Rosefield Solar Farm

Environmental Statement

Volume 2
Chapter 17: Cumulative Effects

APFP Regulation 5(2)(a)

Planning Act 2008

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

EN010158/APP/6.2
September 2025
Rosefield Energyfarm Limited

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17. Cumulative Effects

17.1. Introduction

17.1.1. This chapter presents the approach to the assessment and identification of cumulative effects. The full description of the Proposed Development is provided within **ES Volume 1, Chapter 3: Proposed Development Description [EN010158/APP/6.1]** and his chapter should be read in conjunction with **ES Volume 2, Chapters 6 - 16 [EN010158/APP/6.2]**.

17.1.2. This chapter is supported by the following figures presented in **ES Volume 3 [EN010158/APP/6.3]**:

- **Figure 17.1: Cumulative Zone of Influence**;
- **Figure 17.2: Cumulative Short List Radius**;
- **Figure 17.3: Cumulative ZTV – Rosefield and National Grid East Claydon Substation Extension**;
- **Figure 17.4: Cumulative ZTV – Rosefield and East Claydon Greener Grid Park**;
- **Figure 17.5: Cumulative ZTV – Rosefield and Tuckey Solar Farm**;
- **Figure 17.6: Cumulative ZTV – Rosefield and Longbreach Solar Farm**;
- **Figure 17.7: Cumulative ZTV – Rosefield and East Claydon BESS**;
- **Figure 17.8: Cumulative ZTV – Rosefield and Littleton Manor Farm**; and
- **Figure 17.9: Cumulative ZTV – Rosefield and all cumulative sites**.

17.1.3. This chapter is further supported by the following technical appendix presented in **ES Volume 4 [EN010158/APP/6.4]**:

- **Appendix 17.1: Long List of Other Approved and or Existing Developments**;
- **Appendix 17.2: Landscape and Visual Inter-project Cumulative Effect Assessment**; and
- **Appendix 17.3: Cumulative Visualisations**.

17.1.4. Cumulative effects occur as a result of several actions on an environmental receptor which may overlap or act in combination. The following types of cumulative effects have been considered, in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 **[Ref. 17-1]** (hereafter 'the EIA Regulations') and best practice guidance:

- **Intra-project combined effects:** the interaction and combination of different environmental residual (post-additional mitigation) effects from within the Proposed Development affecting a receptor; and
- **Inter-project cumulative effects:** the combined residual (post-mitigation) effects of the Proposed Development and 'other existing development and/or approved development' on a single receptor/resource.

17.2. Legislative framework, planning policy and guidance

17.2.1. This assessment has been undertaken with regard to the following legislation, policy and guidance.

17.2.2. It should be noted that this chapter does not assess the compliance of the Proposed Development against relevant planning policy. Such an assessment is presented in the **Planning Statement [EN010158/APP/5.7]**.

Legislation

- Schedule 4 paragraph (5)(e) of the EIA Regulations **[Ref. 17-1]** states that the Environmental Statement (ES) should include "a description of the likely significant effects of the development on the environment resulting from… the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the uses of natural resources".
- Regulation 5(2) of the EIA Regulations states that the Environmental Impact Assessment (EIA) must identify, describe and assess in an appropriate manner, in light of each individual case, the direct and indirect significant effects of the proposed development on population and human health, biodiversity, land, soil, water, air and climate, material assets, cultural heritage and the landscape.
- Regulation 5(2)(e) of the EIA Regulations also requires applicants to assess "the interaction between those factors."

National planning policy

- Overarching National Policy Statement for Energy (NPS EN-1) (2023) **[Ref. 17-2]** provides the basis for decisions regarding nationally significant energy infrastructure. There are multiple references to cumulative assessment, such as paragraph 4.1.5, which requires that potential adverse impacts, including any long term and cumulative adverse impacts, as well as any measures to avoid, reduce, mitigate or compensate for any adverse impacts are considered.

- National Policy Statement for Renewable Energy Infrastructure (NPS EN-3) (2023) **[Ref. 17-3]** sets out the policies relating to electricity generation from renewable sources of energy and includes multiple references to cumulative assessment. Section 2.10 gives specific consideration to solar development including assessment of cumulative impacts.
- National Policy Statement for Electricity Networks Infrastructure (NPS EN-5) (2023) **[Ref. 17-4]**, paragraph 2.9.10 makes reference to cumulative landscape and visual impacts where new overhead lines are required along with other related developments such as substations, wind farms and/or other new sources of power generation. However, no such overhead lines are required in respect of the Proposed Development.
- National Planning Policy Framework (NPPF) (2024) **[Ref. 17-5]** makes reference to ensuring adverse cumulative effects are addressed appropriately, particularly related to highways, landscape and visual, flood risk, ground conditions and pollution, air quality, human health and the historic environment.

Local planning policy

- Vale of Aylesbury Local Plan (VALP) 2013 – 2033 (Adopted September 2021) **[Ref. 17-6]**, specifically policies:
  - NE1 ‘Biodiversity and Geodiversity’;
  - NE3 ‘The Chilterns AONB and setting’;
  - NE8 ‘Trees, hedgerows and woodlands’;
  - C3 ‘Renewable Energy’; and
  - I1 ‘Green infrastructure’.
- Buckinghamshire Minerals and Waste Local Plan 2016-2036 (2019) **[Ref. 17-7]**.

Guidance

- Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment (2024) **[Ref. 17-8]**; and
- Institute of Environmental Management and Assessment: The State of Environmental Impact Assessment in the UK (2011) **[Ref. 17-9]**.

17.3. Stakeholder engagement

17.3.1. **Table 17.1** provides a summary of the stakeholder engagement activities undertaken separate from the EIA scoping, Phase One Consultation, Phase Two Consultation and Targeted Consultation process. This table also details the matters raised, how such matters have been addressed,

and where they have been addressed within the Development Consent Order (DCO) Application documentation.

17.3.2. **ES Volume 4, Appendix 5.3: EIA Scoping Opinion Response Matrix [EN010158/APP/6.4]** presents the responses received in the EIA Scoping Opinion and the Applicant's response to each matter that has been raised.

17.3.3. **Appendices A4, J1, J2 and K3** of the **Consultation Report Appendices [EN010158/APP/5.2]**, which is submitted in support of the DCO Application, sets out the feedback received during Phase One Consultation, Phase Two Consultation and Targeted Consultation and how regard has been afforded by the Applicant to each matter raised.

Table 17.1: Summary of stakeholder engagement

Consultee	Date of engagement	Summary of matters raised	Outcome of engagement	Where this matter is addressed in the DCO Application documentation
Buckinghamshire Council	06 June 2025	An email was sent to Buckinghamshire Council to seek agreement on the developments identified on the short list that will form part of the assessment and on the proposed cut off date of 30 June 2025 for developments to form part of the short list.	Buckinghamshire Council agreed with the developments identified on the short list, only requesting that Longbreach Solar Farm be added.	The long list is provided in **ES Volume 4, Appendix 17.1: Cumulative Long List [EN010158/APP/6.4]** and the short list is presented in **Table 7.3** of this chapter. Longbreach Solar Farm has been included in the short list. The assessment which has been based on the short list of development is detailed in **Section 7.7** of this chapter.

17.4. Approach to identifying the scope of the assessment

Intra-project combined effects

17.4.1. The approach to the assessment of interactions of environmental effects (intra-project combined effects) has considered the changes in baseline conditions at common sensitive receptors (i.e. those receptors that have been identified as experiencing likely significant effects by more than one environmental factor) due to the Proposed Development.

17.4.2. The assessment has been based upon residual (post-additional mitigation) effects of '**slight/minor**' or greater significance only ('**negligible**' residual effects have not been considered). The assessment includes consideration of where multiple **not significant** effects could combine to become **significant**. In addition, where a **significant** effect has been identified, the assessment includes consideration of the potential for this to be made worse.

17.4.3. The study area for the assessment of intra-project combined effects has been informed by the study areas for the individual environmental factor assessments.

Stage 1: Screening

17.4.4. Screening has been undertaken to determine whether a sensitive receptor is exposed to more than one type of residual (post-additional mitigation) effect, at the same time, during the construction, operation (including maintenance), and/or decommissioning phases of the Proposed Development. Those common sensitive receptors exposed to two or more types of residual (post-additional mitigation) effects with significance of '**slight/minor/low**' or greater, have been taken forward to Stage 2 of the assessment.

17.4.5. If there is only one type of effect on a sensitive receptor (i.e. only one environmental factor assessment has identified effects on that sensitive receptor), then it has been considered that there are no potential intra-project combined effects, and the sensitive receptor has not been taken forward to Stage 2 of the assessment.

Stage 2: Assessment for intra-project combined effects

17.4.6. A quantitative assessment of the overall significance of the intra-project combined effects on common sensitive receptors identified at Stage 1 has been undertaken, where possible, based on technical information provided in the environmental factor assessments (**ES Volume 2, Chapters 6 - 16 [EN010158/APP/6.2]**) and supporting appendices, as well as professional judgement. Given that the types of effects may be very different in some cases, a quantitative assessment has not always been possible, and

where that is the case, it has been necessary to apply professional judgement in determining the significance of each individual effect.

17.4.7. The evaluation at the receptor level has considered:

- The magnitude of change at the common receptor;
- Previously identified sensitivity/importance/value; and
- Duration and reversibility of interaction.

17.4.8. The focus has been on determining a change in the level of effect likely to be experienced and whether this is significant or not.

17.4.9. The significance has been determined by professional judgement and based upon a 'lead' environmental factor which will have considered indirect effects upon the receptor within the corresponding assessment (see **ES Volume 2, Chapters 6 - 16 [EN010158/APP/6.2]**). Where a significant effect has been stated within the relevant environmental factor chapter, this has been taken forward into the Stage 2 intra-project combined assessment. Where there has been only one significant effect concluded on a receptor/receptor group, on a precautionary basis, this has then been categorised as a significant intra-project combined effect. However, this is not classified as a new significant effect, in addition to or separate from that identified in the relevant environmental factor chapter.

Inter-project cumulative effects

17.4.10. The approach to the assessment of inter-project cumulative effects has considered the deviation from the baseline conditions at common sensitive receptors as a result of changes brought about as a result of the Proposed Development in combination with one or more other existing development and/or approved developments. The assessment of the inter-project cumulative effects is based upon the residual (post-additional mitigation) effects that have been identified in the various environmental factor assessments for the Proposed Development (**ES Volume 2, Chapters 6 - 16 [EN010158/APP/6.2]**), as well as available environmental information for the other existing development and/or approved developments.

17.4.11. In accordance with the Planning Inspectorate's Advice on Cumulative Effects Assessment **[Ref. 17-8]**, the identification of other existing development and/or approved developments comprises two clear stages, as follows:

- **Stage 1:** establish a long list of other existing development and/or approved developments based on appropriate spatial and temporal limits; and
- **Stage 2:** apply a clear rationale to establish a short list of other existing development and/or approved developments which, in combination with

the Proposed Development, have the potential to result in a significant inter-project cumulative effect for inclusion within the assessment.

Stage 1: Long list methodology

17.4.12. In accordance with the Planning Inspectorate's Advice on Cumulative Effects Assessment **[Ref. 17-8]**, the first task in establishing the long list of relevant other existing development and/or approved development(s) is to determine the 'search area'. For the purposes of this assessment, the 'search area' has been determined by affording consideration to the Zone of Influence (ZoI) for each environmental factor assessed within this ES.

17.4.13. The ZoI for each environmental factor is defined as the spatial area over which an effect is likely to be experienced. The ZoI for each environmental factor has been identified based on the extent of the likely effects as identified as the study area in each of the individual environmental factor assessments (**ES Volume 2, Chapters 6 - 16 [EN010158/APP/6.2]**), whilst also reflecting any additional area over which inter-project cumulative effects may occur for particular cumulative scenarios (e.g., sequential cumulative visual effects on users of linear routes).

17.4.14. The environmental factor-specific study areas presented in **ES Volume 2, Chapters 6 - 16 [EN010158/APP/6.2]**, and appropriate justifications for these study areas, are provided below in **Table 17.2**.

Table 17.2: ZoI for each environmental factor

Environmental factor	ZoI	Justification
Air quality	250m from the Order Limits	Based on the Institute of Air Quality Management (IAQM) construction dust guidance **[Ref.17-10]**, the study area for sensitive human receptors for demolition, earthworks and general construction activities is up to 250m from the Order Limits. For trackout activities[1], the study area is up to 50m from the edge of the road likely to be affected by trackout. The study area for sensitive ecological receptors for demolition, earthworks and general construction activities is up to 50m from the Order Limits.

[1] Trackout is defined as the transport of dust and dirt from the construction/demolition sites onto public road network, where it may be deposited and then re-suspended by vehicles using the network.

Environmental factor	ZoI	Justification
Biodiversity	2km from the Order Limits (extended to 10km in certain circumstances)	Background data searches for statutory and non-statutory designated sites and protected species records focus on the Order Limits and a 2km buffer, extended to 10km for Special Protection Areas, Special Areas of Conservation and Ramsar sites.
Climate	Not applicable (global)	Greenhouse gas (GHG) emissions are inherently cumulative, where the sensitive receptor is the global climate. As such, it is not possible to define a ZoI for the assessment for inter-project cumulative effects on GHG emissions, and therefore not possible to carry out an inter-project cumulative effects assessment.
Cultural heritage	10km from the Order Limits	The Zones of Theoretical Visibility (ZTVs) presented in **ES Volume 4, Appendix 10.6: Viewpoints and Visualisations [EN010158/APP/6.4]** demonstrate that any visibility of the Proposed Development could potentially extend beyond 6km from the Order Limits and the study area for designated heritage assets has been set at 5km (**ES Volume 4, Appendix 9.1: Archaeological Desk-Based Assessment and Setting Assessment [EN010158/APP/6.4]**). In theory, there could be inter-project cumulative effects to heritage assets within this distance of the Order Limits as a result of other existing development and/or approved developments of a similar height within 5km of the asset. The ZoI for cultural heritage is therefore set at 10km from the Order Limits.
Landscape and visual	10km from the Order Limits	The ZTVs presented in **ES Volume 4, Appendix 10.6: Viewpoints and Visualisations [EN010158/APP/6.4]** demonstrate that any visibility of the Proposed Development could potentially extend beyond 6km from the Order Limits. In theory, sequential cumulative visual

Environmental factor	ZoI	Justification
		effects on users of linear routes (e.g., roads or long distance recreational footpaths) could be influenced by developments beyond the study area. In order to consider developments beyond the study area, the ZoI for the inter-project cumulative effects assessment is set at 10km from the Order Limits. It is considered that sequential cumulative visual effects on users of linear routes at greater distances would be no greater than negligible due to the considerable separation distances.
Land and groundwater	1km from the Order Limits	A 1km buffer has been considered with regard to identifying land and groundwater related receptors that could be impacted by the construction, operation (including maintenance) and/or decommissioning of the Proposed Development.
Noise and vibration	300m from the Order Limits (for construction and decommissioning). Approximately 1km from the Order Limits (for operation, including maintenance)	The study area for the construction and decommissioning phase assessments considers noise and vibration sensitive receptors that are located within 600m of the Order Limits. This has been determined based on the guidance set out in BS 5228-1: 2009+A1: 2014 **[Ref. 17-11]**, BS 5228-2: 2009+A1: 2014 **[Ref. 17-12]**. For the assessment of operation (including maintenance) phase noise levels, a 1km study area buffer from the Order Limits has been adopted. Beyond this distance, the contribution of noise emissions is expected to be negligible.
Population	Community Study Area (**ES Volume 3, Figure 14.4: Community Study Area [EN010158/APP/6.3]**) Construction Labour Market Area (CLMA)	Determined by the likelihood of receptors identified as being affected by the Proposed Development in **ES Volume 2, Chapter 14: Population [EN010158/APP/6.2]**.

Environmental factor	ZoI	Justification
	Focus Area (**ES Volume 3, Figure 14.2: Construction Labour Market Area (CLMA) [EN010158/APP/6.3]**)	
Soil	1km from the Order Limits	A 1km buffer has been considered with regard to the agriculture and soil related receptors that could be impacted by the construction, operation (including maintenance) and/or decommissioning of the Proposed Development. Soil conditions are very localised and can drastically change within a small area therefore, it is reasonable to only consider a localised buffer.
Transport and access	Developments that result in significant traffic flows (in excess of 10%) that result in construction or operational traffic on the study area road network during the proposed construction period.	Projects that generate significant traffic levels on the study area road network (both trunk and local) that coincide with the Proposed Development has been considered as these may result in inter-project cumulative effects on the network.
Water	1km from the Order Limits	A 1km study area has been considered with regard to identifying hydrological features and surface water related receptors that could be impacted by the construction, operation (including maintenance), and/or decommissioning of the Proposed Development.

17.4.15. The overall combined 'search area' for the long list of relevant other existing development and/or approved development(s) has been based on the largest ZoI (study area) in terms of distance, which in this case is 10km. However, and notwithstanding the above, consideration has been afforded to the adoption of a wider study area for inter-project cumulative effects assessment in relation to transport (as noted in **Table 17.2** and discussed further in **Section 17.8**).

17.4.16. Following the adoption of the 10km ZoI, a planning application search was undertaken to identify other existing development and/or approved developments within the 10km ZoI, using the planning portals of Cherwell District Council, Buckinghamshire Council and the Planning Inspectorate.

17.4.17. The 10km ZoI extends from the 'bounding circle' which surrounds the Order Limits (excluding the Snake Lane/Fidlers Field highways works), as presented on **ES Volume 3, Figure 17.1: Cumulative Zone of Influence [EN010158/APP/6.3]** which takes an overly precautionary approach and, in some cases, extends wider than 10km from the Order Limits. The ZoI was not expanded to include Snake Lane/Fidlers Field due to the minor scale of the works associated with it and the overly precautionary approach taken. However, the ZoI from the bounding circle still encompasses an area of over 8km from Snake Lane/Fidlers Field, which is considered appropriate.

17.4.18. The central National Grid Reference point of other existing development and/or approved developments has been used to determine their location, in the absence of an application boundary in GIS format.

17.4.19. Only the following types of other existing developments and/or approved developments have been considered for inclusion on the long list, as the Applicant considers that any development that does not fall within these types would not likely give rise to a significant inter-project cumulative effect[2]:

- Employment developments;
- Residential developments of 10+ dwellings;
- Minerals and waste applications;
- Industrial developments;
- NSIP developments[3];
- Transport infrastructure developments (trunk roads or motorways only); and
- Energy infrastructure developments.

17.4.20. Of the development types listed above, only those that meet one or more of the following criteria have been included on the long list (in accordance

[2] Based on professional judgement with reference to EIA screening thresholds and reference to definitions of major development.
[3] As defined by the Planning Act 2008. Available online: https://www.legislation.gov.uk/ukpga/2008/29/contents

with the 'Tier 1' and 'Tier 2' descriptions in the Planning Inspectorate's Advice on Cumulative Effects Assessment **[Ref. 17-8]**):

- Projects that are under construction but that will not be completed prior to the Proposed Development commencing[4];
- Projects with planning permission within the last five years[5] (whether under the Planning Act 2008 or other regimes), but not yet implemented;
- Submitted applications (whether under the Planning Act 2008 or other regimes), but not yet determined; and
- Projects on the Planning Inspectorate's Programme of Projects where an EIA Scoping Report has been submitted, but for which an application has not yet been submitted.

17.4.21. The Applicant's interpretation of the last bullet point above is that this solely relates to Nationally Significant Infrastructure Projects (NSIPs). However, the Applicant has chosen to widen this particular criterion to include projects screened as EIA development under other regimes where an EIA Scoping Report has been submitted, but for which an application has not yet been submitted.

17.4.22. It should be noted that with reference to 'Tier 3' descriptions in the Planning Inspectorate's Advice on Cumulative Effects Assessment **[Ref. 17-8]**, the following other existing development and/or approved development(s) have not been considered for inclusion in the long list. None of the below will have sufficient environmental assessment information freely and publicly available to inform the inter-project cumulative effects assessment, nor a high level qualitative assessment. The Applicant therefore does not consider the below to be 'existing development and/or approved development':

- Projects on the Planning Inspectorate's Programme of Projects where an EIA Scoping Report has not been submitted;

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[4] In accordance with the Planning Inspectorate's Advice on Cumulative Effects Assessment, other projects that are expected to be completed before construction of the Proposed Development, and the effects of those projects have been fully determined within their respective applications, are considered as part of the baseline.

[5] A five-year period is considered a reasonable time period to capture all other existing development and/or approved developments that still have the potential to be built. Standard planning permission conditions typically state that development must be begun no later than the expiration of three years from the date of permission. Developments with planning permission older than five years will likely have been built or will not likely be built at all.

- Projects that have been identified in the relevant Development Plan(s) (and emerging Development Plans); and
- Projects identified in other plans and programmes (as appropriate) which set the framework for future development consents/approvals, where such development is reasonably likely to come forward.

17.4.23. The long list of other existing development and/or approved developments is provided in **ES Volume 4, Appendix 17.1: Cumulative Long List [EN010158/APP/6.4]** and follows the Matrix set out in Appendix 1 of the Planning Inspectorate's Advice on Cumulative Effects Assessment **[Ref. 17-8]**. This long list is accurate as of 30 June 2025 and has been kept under review by the Applicant's Planning Team to allow for a robust assessment of inter-project cumulative effects.

Stage 2: Short list methodology

17.4.24. Following the formation of the long list, the eligible other existing developments and/or approved developments identified have been through further assessment (Stage 2) to establish a short list of other existing development and/or approved developments which, in combination with the Proposed Development, have the potential to result in significant inter-project cumulative effects.

