly both                                | Owner and occupier as highway authority               |
| 13-032                | Acquire right to use / carry out works | Possibly both                                | Owner and occupier as highway authority               |
| 13-033                | Acquire right to use / carry out works | Possibly both                                | Owner and occupier as highway authority               |
| 13-034                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                         |
| 13-035                | Temporary Possession                   | Temporary                                    | Owner and occupier as highway authority               |
| 13-036                | Temporary Possession                   | Temporary                                    | Owner and occupier as highway authority               |
| 14-001                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority footpath CORM7          |
| 14-002                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority footpath CORM8          |
| 14-004                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority footpath CORM7          |

| <b>Plan Reference</b> | <b>Rights Claimed</b>                  | <b>Temporary or Permanent Rights Claimed</b> | <b>Owner or Occupier (as Local Highway Authority)</b>                                                                                                      |
|-----------------------|----------------------------------------|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 14-006                | Acquire right to use / carry out works | Possibly both                                | Owner and occupier as highway authority                                                                                                                    |
| 14-008                | Acquire right to use / carry out works | Possibly both                                | Owner and occupier as highway authority                                                                                                                    |
| 14-009                | Acquire right to use / carry out works | Possibly both                                | Difficult to ascertain – may be maintainable highway – see Figure 8 Thingley Overbridge                                                                    |
| 14-010                | Acquire right to use / carry out works | Possibly both                                | Unregistered strip of land adjacent to highway – not shown as part of the Wiltshire Council maintainable highway record – see Figure 8 Thingley Overbridge |
| 14-011                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority – part of Wiltshire Council maintainable highway record – see Figure 8 Thingley Overbridge                                   |
| 14-016                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority – part of Wiltshire Council maintainable highway record – see Figure 8 Thingley Overbridge                                   |
| 14-017                | Acquire right to use / carry out works | Possibly both                                | Difficult to ascertain but appears to be an unregistered strip of land adjacent to highway – see Figure 8 Thingley Overbridge                              |
| 14-019                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority footpath CORM9                                                                                                               |
| 14-020                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority footpath CORM9                                                                                                               |
| 14-021                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority footpath CORM9                                                                                                               |
| 14-024                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority Book of Reference to footpath CORM9 not applicable                                                                           |
| 14-025                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                                                                                                              |

| <b>Plan Reference</b> | <b>Rights Claimed</b>                  | <b>Temporary or Permanent Rights Claimed</b> | <b>Owner or Occupier (as Local Highway Authority)</b>                                               |
|-----------------------|----------------------------------------|----------------------------------------------|-----------------------------------------------------------------------------------------------------|
| 14-026                | Acquire right to use / carry out works | Possibly both                                | Footpath CORM3 outside plot 14-026                                                                  |
| 14-027                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                                                       |
| 14-028                | Acquire right to use / carry out works | Possibly both                                | Footpath CORM3 outside plot 14-028                                                                  |
| 14-029                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                                                       |
| 14-030                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                                                       |
| 14-031                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                                                       |
| 14-032                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                                                       |
| 14-033                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                                                       |
| 14-037                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                                                       |
| 14-039                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                                                       |
| 14-041                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                                                       |
| 14-049                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority footpath CORM13                                                       |
| 15-001                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                                                                       |
| 15-002                | Temporary Possession                   | Temporary                                    | Not shown as part of the Wiltshire Council maintainable highway record – see Figure 9 B3353 Gastard |

| <b>Plan Reference</b> | <b>Rights Claimed</b>                  | <b>Temporary or Permanent Rights Claimed</b> | <b>Owner or Occupier (as Local Highway Authority)</b>                                                |
|-----------------------|----------------------------------------|----------------------------------------------|------------------------------------------------------------------------------------------------------|
| 15-003                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                                                                        |
| 15-004                | Temporary Possession                   | Temporary                                    | Not shown as part of the Wiltshire Council maintainable highway record – see Figure 9 B3353 Gastard  |
| 15-005                | Temporary Possession                   | Temporary                                    | Not shown as part of the Wiltshire Council maintainable highway record – see Figure 9 B3353 Gastard  |
| 15-006                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                                                                        |
| 15-008                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority footpath CORM32, CORM33 CORM34 CORM35                                  |
| 15-009                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority footpath CORM23 CORM30 CORM31                                          |
| 15-011                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority footpath CORM24                                                        |
| 15-015                | Temporary Possession                   | Temporary                                    | Owner and Occupier as highway authority                                                              |
| 15-016                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                                                                        |
| 15-017                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                                                                        |
| 15-018                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                                                                        |
| 15-019                | Temporary Possession                   | Temporary                                    | Owner and Occupier as highway authority                                                              |
| 15-020                | Acquire right to use / carry out works | Possibly both                                | Not shown as part of the Wiltshire Council maintainable highway record – see Figure 10 B3353 Whitley |
| 15-021                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority footpath MELW77                                                        |
| 16-001                | Temporary Possession                   | Temporary                                    | Occupier as highway authority footpath MELW77                                                        |
| 16-002                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                                                                        |