17.4.25. The criteria used to determine whether to include or exclude an existing development and/or approved development on the short list reflects the process established by the Planning Inspectorate's Advice on Cumulative Effects Assessment **[Ref. 17-8]** and has regard to relevant policy and guidance documents and consultation with the relevant statutory consultation bodies (particularly Buckinghamshire Council). The Planning Inspectorate's Advice on Cumulative Effects Assessment **[Ref. 17-8]** states that the criteria should address the following:

- **Temporal scope:** The relative construction, operation and decommissioning programmes of the other existing and/or approved developments identified in the ZoI together with the Proposed Development, to establish whether there is overlap and any potential for interaction;
- **Scale and nature of development:** The scale and nature of the other existing and/or approved developments identified in the ZoI that are likely to interact with the Proposed Development. Statutory definitions of major development and EIA screening thresholds may be of assistance when considering issues of scale;
- **Other factors:** For example, the nature and, or capacity of the receiving environment, which could make a significant cumulative effect with the other existing and/or approved developments more or less likely. Consider using a source-pathway receptor approach to inform the assessment.

17.4.26. The Planning Inspectorate's Advice on Cumulate Effects Assessment **[Ref. 17-8]** suggests that professional judgement may also be used to supplement the threshold criteria and in order to avoid excluding other existing development and/or approved development that is:

- "*Below the threshold criteria limits but has characteristics likely to give rise to a significant effect; or*
- *Below the threshold criteria limits but could give rise to a cumulative effect by virtue of its proximity to the proposed NSIP* [i.e. the Proposed Development]".

17.4.27. The Planning Inspectorate's Advice on Cumulative Effects Assessment **[Ref. 17-8]** also notes:

- "*Professional judgement could be applied to support the exclusion of other existing and, or approved development that exceeds the thresholds but may not give rise to evident effects. All the other existing and, or approved development considered should be documented and the reasons for inclusion or exclusion clearly stated.*"

17.4.28. Taking the above into consideration, the other existing development and/or approved developments on the long list have been reviewed against the following criteria to form the short list of other existing development and/or approved developments:

- **Criteria 1:** The other existing development and/or approved development has a construction, operation (including maintenance), and/or decommissioning phase that may overlap with any phase of the Proposed Development;
- **Criteria 2:** The other existing development and/or approved development and the Proposed Development share common sensitive receptors/resources which are assessed and described in the supporting environmental documentation, and have the potential to be significantly affected by the combination of the other existing development and/or approved development and the Proposed Development;
- **Criteria 3:** The other existing development and/or approved development has sufficient environmental assessment information readily and publicly available (including traffic flows) to inform the inter-project cumulative effects assessment. The assessment of each existing development and/or approved development on the short list will

be proportionate to the environmental assessment information available[6].

17.4.29. Where an existing development and/or approved development meets all of the above criteria, it has been included on the 'short list' and has been taken forward for further consideration in the assessment. The 'short list' is detailed below in **Table 17.3** and the location of each development is shown in **ES Volume 3, Figure 17.2: Cumulative Short List Radius [EN010158/APP/6.3]**.

17.4.30. This short list has been kept under review and consulted upon with Buckinghamshire Council to allow for a robust assessment of inter-project cumulative effects.

17.4.31. The information provided in **Table 17.3** is accurate as of 30 June 2025, the assessment cut-off date. Note that the identification numbers in the first column of **Table 17.3** correspond with those in **ES Volume 4, Appendix 17.1: Cumulative Long List [EN010158/APP/6.4]**.

[6] In the unlikely event that a Tier 1 or 2 development, which is known will be progressed, but has insufficient environmental assessment information, a detailed inter-project cumulative effects assessment may not be possible. It may, however, still be prudent to consider the development in the inter-project cumulative effects assessment. The assessment may therefore take the form of listing the development and why it has not been considered in detail, or the potential inter-project cumulative effect could be discussed at a high level (qualitatively) using professional judgement.

Table 17.3: Short list of other existing developments and/or approved developments

ID No. in the long list	Application reference	Planning regime	Brief description	Distance from the Order Limits	Status	Within 10km ZoI
1	23/03875/APP Appeal ref. 25/00013/REF	Town and Country Planning Act 1990	East Claydon BESS. Development of a battery energy storage system (BESS), connected directly to the national grid with associated infrastructure including access, drainage, and landscaping.	Within Order Limits	Refused – Appeal notification	Yes
2	25/01297/APP	Town and Country Planning Act 1990	East Claydon Greener Grid Park. Construction of a greener grid park comprising energy storage and grid balancing equipment and associated infrastructure including access, drainage, landscaping and other incidental works.	Within Order Limits	Pending decision	Yes
3	19/00983/APP	Town and Country Planning Act 1990	Tuckey Solar Farm. Ground mounted solar farm, ancillary infrastructure and associated works including the diversion of public rights of way (PRoW) and landscape planting.	Within bounding circle	Approved	Yes

ID No. in the long list	Application reference	Planning regime	Brief description	Distance from the Order Limits	Status	Within 10km ZoI
5	Hybrid Bill	High Speed Rail Act 2017	High Speed Rail 2 ('HS2')	Bounding circle and beyond	Approved	Yes
7	CM/0016/21	Town and Country Planning Act 1990	Calvert Solar Farm. Application for the construction of solar array/solar park comprising of ground mounted solar PV panels and associated works including: Distributor Network Operator (DNO) switching station, client switching station, battery containers, general storage container, access track, fencing, security cameras and cabling for a temporary period of 35 years at Calvert Landfill Site.	Partially in bounding circle	Pending decision	Yes
8	25/00013/DCO	Planning Act 2008	East West Rail DCO: Bedford to Cambridge and Western improvements.	1km	Pending decision	Yes
9	25/01865/APP	Town and Country Planning Act 1990	Longbreach Solar Farm. Erection of a solar farm and creation of new vehicular access, new footpath, substation compound, customer substation, inverters, CCTV Tower,	1.18km	Pending decision	Yes

ID No. in the long list	Application reference	Planning regime	Brief description	Distance from the Order Limits	Status	Within 10km ZoI
			storage containers, perimeter fencing, car parking and associated ancillary development.			
11	21/A2851//NON Appeal ref. 22/00125/REF	Town and Country Planning Act 1990	Grendon Prison. Outline planning application with all matters reserved except for access, layout, and scale for the construction a new category C prison (up to 67,000 sqm GEA) within a secure perimeter fence together with access, parking, landscaping and associated engineering works.	1.63km	Approved – following appeal	Yes
13	25/00883/AOP	Town and Country Planning Act 1990	Demolition of existing buildings and commercial redevelopment with residential development, including affordable housing, along with associated access and infrastructure.	1.7km	Pending decision	Yes
14	24/00407/APP	Town and Country Planning Act 1990	Erection of 10 no. dwellings and associated green infrastructure.	2.64km	Pending decision	Yes

ID No. in the long list	Application reference	Planning regime	Brief description	Distance from the Order Limits	Status	Within 10km ZoI
16	25/01567/AOP	Town and Country Planning Act 1990	Outline planning permission with all matters reserved for the development of up to 24 dwellings, open space, sustainable drainage and associated works.	4.2km	Pending decision	Yes
19	22/03873/F Appeal ref. APP/C3105/W/24/3353069	Town and Country Planning Act 1990	Padbury Brook Solar Farm. Installation and operation of a renewable energy generating station comprising ground-mounted photovoltaic solar arrays and battery-based electricity storage containers together with a switchgear container, inverter/transformer units, Site access, internal access tracks, security measures, access gates, other ancillary infrastructure and landscaping and biodiversity enhancements.	6.9km	Approved - following appeal	Yes
20	24/03004/APP	Town and Country Planning Act 1990	Hybrid application for the redevelopment of the site comprising outline planning permission, with all matters reserved	6.95km	Pending decision	Yes

ID No. in the long list	Application reference	Planning regime	Brief description	Distance from the Order Limits	Status	Within 10km ZoI
			except access, for a drive thru restaurant (Use Class E(b)/Sui Generis) and EV charging hub and full planning permission for an office building (Use Class E(g)(ii)) and a day nursery (Use Class E(f)) with associated landscaping, parking and access arrangements.			
21	21/04112/OUT Appeal ref. 22/00039/REF	Town and Country Planning Act 1990	Outline application for the erection of up to 65 dwellings, including up to 8 live-work dwellings (use class sui generis), public open space, access, infrastructure and demolition of existing buildings (all matters reserved except principle means of access from Station Road).	8.14km	Approved - following appeal	Yes
22	24/03426/AOP	Town and Country Planning Act 1990	Outline application (all reserved apart from access) for approx. 220 residential dwellings, pre-school/nursery, SuDS and open space off Bourton Road, Buckingham, MK18 7R.	8.2km	Pending decision	Yes

ID No. in the long list	Application reference	Planning regime	Brief description	Distance from the Order Limits	Status	Within 10km ZoI
24	24/00949/F	Town and Country Planning Act 1990	Siting of battery storage facility; substation for the connection of the BESS to the grid; ancillary equipment; security fencing; landscaping and vehicular access alterations.	9.02km	Approved	Yes
25	21/03558/OUT	Town and Country Planning Act 1990	Outline application for residential development for up to 250 dwellings including affordable housing and ancillary uses including retained Local Wildlife Site, public open space, play areas, localised land remodelling, compensatory flood storage, structural planting and access.	9.4km	Pending decision	Yes
26	24/03259/F	Town and Country Planning Act 1990	The erection of two Use Class B8 floorspace units (with ancillary office floorspace (Use Class E(G(i))) with associated infrastructure including: a building for the use as an energy centre (details of the energy generation reserved for future approval); loading bays; service	9.5km	Approved	Yes

ID No. in the long list	Application reference	Planning regime	Brief description	Distance from the Order Limits	Status	Within 10km ZoI
			yards; external plant; bin stores, vehicle parking (HGV, lorry, car and motorcycle); cycle parking, amenity areas, landscaping including permanent landscaped mounds; sustainable drainage details. Demolition of three vacant agricultural building (and two smaller structures) to the north east corner of the site. Access from the existing Symmetry Park estate road.			
27	21/01224/OUT	Town and Country Planning Act 1990	Outline planning application for Automotive Experience Quarter comprising Commercial, Business and Services uses (Class E), Light Industrial (Class B2), Local Community and Learning Uses (Class F) and vehicle circuits (Sui Generis) with all matters reserved aside from that of access).	9.63km	Approved	Yes
28	25/00439/SCOP	Town and Country Planning Act 1990	EIA scoping opinion for a proposed residential-led development.	9.7km	Scoping Opinion issued	Yes

ID No. in the long list	Application reference	Planning regime	Brief description	Distance from the Order Limits	Status	Within 10km ZoI
31	23/01610/OUT	Town and Country Planning Act 1990	Outline application (matters of access to be considered, with matters of layout, scale, appearance and landscaping reserved) cross boundary with Buckinghamshire LPA (application reference 23/02180/AOP) for a Sustainable Urban Extension comprising residential development of up to 1,265 dwellings (Use Class C3), a mixed-use local centre (Class E(a) Display or retail sale of goods, other than hot food, E(b) Sale of food and drink for consumption (mostly) on the premises, E(c) provision of: E(c)(i) Financial services, E(c)(ii) professional services (other than health or medical services), or E(c)(iii) Other appropriate services in a commercial, business or service locality, E(e) Provision of medical or health services (except the use of premises attached to the residence of the consultant or practitioner), E(f) Creche, day nursery or day	9.9km	Pending decision	Yes

ID No. in the long list	Application reference	Planning regime	Brief description	Distance from the Order Limits	Status	Within 10km ZoI
			centre (not including a residential use)), sui-generis hot food takeaway, a care home/extra care provision, community and commercial uses, a primary school, vehicle accesses from and a link road between the A421 and H6 Childs Way, diversion of existing PRoW and new pedestrian and cycle access points and routes, car and cycle parking, open space, sports provision, play areas, landscaping, plant, earthworks and ground remodelling, demolition of existing buildings, electrical substations, and associated infrastructure works. EIA development.			
32	22/03384/AOP	Town and Country Planning Act 1990	Littleton Manor Farm. Hybrid application to comprise: Part A - Outline Planning Application with all matters reserved (except for 2 principal points of access) for a residential development of up to 535	3.5km	Pending decision	Yes

ID No. in the long list	Application reference	Planning regime	Brief description	Distance from the Order Limits	Status	Within 10km ZoI
			dwellings; primary school; commercial units; mobility hubs; parking; upgraded vehicular access onto A41 and Quainton Road; vehicle accesses; cycle and pedestrian accesses; a community hub including residential care and retail; associated landscaping, parkland and woodland, ecological and environmental enhancements/habitat creation; green and blue infrastructure. Part B - A full planning application for an Energy Park development comprising a solar PV array, a wind turbine, an electric vehicle charging station, a substation, roundabout connecting to the A41 including new access roads and associated infrastructure.			

Stage 3: Information gathering

17.4.32. The other existing developments and/or approved developments that form part of the short list have been subject to a review of environmental information, where available, including details of:

- Location;
- Programme, including construction, operation (including maintenance), and decommissioning;
- Baseline data;
- Effects arising from such other existing development and/or approved developments on common sensitive receptors; and
- Proposed design.

Stage 4: Assessment

17.4.33. There is no formal guidance on the criteria for determining significance of inter-project cumulative effects. The following principles have been considered in assessing the significance of inter-project cumulative effects, in accordance with the Planning Inspectorate's Advice on Cumulative Effects Assessment **[Ref. 17-8]** and in consideration of any mitigation measures required to avoid, prevent, reduce or, if possible, offset any identified significant adverse inter-project cumulative effects:

- The duration of effect (temporary or permanent);
- The extent of effect (the geographical area);
- The type of effect (whether additive or synergistic);
- The frequency of the effect;
- The value and resilience of the receptor affected; and
- The likely success of mitigation.

17.4.34. When considering the inter-project cumulative effects with other existing developments and/or approved developments, it has been assumed that standard and good practice mitigation measures will be applied to the developments (e.g., use of Construction Environmental Management Plans) and that such mitigation would be secured as part of any planning permission granted. As such, it is appropriate to rely on these mitigation measures when completing the inter-project cumulative effects assessment.

17.4.35. The Applicant considers it not possible to assess all the inter-project cumulative effects of decommissioning activities as there is currently no mechanism to identify other existing development and/or approved developments that would be relevant at that time. However, where

possible, an assessment has been completed. It is anticipated that further consideration of the potential inter-project cumulative effects of decommissioning will be a matter for the relevant consenting authority at the time.

17.4.36. Regarding waste during decommissioning, several solar farm and battery energy storage developments (including Tucky Solar Farm and East Claydon Greener Grid Park which form part of the short list detailed in **Table 17.3**) are being progressed in Buckinghamshire, which subject to the granting of planning permission and operational lifespan, could generate decommissioning waste at the same time.

17.4.37. The Proposed Development is anticipated to generate a substantive amount of electrical and electronic equipment waste at decommissioning which would include Solar PV modules, batteries, and substation equipment, as well as other smaller quantities of electrical and electronic equipment waste from supporting electrical infrastructure. As such, these will be recovered and recycled by an authorised reprocessor, as required by the Waste Electrical and Electronic Equipment Regulations 2013 **[Ref. 17-13]**. To ensure that this is done to "Best Available Treatment Recovery and Recycling Techniques", a list of up-to -date authorised reprocessors will be established in the detailed Operational Environmental Management Plan and detailed Decommissioning Environmental Management Plan. This is secured by the **Outline Operational Environmental Management Plan (Outline OEMP) [EN010158/APP/7.3]** and **Outline Decommissioning Environmental Management Plan (Outline DEMP) [EN010158/APP/7.4]**.

17.4.38. The **Outline DEMP [EN010158/APP/7.4]** for the Proposed Development provides outline measures for the management of waste, including during the decommissioning phase. This is secured by a Requirement to the **Draft Development Consent Order (DCO) [EN010158/APP/3.1]**. In line with the VALP (2021) **[Ref. 17-6]** Policy C3 Renewable Energy, and Buckinghamshire Minerals and Waste Local Plan 2016-2036 (2019) **[Ref. 17-7]**.

17.5. Assessment of intra-project combined effects

17.5.1. The types of receptor groups typically identified as being subject to intra-project combined effects are as follows:

- Air quality: residents, ecological designated sites;
- Ecology and biodiversity: ecological designated sites, ecological receptors;
- Historic environment: settings of nationally designated and non-designated heritage assets;

- Landscape and visual resources: landscape character, visual receptors (residents, users of PRoW, other visual receptors);
- Soil: agricultural land quality and soil;
- Noise and vibration: residents;
- Population: agricultural land, businesses, and community, recreational and tourist facilities and assets and their users;
- Transport and access: road users, residents, pedestrians/cyclists, sensitive local uses (e.g., schools, local facilities); and
- Water: land at risk of flooding and groundwater.

17.5.2. Intra-project combined effects have on the whole been considered within the technical chapters (**ES Volume 2, Chapters 6 - 16 [EN010158/APP/6.2]**). For example, habitat degradation from dust and water pollution and species disturbance from light, noise, vibration and human activity, are considered in **ES Volume 2, Chapter 7: Biodiversity [EN010158/APP/6.2]**. Visual impacts and restrictions to PRoW access are considered in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]** and **ES Volume 2, Chapter 14: Population [EN010158/APP/6.2]**. Further detail is considered in **Tables 17.4 - 17.6** below.

17.5.3. A review of the sensitive receptor (or sensitive receptor group) identified in each technical chapter, and whether the same receptor is exposed to more than one type of residual (post-additional mitigation) effect of '**slight/minor/low**' adverse or beneficial significance or greater, during the construction, operation (including maintenance), and/or decommissioning phases of the Proposed Development has been completed. This has been undertaken using each of the summary tables presented in the final sections of **ES Volume 2, Chapters 6 - 16 [EN010158/APP/6.2]**.

17.5.4. The Stage 1 – Screening Assessment is presented in **Tables 17.4** and **17.5** below which summarises whether a sensitive receptor (or sensitive receptor group) is exposed to more than one type of residual (post-additional mitigation) effect of '**slight/minor/low**' (or equivalent) significance or greater, during the construction, operation (including maintenance), and/or decommissioning phases of the Proposed Development.

17.5.5. Where a residual (post-additional mitigation) effect is beneficial, this is stated in the 'Environmental factor/receptor/receptor group' column.

17.5.6. **Tables 17.4** and **17.5** set out each receptor/receptor group that is assessed within each environmental factor ES chapter. Where a residual (post-additional mitigation) effect of '**slight/minor/low**' (or equivalent) significance or greater is identified for a receptor/receptor group, this is delineated by an 'X' under the environmental factors that have identified it.

On a precautionary basis, if a receptor/receptor group has two or more '**slight/minor/low**' (or equivalent) significance or greater identified, the receptor/receptor group is taken forward into Stage 2.

Table 17.4: Screening of the interaction between common sensitive receptors and likely residual effect: construction and decommissioning phases

Environmental factor/ receptor/receptor group	Likely residual effect										
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Soil	Landscape and visual	Noise and vibration	Population	Transport and access	Water	Taken forward to Stage 2
Air Quality											
Residential receptors	X		X			X	X	X			Y
Human receptors	X			X		X	X	X	X		Y
Designated habitats	X	X								x	Y
Biodiversity											
Statutory and non-statutory designated sites and ancient woodland	X	X								X	Y
Hedgerows and hedgerow trees		X	X			X					Y
Individual trees and lines of trees		X				X					Y
Mixed scrub, bramble scrub, other neutral grassland and modified grassland		X									N
Black hairstreak and brown hairstreak butterfly		X									N
Terrestrial invertebrates (excluding black hairstreak and brown hairstreak butterfly)		X									N
Great crested newts		X									N
Reptiles		X									N
Ground nesting birds		X									N
Non-ground nesting		X									N
Wintering birds		X									N
Bechstein's bat (foraging, commuting and roosting)		X							X		Y

Environmental factor/ receptor/receptor group	Likely residual effect										
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Soil	Landscape and visual	Noise and vibration	Population	Transport and access	Water	Taken forward to Stage 2
Barbastelle bats (foraging, commuting and roosting)		X					X				Y
Other bat species (foraging, commuting and roosting)		X					X				Y
Cultural heritage											
Claydon House (Grade I Listed) (NHLE 1288461)			X			X	X	X			Y
Claydon Grade II Registered Park and Garden (NHLE 1000597) including non-registered parts of parkland (MBC20416)	X		X			X		X			Y
Non-registered parts of parkland associated with Claydon House (MBC20416)			X								N
Finemerehill House (NHLE 1117815)	X		X				X	X			Y
Pond Farmhouse (NHLE 1214849)	X		X			X	X	X			Y
Dry Leys Farmhouse (NHLE 1319271)			X				X	X			Y
Middle Claydon Conservation Area (including Listed Buildings therein)			X								N
Botolph Claydon Conservation Area	X		X			X	X				Y
Catherine Farm (MBC26340)	X		X			X	X	X			Y

Environmental factor/ receptor/receptor group	Likely residual effect										
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Soil	Landscape and visual	Noise and vibration	Population	Transport and access	Water	Taken forward to Stage 2
Physical impacts to area of Iron-Age to Romano-British settlement activity in Parcel 3 (HA1/MBC45205)			X								N
Physical impacts to area of linear anomalies north of Sheephouse Wood (MBC44779)			X								N
Physical impacts to route of Roman road (MBC6013)			X								N
Physical impacts to remains of medieval field systems (HA2, HA3, HA4, HA5)			X								N
Post-medieval field systems (HA6)		x	X			x					Y
Physical impacts to route of Aylesbury to Buckingham branch of the Metropolitan Railway (MBC14921) and site of Granborough Road Station buildings (MBC14922)			X								N
Physical impacts to two post-medieval extractive pits (MBC45160 and MBC45161)			X								N
Physical impacts to two former 17th century ponds (MBC10753; MBC21469)			X								N
Physical impacts to currently unknown below			X								N

Environmental factor/ receptor/receptor group	Likely residual effect										
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Soil	Landscape and visual	Noise and vibration	Population	Transport and access	Water	Taken forward to Stage 2
ground archaeological remains within the Order Limits											
Land and groundwater											
Geology				X							N
Human receptors	X			X							Y
Groundwater regime with respect to groundwater levels and flow				X							N
Groundwater quality				X							N
Landscape and visual											
Landscape fabric (woodland, trees and hedgerows)		X				X					Y
NCA 108: Upper Thames Clay Vales						X					N
LCT 5: Shallow Valley						X					N
LCA 5.6: Claydon Valley						X					N
LCA 5.7: Hogshaw Claylands						X					N
LCA 5.8: North Marston Undulating Claylands						X					N
LCT 7: Wooded Rolling Lowlands						X					N
LCA 7.3: Claydon Bowl						X					N
LCT 9: Low Hills and Ridges						X					N
LCA 9.1: Finemere Hill						X					N
LCA 9.2: Quainton Hill						X					N
LCA 9.3: Pitchcott-Whitchurch Ridge						X					N

Environmental factor/ receptor/receptor group	Likely residual effect										
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Soil	Landscape and visual	Noise and vibration	Population	Transport and access	Water	Taken forward to Stage 2
Quainton-Wing Hills AAL						X					N
Botolph Claydon	X		X			X	X	X			Y
Granborough						X	X				Y
North Marston						X					N
Oving						X					N
Steeple Claydon						X					N
Orchard Way/Calvert Road	X					X					Y
Quainton Road/ Claydon Road	X					X			X		Y
Winslow Road/ East Claydon Road	X					X					Y
Queen Catherine Road						X					N
East West Rail						X					N
NCN Route No. 51						X					N
North Buckinghamshire Way/Midshires Way	X					X		X	X		Y
Swan's Way/ Outer Aylesbury Ring						X		X			Y
Bernwood Jubilee Way	X					X		X	X		Y
PRoW between Calvert Road and HS2	X					X		X	X		Y
Three Points Lane and the PRoW extending to HS2	X					X		X	X		Y
PRoW between Three Points Lane and Splash Lane (Three Points Lane Bridleway)	X					X		X	X		Y

Environmental factor/ receptor/receptor group	Likely residual effect										
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Soil	Landscape and visual	Noise and vibration	Population	Transport and access	Water	Taken forward to Stage 2
PRoW between Botolph Claydon and Runt's Wood	X					X		X	X		Y
PRoW to Finemere Hill	X					X		X	X		Y
PRoW between Finemere Hill and HS2/Claydon Road	X					X		X	X		Y
PRoW, lanes and roads between East Claydon/East Claydon Road and to within Parcel 3	X					X		X	X		Y
PRoW, lanes and roads between East Claydon Road/Parcel 3 and Granborough/Hogshaw Road	X					X		X	X		Y
PRoW between Steeple Claydon and Calvert Road	X					X		X	X		Y
Claydon House			X			X	X	X			Y
Hogshaw Farm and Wildlife Park						X	X	X	X		Y
1-2 Calvert Cottages	X					X	X				Y
3 Calvert Cottages	X					X	X				Y
4-5 Calvert Cottages	X					X	X				Y
Granary Cottage	X					X	X				Y
Pond Farm	X		X			X	X				Y
The Old Dairy	X					X	X				Y
Knowlhill Farm	X					X	X				Y
1-2 Blackmorehill Farm Cottages (Catherine Farm is located within the vicinity)	X		X			X	X				Y
4-5 Catherine Cottages	X					X	X				Y

Environmental factor/ receptor/receptor group	Likely residual effect										
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Soil	Landscape and visual	Noise and vibration	Population	Transport and access	Water	Taken forward to Stage 2
6-7 Catherine Cottages	X					X	X				Y
Bernwood Farm	X					X	X				Y
Sion Hill Farm	X					X	X				Y
Station House	X					X	X				Y
Soil											
Agricultural land quality (Grade 2 and 3a)					X			X			Y
Agricultural land quality (Grade 3b)					X			X			Y
Soil ecosystems					X			X			Y
Noise and vibration											
Beachfield							X	X			Y
Bernwood Farm	X		X			X	X	X			Y
Bernwood Farm	X		X			X	X	X			Y
Orchard Way, Botolph Claydon			X				X	X			Y
Botyl Rd, Botolph Claydon			X			X	X	X			Y
Brickhill Way, Calvert							X	X			Y
Calvert Cottages	X					X	X	X			Y
Catherine Cottages	X					X	X	X			Y
Catherine Farm	X		X			X	X	X			Y
Claydon Rd	X					X	X	X	X		Y
Dry Leys Farmhouse			X				X	X			Y
Finmere Hill House	X		X				X	X			Y
Hogshaw Farm						X	X	X	X		Y
Knowhill Farm	X					X	X	X			Y
Lower Farm							X	X			Y
Muxwell Farm	X						X	X			Y
Pond Farm	X		X			X	X	X			Y

Environmental factor/ receptor/receptor group	Likely residual effect										
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Soil	Landscape and visual	Noise and vibration	Population	Transport and access	Water	Taken forward to Stage 2
The Old Dairy, Pond Farm	X					X	X	X			Y
Sion Hill Farm	X					X	X	X			Y
Woodland Barn							X	X			Y
Borshaw Farm						X	X	X	X		Y
Brackley Ln, Calvert (A)							X	X			Y
Brackley Ln, Calvert (B)							X	X			Y
Red Kit View, Calvert							X	X			Y
Blackmorehill Farm Cottages	X					X	X	X			Y
Woodlands Farm Fishery							X	X			Y
Claydon House			X			X	X	X			Y
Middle Farm							X	X			Y
Granborough						X	X	X			Y
East Claydon						X	X	X			Y
Population											
Employment (slight beneficial)								X			N
Agricultural businesses and landholdings					X			X			Y
Other (non-agricultural) businesses and development land	X		X			X	X	X			Y
Tourism and the tourist economy (minor beneficial)	X		X			X	X	X			Y
Community access/walkers, cyclists and horse riders (PRoW)	X					X		X			Y
Private property and housing/land allocations	X		X			X	X	X			Y

Environmental factor/ receptor/receptor group	Likely residual effect										
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Soil	Landscape and visual	Noise and vibration	Population	Transport and access	Water	Taken forward to Stage 2
Community and recreational facilities, land and assets and their users	X						X	X			Y
Transport and access											
Users of Station Road/Dewes Lane									X		N
Users of Snake Lane/Fidlers Field									X		N
Users of Granborough Road									X		N
Users of Claydon Road						X			X		Y
PRoW, Bridleway and Path Users within the Site study area	X					X		X	X		Y
Residents of Snake Lane/Fidlers Field									X		N
Residents of Claydon Road	X					X	X		X		Y
Water											
Water quality										X	N
Flood risk and surface water drainage										X	N
Water framework directive waterbody (Claydon Brook Tributary)			X							X	Y

Table 17.5: Screening of the interaction between common sensitive receptors and likely residual effects: operation (including maintenance) phase

Environmental factor/ receptor/receptor group	Likely residual effect									
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Landscape and visual	Soil	Noise and vibration	Population	Water	Taken forward to Stage 2
Air Quality										
Human receptors	X			X	X		X	X		Y
Designated habitats	X								X	Y
Biodiversity										
Ponds (significant beneficial)		X								N
Mixed scrub, bramble scrub, other neutral grassland and modified grassland (significant beneficial)		X								N
Ground nesting birds (significant beneficial)		X								N
Bechstein's bats (foraging, commuting and roosting)		X					X			Y
Barbastelle bats (foraging, commuting and roosting)		X					X			Y
Other bat species (foraging, commuting and roosting)		X					X			Y
Cultural heritage										
Grade I Listed Building of Claydon House (NHLE 1288461)			X		X		X	X		Y
Claydon Grade II Registered Park and Garden (NHLE 1000597) including non-registered parts of parkland (MBC20416)			X		X			X		Y

Environmental factor/ receptor/receptor group	Likely residual effect									
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Landscape and visual	Soil	Noise and vibration	Population	Water	Taken forward to Stage 2
Physical impacts to non-registered parts of parkland associated with Claydon House (MBC20416)			X							N
Finemerehill House (NHLE 1117815)			X				X	X		Y
Pond Farmhouse (NHLE 1214849)	X		X		X		X	X		Y
Dry Leys Farmhouse (NHLE 1319271)			X		X		X	X		Y
Middle Claydon Conservation Area (including Listed Buildings therein)			X							N
Botolph Claydon Conservation Area	X		X		X		X	X		Y
Catherine Farm (MBC26340)	X		X		X		X	X		Y
Physical impacts to area of Iron-Age to Romano-British settlement activity in Parcel 3 (HA1/MBC45205)			X							N
Physical impacts to area of linear anomalies north of Sheephouse Wood (MBC44779)			X							N
Physical impacts to route of Roman road (MBC6013)			X							N
Physical impacts to below ground remains of medieval field systems (HA2, HA3, HA4, HA5)			X							N

Environmental factor/ receptor/receptor group	Likely residual effect									
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Landscape and visual	Soil	Noise and vibration	Population	Water	Taken forward to Stage 2
post-medieval field systems (HA6)			**X**							**N**
Physical impacts to below ground remains of farms and farm buildings of post-medieval date (HA7, HA8, HA9, HA10, HA11, HA12, HA13, HA14, HA15, HA16, HA17, HA18)			**X**							**N**
Physical impacts to route of Aylesbury to Buckingham branch of the Metropolitan Railway (MBC14921) and site of Granborough Road Station buildings (MBC14922)			**X**							**N**
Physical impacts to two post-medieval extractive pits (MBC45160 and MBC45161)			**X**							**N**
Physical impacts to two former 17th century ponds (MBC10753; MBC21469)			**X**							**N**
Physical impacts to currently unknown below ground archaeological remains within the Order Limits			**X**							**N**
Land and groundwater										
Geology				**X**						**N**
Human receptors	**X**			**X**						**Y**
Groundwater regime with respect to groundwater levels and flow				**X**						**N**

Environmental factor/ receptor/receptor group	Likely residual effect									
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Landscape and visual	Soil	Noise and vibration	Population	Water	Taken forward to Stage 2
Groundwater quality				X						N
Aquifer				X						N
Landscape and visual										
Landscape fabric (woodland, trees and hedgerows)		X			X					Y
NCA 108: Upper Thames Clay Vales					X					N
LCT 5: Shallow Valley					X					N
LCA 5.4: Twyford Vale					X					N
LCA 5.6: Claydon Valley					X					N
LCA 5.7: Hogshaw Claylands					X					N
LCA 5.8: North Marston Undulating Claylands					X					N
LCT 7: Wooded Rolling Lowlands					X					N
LCA 7.3: Claydon Bowl					X					N
LCT 9: Low Hills and Ridges					X					N
LCA 9.1: Finemere Hill					X					N
LCA 9.2: Quainton Hill					X					N
LCA 9.3: Pitchcott-Whitchurch Ridge					X					N
Quainton-Wing Hills AAL					X					N
Botolph Claydon	X		X		X			X		Y
Granborough					X		X	X		Y
North Marston					X					N
Oving					X					N
Steeple Claydon					X					N

Environmental factor/ receptor/receptor group	Likely residual effect									
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Landscape and visual	Soil	Noise and vibration	Population	Water	Taken forward to Stage 2
Orchard Way/Calvert Road	X				X					Y
Quainton Road/ Claydon Road	X				X					Y
Winslow Road/ East Claydon Road	X				X					Y
Queen Catherine Road					X					N
East West Rail					X					N
NCN Route No. 51					X					N
North Buckinghamshire Way/Midshires Way	X				X			X		Y
Swan's Way/ Outer Aylesbury Ring					X			X		Y
Bernwood Jubilee Way	X				X			X		Y
PRoW between Calvert Road and HS2	X				X			X		Y
Three Points Lane and the PRoW extending to HS2	X				X			X		Y
PRoW between Three Points Lane and Splash Lane (Three Points Lane Bridleway)	X				X			X		Y
PRoW between Botolph Claydon and Runt's Wood	X				X			X		Y
PRoW to Finemere Hill	X				X			X		Y
PRoW between Finemere Hill and HS2/Claydon Road	X				X			X		Y
PRoW, lanes and roads between East Claydon/East Claydon	X				X			X		Y

Environmental factor/ receptor/receptor group	Likely residual effect									
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Landscape and visual	Soil	Noise and vibration	Population	Water	Taken forward to Stage 2
Road and to within Parcel 3										
PRoW, lanes and roads between East Claydon Road/Parcel 3 and Granborough/Hogshaw Road	X				X			X		Y
PRoW between Steeple Claydon and Calvert Road	X				X			X		Y
Claydon House			X		X		X	X		Y
Hogshaw Farm and Wildlife Park					X		X	X		Y
1-2 Calvert Cottages	X				X		X	X		Y
3 Calvert Cottages	X				X		X	X		Y
4-5 Calvert Cottages	X				X		X	X		Y
Granary Cottage	X				X		X	X		Y
Pond Farm			X		X		X	X		Y
The Old Dairy					X		X	X		Y
Knowlhill Farm					X		X	X		Y
1-2 Blackmorehill Farm Cottages (Catherine Farm is located within the vicinity)	X		X		X		X	X		Y
4-5 Catherine Cottages	X				X		X	X		Y
6-7 Catherine Cottages	X				X		X	X		Y
Bernwood Farm	X				X		X	X		Y
Sion Hill Farm					X		X	X		Y
Station House					X		X	X		Y
Soil										
Agricultural land quality (Grades 2, 3a and 3b)						X				N

Environmental factor/ receptor/receptor group	Likely residual effect									
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Landscape and visual	Soil	Noise and vibration	Population	Water	Taken forward to Stage 2
Soil ecosystems (slight beneficial)						X				N
Agricultural land quality in Green and Blue Infrastructure						X				N
Soil ecosystems in Green and Blue Infrastructure (slight beneficial)						X				N
Noise and vibration										
Beachfield							X	X		Y
Bernwood Farm	X		X		X		X	X		Y
Orchard Way, Botolph Claydon	X		X				X	X		Y
Botyl Rd, Botolph Claydon			X		X		X	X		Y
Brickhill Way, Calvert							X	X		Y
Calvert Cottages	X				X		X	X		Y
Catherine Cottages	X				X		X	X		Y
Catherine Farm	X		X		X		X	X		Y
Claydon Rd	X						X	X		Y
Dry Leys Farmhouse			X				X	X		Y
Finmere Hill House			X				X	X		Y
Hogshaw Farm					X		X	X		Y
Knowhill Farm					X		X	X		Y
Lower Farm							X	X		Y
Muxwell Farm							X	X		Y
Pond Farm			X		X		X	X		Y
The Old Dairy, Pond Farm					X		X	X		Y
Sion Hill Farm					X		X	X		Y
Woodland Barn							X	X		Y

Environmental factor/ receptor/receptor group	Likely residual effect									
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Landscape and visual	Soil	Noise and vibration	Population	Water	Taken forward to Stage 2
Borshaw Farm					X		X	X		Y
Brackley Ln, Calvert (A)							X	X		Y
Brackley Ln, Calvert (B)							X	X		Y
Red Kit View, Calvert							X	X		Y
Blackmorehill Farm Cottages	X				X		X	X		Y
Woodlands Farm Fishery							X	X		Y
Claydon House			X		X		X	X		Y
Middle Farm							X	X		Y
Granborough	X				X		X	X		Y
East Claydon	X						X	X		Y
Population										
Employment (slight beneficial)								X		N
Agricultural businesses and landholdings								X		N
Other (non-agricultural) businesses			X		X			X		Y
Tourism and the tourist economy	X		X		X		X	X		Y
Community access/walkers, cyclists and horse riders (slight beneficial)					X			X		Y
Private property and housing/land allocations			X		X		X	X		Y
Community and recreational facilities, land and assets and their users	X						X	X		Y
Water										

Environmental factor/ receptor/receptor group	Likely residual effect									
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Landscape and visual	Soil	Noise and vibration	Population	Water	Taken forward to Stage 2
Water quality									**X**	**N**
Flood risk and surface water drainage									**X**	**N**
Water framework directive waterbody (Claydon Brook Tributary)		**X**							**X**	**Y**

17.5.7. Receptors identified in **Tables 17.4** and **17.5** to be taken forward to Stage 2 of the intra-project combined effects assessment. The interaction between the likely effects on these receptors has been examined in order to determine an overall likely combined significance of the impacts of all identified likely residual effects in interaction. This significance has been determined by professional judgement and based upon a 'lead' environmental factor which will have considered indirect effects upon the receptor within the corresponding assessment (see **ES Volume 2, Chapters 6 - 16 [EN010158/APP/6.2]**). Where a significant effect has been stated within the relevant environmental factor chapter, this has been taken forward into the Stage 2 intra-project combined assessment. Where there has been only one significant effect concluded on a receptor/receptor group, on a precautionary basis, this has then been categorised as a significant intra-project combined effect. However, this is not classified as a new significant effect, in addition to or separate from that identified in the relevant environmental factor chapter.

17.5.8. Any properties located within 250m of the Order Limits are grouped under: 'Residential (including human) receptors within 250m of the Order Limits' in **Tables 17.6** and **17.7** below. These are:

- Pond Farmhouse (NHLE 1214849);
- Catherine Farm (MBC26340);
- Calvert Cottages;
- Granary Cottage;
- The Old Dairy;
- Knowlhill Farm;
- Blackmorehill Farm Cottages;
- Catherine Cottages;
- Bernwood Farm;
- Sion Hill Farm;
- Station House; and
- Residents on Claydon Road.

17.5.9. The PRoW that are grouped under 'PRoW in and around the Order Limits (excluding Swan's Way/Outer Aylesbury Ring)' in **Tables 17.6** and **17.7** below are:

- North Buckinghamshire Way/Midshires Way;
- Bernwood Jubilee Way;
- PRoW between Calvert Road and HS2;

- Three Points Lane and the PRoW extending to HS2;
- PRoW between Three Points Lane and Splash Lane (Three Points Lane Bridleway);
- PRoW between Botolph Claydon and Runt's Wood;
- PRoW to Finemere Hill;
- PRoW between Finemere Hill and HS2/Claydon Road;
- PRoW, lanes and roads between East Claydon/East Claydon Road and Parcel 3;
- PRoW, lanes and roads between East Claydon Road/Parcel 3 Granborough/Hogshaw Road; and
- PRoW between Steeple Claydon/Queen Catherine Road and Calvert Road.

Table 17.6: Intra-project combined likely residual effect interactions during construction and decommissioning (Stage 2)

Environmental factor/receptor/ receptor group	Likely residual effect										Mitigation	Likelihood of significant intra-project combined effects
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Soil	Landscape and visual	Noise and vibration	Population	Transport and access	Water		
Residential (including human) receptors located within 250m of the Order Limits (excluding Finmere Hill House, Dry Leys Farmhouse and Muxwell Farm)	The sensitivity of the area to dust soiling effects on people and property is considered to be **high** during demolition (during decommissioning phase only), earthworks and construction activities, and **low** for trackout activities. Therefore, it has been concluded there is a **medium** risk of dust emissions impacts from demolition activities (during decommissioning phase only), a **low** risk of dust emissions impacts from earthworks, construction activities which is **not significant**. The sensitivity of the human receptors to road traffic emissions is considered to be **high** and the magnitude of change, following additional mitigation, is considered to be below Environmental Protection UK and Institute of Air Quality Management guidance screening criteria which is **not significant.**	N/A – intra-project combined effect not applicable to this factor.	There is likely to be a **temporary**, **short-term**, **slight adverse** residual effect on Claydon House, Pond Farmhouse, and Catherine Farm which is considered to be **not significant**.	With respect to contamination issues affecting human health, the receptor sensitivity is categorised as **medium**. The magnitude of impact is categorised as **negligible**. Therefore, there is assessed to be either a **neutral** residual effect, or an **indirect**, **temporary**, **short-term slight adverse** residual effect on human health, which is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	The **short-term** nature of any construction effects in close proximity to a single property would likely mean that any identified effects would not reach the threshold to become a matter for residential amenity.	Following the implementation of suitable additional mitigation measures, the magnitude of impact during the construction phase at **high** sensitivity receptors is considered to be up to **low**, resulting in a direct, temporary **minor adverse** effect, which is considered to be **not significant**. The predicted construction induced vibration levels are below the 1 mm/s PPV threshold at all considered receptors. Therefore, the magnitude of impact at **high** sensitivity receptors is considered to be up to **low**, resulting in a direct, temporary **minor adverse** effect, which is considered to be **not significant**. On the basis of the road traffic noise assessment, the magnitude of impact at **high** sensitivity receptors is considered to be up to **low**, resulting in a direct, temporary **minor adverse** effect, which is considered **not significant**.	No existing or proposed/ planned residential property would require demolition or become undeliverable as a result of the construction of the Proposed Development, and no property would become uninhabitable as a result of residual significant environmental effects, resulting in a **negligible** sensitivity. The magnitude of change would be **minor**. As a result, the is likely to be a **temporary neutral or slight adverse** effect that is considered to be **not significant**.	The magnitude of impact during the construction phase is considered to be **minor,** resulting in a temporary **minor adverse** effect which is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	**Outline Construction Environmental Management Plan (Outline CEMP) [EN010158/APP/7.2]** **Outline DEMP [EN010158/APP/7.4]** **Outline Construction Traffic Management Plan (Outline CTMP) [EN010158/APP/7.5]** **Outline Landscape and Ecological Management Plan (Outline LEMP) [EN010158/APP/7.6]**	For this receptor group, population is considered to be the 'lead' environmental factor. The population assessment has taken into account the potential effects of each other relevant environmental factor upon this receptor group and concludes that there will not be a significant effect. It is therefore not anticipated for this receptor group to experience significant intra-project combined effects.
Ecologically designated sites	The sensitivity of the area to ecological impacts is considered to be **medium-low** for demolition (during decommissioning phase only), earthworks and construction and **low** trackout. Therefore, it has been concluded there is a **low-negligible** risk of dust emissions impacts for every	There is not anticipated to be an adverse effect on the integrity of statutory designated sites, non-statutory designated sites or ancient woodland during construction, which is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	The magnitude of impact on watercourses within Finemere Wood SSSI and Sheephouse Wood SSSI (a receptor of **high** sensitivity /importance) would be **minor**, meaning the	**Outline CEMP [EN010158/APP/7.2]** **Outline DEMP [EN010158/APP/7.4]** **Outline CTMP [EN010158/APP/7.5]** **Outline LEMP** **[EN010158/APP/7.6]** **Outline Drainage Strategy [EN010158/APP/7.11]**	For this receptor group, biodiversity is considered to be the 'lead' environmental factor. The biodiversity assessment has taken into account the potential effects of each other relevant environmental