| <b>Plan Reference</b> | <b>Rights Claimed</b>                  | <b>Temporary or Permanent Rights Claimed</b> | <b>Owner or Occupier (as Local Highway Authority)</b>   |
|-----------------------|----------------------------------------|----------------------------------------------|---------------------------------------------------------|
| 16-002a               | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                           |
| 16-004                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                           |
| 16-005                | Acquire right to use / carry out works | Possibly both                                | Owner and Occupier as highway authority                 |
| 16-007                | Acquire right to use / carry out works | Possibly both                                | Owner and Occupier as highway authority                 |
| 16-008                | Acquire right to use / carry out works | Possibly both                                | Owner and Occupier as highway authority                 |
| 16-009                | Acquire right to use / carry out works | Possibly both                                | Owner and Occupier as highway authority                 |
| 16-012                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority footpath<br>MELW84 MELW85 |
| 16-014                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority footpath<br>MELW84 MELW85 |
| 16-016                | Acquire right to use / carry out works | Possibly both                                | Occupier as highway authority                           |
| 17-001                | Temporary Possession                   | Temporary                                    | Owner and Occupier as highway authority                 |
| 17-002                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                           |
| 17-003                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                           |
| 17-004                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                           |
| 17-005                | Temporary Possession                   | Temporary                                    | Owner and Occupier as highway authority                 |
| 19-001                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                           |
| 22-001                | Temporary Possession                   | Temporary                                    | Owner and Occupier as highway authority                 |
| 22-002                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                           |
| 23-001                | Temporary Possession                   | Temporary                                    | Occupier as highway authority                           |
| 23-002                | Temporary Possession                   | Temporary                                    | Owner and Occupier as highway authority                 |

| Plan Reference                                                                                                                                                                                            | Rights Claimed                                                            | Temporary or Permanent Rights Claimed | Owner or Occupier (as Local Highway Authority)                                                                                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| 23-003                                                                                                                                                                                                    | Temporary Possession                                                      | Temporary                             | Occupier as highway authority                                                                                                         |
| <b>Part Two – Potential Claims S10 CPA</b>                                                                                                                                                                |                                                                           |                                       |                                                                                                                                       |
| 11-011                                                                                                                                                                                                    | Wiltshire Council has no interest in this land                            |                                       | In respect of provision to boundary structures contain in agreement dated 12 April 1966                                               |
| 14-049                                                                                                                                                                                                    | Wiltshire Council has no interest in this land apart from public footpath |                                       | Rights granted in deed dated 8 September 1902, 29 December 1902 and 30 December 1903. Rights granted in Conveyance dated 25 July 1932 |
| 15-012                                                                                                                                                                                                    | Wiltshire Council has no interest in this land                            |                                       | In respect of restrictive covenants as contained in Agreement dated 16 November 1976                                                  |
| <b>Part Three – Entitled to enjoy easements or other private rights over land (including private rights of navigation over water) which it is proposed shall be extinguished, suspended or interfered</b> |                                                                           |                                       |                                                                                                                                       |
| 11-011                                                                                                                                                                                                    | Wiltshire Council has no interest in this land, or any adjacent land      |                                       | In respect of provision to boundary structures contain in agreement dated 12 April 1966                                               |
| 14-049                                                                                                                                                                                                    | Wiltshire Council has no interest in this land, or any adjacent land      |                                       | Rights granted in deed dated 8 September 1902, 29 December 1902 and 30 December 1903. Rights granted in Conveyance dated 25 July 1932 |
| 15-012                                                                                                                                                                                                    | Wiltshire Council has no interest in this land, or any adjacent land      |                                       | In respect of restrictive covenants as contained in Agreement dated 16 November 1976                                                  |
| 16-002                                                                                                                                                                                                    | Assume lampposts, soakaways etc.                                          |                                       | In respect of street furniture                                                                                                        |
| 16-002a                                                                                                                                                                                                   | Assume lampposts, soakaways etc.                                          |                                       | In respect of street furniture                                                                                                        |
| 16-004                                                                                                                                                                                                    | Assume lampposts, soakaways etc.                                          |                                       | In respect of street furniture                                                                                                        |
| 16-005                                                                                                                                                                                                    | Assume lampposts, soakaways etc.                                          |                                       | In respect of street furniture                                                                                                        |
| 16-014                                                                                                                                                                                                    | Assume lampposts, soakaways etc.                                          |                                       | In respect of street furniture                                                                                                        |