Environmental factor/receptor/ receptor group	Likely residual effect										Mitigation	Likelihood of significant intra-project combined effects
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Soil	Landscape and visual	Noise and vibration	Population	Transport and access	Water		
	activity with is **not significant**. The sensitivity of the designated habitats to road traffic emissions is considered to be **medium-low** and the magnitude of change, following additional mitigation, is considered to be below the Design Manual for Roads and Bridges LA 105 Air Quality screening criteria which is **not significant**.									overall of water quality effect is **slight adverse**, which is considered to be **not significant**. The effect would be temporary, direct and of local importance.		factor upon this receptor group and concludes that there will not be a significant effect. It is therefore not anticipated for this receptor group to experience significant intra-project combined effects.
Landscape Fabric	N/A – intra-project combined effect not applicable to this factor.	The hedgerow resource is considered to be of **County** importance. The residual effect is predicted to be **adverse**, **short-term** and **temporary** whilst reinstated sections of hedgerows become re-established. Given the hedgerow resource in the local area, this is deemed to be **not significant**. Individual trees and lines of trees are predicted to have a residual effect of **adverse**, **long-term** and **permanent** whilst new tree planting becomes established which is considered to be **not significant**.	The importance of the setting of post-medieval field systems (HA6), which comprises the hedgerow boundaries within the Site, is **low**. The magnitude of impact is **minor**. There is likely to be a **temporary**, **slight adverse** residual effect on the post-medieval field systems, which is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	The sensitivity of the existing hedgerows in the landscape is variable across the Site given that some are in better condition than others. However, taken collectively the sensitivity of the hedgerows in the study area is assessed to be **high/medium**. There would be a small scale of change over a wide area and for a short duration resulting in a **slight** magnitude of effect. Therefore, there is likely to be a **moderate adverse** effect on existing landscape fabric, which is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	**Outline CEMP [EN010158/APP/7.2]** **Outline DEMP [EN010158/APP/7.4]** **Outline LEMP [EN010158/APP/7.6]**	For this receptor group, landscape is considered to be the 'lead' environmental factor. The landscape assessment has taken into account the potential effects of each other relevant environmental factor upon this receptor group and concludes that there will not be a significant effect. It is therefore not anticipated for this receptor group to experience significant intra-project combined effects.
Bats (foraging, commuting and roosting) (including Bechstein's bat and Barbastelle bats)	N/A – intra-project combined effect not applicable to this factor.	The Bernwood Bechstein's bat population is considered to be of **National** importance. The residual impact of construction activities is therefore assessed as being **adverse**, **short-term** and **temporary** and is	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	There is potential to be **minor** residual effect of noise on bats which is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	**Outline CEMP [EN010158/APP/7.2]** **Outline DEMP [EN010158/APP/7.4]** **Outline LEMP [EN010158/APP/7.6]**	For this receptor group, biodiversity is considered to be the 'lead' environmental factor. The biodiversity assessment has taken into account the potential effects of each other relevant environmental factor upon this

Environmental factor/receptor/ receptor group	Likely residual effect										Mitigation	Likelihood of significant intra-project combined effects
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Soil	Landscape and visual	Noise and vibration	Population	Transport and access	Water		
		considered to be **not significant**. Barbastelle bats associated with the Proposed Development are considered to be of **District** importance. The residual impact is assessed as being **adverse**, **short-term** and **temporary**, and is considered to be **not significant**. The assemblage of bat species considered under the 'other bat species' receptor is considered to be of **Local** importance. The impact on 'other bat species' is considered to be **adverse**, **short-term**, **temporary** and **not significant**.										receptor group and concludes that there will not be a significant effect. It is therefore not anticipated for this receptor group to experience significant intra-project combined effects.
Finemerehill House (NHLE 1117815)	The sensitivity of the area to dust soiling effects on people and property is considered to be **high** during demolition (during decommissioning phase only), earthworks and construction activities, and **low** for trackout activities. Therefore, it has been concluded there is a **medium** risk of dust emissions impacts from demolition activities (during decommissioning phase only), a **low** risk of dust emissions impacts from earthworks, construction activities which is **not significant**.	N/A – intra-project combined effect not applicable to this factor.	The importance of this Grade II listed building is **medium** and the magnitude of impact is **minor**. Therefore, there is likely to be a **temporary**, **short-term**, **slight adverse** residual effect on Finemerehill House, which is considered to be **not significant**.	With respect to contamination issues affecting human health, the receptor sensitivity is categorised as **medium**. The magnitude of impact is categorised as **negligible**. Therefore, there is assessed to be either a **neutral** residual effect, or an **indirect**, **temporary**, **short-term slight adverse** residual effect on human health, which is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	Following the implementation of suitable additional mitigation measures, the magnitude of impact during the construction phase at **high** sensitivity receptors is considered to be up to **low**, resulting in a direct, temporary **minor adverse** effect, which is considered to be **not significant**. The predicted construction induced vibration levels are below the 1 mm/s PPV threshold at all considered receptors. Therefore, the magnitude of impact at **high** sensitivity receptors is considered to be up to **low**, resulting in a direct, temporary **minor adverse** effect, which is	No existing or proposed/ planned residential property would require demolition or become undeliverable as a result of the construction of the Proposed Development, and no property would become uninhabitable as a result of residual significant environmental effects, resulting in a **negligible** sensitivity. The magnitude of change would be **minor**. As a result, the is likely to be a **temporary neutral or slight adverse** effect that is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	**Outline CEMP [EN010158/APP/7.2]** **Outline DEMP [EN010158/APP/7.4]** **Outline LEMP [EN010158/APP/7.6]**	For this receptor group, population is considered to be the 'lead' environmental factor. The population assessment has taken into account the potential effects of each other relevant environmental factor upon this receptor group and concludes that there will not be a significant effect. It is therefore not anticipated for this receptor group to experience significant intra-project combined effects.

Environmental factor/receptor/ receptor group	Likely residual effect										Mitigation	Likelihood of significant intra-project combined effects
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Soil	Landscape and visual	Noise and vibration	Population	Transport and access	Water		
							considered to be **not significant**. On the basis of the road traffic noise assessment, the magnitude of impact at **high** sensitivity receptors is considered to be up to **low**, resulting in a direct, temporary **minor adverse** effect, which is considered **not significant**.					
Dry Leys Farmhouse (NHLE 1319271)	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	The importance of this Grade II listed building is **medium** and the magnitude of impact is **negligible**. Therefore, there is likely to be a temporary, short term, **slight adverse** residual effect on Dry Leys Farmhouse, which is considered to be **not significant**.	With respect to contamination issues affecting human health, the receptor sensitivity is categorised as **medium**. The magnitude of impact is categorised as **negligible**. Therefore, there is assessed to be either a **neutral** residual effect, or an **indirect**, **temporary**, **short-term slight adverse** residual effect on human health, which is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	Following the implementation of suitable additional mitigation measures, the magnitude of impact during the construction phase at **high** sensitivity receptors is considered to be up to **low**, resulting in a direct, temporary **minor adverse** effect, which is considered to be **not significant**. The predicted construction induced vibration levels are below the 1 mm/s PPV threshold at all considered receptors. Therefore, the magnitude of impact at **high** sensitivity receptors is considered to be up to **low**, resulting in a direct, temporary **minor adverse** effect, which is considered to be **not significant**. On the basis of the road traffic noise assessment, the magnitude of impact at **high** sensitivity receptors is considered to be up to **low**, resulting in a direct, temporary **minor adverse** effect, which is considered **not significant**.	No existing or proposed/ planned residential property would require demolition or become undeliverable as a result of the construction of the Proposed Development, and no property would become uninhabitable as a result of residual significant environmental effects, resulting in a **negligible** sensitivity. The magnitude of change would be **minor**. As a result, the is likely to be a **temporary neutral or slight adverse** effect that is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	**Outline CEMP [EN010158/APP/7.2]** **Outline DEMP [EN010158/APP/7.4]** **Outline LEMP [EN010158/APP/7.6]**	For this receptor group, population is considered to be the 'lead' environmental factor. The population assessment has taken into account the potential effects of each other relevant environmental factor upon this receptor group and concludes that there will not be a significant effect. It is therefore not anticipated for this receptor group to experience significant intra-project combined effects.

Environmental factor/receptor/ receptor group	Likely residual effect										Mitigation	Likelihood of significant intra-project combined effects
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Soil	Landscape and visual	Noise and vibration	Population	Transport and access	Water		
Botolph Claydon (including the Conservation Area)	The sensitivity of the area to dust soiling effects on people and property is considered to be **high** during demolition (during decommissioning phase only), earthworks and construction activities, and **low** for trackout activities. Therefore, it has been concluded there is a **medium** risk of dust emissions impacts from demolition activities (during decommissioning phase only), a **low** risk of dust emissions impacts from earthworks, construction activities which is **not significant**.	N/A – intra-project combined effect not applicable to this factor.	The importance of this conservation area is **medium**. The magnitude of impact is **minor**. Therefore, there is likely to be a **temporary**, **short-term**, **slight adverse** residual effect on Botolph Claydon Conservation Area, which is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	There would be a medium scale of change to visual amenity, over a localised extent of the receptor group. This would be experienced over a medium term duration and would result in a **moderate/slight** magnitude of effect. The sensitivity of this receptor group has been assessed to be **high/medium**. Therefore, there would be a **moderate adverse** effect on views, which is considered to be **not significant**.	Following the implementation of suitable additional mitigation measures, the magnitude of impact during the construction phase at **high** sensitivity receptors is considered to be up to **low**, resulting in a direct, temporary **minor adverse** effect, which is considered to be **not significant**. The predicted construction induced vibration levels are below the 1 mm/s PPV threshold at all considered receptors. Therefore, the magnitude of impact at **high** sensitivity receptors is considered to be up to **low**, resulting in a direct, temporary **minor adverse** effect, which is considered to be **not significant**. On the basis of the road traffic noise assessment, the magnitude of impact at **high** sensitivity receptors is considered to be up to **low**, resulting in a direct, temporary **minor adverse** effect, which is considered **not significant**.	No existing or proposed/ planned residential property would require demolition or become undeliverable as a result of the construction of the Proposed Development, and no property would become uninhabitable as a result of residual significant environmental effects, resulting in a **negligible** sensitivity. The magnitude of change would be **minor**. As a result, there is likely to be a **temporary neutral or slight adverse** effect that is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	**Outline CEMP [EN010158/APP/7.2]** **Outline DEMP [EN010158/APP/7.4]** **Outline LEMP [EN010158/APP/7.6]**	For this receptor group, population is considered to be the 'lead' environmental factor. The population assessment has taken into account the potential effects of each other relevant environmental factor upon this receptor group and concludes that there will not be a significant effect. It is therefore not anticipated for this receptor group to experience significant intra-project combined effects.
Granborough	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	There would be a medium scale of change to visual amenity during construction. This would be experienced over a limited extent of the receptor group and would be medium term duration and would result in a **slight** magnitude of effect. The sensitivity of this receptor group has been assessed	Following the implementation of suitable additional mitigation measures, the magnitude of impact during the construction phase at **high** sensitivity receptors is considered to be up to **low**, resulting in a direct, temporary **minor adverse** effect, which is considered to be **not significant**.	No existing or proposed/ planned residential property would require demolition or become undeliverable as a result of the construction of the Proposed Development, and no property would become uninhabitable as a result of residual significant environmental effects, resulting in a	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	**Outline CEMP [EN010158/APP/7.2]** **Outline DEMP [EN010158/APP/7.4]** **Outline LEMP [EN010158/APP/7.6]**	For this receptor group, population is considered to be the 'lead' environmental factor. The population assessment has taken into account the potential effects of each other relevant environmental factor upon this receptor group and concludes

Environmental factor/receptor/ receptor group	Likely residual effect										Mitigation	Likelihood of significant intra-project combined effects
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Soil	Landscape and visual	Noise and vibration	Population	Transport and access	Water		
						to be **high/medium**. Therefore, during construction, there would be a **moderate/minor adverse** effect on views for this receptor group, which is considered to be **not significant**.	The predicted construction induced vibration levels are below the 1 mm/s PPV threshold at all considered receptors. Therefore, the magnitude of impact at **high** sensitivity receptors is considered to be up to **low**, resulting in a direct, temporary **minor adverse** effect, which is considered to be **not significant**. On the basis of the road traffic noise assessment, the magnitude of impact at **high** sensitivity receptors is considered to be up to **low**, resulting in a direct, temporary **minor adverse** effect, which is considered **not significant**.	**negligible** sensitivity. The magnitude of change would be **minor**. As a result, there is likely to be a **temporary neutral or slight adverse** effect that is considered to be **not significant**.				that there will not be a significant effect. It is therefore not anticipated for this receptor group to experience significant intra-project combined effects.
Orchard Way/Calvert Road	The sensitivity of the human receptors to road traffic emissions is considered to be **high** and the magnitude of change, following additional mitigation, is considered to be below Environmental Protection UK and Institute of Air Quality Management guidance screening criteria which is **not significant.**	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	There would be a medium scale of change over a very limited section of the road for a medium term duration and this would result in a **slight/negligible** magnitude of effect on visual amenity. The sensitivity of this receptor has been assessed to be **medium**. Therefore, during construction, there is likely to be a **minor adverse** effect on views from Orchard Way/Calvert Road which is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	**Outline CEMP [EN010158/APP/7.2]** **Outline DEMP [EN010158/APP/7.4]** **Outline CTMP [EN010158/APP/7.5]** **Outline LEMP [EN010158/APP/7.6]**	For this receptor group, landscape is considered to be the 'lead' environmental factor. The landscape assessment has taken into account the potential effects of each other relevant environmental factor upon this receptor group and concludes that there will not be a significant effect. It is therefore not anticipated for this receptor group to experience significant intra-project combined effects.
Quainton Road/ Claydon Road	The sensitivity of the human receptors to road traffic emissions is considered to be **high** and the	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	There would be a large to medium scale of change in the view along a localised extent of	The magnitude of impact at **high** sensitivity receptors is considered to be up to **low**, resulting	N/A – intra-project combined effect not applicable to this factor.	The magnitude of impact during the construction phase is	N/A – intra-project combined effect not	**Outline CEMP [EN010158/APP/7.2]** **Outline DEMP [EN010158/APP/7.4]**	For this receptor group, landscape is considered to be the 'lead' environmental

Environmental factor/receptor/ receptor group	Likely residual effect										Mitigation	Likelihood of significant intra-project combined effects
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Soil	Landscape and visual	Noise and vibration	Population	Transport and access	Water		
	magnitude of change, following additional mitigation, is considered to be below Environmental Protection UK and Institute of Air Quality Management guidance screening criteria which is **not significant.**					the route. Beyond these sections of the road there would be a small or negligible scale of change in the view. This would be experienced over a medium term duration resulting in a **moderate/ slight** magnitude of effect. The sensitivity of this receptor group has been assessed to be **medium**. Therefore, during construction, there is likely to be a **moderate adverse** effect on views from Quainton Road/Claydon Road, which is considered to be **not significant**.	in a direct, temporary **minor adverse** effect, which is considered **not significant**.		considered to be **minor,** resulting in a temporary **minor adverse** effect which is considered to be **not significant**.	applicable to this factor.	**Outline CTMP [EN010158/APP/7.5]** **Outline LEMP [EN010158/APP/7.6]**	factor. The landscape assessment has taken into account the potential effects of each other relevant environmental factor upon this receptor group and concludes that there will not be a significant effect. It is therefore not anticipated for this receptor group to experience significant intra-project combined effects.
Winslow Road/ East Claydon Road	The sensitivity of the human receptors to road traffic emissions is considered to be **high** and the magnitude of change, following additional mitigation, is considered to be below Environmental Protection UK and Institute of Air Quality Management guidance screening criteria which is **not significant.**	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	There would be a small to negligible scale of change over a limited section of the road for a medium term duration and this would result in a **negligible** magnitude of effect on visual amenity. The sensitivity of this receptor group has been assessed to be **medium**. Therefore, during construction, there is likely to be a **minor/negligible adverse** effect on views from Winslow Road/Claydon Road which is considered to be **not significant.**	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	**Outline CEMP [EN010158/APP/7.2]** **Outline DEMP [EN010158/APP/7.4]** **Outline CTMP [EN010158/APP/7.5]** **Outline LEMP [EN010158/APP/7.6]**	For this receptor group, landscape is considered to be the 'lead' environmental factor. The landscape assessment has taken into account the potential effects of each other relevant environmental factor upon this receptor group and concludes that there will not be a significant effect. It is therefore not anticipated for this receptor group to experience significant intra-project combined effects.
PRoW in and around the Order Limits (excluding Swan's Way/ Outer Aylesbury Ring)	The sensitivity of the area to dust soiling effects on people and property is considered to be **high** during demolition (during decommissioning phase only), earthworks and construction	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	The sensitivity of this receptor group has been assessed to be **high/medium**. There would be a **moderate adverse** effect on views from the North Buckinghamshire Way/Midshires Way	Construction noise affecting users of PRoW is considered to be **not significant**.	The value (sensitivity) of affected community access (PRoW and Permissive Paths) and their users (WCH) as a receptor is **medium** and the magnitude of change	The magnitude of impact during the construction phase is considered to be **minor,** resulting in a temporary **minor adverse** effect	N/A – intra-project combined effect not applicable to this factor.	**Outline CEMP [EN010158/APP/7.2]** **Outline DEMP [EN010158/APP/7.4]** **Outline CTMP [EN010158/APP/7.5]** **Outline LEMP [EN010158/APP/7.6]**	For this receptor group, landscape is considered to be the 'lead' environmental factor. The landscape assessment has taken into account the potential effects

Environmental factor/receptor/ receptor group	Likely residual effect										Mitigation	Likelihood of significant intra-project combined effects
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Soil	Landscape and visual	Noise and vibration	Population	Transport and access	Water		
	activities, and **low** for trackout activities. Therefore, it has been concluded there is a **medium** risk of dust emissions impacts from demolition activities (during decommissioning phase only), a **low** risk of dust emissions impacts from earthworks, construction activities which is **not significant**. The sensitivity of the human receptors to road traffic emissions is considered to be **high** and the magnitude of change, following additional mitigation, is considered to be below Environmental Protection UK and Institute of Air Quality Management guidance screening criteria which is **not significant.**					and Bernwood Jubilee Way and on the PRoW, lanes and roads between East Claydon/East Claydon Road and Parcel 3, which is considered to be **significant**. There would be a **major/moderate adverse** effect on views from the PRoW between Calver Road and HS2, along the PRoW between Botolph Claydon and Runt's Wood, and from the PRoW to Finemere Hill which is considered to be **significant**. There would be a **moderate adverse** effect on views from Three Points Lane and the PRoW extending to HS2, which is considered to be **not significant**. There would be a **moderate/minor** adverse effect on views from PRoW, lanes and roads between East Claydon Road/Parcel 3 and Granborough/ Hogshaw Road and from PRoW between Steeple Claydon/Queen Catherine Road and Calvert Road, which is considered to be **not significant**. There would be a **minor adverse** effect on views from the PRoW between Three Points Lane and Splash Lane (Three Points Lane Bridleway), which is considered to be **not significant**. There would be a **minor/negligible adverse** effect on views from the PRoW between Finemere Hill and		expected during construction is **minor.** Overall, there is likely to be a **slight adverse** residual effect on community access (PRoW and Permissive Paths) and their users (WCH), which is considered to be **not significant.**	which is considered to be **not significant**.		**Outline Rights of Way and Access Strategy [EN010158/APP/7.8]**	of each other relevant environmental factor upon this receptor group and concludes that there is potential for a significant effect. It is therefore anticipated for this receptor group to experience **significant** intra-project combined effects.

Environmental factor/receptor/ receptor group	Likely residual effect										Mitigation	Likelihood of significant intra-project combined effects
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Soil	Landscape and visual	Noise and vibration	Population	Transport and access	Water		
						HS2/Claydon Road, which is considered to be **not significant**.						
Swan's Way/ Outer Aylesbury Ring	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	In total there would be views of construction along an approximate 1km length of the 85km Swan's Way which is the shorter of the two long distance trails. This would be experienced over a medium term duration and would result in a **slight** magnitude of effect on visual amenity. The sensitivity of this receptor group has been assessed to be **high/medium**. Therefore, during construction, there would be a **moderate/minor adverse** effect on views from the Swan's Way/Outer Aylesbury Ring, which is considered to be **not significant**.	Construction noise affecting users of PRoW is considered to be **not significant**.	The value (sensitivity) of affected community access (PRoW and Permissive Paths) and their users (WCH) as a receptor is **medium** and the magnitude of change expected during construction is **minor.** Overall, there is likely to be a **slight adverse** residual effect on community access (PRoW and Permissive Paths) and their users (WCH), which is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	**Outline CEMP [EN010158/APP/7.2]** **Outline DEMP [EN010158/APP/7.4]** **Outline LEMP [EN010158/APP/7.6]** **Outline Rights of Way and Access Strategy [EN010158/APP/7.8]**	For this receptor group, landscape is considered to be the 'lead' environmental factor. The landscape assessment has taken into account the potential effects of each other relevant environmental factor upon this receptor group and concludes that there will not be a significant effect. It is therefore not anticipated for this receptor group to experience significant intra-project combined effects.
Beachfield; Brickhill Way, Calvert; Lower Farm; Woodland Barn; Brackley Ln, Calvert; Red Kit View, Calvert; Woodlands Farm Fishery; Middle Farm	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	Following the implementation of suitable additional mitigation measures, the magnitude of impact during the construction phase at **high** sensitivity receptors is considered to be up to **low**, resulting in a direct, temporary **minor adverse** effect, which is considered to be **not significant**. The predicted construction induced vibration levels are below the 1 mm/s PPV threshold at all considered receptors. Therefore, the magnitude of impact at **high** sensitivity receptors is considered to be up to **low**, resulting in a	No existing or proposed/ planned residential property would require demolition or become undeliverable as a result of the construction of the Proposed Development, and no property would become uninhabitable as a result of residual significant environmental effects, resulting in a **negligible** sensitivity. The magnitude of change would be **minor**. As a result, the is likely to be a **temporary neutral or slight adverse** effect that is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	**Outline CEMP [EN010158/APP/7.2]** **Outline DEMP [EN010158/APP/7.4]**	For this receptor group, landscape is considered to be the 'lead' environmental factor. The landscape assessment has taken into account the potential effects of each other relevant environmental factor upon this receptor group and concludes that there will not be a significant effect. It is therefore not anticipated for this receptor group to experience significant intra-project combined effects.

Environmental factor/receptor/ receptor group	Likely residual effect										Mitigation	Likelihood of significant intra-project combined effects
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Soil	Landscape and visual	Noise and vibration	Population	Transport and access	Water		
							direct, temporary **minor adverse** effect, which is considered to be **not significant**. On the basis of the road traffic noise assessment, the magnitude of impact at **high** sensitivity receptors is considered to be up to **low**, resulting in a direct, temporary **minor adverse** effect, which is considered **not significant**.					
Muxwell Farm	The sensitivity of the area to dust soiling effects on people and property is considered to be **high** during demolition (during decommissioning phase only), earthworks and construction activities, and **low** for trackout activities. Therefore, it has been concluded there is a **medium** risk of dust emissions impacts from demolition activities (during decommissioning phase only), a **low** risk of dust emissions impacts from earthworks, construction activities which is **not significant**. The sensitivity of the human receptors to road traffic emissions is considered to be **high** and the magnitude of change, following additional mitigation, is considered to be below Environmental Protection UK and Institute of Air Quality Management guidance screening criteria which is **not significant.**	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	With respect to contamination issues affecting human health, the receptor sensitivity is categorised as **medium**. The magnitude of impact is categorised as **negligible**. Therefore, there is assessed to be either a **neutral** residual effect, or an **indirect**, **temporary**, **short-term slight adverse** residual effect on human health, which is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	Following the implementation of suitable additional mitigation measures, the magnitude of impact during the construction phase at **high** sensitivity receptors is considered to be up to **low**, resulting in a direct, temporary **minor adverse** effect, which is considered to be **not significant**. The predicted construction induced vibration levels are below the 1 mm/s PPV threshold at all considered receptors. Therefore, the magnitude of impact at **high** sensitivity receptors is considered to be up to **low**, resulting in a direct, temporary **minor adverse** effect, which is considered to be **not significant**. On the basis of the road traffic noise assessment, the magnitude of impact at **high** sensitivity receptors is considered to be up to **low**, resulting in a direct, temporary **minor adverse** effect, which is	No existing or proposed/ planned residential property would require demolition or become undeliverable as a result of the construction of the Proposed Development, and no property would become uninhabitable as a result of residual significant environmental effects, resulting in a **negligible** sensitivity. The magnitude of change would be **minor**. As a result, the is likely to be a **temporary neutral or slight adverse** effect that is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	**Outline CEMP [EN010158/APP/7.2]** **Outline DEMP [EN010158/APP/7.4]** **Outline CTMP [EN010158/APP/7.5]** **Outline LEMP [EN010158/APP/7.6]**	For this receptor group, population is considered to be the 'lead' environmental factor. The population assessment has taken into account the potential effects of each other relevant environmental factor upon this receptor group and concludes that there will not be a significant effect. It is therefore not anticipated for this receptor group to experience significant intra-project combined effects.

Environmental factor/receptor/ receptor group	Likely residual effect										Mitigation	Likelihood of significant intra-project combined effects
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Soil	Landscape and visual	Noise and vibration	Population	Transport and access	Water		
							considered **not significant**.					
Borshaw Farm	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	The **short-term** nature of any construction effects in close proximity to a single property would likely mean that any identified effects would not reach the threshold to become a matter for residential amenity.	The magnitude of impact during the construction phase at **high** sensitivity receptors is considered to be up to **low**, resulting in a direct, temporary **minor adverse** effect, which is considered to be **not significant**. The predicted construction induced vibration levels are below the 1 mm/s PPV threshold at all considered receptors. Therefore, the magnitude of impact at **high** sensitivity receptors is considered to be up to **low**, resulting in a direct, temporary **minor adverse** effect, which is considered to be **not significant**. On the basis of the road traffic noise assessment, the magnitude of impact at **high** sensitivity receptors is considered to be up to **low**, resulting in a direct, temporary **minor adverse** effect, which is considered **not significant**.	No existing or proposed/ planned residential property would require demolition or become undeliverable as a result of the construction of the Proposed Development, and no property would become uninhabitable as a result of residual significant environmental effects, resulting in a **negligible** sensitivity. The magnitude of change would be **minor**. As a result, the is likely to be a **temporary neutral or slight adverse** effect that is considered to be **not significant**.	The magnitude of impact during the construction phase is considered to be **minor,** resulting in a temporary **minor adverse** effect which is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	**Outline CEMP [EN010158/APP/7.2]** **Outline DEMP [EN010158/APP/7.4]** **Outline LEMP [EN010158/APP/7.6]**	For this receptor group, population is considered to be the 'lead' environmental factor. The population assessment has taken into account the potential effects of each other relevant environmental factor upon this receptor group and concludes that there will not be a significant effect. It is therefore not anticipated for this receptor group to experience significant intra-project combined effects.
East Claydon	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	The **short-term** nature of any construction effects in close proximity to a single property would likely mean that any identified effects would not reach the threshold to become a matter for residential amenity.	Following the implementation of suitable additional mitigation measures, the magnitude of impact during the construction phase at **high** sensitivity receptors is considered to be up to **low**, resulting in a direct, temporary **minor adverse** effect, which is considered to be **not significant**. The predicted construction	No existing or proposed/ planned residential property would require demolition or become undeliverable as a result of the construction of the Proposed Development, and no property would become uninhabitable as a result of residual significant environmental effects, resulting in a **negligible** sensitivity. The magnitude of change would be	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	**Outline CEMP [EN010158/APP/7.2]** **Outline DEMP [EN010158/APP/7.4]** **Outline LEMP [EN010158/APP/7.6]**	For this receptor group, population is considered to be the 'lead' environmental factor. The population assessment has taken into account the potential effects of each other relevant environmental factor upon this receptor group and concludes that there will not

Environmental factor/receptor/ receptor group	Likely residual effect										Mitigation	Likelihood of significant intra-project combined effects
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Soil	Landscape and visual	Noise and vibration	Population	Transport and access	Water		
							induced vibration levels are below the 1 mm/s PPV threshold at all considered receptors. Therefore, the magnitude of impact at **high** sensitivity receptors is considered to be up to **low**, resulting in a direct, temporary **minor adverse** effect, which is considered to be **not significant**. On the basis of the road traffic noise assessment, the magnitude of impact at **high** sensitivity receptors is considered to be up to **low**, resulting in a direct, temporary **minor adverse** effect, which is considered **not significant**.	**minor**. As a result, the is likely to be a **temporary neutral or slight adverse** effect that is considered to be **not significant**.				be a significant effect. It is therefore not anticipated for this receptor group to experience significant intra-project combined effects.
Agricultural businesses and landholdings (including consideration of ALC Grades 2, 3a and 3b, and soil ecosystems)	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	There is 3ha of Grade 2 land which is considered **very high** sensitivity. There is 7ha of Grade 3a land which is considered **high** sensitivity. As the Grade 2 land take is 3 ha, the magnitude of impact is **negligible**; the significance of the residual effect on Grade 2 land is assessed as **slight adverse** and **not significant**. Grade 3a land take is 7ha. However, as the land take is only **temporary**, the magnitude of impact is assessed as **minor** and the significance of residual effect is **slight** or	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	The value (sensitivity) of the agricultural land holdings as a receptor is **very high** and the magnitude of change expected at this operation is **minor**. Therefore, there is likely to be a **temporary** or **permanent slight adverse** residual effect on agricultural businesses and landholdings, which is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	**Outline CEMP [EN010158/APP/7.2]** **Outline DEMP [EN010158/APP/7.4]** **Outline LEMP [EN010158/APP/7.6]** **Outline Soil Management Plan (Outline SMP) [EN010158/APP/7.7]**	For this receptor group, population is considered to be the 'lead' environmental factor. The population assessment has taken into account the potential effects of each other relevant environmental factor upon this receptor group and concludes that there will not be a significant effect. It is therefore not anticipated for this receptor group to experience significant intra-project combined effects.

Environmental factor/receptor/ receptor group	Likely residual effect										Mitigation	Likelihood of significant intra-project combined effects
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Soil	Landscape and visual	Noise and vibration	Population	Transport and access	Water		
					moderate adverse. The overall significance of residual effect is considered to be **slight adverse** and **not significant**. Grade 3b covers the majority of the Site and is non-BMV land; therefore, the majority of the Site is classified as **medium** sensitivity. As the land take is only temporary, the magnitude of impact for Grade 3b land take will be **minor**. Therefore, the significance of the residual effect will be **slight adverse** and **not significant**. All soils within the Order Limits have a medium resilience to damage during handling and are of **medium** sensitivity. The magnitude of impact for soil ecosystems will also be **minor**. Therefore, the significance of the residual effect will be **slight adverse** and **not significant**.							
Other (non-agricultural) businesses and development land (including Claydon House, Claydon House RPG, and Hogshaw Farm and Wildlife Park)	The sensitivity of the area to dust soiling effects on people and property is considered to be **high** during demolition (during decommissioning phase only), earthworks and construction activities, and **low** for	N/A – intra-project combined effect not applicable to this factor.	There is likely to be a **temporary**, **short-term**, **slight adverse** residual effect on Claydon House which is considered to be **not significant**. The importance of Claydon Park is **high** and the	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	The **short-term** nature of any construction effects in close proximity to a single property would likely mean that any identified effects would not reach the threshold to become a matter for residential amenity.	Following the implementation of suitable additional mitigation measures, the magnitude of impact during the construction phase at **high** sensitivity receptors is considered to be up to **low**, resulting in a	The value (sensitivity) of non-agricultural business and development land as a receptor is high or very high and the magnitude of change expected at this operation is minor (except for one topic area for one receptor - Hogshaw Farm and	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	**Outline CEMP [EN010158/APP/7.2]** **Outline DEMP [EN010158/APP/7.4]** **Outline CTMP [EN010158/APP/7.5]** **Outline LEMP [EN010158/APP/7.6]**	For this receptor group, landscape is considered to be the 'lead' environmental factor. The landscape assessment has taken into account the potential effects of each other

Environmental factor/receptor/ receptor group	Likely residual effect										Mitigation	Likelihood of significant intra-project combined effects
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Soil	Landscape and visual	Noise and vibration	Population	Transport and access	Water		
	trackout activities. Therefore, it has been concluded there is a **medium** risk of dust emissions impacts from demolition activities (during decommissioning phase only), a **low** risk of dust emissions impacts from earthworks, construction activities which is **not significant**. The sensitivity of the human receptors to road traffic emissions is considered to be **high** and the magnitude of change, following additional mitigation, is considered to be below Environmental Protection UK and Institute of Air Quality Management guidance screening criteria which is **not significant.**		magnitude of impact is **minor**. Therefore, there is likely to be a **temporary**, **short-term**, **slight adverse** residual effect on Claydon Park, which is considered to be **not significant**.			There would be a large/medium to medium scale of change across an intermediate extent of the wider visitor attraction of Hogshaw Farm. This would be experienced over a medium term duration resulting in a **moderate** magnitude of effect on visual amenity. The sensitivity of this receptor group has been assessed to be **high/ medium**. Therefore, during construction, there would be a **moderate adverse** effect on views from Hogshaw Farm, which is considered to be **significant**. There would be a **moderate/minor adverse** effect on views from around Claydon House, which is considered to be **not significant**.	direct, temporary **minor adverse** effect, which is considered to be **not significant**. The predicted construction induced vibration levels are below the 1 mm/s PPV threshold at all considered receptors. Therefore, the magnitude of impact at **high** sensitivity receptors is considered to be up to **low**, resulting in a direct, temporary **minor adverse** effect, which is considered to be **not significant**. On the basis of the road traffic noise assessment, the magnitude of impact at **high** sensitivity receptors is considered to be up to **low**, resulting in a direct, temporary **minor adverse** effect, which is considered **not significant**.	Wildlife Park – which would experience moderate adverse visual amenity effects). Therefore, there is likely to be a **temporary** or **permanent slight adverse** residual effect on other (non-agricultural) businesses and development land, which is considered to be **not significant**.				relevant environmental factor upon this receptor group and concludes that there is potential for a significant effect. It is therefore anticipated for this receptor group to experience **significant** intra-project combined effects.
Tourism and the tourist economy (including Claydon House, Claydon House RPG, and Hogshaw Farm and Wildlife Park)	The sensitivity of the area to dust soiling effects on people and property is considered to be **high** during demolition (during decommissioning phase only), earthworks and construction activities, and **low** for trackout activities. Therefore, it has been concluded there is a **medium** risk of dust emissions impacts from demolition activities (during decommissioning phase only), a **low** risk of dust emissions impacts from earthworks, construction activities which is **not significant**.	N/A – intra-project combined effect not applicable to this factor.	There is likely to be a **temporary**, **short-term**, **slight adverse** residual effect on Claydon House which is considered to be **not significant**. The importance of Claydon Park is **high** and the magnitude of impact is **minor**. Therefore, there is likely to be a **temporary**, **short-term**, **slight adverse** residual effect on Claydon Park, which is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	The **short-term** nature of any construction effects in close proximity to a single property would likely mean that any identified effects would not reach the threshold to become a matter for residential amenity. There would be a large/medium to medium scale of change across an intermediate extent of the wider visitor attraction of Hogshaw Farm. This would be experienced over a medium term duration resulting in a **moderate** magnitude of effect on visual amenity.	Following the implementation of suitable additional mitigation measures, the magnitude of impact during the construction phase at **high** sensitivity receptors is considered to be up to **low**, resulting in a direct, temporary **minor adverse** effect, which is considered to be **not significant**. The predicted construction induced vibration levels are below the 1 mm/s PPV threshold at all considered receptors. Therefore, the magnitude of impact at **high** sensitivity receptors is	The effect of non-local construction workforce on the tourism accommodation market is considered to be **minor** (**beneficial**) at the Local Authority/County scale, which is considered to be **not significant**. The value (sensitivity) of tourism as a receptor is **medium** and the magnitude of change expected during construction is **minor to moderate/ major adverse**. Therefore, there is likely to be a **temporary slight adverse** residual effect on tourism,	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	**Outline CEMP [EN010158/APP/7.2]** **Outline DEMP [EN010158/APP/7.4]** **Outline CTMP [EN010158/APP/7.5]** **Outline LEMP [EN010158/APP/7.6]**	For this receptor group, landscape is considered to be the 'lead' environmental factor. The landscape assessment has taken into account the potential effects of each other relevant environmental factor upon this receptor group and concludes that there is potential for a significant effect. It is therefore anticipated for this receptor group to experience **significant** intra-project combined effects.

Environmental factor/receptor/ receptor group	Likely residual effect										Mitigation	Likelihood of significant intra-project combined effects
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Soil	Landscape and visual	Noise and vibration	Population	Transport and access	Water		
	The sensitivity of the human receptors to road traffic emissions is considered to be **high** and the magnitude of change, following additional mitigation, is considered to be below Environmental Protection UK and Institute of Air Quality Management guidance screening criteria which is **not significant.**					The sensitivity of this receptor group has been assessed to be **high/ medium**. Therefore, during construction, there would be a **moderate adverse** effect on views from Hogshaw Farm, which is considered to be **significant**. **Negligible** or **minor** or **minor/ moderate** adverse effects for seven PRoW which is considered to be **not significant**, and **moderate** or **moderate/major** adverse effects for six PRoW which is considered to be **significant**. There would be a **moderate/minor adverse** effect on views from around Claydon House, which is considered to be **not significant**.	considered to be up to **low**, resulting in a direct, temporary **minor adverse** effect, which is considered to be **not significant**. On the basis of the road traffic noise assessment, the magnitude of impact at **high** sensitivity receptors is considered to be up to **low**, resulting in a direct, temporary **minor adverse** effect, which is considered **not significant**.	which is considered to be **not significant**.				
Community and recreational facilities, land and assets and their users	The sensitivity of the area to dust soiling effects on people and property is considered to be **high** during demolition (during decommissioning phase only), earthworks and construction activities, and **low** for trackout activities. Therefore, it has been concluded there is a **medium** risk of dust emissions impacts from demolition activities (during decommissioning phase only), a **low** risk of dust emissions impacts from earthworks, construction activities which is **not significant**. The sensitivity of the human receptors to road traffic emissions is considered to be	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	Construction noise affecting users of PRoW is considered to be **not significant**.	The value (sensitivity) of community and recreational facilities, land and assets and their users as a receptor is **high** and the magnitude of change expected during construction is **negligible** to **minor.** Therefore, there is likely to be a temporary **slight adverse** residual effect, which is considered to be **not significant**. .	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	**Outline CEMP [EN010158/APP/7.2]** **Outline DEMP [EN010158/APP/7.4]** **Outline CTMP [EN010158/APP/7.5]**	For this receptor group, population is considered to be the 'lead' environmental factor. The population assessment has taken into account the potential effects of each other relevant environmental factor upon this receptor group and concludes that there will not be a significant effect. It is therefore not anticipated for this receptor group to experience significant intra-project combined effects.

Environmental factor/receptor/ receptor group	Likely residual effect										Mitigation	Likelihood of significant intra-project combined effects
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Soil	Landscape and visual	Noise and vibration	Population	Transport and access	Water		
	high and the magnitude of change, following additional mitigation, is considered to be below Environmental Protection UK and Institute of Air Quality Management guidance screening criteria which is **not significant**.											
Water framework directive waterbody (Claydon Brook Tributary)	N/A – intra-project combined effect not applicable to this factor.	Ponds and watercourses are considered to be of **County** importance. Ditches are considered to be of **Local** importance. There is not anticipated to be an adverse effect on ponds, watercourses and ditches, which is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	Claydon Brook Tributary is considered to be of **medium** sensitivity/importance. The magnitude of impact following additional mitigation is considered to be **minor.** The residual effect is **slight adverse**, which is considered to be **not significant**. The effect would be temporary, direct and of local importance.	**Outline CEMP [EN010158/APP/7.2]** **Outline DEMP [EN010158/APP/7.4]** **Outline LEMP [EN010158/APP/7.6]**	For this receptor group, water is considered to be the 'lead' environmental factor. The water assessment has taken into account the potential effects of each other relevant environmental factor upon this receptor group and concludes that there will not be a significant effect. It is therefore not anticipated for this receptor group to experience significant intra-project combined effects.