Figure 1: Farhill Lane

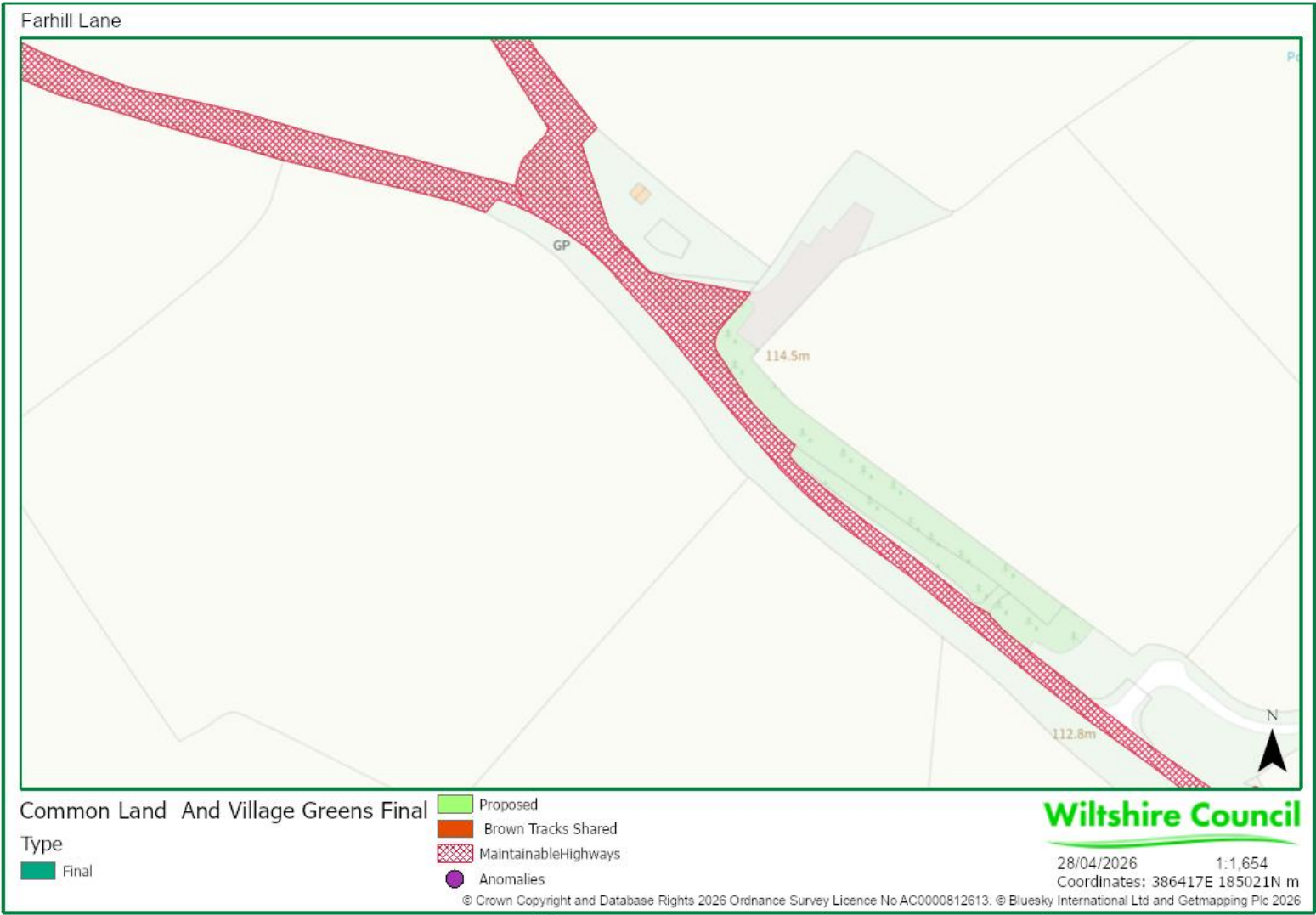


Figure 2: Honey Lane



**Figure 3: Fosse Way Railway Bridge**



Figure 4: Fosse Way Railway Bridge 2



Figure 5: Pig Lane Railway Bridge