Table 17.7: Intra-project combined likely residual effect interactions during the operation (including maintenance) phase (Stage 2)

Environmental factor/receptor/ receptor group	Likely residual effect								Mitigation	Likelihood of intra-project combined effects
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Landscape and visual	Noise and vibration	Population	Water		
Residential (including human) receptors located within 250m of the Order Limits (excluding Finmere Hill House, Dry Leys Farmhouse and Muxwell Farm)	The sensitivity of the human receptors to road traffic emissions is considered to be **high** and the magnitude of change, with additional best practice mitigation measures, is considered to be below Environmental Protection UK and Institute of Air Quality Management guidance screening criteria. Therefore, the residual effect on human receptors following the implementation of additional mitigation measures is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	The magnitude of impact as a result of the presence of the Proposed Development within the rural setting of Pond Farmhouse will be **moderate**. Therefore, there is likely to be a temporary, long term, **moderate adverse** residual effect on this asset, which is considered to be **significant**. The magnitude of impact as a result of the presence of the Proposed Development within the rural setting of Catherine farm, will be **minor**. Therefore, there is likely to be a temporary, long term, **slight adverse** residual effect on this asset, which is considered to be **not significant**.	With respect to contamination issues affecting human health, the receptor sensitivity is categorised as **medium**. The magnitude of impact (change) is categorised as **negligible** (with contaminant concentrations expected to be substantially below any screening levels, and no requirement for further control measures to reduce the risks to human health or make the land suitable for its intended use). Therefore, there is assessed to be either a **neutral** residual effect, or an indirect, temporary, short-term **slight adverse** residual effect on human health following the implementation of additional mitigation measures, which is considered to be **not significant**.	It is assessed that the residents of four dwellings (4-5 Catherine Cottages, 6-7 Catherine Cottages, Bernwood Farm and Sion Hill Farm) would experience **significant** visual effects during Year 1. At 4-5 Catherine Cottages and 6-7 Catherine Cottages, by Year 10 these effects would reduce in magnitude due to the establishment of mitigation and by Year 10 would be **not significant**. It is considered likely that **significant** visual effects would remain at Sion Hill Farm and Bernwood Farm at Year 10 reflecting the fact that views are available from elevated rooms within the properties. All other residential properties are considered to have views that are **not significant** in both Years 1 and 10.	The highest magnitude of impact during the operation (including maintenance) phase at **high** sensitivity receptors is considered **low**, resulting in a direct, permanent **minor adverse** effect, which is considered **not significant**.	No existing or proposed/planned residential property would require demolition or become undeliverable as a result of the operation (including maintenance) of the Proposed Development, and no property would become uninhabitable as a result of residual significant environmental effects, resulting in a **negligible** sensitivity. The magnitude of change would be **minor**. As a result, the is likely to be a **temporary neutral or slight adverse** effect that is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	**Outline OEMP [EN010158/APP/7.3]** **Outline LEMP [EN010158/APP/7.6]**	For this receptor group, landscape is considered to be the 'lead' environmental factor. The landscape assessment has taken into account the potential effects of each other relevant environmental factor upon this receptor group and concludes that there is potential for a significant effect. It is therefore anticipated for this receptor group to experience **significant** intra-project combined effects.
Designated habitats	The sensitivity of the designated sites to road traffic emissions is considered to be **medium-low** and the magnitude of change, is considered to be below the Design Manual for Roads and Bridges LA 105 Air Quality screening criteria. Therefore, the residual effect on the designated sites is considered to be **not significant**.	There is not anticipated to be an adverse effect on the integrity of statutory designated sites, non-statutory designated sites or ancient woodland during operation (including maintenance), which is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	The implementation of the measures detailed in and secured by the **Outline OEMP [EN010158/APP/7.3]** would ensure the magnitude of impact on watercourses within Finemere Wood SSSI and Sheephouse Wood SSSI (a receptor of **high** sensitivity/ importance) would be reduced to **minor**, meaning the overall of water quality effect is reduced to **slight adverse**, which is considered to be **not significant**. The effect would be temporary, direct and of local importance.	**Outline OEMP [EN010158/APP/7.3]** **Outline LEMP [EN010158/APP/7.6]**	For this receptor group, biodiversity is considered to be the 'lead' environmental factor. The biodiversity assessment has taken into account the potential effects of each other relevant environmental factor upon this receptor group and concludes that there will not be a significant effect. It is therefore not anticipated for this receptor group to experience significant intra-project combined effects.
Bats (foraging, commuting and roosting) (including Bechstein's bat	N/A – intra-project combined effect not applicable to this factor.	The Bernwood Bechstein's bat population is considered to be of **National** importance.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	There is potential to be **minor** residual effect of noise on bats which is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	**Outline OEMP [EN010158/APP/7.3]** **Outline LEMP [EN010158/APP/7.6]**	For this receptor group, biodiversity is considered to be the 'lead' environmental factor. The biodiversity assessment has taken into account

Environmental factor/receptor/ receptor group	Likely residual effect								Mitigation	Likelihood of intra-project combined effects
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Landscape and visual	Noise and vibration	Population	Water		
and Barbastelle bats)		The residual impact of construction activities is therefore assessed as being **adverse**, **long-term** and **permanent** and is considered to be potentially **significant** at the **District** level. Barbastelle bats associated with the Proposed Development are considered to be of **District** importance. The residual impact is assessed as being **adverse**, **long-term** and **permanent**, and is considered to be **not significant**. The assemblage of bat species considered under the 'other bat species' receptor is considered to be of **Local** importance. The impact on 'other bat species' is considered to be **adverse**, **long-term**, **permanent** and **not significant**.								the potential effects of each other relevant environmental factor upon this receptor group and concludes that there is potential for a significant effect. It is therefore anticipated for this receptor group to experience likely **significant** intra-project combined effects.
Finemerehill House (NHLE 1117815)	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	The magnitude of impact as a result of the presence of the Proposed Development within the rural setting of the farm, following additional mitigation, will be **minor**. Therefore, there is likely to be a temporary, long term, **slight adverse** residual effect on this asset, which is considered to be **not significant**.	With respect to contamination issues affecting human health, the receptor sensitivity is categorised as **medium**. The magnitude of impact (change) is categorised as **negligible** (with contaminant concentrations expected to be substantially below any screening levels, and no requirement for further control measures to reduce the risks to human health or make the land suitable for its intended use). Therefore, there is assessed to be either a **neutral** residual effect, or an indirect, temporary, short-term **slight adverse** residual effect on human health following the implementation of additional mitigation measures, which is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	The highest magnitude of impact during the operation (including maintenance) phase at **high** sensitivity receptors is considered **low**, resulting in a direct, permanent **minor adverse** effect, which is considered **not significant**.	No existing or proposed/planned residential property would require demolition or become undeliverable as a result of the operation (including maintenance) of the Proposed Development, and no property would become uninhabitable as a result of residual significant environmental effects, resulting in a **negligible** sensitivity. The magnitude of change would be **minor**. As a result, the is likely to be a **temporary neutral or slight adverse** effect that is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	**Outline OEMP [EN010158/APP/7.3]** **Outline LEMP [EN010158/APP/7.6]**	For this receptor group, population is considered to be the 'lead' environmental factor. The population assessment has taken into account the potential effects of each other relevant environmental factor upon this receptor group and concludes that there will not be a significant effect. It is therefore not anticipated for this receptor group to experience significant intra-project combined effects.
Dry Leys Farmhouse (NHLE 1319271)	N/A – intra-project combined effect not	N/A – intra-project combined effect not applicable to this factor.	The magnitude of impact as a result of the presence of the Proposed	With respect to contamination issues affecting human health,	Views from the property are considered to be	The highest magnitude of impact during the operation	No existing or proposed/planned residential property	N/A – intra-project combined effect not	**Outline OEMP [EN010158/APP/7.3]**	For this receptor group, population is considered to be the 'lead'

Environmental factor/receptor/ receptor group	Likely residual effect								Mitigation	Likelihood of intra-project combined effects
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Landscape and visual	Noise and vibration	Population	Water		
	applicable to this factor.		Development within the rural setting of the farm, following additional mitigation, will be **minor**. Therefore, there is likely to be a temporary, long term, **slight adverse** residual effect on this asset, which is considered to be **not significant**.	the receptor sensitivity is categorised as **medium**. The magnitude of impact (change) is categorised as **negligible** (with contaminant concentrations expected to be substantially below any screening levels, and no requirement for further control measures to reduce the risks to human health or make the land suitable for its intended use). Therefore, there is assessed to be either a **neutral** residual effect, or an indirect, temporary, short-term **slight adverse** residual effect on human health following the implementation of additional mitigation measures, which is considered to be **not significant**.	**not significant** in both Years 1 and 10	(including maintenance) phase at **high** sensitivity receptors is considered **low**, resulting in a direct, permanent **minor adverse** effect, which is considered **not significant**.	would require demolition or become undeliverable as a result of the operation (including maintenance) of the Proposed Development, and no property would become uninhabitable as a result of residual significant environmental effects, resulting in a **negligible** sensitivity. The magnitude of change would be **minor**. As a result, the is likely to be a **temporary neutral or slight adverse** effect that is considered to be **not significant**.	applicable to this factor.	**Outline LEMP [EN010158/APP/7.6]**	environmental factor. The population assessment has taken into account the potential effects of each other relevant environmental factor upon this receptor group and concludes that there will not be a significant effect. It is therefore not anticipated for this receptor group to experience significant intra-project combined effects.
Botolph Claydon (including Conservation Area)	The sensitivity of the human receptors to road traffic emissions is considered to be **high** and the magnitude of change, with additional best practice mitigation measures, is considered to be below Environmental Protection UK and Institute of Air Quality Management guidance screening criteria. Therefore, the residual effect on human receptors following the implementation of additional mitigation measures is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	The importance of Botolph Claydon Conservation Area is **medium** and the magnitude of impact, following additional mitigation, is **minor**. Therefore, there is likely to be a temporary, long-term, **slight adverse** residual effect on this asset, which is considered to be **not significant.**	N/A – intra-project combined effect not applicable to this factor.	The sensitivity of this receptor group has been assessed to be **high/medium**. Therefore, in Years 1 and 10 of operation (including maintenance), there would be a **moderate adverse** effect on views from Botolph Claydon, which is considered to be **not significant**.	The highest magnitude of impact during the operation (including maintenance) phase at **high** sensitivity receptors is considered **low**, resulting in a direct, permanent **minor adverse** effect, which is considered **not significant**.	No existing or proposed/planned residential property would require demolition or become undeliverable as a result of the operation (including maintenance) of the Proposed Development, and no property would become uninhabitable as a result of residual significant environmental effects, resulting in a **negligible** sensitivity. The magnitude of change would be **minor**. As a result, the is likely to be a **temporary neutral or slight adverse** effect that is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	**Outline OEMP [EN010158/APP/7.3]** **Outline LEMP [EN010158/APP/7.6]**	For this receptor group, landscape is considered to be the 'lead' environmental factor. The landscape assessment has taken into account the potential effects of each other relevant environmental factor upon this receptor group and concludes that there will not be a significant effect. It is therefore not anticipated for this receptor group to experience significant intra-project combined effects.
Landscape fabric (woodland, trees and hedgerows)	N/A – intra-project combined effect not applicable to this factor.	There is not anticipated to be an adverse effect on the hedgerow resource, ancient or veteran trees, individual trees and lines of trees or ancient woodland	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	In Year 1 of operation (including maintenance), there is likely to be a **moderate adverse** effect on existing landscape fabric, which	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	**Outline OEMP [EN010158/APP/7.3]** **Outline LEMP [EN010158/APP/7.6]**	For this receptor group, landscape is considered to be the 'lead' environmental factor. The landscape assessment has taken into account the potential effects of

Environmental factor/receptor/ receptor group	Likely residual effect								Mitigation	Likelihood of intra-project combined effects
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Landscape and visual	Noise and vibration	Population	Water		
		during operation (including maintenance), which is considered to be **not significant**.			is considered to be **not significant**. In Year 10 of operation (including maintenance), there is likely to be a **moderate beneficial** effect on existing landscape fabric, which is considered to be **significant**.					each other relevant environmental factor upon this receptor group and concludes that there is potential for a significant effect. It is therefore anticipated for this receptor group to experience **significant** intra-project combined effects.
Orchard Way/Calvert Road	The sensitivity of the human receptors to road traffic emissions is considered to be **high** and the magnitude of change, with additional best practice mitigation measures, is considered to be below Environmental Protection UK and Institute of Air Quality Management guidance screening criteria. Therefore, the residual effect on human receptors following the implementation of additional mitigation measures is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	The sensitivity of this receptor group has been assessed to be **medium**. Therefore, in Year 1 of operation (including maintenance), there is likely to be a **moderate/minor adverse** effect on views from Orchard Way/Calvert Road which is considered to be **not significant**. In Year 10 of operation (including maintenance), there would be a residual **minor adverse** effect on views for road users, which is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	**Outline OEMP [EN010158/APP/7.3]** **Outline LEMP [EN010158/APP/7.6]**	For this receptor group, landscape is considered to be the 'lead' environmental factor. The landscape assessment has taken into account the potential effects of each other relevant environmental factor upon this receptor group and concludes that there will not be a significant effect. It is therefore not anticipated for this receptor group to experience significant intra-project combined effects.
Quainton Road/ Claydon Road	The sensitivity of the human receptors to road traffic emissions is considered to be **high** and the magnitude of change, with additional best practice mitigation measures, is considered to be below Environmental Protection UK and Institute of Air Quality Management guidance screening criteria. Therefore, the residual effect on human receptors following the implementation of additional mitigation measures is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	The sensitivity of this receptor group has been assessed to be **medium**. Therefore, in Year 1 of operation (including maintenance), there would be a **moderate adverse** effect on views for road users from a localised stretch of the road, which is considered to be **not significant**. In Year 10 of operation (including maintenance) there would be a residual **minor adverse** effect on views for road users, which is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	**Outline OEMP [EN010158/APP/7.3]** **Outline LEMP [EN010158/APP/7.6]**	For this receptor group, landscape is considered to be the 'lead' environmental factor. The landscape assessment has taken into account the potential effects of each other relevant environmental factor upon this receptor group and concludes that there will not be a significant effect. It is therefore not anticipated for this receptor group to experience significant intra-project combined effects.
Winslow Road/ East Claydon Road	The sensitivity of the human receptors to road traffic emissions is considered to be **high** and the magnitude of change, with additional best practice mitigation measures, is	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	The sensitivity of this receptor group has been assessed to be **medium**. Therefore, in Years 1 to 10 of operation (including maintenance), there would be a residual **minor/negligible**	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	**Outline OEMP [EN010158/APP/7.3]** **Outline LEMP [EN010158/APP/7.6]**	For this receptor group, landscape is considered to be the 'lead' environmental factor. The landscape assessment has taken into account the potential effects of each other relevant environmental factor

Environmental factor/receptor/ receptor group	Likely residual effect								Mitigation	Likelihood of intra-project combined effects
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Landscape and visual	Noise and vibration	Population	Water		
	considered to be below Environmental Protection UK and Institute of Air Quality Management guidance screening criteria. Therefore, the residual effect on human receptors following the implementation of additional mitigation measures is considered to be **not significant**.				**adverse** effect on views for road users, which is considered to be **not significant**.					upon this receptor group and concludes that there will not be a significant effect. It is therefore not anticipated for this receptor group to experience significant intra-project combined effects.
PRoW in and around the Order Limits (excluding Swan's Way/ Outer Aylesbury Ring)	The sensitivity of the human receptors to road traffic emissions is considered to be **high** and the magnitude of change, with additional best practice mitigation measures, is considered to be below Environmental Protection UK and Institute of Air Quality Management guidance screening criteria. Therefore, the residual effect on human receptors following the implementation of additional mitigation measures is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	The sensitivity of these receptors has been assessed to be **high/medium**. In Year 1 of operation (including maintenance), there would be a **moderate adverse** effect on views from the North Buckinghamshire Way/Midshires Way which is considered to be **significant**. In Year 10 of operation (including maintenance), there would be a **moderate/minor adverse** effect on views from the North Buckinghamshire Way/Midshires Way, which is considered to be **not significant**. In Years 1 and 10 of operation (including maintenance), there would be a **major/ moderate adverse** effect on views from the Bernwood Jubilee Way, which is considered to be **significant**. In Years 1 to 10 of operation (including maintenance), there would be a **major adverse** effect on views from the PRoW between Calvert Road and HS2, which is considered to be **significant.** Year 1 of operation (including maintenance), there would be a **moderate adverse** effect on views from Three Points Lane and the PRoW network to the south east, which is considered to be **not significant**. In Year 10 of operation (including	N/A – intra-project combined effect not applicable to this factor.	Overall, therefore on balance there is likely to be a **permanent**, **slight beneficial** residual effect on community access (PRoW and Permissive Paths) and their users (WCH), which is considered to be **not significant.**	N/A – intra-project combined effect not applicable to this factor.	**Outline OEMP [EN010158/APP/7.3]** **Outline LEMP [EN010158/APP/7.6]** **Outline Rights of Way and Access Strategy [EN010158/APP/7.8]**	For this receptor group, landscape is considered to be the 'lead' environmental factor. The landscape assessment has taken into account the potential effects of each other relevant environmental factor upon this receptor group and concludes that there is potential for a significant effect. It is therefore anticipated for this receptor group to experience **significant** intra-project combined effects.

Environmental factor/receptor/ receptor group	Likely residual effect								Mitigation	Likelihood of intra-project combined effects
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Landscape and visual	Noise and vibration	Population	Water		
					maintenance), there would be a **moderate/ minor adverse** effect on views from Three Points Lane and the PRoW network to the south east, which is considered to be **not significant**. In Years 1 to 10 of operation (including maintenance), there would be a **moderate/minor adverse** effect on views from the PRoW between Three Points Lane and Splash Lane (Three Points Lane Bridleway); the PRoW, lanes and roads between East Claydon Road/Parcel 3 and Granborough/Hogshaw Road; and the PRoW between Steeple Claydon/Queen Catherine Road and Calvert Road, which is considered to be **not significant**. In Year 1 operation, there would be a **major adverse** effect on views for PRoW between Botolph Claydon and Runt's Wood, which is considered to be **significant**. In Year 10 operation, there would be a **major/moderate** to **moderate adverse** effect on views for this receptor group, which is considered to be **significant.** In Years 1 to 10 of operation, there would be a **major/moderate adverse** to **moderate** effect on views from PRoW to Finemere Hill, which is considered to be **significant**. In Years 1 to 10 of operation, there would be a **minor/negligible adverse** effect on views from PRoW between Finemere Hill and HS2/Claydon Road, which is considered to be **not significant**. In Year 1 operation, there would be a **major/ moderate adverse**					

Environmental factor/receptor/ receptor group	Likely residual effect								Mitigation	Likelihood of intra-project combined effects
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Landscape and visual	Noise and vibration	Population	Water		
					effect on views from PRoW, lanes and roads between East Claydon/East Claydon Road and Parcel 3, which is considered to be **significant**. In Year 10 operation, there would be a **moderate adverse** effect on views from this footpath network, which is considered to be **significant**.					
Swan's Way/ Outer Aylesbury Ring	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	The sensitivity of this receptor group has been assessed to be **high/medium**. Therefore, in Years 1 to 10 of operation (including maintenance), there would be a **moderate adverse** effect on views from the Swan's Way/Outer Aylesbury Ring, which is considered to be **significant**.	N/A – intra-project combined effect not applicable to this factor.	Overall, therefore on balance there is likely to be a **permanent**, **slight beneficial** residual effect on community access (PRoW and Permissive Paths) and their users (WCH), which is considered to be **not significant.**	N/A – intra-project combined effect not applicable to this factor.	**Outline OEMP [EN010158/APP/7.3]** **Outline LEMP [EN010158/APP/7.6]** **Outline Rights of Way and Access Strategy [EN010158/APP/7.8]**	For this receptor group, landscape is considered to be the 'lead' environmental factor. The landscape assessment has taken into account the potential effects of each other relevant environmental factor upon this receptor group and concludes that there is potential for a significant effect. It is therefore anticipated for this receptor group to experience **significant** intra-project combined effects.
Beachfield; Brickhill Way, Calvert; Lower Farm; Woodland Barn; Brackley Ln, Calvert; Red Kit View, Calvert; Woodlands Farm Fishery; Middle Farm	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	Views from the properties are considered to be **not significant** in both Years 1 and 10.	The highest magnitude of impact during the operation (including maintenance) phase at **high** sensitivity receptors is considered **low**, resulting in a direct, permanent **minor adverse** effect, which is considered **not significant**.	No existing or proposed/planned residential property would require demolition or become undeliverable as a result of the operation (including maintenance) of the Proposed Development, and no property would become uninhabitable as a result of residual significant environmental effects, resulting in a **negligible** sensitivity. The magnitude of change would be **minor**. As a result, the is likely to be a **temporary neutral or slight adverse** effect that is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	**Outline OEMP [EN010158/APP/7.3]** **Outline LEMP [EN010158/APP/7.6]**	For this receptor group, population is considered to be the 'lead' environmental factor. The population assessment has taken into account the potential effects of each other relevant environmental factor upon this receptor group and concludes that there will not be a significant effect. It is therefore not anticipated for this receptor group to experience significant intra-project combined effects.
Muxwell Farm	N/A – intra-project combined effect not	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	With respect to contamination issues affecting human health,	Views from the property are considered to be	The highest magnitude of impact during the operation	No existing or proposed/planned residential property	N/A – intra-project combined effect not	**Outline OEMP [EN010158/APP/7.3]**	For this receptor group, population is considered to be the 'lead'

Environmental factor/receptor/ receptor group	Likely residual effect								Mitigation	Likelihood of intra-project combined effects
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Landscape and visual	Noise and vibration	Population	Water		
	applicable to this factor.			the receptor sensitivity is categorised as **medium**. The magnitude of impact (change) is categorised as **negligible** (with contaminant concentrations expected to be substantially below any screening levels, and no requirement for further control measures to reduce the risks to human health or make the land suitable for its intended use). Therefore, there is assessed to be either a **neutral** residual effect, or an indirect, temporary, short-term **slight adverse** residual effect on human health following the implementation of additional mitigation measures, which is considered to be **not significant**.	**not significant** in both Years 1 and 10.	(including maintenance) phase at **high** sensitivity receptors is considered **low**, resulting in a direct, permanent **minor adverse** effect, which is considered **not significant**.	would require demolition or become undeliverable as a result of the operation (including maintenance) of the Proposed Development, and no property would become uninhabitable as a result of residual significant environmental effects, resulting in a **negligible** sensitivity. The magnitude of change would be **minor**. As a result, the is likely to be a **temporary neutral or slight adverse** effect that is considered to be **not significant**.	applicable to this factor.	**Outline LEMP [EN010158/APP/7.6]**	environmental factor. The population assessment has taken into account the potential effects of each other relevant environmental factor upon this receptor group and concludes that there will not be a significant effect. It is therefore not anticipated for this receptor group to experience significant intra-project combined effects.
Borshaw Farm	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	Views from the property are considered to be **not significant** in both Years 1 and 10.	The highest magnitude of impact during the operation (including maintenance) phase at **high** sensitivity receptors is considered **low**, resulting in a direct, permanent **minor adverse** effect, which is considered **not significant**.	No existing or proposed/planned residential property would require demolition or become undeliverable as a result of the operation (including maintenance) of the Proposed Development, and no property would become uninhabitable as a result of residual significant environmental effects, resulting in a **negligible** sensitivity. The magnitude of change would be **minor**. As a result, the is likely to be a **temporary neutral or slight adverse** effect that is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	**Outline OEMP [EN010158/APP/7.3]** **Outline LEMP [EN010158/APP/7.6]**	For this receptor group, population is considered to be the 'lead' environmental factor. The population assessment has taken into account the potential effects of each other relevant environmental factor upon this receptor group and concludes that there will not be a significant effect. It is therefore not anticipated for this receptor group to experience significant intra-project combined effects.
Granborough	The sensitivity of the human receptors to road traffic emissions is considered to be **high** and the magnitude of change, with additional best practice mitigation	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	The sensitivity of this receptor group has been assessed to be **high/medium**. Therefore, in Years 1 to 10 of operation (including maintenance), there would be a	The highest magnitude of impact during the operation (including maintenance) phase at **high** sensitivity receptors is considered **low**,	No existing or proposed/planned residential property would require demolition or become undeliverable as a result of the	N/A – intra-project combined effect not applicable to this factor.	**Outline OEMP [EN010158/APP/7.3]** **Outline LEMP [EN010158/APP/7.6]**	For this receptor group, population is considered to be the 'lead' environmental factor. The population assessment has taken into account the potential effects of each other relevant

Environmental factor/receptor/ receptor group	Likely residual effect								Mitigation	Likelihood of intra-project combined effects
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Landscape and visual	Noise and vibration	Population	Water		
	measures, is considered to be below Environmental Protection UK and Institute of Air Quality Management guidance screening criteria. Therefore, the residual effect on human receptors following the implementation of additional mitigation measures is considered to be **not significant**.				residual **moderate adverse** effect on views from Granborough, which is considered to be **not significant**.	resulting in a direct, permanent **minor adverse** effect, which is considered **not significant**.	operation (including maintenance) of the Proposed Development, and no property would become uninhabitable as a result of residual significant environmental effects, resulting in a **negligible** sensitivity. The magnitude of change would be **minor**. As a result, the is likely to be a **temporary neutral or slight adverse** effect that is considered to be **not significant**.			environmental factor upon this receptor group and concludes that there will not be a significant effect. It is therefore not anticipated for this receptor group to experience significant intra-project combined effects.
East Claydon	The sensitivity of the human receptors to road traffic emissions is considered to be **high** and the magnitude of change, with additional best practice mitigation measures, is considered to be below Environmental Protection UK and Institute of Air Quality Management guidance screening criteria. Therefore, the residual effect on human receptors following the implementation of additional mitigation measures is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	The highest magnitude of impact during the operation (including maintenance) phase at **high** sensitivity receptors is considered **low**, resulting in a direct, permanent **minor adverse** effect, which is considered **not significant**.	No existing or proposed/planned residential property would require demolition or become undeliverable as a result of the operation (including maintenance) of the Proposed Development, and no property would become uninhabitable as a result of residual significant environmental effects, resulting in a **negligible** sensitivity. The magnitude of change would be **minor**. As a result, the is likely to be a **temporary neutral or slight adverse** effect that is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	**Outline OEMP [EN010158/APP/7.3]**	For this receptor group, population is considered to be the 'lead' environmental factor. The population assessment has taken into account the potential effects of each other relevant environmental factor upon this receptor group and concludes that there will not be a significant effect. It is therefore not anticipated for this receptor group to experience significant intra-project combined effects.
Other (non-agricultural) businesses (including Claydon House, Claydon House RPG, and Hogshaw Farm and Wildlife Park)	The sensitivity of the human receptors to road traffic emissions is considered to be **high** and the magnitude of change, with additional best practice mitigation measures, is considered to be below Environmental Protection UK and Institute of Air Quality Management guidance	N/A – intra-project combined effect not applicable to this factor.	The magnitude of impact, following additional mitigation, is **minor**. Therefore, there is likely to be a temporary, long-term, **slight adverse** residual effect on Claydon House, which is considered to be **not significant**. The magnitude of impact, following additional mitigation, is **minor**. Therefore, there is likely to be a temporary, long-term,	N/A – intra-project combined effect not applicable to this factor.	In Years 1 to 10 of operation, there would be a **moderate adverse** effect on views from Claydon House and its surroundings, which is considered to be **significant**. In Years 1 to 10 of operation, there would be a **moderate adverse** effect on views from Hogshaw Farm and Wildlife Park, which is	The highest magnitude of impact during the operation (including maintenance) phase at **high** sensitivity receptors is considered **low**, resulting in a direct, permanent **minor adverse** effect, which is considered **not significant**.	The value (sensitivity) of non-agricultural business and development land as a receptor is **high or very high** and the magnitude of change expected at this operation is generally **slight/negligible** or **minor**. Therefore, there is likely to be a	N/A – intra-project combined effect not applicable to this factor.	**Outline OEMP [EN010158/APP/7.3]** **Outline LEMP [EN010158/APP/7.6]**	For this receptor group, landscape is considered to be the 'lead' environmental factor. The landscape assessment has taken into account the potential effects of each other relevant environmental factor upon this receptor group and concludes that there is potential for a significant effect.

Environmental factor/receptor/ receptor group	Likely residual effect								Mitigation	Likelihood of intra-project combined effects
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Landscape and visual	Noise and vibration	Population	Water		
	screening criteria. Therefore, the residual effect on human receptors following the implementation of additional mitigation measures is considered to be **not significant**.		**slight adverse** residual effect on the significance of Claydon Park Registered Park and Garden as a result of changes to the contribution made by its setting, which is considered to be **not significant**. The magnitude of impact, following additional mitigation, will be **minor**. Therefore, there will be **a direct, permanent, slight adverse** residual effect on the non-registered parkland, which is considered to be **not significant**.		considered to be **significant.**		**temporary**, but **long-term slight adverse** residual effect, which is considered to be **not significant**.			It is therefore anticipated for this receptor group to experience **significant** intra-project combined effects.
Tourism and the tourist economy (including Claydon House, Claydon House RPG, and Hogshaw Farm and Wildlife Park)	The sensitivity of the human receptors to road traffic emissions is considered to be **high** and the magnitude of change, with additional best practice mitigation measures, is considered to be below Environmental Protection UK and Institute of Air Quality Management guidance screening criteria. Therefore, the residual effect on human receptors following the implementation of additional mitigation measures is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	The magnitude of impact, following additional mitigation, is **minor**. Therefore, there is likely to be a temporary, long term, **slight adverse** residual effect on Claydon House, which is considered to be **not significant**. The magnitude of impact, following additional mitigation, is **minor**. Therefore, there is likely to be a temporary, long-term, **slight adverse** residual effect on the significance of Claydon Park Registered Park and Garden as a result of changes to the contribution made by its setting, which is considered to be **not significant**. The magnitude of impact, following additional mitigation, will be **minor**. Therefore, there will be **a direct, permanent, slight adverse** residual effect on the non-registered parkland, which is considered to be **not significant.**	N/A – intra-project combined effect not applicable to this factor.	In Years 1 to 10 of operation, there would be a **moderate adverse** effect on views from Claydon House and its surroundings, which is considered to be **significant**. In Years 1 to 10 of operation, there would be a **moderate adverse** effect on views from Hogshaw Farm and Wildlife Park, which is considered to be **significant.**	The highest magnitude of impact during the operation (including maintenance) phase at **high** sensitivity receptors is considered **low**, resulting in a direct, permanent **minor adverse** effect, which is considered **not significant**.	The value (sensitivity) of tourism as a receptor is **medium** and the magnitude of change expected during the operation (including maintenance) phase is **minor to moderate/major adverse.** Therefore, there is likely to be a temporary **slight adverse** residual effect on tourism, which is considered to be **not significant.**	N/A – intra-project combined effect not applicable to this factor.	**Outline OEMP [EN010158/APP/7.3]** **Outline LEMP [EN010158/APP/7.6]**	For this receptor group, landscape is considered to be the 'lead' environmental factor. The landscape assessment has taken into account the potential effects of each other relevant environmental factor upon this receptor group and concludes that there is potential for a significant effect. It is therefore anticipated for this receptor group to experience **significant** intra-project combined effects.
Community and recreational facilities, land and assets and their users	The sensitivity of the human receptors to road traffic emissions is considered to be **high** and the magnitude of change, with additional best practice mitigation measures, is considered to be below Environmental Protection UK and Institute of Air Quality	N/A – intra-project combined effect not applicable to this factor.	The magnitude of impact, following additional mitigation, is **minor**. Therefore, there is likely to be a temporary, long-term, **slight adverse** residual effect on the significance of Claydon Park Registered Park and Garden as a result of changes to the contribution made by its setting, which	N/A – intra-project combined effect not applicable to this factor.	In Years 1 to 10 of operation, there would be a **moderate adverse** effect on views from Claydon House and its surroundings, which is considered to be **significant**.	The highest magnitude of impact during the operation (including maintenance) phase at **high** sensitivity receptors is considered **low**, resulting in a direct, permanent **minor adverse** effect, which is considered **not significant**.	The value (sensitivity) of community and recreational facilities, land and assets and their users as a receptor is **high** and the magnitude of change expected during the operation (including maintenance) phase	N/A – intra-project combined effect not applicable to this factor.	**Outline OEMP [EN010158/APP/7.3]** **Outline LEMP [EN010158/APP/7.6]**	For this receptor group, landscape is considered to be the 'lead' environmental factor. The landscape assessment has taken into account the potential effects of each other relevant environmental factor upon this receptor group and concludes that there is potential for a significant effect.

Environmental factor/receptor/ receptor group	Likely residual effect								Mitigation	Likelihood of intra-project combined effects
	Air quality	Biodiversity	Cultural heritage	Land and groundwater	Landscape and visual	Noise and vibration	Population	Water		
	Management guidance screening criteria. Therefore, the residual effect on human receptors following the implementation of additional mitigation measures is considered to be **not significant**.		is considered to be **not significant**. The magnitude of impact, following additional mitigation, will be **minor**. Therefore, there will be **a direct, permanent, slight adverse** residual effect on the non-registered parkland, which is considered to be **not significant**.				is **negligible** to **minor.** Therefore, there is likely to be a temporary but long-term **slight adverse** residual effect, which is considered to be **not significant.**			It is therefore anticipated for this receptor group to experience **significant** intra-project combined effects.
Water framework directive waterbody (Claydon Brook Tributary)	N/A – intra-project combined effect not applicable to this factor.	There is not anticipated to be an adverse effect on the integrity of statutory designated sites, non-statutory designated sites or ancient woodland during operation (including maintenance), which is considered to be **not significant**.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	N/A – intra-project combined effect not applicable to this factor.	Claydon Brook Tributary is considered to be of **medium** sensitivity/ importance. The magnitude of impact following additional mitigation is considered to be minor. The residual effect is reduced to **slight adverse**, in the event of a pollution event occurring, which is considered to be **not significant**. The effect would be temporary, direct and of local importance.	**Outline OEMP [EN010158/APP/7.3]** **Outline LEMP [EN010158/APP/7.6]**	For this receptor group, water is considered to be the 'lead' environmental factor. The water assessment has taken into account the potential effects of each other relevant environmental factor upon this receptor group and concludes that there will not be a significant effect. It is therefore not anticipated for this receptor group to experience significant intra-project combined effects.

17.5.10. Sensitive receptors in proximity to the Proposed Development identified to have intra-project combined effects during the construction and/or decommissioning phases have been listed in **Table 17.6**. Where there has been only one significant effect concluded on a receptor/receptor group, on a precautionary basis, this has then been categorised as a significant intra-project combined effect. However, this is not classified as a new significant effect, in addition to or separate from that identified in the relevant environmental factor chapter. The assessment has concluded that the following receptors have the potential to experience significant intra-project combined effects:

- PRoW between Calvert Road and HS2 – **significant adverse** effects due to a medium term duration of large/medium to small change in scale of views experienced over a wide extent of the routes as described in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]**;
- PRoW between Botolph Claydon and Runt's Wood – **significant adverse** effects due to a medium term duration of large scale change in views over a wide extent of these routes as described in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]**;
- PRoW to Finemere Hill – **significant adverse** effects due to a medium term duration of large scale change in views over a wide extent on the footpath network as described in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]**;
- North Buckinghamshire Way/Midshires Way – **significant adverse** effects due to a medium term duration of large scale change in views over a limited section of the trail and a large/medium and medium scale change in views from other parts of the route as described in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]**;
- Bernwood Jubilee Way – **significant adverse** effects due to a medium term duration of large scale change in views over localised sections of the trail and a medium scale change in views from other parts of the route as described in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]**;
- PRoW, lanes and roads between East Claydon/East Claydon Road and Parcel 3 – **significant adverse** effects due to a medium term duration of large/medium scale change in views over a wide extent of these routes as described in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]**; and
- Hogshaw Farm and Wildlife Park – **significant adverse** effects due to a medium term duration of large/medium to medium scale of change across an intermediate extent of the wider visitor attraction as described in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]**.

17.5.11. Sensitive receptors in proximity to the Proposed Development identified to have intra-project combined effects during the operation (including maintenance) phase have been listed in **Table 17.7**. Where there has been only one significant effect concluded on a receptor/receptor group, on a precautionary basis, this has then been categorised as a significant intra-project combined effect. However, this is not classified as a new significant effect, in addition to or separate from that identified in the relevant environmental factor chapter. The assessment has concluded that the following receptors have the potential to experience significant intra-project combined effects:

- Residential properties – four dwellings (4-5 Catherine Cottages, 6-7 Catherine Cottages, Bernwood Farm and Sion Hill Farm) would experience **significant** visual effects during Year 1. At 4-5 Catherine Cottages and 6-7 Catherine Cottages, by Year 10 these effects would reduce in magnitude due to the establishment of mitigation and by Year 10 would be **not significant**. It is considered likely that **significant** visual effects would remain at Sion Hill Farm and Bernwood Farm at Year 10 reflecting the fact that views are available from elevated rooms within the properties as described in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]**;
- Residential properties – **significant adverse** effects as the Solar PV modules will be visible within and change the character of the setting around this building on all sides, reducing the contribution that the agricultural setting makes to the building's significance as described in **ES Volume 2, Chapter 9: Cultural Heritage [EN010158/APP/6.2]**;
- Bats (in particular Bechstein's bat (*Myotis bechsteinii*) and barbastelle (*Barbastella barbastellus*)) where a displacement effect from Solar PV modules, perhaps through high frequency noise, may act in combination with habitat loss/modification to further fragment commuting and foraging routes as described within **ES Volume 2, Chapter 7: Biodiversity [EN010158/APP/6.2]**;
- Landscape fabric (woodland, trees and hedgerows) – **significant beneficial** effects in Year 10 of operation (including maintenance) due to the new mitigation planting implemented becoming established and exceeding the amount lost during construction as described in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]**;
- North Buckinghamshire Way/Midshires Way – **significant adverse** effects in Year 1 of operation (including maintenance) due to the medium term duration of a large to medium scale change experienced over a localised extent. By Year 10, there would not be a significant adverse effect due to mitigation planting becoming established as detailed in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]**;

- Bernwood Jubilee Way – **significant adverse** effect in Years 1 to 10 of operation (including maintenance) due to the long-term duration of large/medium to medium scale change in views along localised sections of the trail as described in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]**;
- PRoW between Calvert Road and HS2 – **significant adverse** effects in Years 1 to 10 of operation (including maintenance) due to the long-term duration of large/medium scale change in views experienced over a wide extent of the routes as described in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]**;
- PRoW between Botolph Claydon and Runt's Wood – **significant adverse** effects in Years 1 to 10 of operation (including maintenance) due to the long-term duration of large to large/medium to medium/small scale change in views experienced over a wide extent of the routes as described in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]**;
- PRoW to Finemere Hill – **significant adverse** effects in Years 1 to 10 of operation (including maintenance) due to the long-term duration of large to medium scale change in views along an intermediate extent of the footpath as described in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]**;
- PRoW, lanes and roads between East Claydon/East Claydon Road and Parcel 3 – **significant adverse** effects in Years 1 to 10 of operation (including maintenance) due to the long-term duration of large to medium to small scale change in views experienced over a wide extent of the routes as described in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]**;
- Swan's Way/Outer Aylesbury Ring – **significant adverse** effect in Years 1 to 10 of operation (including maintenance) due to the long-term duration of medium to small scale effects that would be experienced over an intermediate extent of these routes as described in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]**;
- Claydon House and its surroundings – **significant adverse** effects in Years 1 to 10 of operation (including maintenance) due to the long-term duration of medium/small scale change in views experienced over a localised extent of this receptor group as described in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]**; and
- Hogshaw Farm and Wildlife Park – **significant adverse** effects in Years 1 to 10 of operation (including maintenance) due to the long-term duration of large/medium to medium scale change in views experienced across an intermediate extent of the Hogshaw Farm and Wildlife Park as described in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]**.

17.5.12. No additional mitigation is proposed for the intra-project combined effects identified, other than those described in **Tables 17.6** and **17.7** and in the ES chapters in **ES Volume 2, Chapters 6 - 16 [EN010158/APP/6.2]**.

17.6. Assessment of inter-project cumulative effects: National Grid East Claydon Substation

17.6.1. National Grid Electricity Transmission has not yet completed non-statutory consultation on the proposed National Grid East Claydon Substation extension. It is anticipated that consultation will occur in Autumn 2025.

17.6.2. As a planning application is yet to be submitted, the following assumptions, using similar applications, National Grid's factsheet on substation construction **[Ref. 17-14]** and engagement with National Grid, have been made in order to complete a high-level appraisal of the inter-project cumulative effects of the Proposed Development with the proposed extension to the National Grid East Claydon Substation:

- The siting and design of the National Grid Substation will follow The Horlock Rules (2009) **[Ref. 17-15]** which were established by National Grid to provide principles to follow when designing infrastructure and overhead line connections;
- The substation extension would be located directly adjacent to the existing National Grid East Claydon Substation.
- For the purposes of this assessment, it is assumed on a precautionary basis the development would consist of the following infrastructure:
  - 4 No. 460 MVA transformers;
  - 2 No. 400 kilovolt (kV) MSCs;
  - 2 No. 400 kV Shunt Reactor;
  - 25 No. 400 kV Air Insulated Switchgear (AIS) bays;
  - 25 x 3 No. 400 kV single phase circuit breakers;
  - 21 x 3 No. 400 kV 1 phase surge arrestors;
  - 389 No. 400 kV post insulators;
  - 1 No. 132kV MSC;
  - 2 No. 132kV Shunt Reactors;
  - 21 No.132kV air insulated switchgear (AIS) bays;
  - 21 x 3 No. 132kV single phase circuit breakers; and
  - 17 x 3 No. 132kV 1 phase surge arrestors.
  - The site is also likely to require a permanent access on East Claydon Road to the substation compound, internal access roads and parking provision, security fencing and CCTV.

- It is assumed that the overhead line gantries would be up to 12m in height with the transformers up to 5m in height. The connecting overhead line towers are assumed to be up to 60m.
- It is assumed that the relevant planning submission supported by any necessary environmental assessments would be submitted in 2026, with construction commencing in 2027.
- It is assumed that the National Grid East Claydon Substation will be permanent development.
- It is assumed that the construction phase will be up to 24 months. It is assumed that the construction works will be subject to a Construction Environmental Management Plan incorporating latest guidance and best practice measures.
- It is assumed that the area for the substation footprint is 640m x 275m.

17.6.3. **Table 17.8** below presents an assessment of the likely inter-project cumulative effects with the proposed National Grid East Claydon Substation.

17.6.4. An assessment of inter-project cumulative effects with the National Grid East Claydon Substation for landscape and visual effects during the operation (including maintenance) phase and climate effects (GHG emissions) is not contained within **Table 17.8**, rather individual sections are included below to clearly set out the full assessments. A qualitative assessment has been undertaken for transport, air quality and noise as detailed in **Table 17.8**, in absence of any publicly available traffic data.

Table 17.8: Inter-project cumulative effects with National Grid East Claydon Substation

Common receptor/ matter	Relevant phase	Description of inter-project cumulative effect	Significance of inter-project cumulative effect (including Proposed Development mitigation)	Cumulative mitigation requirements	Residual inter-project cumulative effect
Air quality					
Neighbouring residents and designated sites	Construction, operation (including maintenance) and decommissioning	Potential effects from dust and particulate matter emissions from Site activities, including the operation of the construction equipment during construction and decommissioning phases. Potential effects from road traffic exhaust emissions during construction, operation (including maintenance), and decommissioning phases.	For dust soiling effects on people and property: • medium risk for demolition (during decommissioning phase only), earthworks and construction activities; and • low risk for trackout activities. For human health impacts: • low risk for demolition (during decommissioning phase only), earthworks, construction and trackout activities. For ecological impacts:	It is assumed that appropriate mitigation would be in place for the National Grid East Claydon Substation development, as is good practice and standard for developments of this nature.	Provided there is adequate mitigation for the National Grid East Claydon Substation development there should be no inter-project cumulative effect. It is anticipated that this would be secured as part of any permission that is granted and the Applicant is therefore confident relying upon this mitigation as part of this assessment.

Common receptor/ matter	Relevant phase	Description of inter-project cumulative effect	Significance of inter-project cumulative effect (including Proposed Development mitigation)	Cumulative mitigation requirements	Residual inter-project cumulative effect
			• low-negligible risk for every activity. The temporary nature of the plant to be used is unlikely to cause a risk of emissions that could result in an exceedance of the Air Quality Standards. The Proposed Development and the National Grid East Claydon Substation are not expected to generate traffic exceeding the Environmental Protection UK and IAQM 2017 guidance and Design Manual for Roads and Bridges LA 105 Air Quality screening criteria during construction, operation (including maintenance), and decommissioning phases.		