Figure 6: Rodbourne Track Railway Bridge



Figure 7: A420

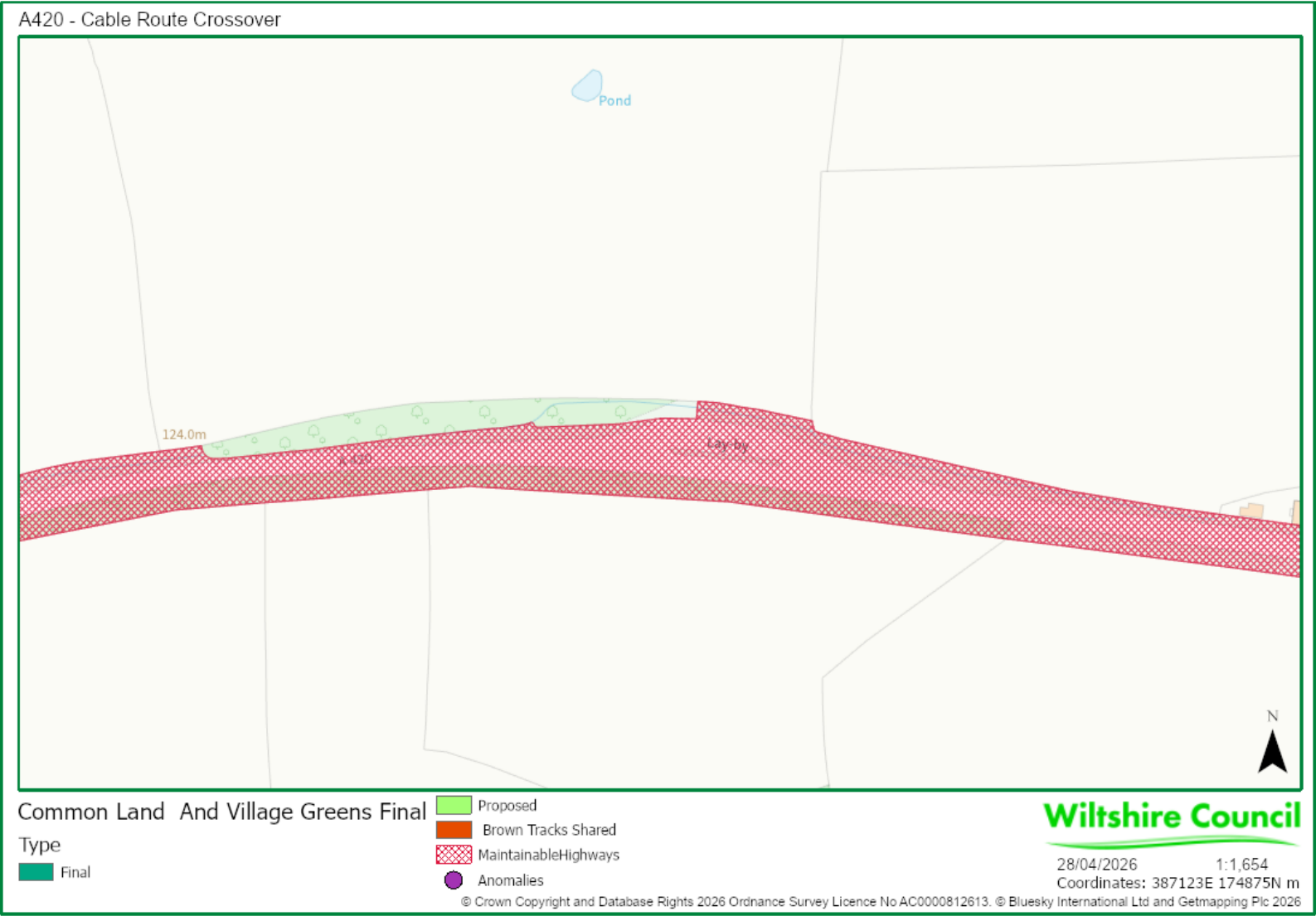


**Figure 8: Thingley Overbridge**



Figure 9: B3353 Gastard



Figure 10: B3353 Whitley