Common receptor/ matter	Relevant phase	Description of inter-project cumulative effect	Significance of inter-project cumulative effect (including Proposed Development mitigation)	Cumulative mitigation requirements	Residual inter-project cumulative effect
Biodiversity					
Bechstein's bat (foraging, commuting and roosting)	Construction, operation (including maintenance) and decommissioning	Loss of arable farmland and hedgerows. This could have a combined effect from further fragmentation of bat foraging habitat and loss of ground-nesting bird habitat.	Habitat loss is considered to be permanent but not significant as it will involve arable or modified grassland of limited biodiversity value, lying outside the core sustenance zone and home range for Bechstein's bats. Provided there is adequate mitigation/compensation for the National Grid East Claydon Substation development, there should be no inter-project cumulative effect.	Habitat creation to maintain foraging habitat for bats and ground-nesting birds. It is assumed that appropriate mitigation would be in place for the National Grid East Claydon Substation development, as is good practice and standard for developments of this nature.	Provided there is adequate mitigation for the National Grid East Claydon Substation development, there should be no inter-project cumulative effect. It is anticipated that this would be secured as part of any permission that is granted and the Applicant is therefore confident relying upon this mitigation as part of this assessment.
Ground nesting birds	Construction, operation (including	Loss of arable farmland. This could have a combined effect	Habitat loss is considered to be permanent but not significant as it will involve	Habitat creation to maintain foraging	Provided there is adequate mitigation for the National Grid

Common receptor/ matter	Relevant phase	Description of inter-project cumulative effect	Significance of inter-project cumulative effect (including Proposed Development mitigation)	Cumulative mitigation requirements	Residual inter-project cumulative effect
	maintenance) and decommissioning	from further loss of ground-nesting bird habitat.	arable or modified grassland of limited biodiversity value. Provided there is adequate mitigation/compensation for the National Grid East Claydon Substation development, there should be no inter-project cumulative effect.	habitat for ground-nesting birds. It is assumed that appropriate mitigation would be in place for the National Grid East Claydon Substation development, as is good practice and standard for developments of this nature.	East Claydon Substation development, there should be no inter-project cumulative effect. It is anticipated that this would be secured as part of any permission that is granted and the Applicant is therefore confident relying upon this mitigation as part of this assessment.
Cultural heritage					
Unknown below ground archaeology	Construction	Excavation and topsoil stripping for Rosefield Substation may impact on currently unknown below ground archaeological remains. This may include	Provided there is adequate mitigation for the National Grid East Claydon Substation development, any inter-project cumulative effect would be no worse	It is anticipated that the National Grid East Claydon Substation will be subject to archaeological evaluation and	Provided there is adequate mitigation for the National Grid East Claydon Substation any inter-project

Common receptor/ matter	Relevant phase	Description of inter-project cumulative effect	Significance of inter-project cumulative effect (including Proposed Development mitigation)	Cumulative mitigation requirements	Residual inter-project cumulative effect
		remains associated with the Iron Age/Romano-British settlement identified in Parcel 3 of the Proposed Development if these extend into the area of the proposed National Grid East Claydon Substation development.	than the effect of the Proposed Development alone.	appropriate mitigation. The mitigation measures for the Proposed Development will include for post-excavation analysis to incorporate the results of any archaeological work carried out for Rosefield Substation.	cumulative effect would be no worse than the effect of the Proposed Development alone and is considered to be **not significant**.
Designated heritage assets	Construction and operation (including maintenance)	The National Grid East Claydon Substation development would be located between the Proposed Development (Rosefield Substation) and East Claydon. The two proposed substations would be seen together in views from East Claydon as an expansion of the existing National Grid Substation and would be seen in the context of	The effect of the Proposed Development on the listed buildings in East Claydon is considered to be minor. The increased density of development to the east of the village as a result of the two projects would result in a slightly greater impact, but the inter-project cumulative effect is not considered to increase.	It is anticipated that the National Grid East Claydon Substation would seek to minimize the impact on the listed buildings in East Claydon.	The increased density of development to the east of the village as a result of the two projects would result in a slightly greater impact, but the inter-project cumulative effect would remain minor and is

Common receptor/ matter	Relevant phase	Description of inter-project cumulative effect	Significance of inter-project cumulative effect (including Proposed Development mitigation)	Cumulative mitigation requirements	Residual inter-project cumulative effect
		existing overhead power lines. The presence of the substations and the Proposed Development would result in an erosion of the contribution that the rural surroundings make to the significance of the listed buildings in East Claydon.			considered to be **not significant**.
Land and groundwater					
Land contamination	Construction and operation (including maintenance)	There is the potential for contamination from the Proposed Development to occur alongside contamination from the National Grid East Claydon Substation.	The effect is considered to be negligible for the Proposed Development, and development of the National Grid East Claydon Substation would not be expected to increase the potential risk relating to land contamination, assuming similar management plans are required to prevent contamination.	No additional mitigation required	Residual inter-project cumulative effects are anticipated to be **not significant**, assuming that National Grid implement best practice measures and a construction management plan.

Common receptor/ matter	Relevant phase	Description of inter-project cumulative effect	Significance of inter-project cumulative effect (including Proposed Development mitigation)	Cumulative mitigation requirements	Residual inter-project cumulative effect
Groundwater	Construction and operation (including maintenance)	Potential contamination of groundwater resources could occur as a result of the Proposed Development and the National Grid East Claydon Substation.	The effect is considered to be negligible for the Proposed Development and development of the National Grid East Claydon Substation would not be expected to increase the potential risk relating to groundwater quality, assuming similar management plans are in place.	No additional mitigation required	Residual inter-project cumulative effects are anticipated to be **not significant**, assuming that National Grid implement best practice measures and a construction management plan.
Soil					
Agricultural land quality	Construction	There is a potential for reduced agricultural land quality from the Proposed Development and the National Grid East Claydon Substation.	The effect is considered to be negligible for the Proposed Development and development of the National Grid East Claydon Substation would not be expected to increase the potential risk relating to agricultural quality, assuming similar	No additional mitigation required	Residual inter-project cumulative effects are anticipated to be **not significant**.

Common receptor/ matter	Relevant phase	Description of inter-project cumulative effect	Significance of inter-project cumulative effect (including Proposed Development mitigation)	Cumulative mitigation requirements	Residual inter-project cumulative effect
			management plans are in place.		
Soil resilience	Construction	There is a potential for soil disturbance from the Proposed Development and the National Grid East Claydon Substation.	The effect is considered to be negligible for the Proposed Development and development of the National Grid East Claydon Substation would not be expected to increase the potential risk relating to soil, assuming similar management plans are in place.	No additional mitigation required	Residual inter-project cumulative effects are anticipated to be **not significant**.
Noise and vibration					
Neighbouring residents	Construction and operation (including maintenance)	There is potential for inter-project cumulative noise levels from the Proposed Development with the East Claydon Substation development, in addition to other existing development and/or approved developments	The inter-project cumulative effect is expected to be minor adverse at Sion Hill Farm. This is on basis that the cumulative noise levels would not exceed the low magnitude of impact criteria	It is assumed that embedded acoustic mitigation measures in the form of appropriately designed blast walls/noise barriers would be included around the	Provided there is adequate mitigation for the National Grid East Claydon Substation development, residual inter-project cumulative effects

Common receptor/ matter	Relevant phase	Description of inter-project cumulative effect	Significance of inter-project cumulative effect (including Proposed Development mitigation)	Cumulative mitigation requirements	Residual inter-project cumulative effect
		in the locality, notably the East Claydon BESS development.	at the surrounding sensitive receptors.	proposed transformers to be introduced at the East Claydon Substation development.	are anticipated to be **not significant**.
Population					
Employment and contribution to GVA	Construction, operation (including maintenance) and decommissioning	Potential beneficial impacts on employment opportunities during the construction phase. Therefore, as the construction phases of the projects overlap, there will likely be additional employment opportunities and associated economic effects (spending and GVA) during this period.	The magnitude of inter-project cumulative impact related to an increase in the number of employment is expected to be **minor**. This will result in a temporary, short term (for construction and decommissioning) and long-term (for operation including maintenance activity) **slight beneficial** effect which may be not significant.	Not applicable, although the Applicant will work with other developers where relevant and appropriate through its **Outline Employment, Skills and Supply Chain Plan [EN010158/APP/7.14]**.	Residual inter-project cumulative effects are anticipated to be **not significant**.

Common receptor/ matter	Relevant phase	Description of inter-project cumulative effect	Significance of inter-project cumulative effect (including Proposed Development mitigation)	Cumulative mitigation requirements	Residual inter-project cumulative effect
Effects on the agricultural economy	Construction, operation (including maintenance) and decommissioning	Construction and operation of the East Claydon Substation development would remove agricultural land from the agricultural economy permanently (which would otherwise have been re-instated by the Proposed Development during the operation (including maintenance) phase (approx. 37.8ha).	The magnitude of inter-project cumulative impact related to the loss of agricultural land and employment capacity is negligible to minor, given that the agricultural economy within Buckinghamshire is both substantial and subject to annual/seasonal variations in employment supported, which is greater than the scale of the indicative loss in employment capacity.	Not applicable.	Residual inter-project cumulative effects are anticipated to be **not significant**.
Effects on tourism and the tourist economy (accommodation uptake)	Construction and decommissioning	There is potential for inter-project cumulative effects on accommodation providers and local services as a result of the potential influx of construction staff to the area should the project's construction phase	The level of employment supported by the East Claydon Substation during its 24 month construction is currently unknown but is unlikely to exceed the workforce supported by the Proposed Development	Not applicable	Residual inter-project cumulative effects are anticipated to be **not significant**.

Common receptor/ matter	Relevant phase	Description of inter-project cumulative effect	Significance of inter-project cumulative effect (including Proposed Development mitigation)	Cumulative mitigation requirements	Residual inter-project cumulative effect
		overlap with the Proposed Development's.	given its nature and scale. Given the scale of likely demand from the Proposed Development (a peak demand of 36 rooms) in the context of peak available serviced accommodation in Buckinghamshire (889 rooms) and the scale and duration of construction of the East Claydon Substation, cumulative effects are not likely to be significant even if peak demand overlaps.		
Effects on community access	Construction, operation (including maintenance) and decommissioning	There is potential for inter-project cumulative effects on community access as the National Grid East Claydon Substation development would likely require the diversion of PRoW which, despite being within the Order Limits for the	No significant inter-project cumulative effects are anticipated given that the Proposed Development's effects on PRoW are of slight significance and relate to PRoW to the west of the Order Limits. predominantly,	Not applicable	Residual inter-project cumulative effects are anticipated to be **not significant**.

Common receptor/ matter	Relevant phase	Description of inter-project cumulative effect	Significance of inter-project cumulative effect (including Proposed Development mitigation)	Cumulative mitigation requirements	Residual inter-project cumulative effect
		Proposed Development, are not currently identified as being diverted or closed.	and are unlikely to interact in terms of community or recreational connectivity effects of the National Grid East Claydon Substation development.		
Traffic and transport					
Users of the road network and sensitive locations (e.g., hospitals, schools, residential areas with provision for walking and cycling)	Construction	There is minimal potential for inter-project cumulative effects as the potential National Grid East Claydon Substation development construction access route differs from that for the Proposed Development, with the sole exception of AIL movements.	No significant inter-project cumulative effects are anticipated, given the low number of AIL movements associated with the Proposed Development.	Co-ordination between Applicants would be required during AIL movements (up to 14 in total for the Proposed Development).	Residual inter-project cumulative effects are anticipated to be **not significant**.
Water					

Common receptor/ matter	Relevant phase	Description of inter-project cumulative effect	Significance of inter-project cumulative effect (including Proposed Development mitigation)	Cumulative mitigation requirements	Residual inter-project cumulative effect
Water quality including Water Framework Directive Watercourses	Construction and operation (including maintenance)	There is potential during the construction and operation phase activities for local watercourse water quality to degrade due to increased silt-laden runoff and pollution arising from the potential of spillages and leaks of fuels, oils and chemicals. It is assumed the appropriate management and mitigation plans will be followed to ensure no degradation of the local water quality within the water environment.	The effect is considered to be negligible for the Proposed Development and development of the National Grid East Claydon Substation would not be expected to increase the potential risk relating to water quality, assuming similar management plans are in place. Water quality issues are to be managed for the Proposed Development through the following: **Outline CEMP [EN010158/APP/7.2]** **Outline OEMP [EN010158/APP/7.3]** **Outline DEMP [EN010158/APP/7.4]**	It is assumed that appropriate mitigation would be in place for development, as is good practice and standard for developments of this nature including the National Grid East Claydon Substation.	Provided there is adequate mitigation for the National Grid East Claydon Substation development, residual inter-project cumulative effects are anticipated to be **not significant**.

Common receptor/ matter	Relevant phase	Description of inter-project cumulative effect	Significance of inter-project cumulative effect (including Proposed Development mitigation)	Cumulative mitigation requirements	Residual inter-project cumulative effect
Flood risk	Operation (including maintenance)	Increased hard standing areas have the potential to increase rates of surface water runoff from what was previously considered permeable land. Cumulatively this has the potential to lead to increased flood risk. As part of the planning application process applicants are required to consider surface water management to ensure no increase in water quantities leaving a development and therefore no increase in flood risk. Therefore, it is assumed there will be no cumulative increase in flood risk.	No inter-project cumulative effects during the operation (including maintenance) phase are anticipated provided that the National Grid East Claydon Substation development provides surface water management strategies. Flood risk issues are to be managed for the Proposed Development through the following: **ES Volume 4, Appendix 16.1: Flood Risk Assessment [EN010158/APP/6.4]** and supporting **Outline Drainage Strategy [EN010158/APP/7.11]**.	It is assumed that appropriate mitigation would be in place for the National Grid East Claydon Substation development, as is good practice and standard for developments of this nature.	Provided there is adequate mitigation for the National Grid East Claydon Substation development, residual inter-project cumulative effects are anticipated to be **not significant**.

Climate (GHG emissions)

17.6.5. Although GHG emissions associated with the National Grid East Claydon Substation development are outside the scope of the GHG assessment for the Proposed Development, in light of recent case law and experience on other energy projects that connect into infrastructure that is consented separately (the most common example at the moment being carbon capture and storage projects), further information on potential emissions associated with the proposed National Grid East Claydon Substation development into which the Proposed Development will connect has been provided. Therefore, for contextual purposes, this section provides an outline of the GHG emissions associated with the proposed National Grid East Claydon Substation development.

17.6.6. To estimate emissions associated with the substation equipment (as outlined in **Paragraph 17.6.2** above), the following key assumptions were applied:

- All equipment sourced from Europe, with the exception of transformers (sourced from Korea);
- In the absence of information, construction fuel use emissions estimated using the following RICS 2023 assumption: 40kgCO_2e/GIFA;
- Maintenance emissions calculated using the following RICS 2023 assumption: 1% of A1-5 (construction phase emissions);
- Repair emissions calculated using the following RICS 2023 assumptions: 10% of A1-3 (embodied emissions of construction materials);
- Representative Environmental Product Declarations could not be sourced for the AIS bays, 400Kv surge arrestors or post insulators (only low to medium voltage ratings available). Therefore, results have been uplifted to account for the difference in specification to ensure the results are conservative;
- Environmental Product Declarations were not available for MSCs and Shunt Reactors. Therefore, an uplift of 10% has been applied to all emission categories to account for this equipment.
- One set of replacements has been calculated for all equipment. It should be noted that this is a conservative assumption; and
- 5% construction waste for all equipment.

17.6.7. A conservative assessment of the GHG emissions from the National Grid East Claydon Substation development have been included in this assessment for context, for the reasons set out above. The National Grid East Claydon Substation development has the potential to support multiple future renewable energy developments in the region, additional to the

Proposed Development. As such, no judgement has been made as to the percentage of these emissions which should be apportioned to the Proposed Development. Figures have been provided here for the full National Grid East Claydon Substation development based on the available information.

17.6.8. The predicted lifecycle GHG emissions are displayed in **Table 17.9** below. Replacement emissions are the largest emissions source (33%), followed by product emissions (27%). It is important to note that the assumptions used for operational replacement are likely to be conservative and therefore represents a worst-case.

Table 17.9: Life cycle emissions from National Grid East Claydon Substation

Component	Emissions (tCO_2e)	Proportion of emissions (%)
Product Stage (A1-3)	10,366	27%
Transport (A4)	1,754	5%
Construction Activities (A5.2)	7,736	20%
Construction Waste (A5.3)	629	2%
Maintenance (B2)	205	1%
Repair (B3)	1,037	3%
Replacement (B4)	12,579	33%
End of life (C1-4)	4,326	11%
Total	**38,632**	**100%**

Landscape and visual

17.6.9. As detailed in **ES Volume 4, Appendix 10.1: Landscape and Visual Impact Assessment Methodology [EN010158/APP/6.4]**, receptors judged to experience negligible or slight/negligible magnitude of effects from the Proposed Development, are not considered for inter-project cumulative effects on the basis that any significant effects arising would primarily be caused by the other existing and/or approved development and would be unlikely to be contributed to by the Proposed Development. Those receptors as identified and assessed in **Section 10.10** of **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]** as experiencing a negligible or slight/negligible magnitude of effect from the Proposed Development, which would otherwise have been included in one

or more of the inter-project cumulative effects assessments below, are detailed as follows:

- NCA 108: Upper Thames Clay Vales;
- NCA 109: Midvale Rodge;
- LCA 5.4: Twyford Vale;
- LCA 9.3: Pitchcott-Whitchurch Ridge;
- Settlements: North Marston and Oving;
- Main roads: Winslow Road/East Claydon Road and Queen Catherine Road;
- Main transport routes: East West Rail;
- Recreational routes NCN No.51; and
- PRoW: Finemere Hill to HS2/Claydon Road.

17.6.10. In addition to these receptors, LCT 7: Wooded Rolling Lowlands, LCT 9: Low Hills and Ridges, LCA 9.1: Finemere Hill and the Quainton-Wings Hill Area of Attractive Landscape are not considered for inter-project cumulative effects on the basis that any large-scale effects arising would be as a result of the Proposed Development alone. Any potential inter-project cumulative effects with other existing development and/or approved developments would result in no greater effects than the Proposed Development on a *solus* basis, and they are therefore not considered for further inter-project cumulative effects assessment.

Inter-project cumulative landscape effects during construction

17.6.11. It is possible that construction of the National Grid East Claydon Substation development may coincide with construction of the Proposed Development and, as such, inter-project cumulative effects may arise with the following landscape receptors.

17.6.12. Decommissioning effects on the landscape character and visual amenity of the environmental baseline are considered to be similar, or no greater than, those identified for the construction phase. The effects are therefore as identified in **Paragraphs 17.6.13** to **17.6.36** below.

LCT 5: Shallow Valleys

17.6.13. It has been assessed in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]** that during construction, the Proposed Development on its own would result in a minor residual adverse effect on landscape character within LCT 5 which extends to a maximum of 750m from the Site and this is considered to be not significant on a *solus* basis.

17.6.14. If both the Proposed Development and the National Grid East Claydon Substation development are constructed in combination, this minor adverse effect on existing landscape character would extend further north to Winslow Road/East Claydon Road; however, this would still remain a very limited extent of the total LCT 5 landscape as a whole.

17.6.15. Therefore, in the scenario that the National Grid East Claydon Substation development is constructed in combination with the Proposed Development, with regard to LCT 5 during construction, there would be a minor adverse inter-project cumulative residual effect which is considered to be **not significant**.

LCA 5.6: Claydon Valley

17.6.16. It has been assessed in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]** that during construction, the Proposed Development on its own would result in a minor residual adverse effect on landscape character within LCA 5.6 which extends to a maximum of 750m from the Site and this is considered to be not significant on a *solus* basis.

17.6.17. If both the Proposed Development and the National Grid East Claydon Substation development are constructed in combination, this minor adverse effect on existing landscape character would extend further north to Winslow Road/East Claydon Road; considered a localised extent of the total LCA 5.6 landscape.

17.6.18. Therefore, in the scenario that the National Grid East Claydon Substation development is constructed in combination with the Proposed Development, with regard to LCA 5.6 during construction, there would be a minor adverse inter-project cumulative residual effect which is considered to be **not significant**.

LCA 5.7: Hogshaw Claylands

17.6.19. It has been assessed in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]** that during construction, the Proposed Development on its own would result in a moderate residual adverse effect on landscape character within LCA 5.7 which extends to a maximum of 750m from the Site and this is considered to be significant on a *solus* basis.

17.6.20. If both the Proposed Development and the National Grid East Claydon Substation development are constructed in combination, this moderate adverse effect on existing landscape character would give rise to a broadly similar scale of landscape change over a similar radius to within LCA 5.7.

17.6.21. Therefore, in the scenario that the National Grid East Claydon Substation development is constructed in combination with the Proposed Development, with regard to LCA 5.7 during construction, there would be

a moderate adverse inter-project cumulative residual effect which is considered to be **significant**.

LCA 5.8: North Marston Undulating Claylands

17.6.22. It has been assessed in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]** that during construction, the Proposed Development on its own would result in a minor residual adverse effect on landscape character within LCA 5.8 which extends to between 1km to 2.5km from the Site and this is considered to be not significant on a *solus* basis.

17.6.23. If both the Proposed Development and the National Grid East Claydon Substation development are constructed in combination, this minor adverse effect on existing landscape character would give rise to a broadly similar scale of landscape change over a similar radius to within LCA 5.8.

17.6.24. Therefore, in the scenario that the National Grid East Claydon Substation development is constructed in combination with the Proposed Development, with regard to LCA 5.8 during construction, there would be a minor adverse inter-project cumulative residual effect which is considered to be **not significant**.

LCA 9.2: Quainton Hill

17.6.25. It has been assessed in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]** that during construction the Proposed Development on its own would result in a moderate residual adverse effect on landscape character within LCA 9.2 which extends to a maximum of 2km from the Site and this is considered to be not significant on a *solus* basis.

17.6.26. If both the Proposed Development and the National Grid East Claydon Substation development are constructed in combination, this moderate adverse effect on existing landscape character would give rise to a broadly similar scale of landscape change over a similar radius to within LCA 9.2.

17.6.27. Therefore, in the scenario that the National Grid East Claydon Substation development is constructed in combination with the Proposed Development, with regard to LCA 9.2 during construction, there would be a moderate adverse inter-project cumulative residual effect which is considered to be **not significant**.

Cumulative visual effects during construction

17.6.28. The cumulative Zone of Theoretical Visibility (ZTV) presented in **ES Volume 3, Figure 17.3: Cumulative ZTV – Rosefield and National Grid East Claydon Substation Extension [EN010158/APP/6.3]** suggests a degree of theoretical cumulative visibility between the Proposed

Development and the National Grid East Claydon Substation development extending to the full extents of the study area and beyond. Whilst the National Grid East Claydon Substation development proposal would potentially be visible over such distances, beyond 5km it would not be visually separable from the existing National Grid East Claydon Substation, i.e. they would appear as one distant development.

17.6.29. With reference to the assessment viewpoints presented in **ES Volume 4, Appendix 10.6: Viewpoints and Visualisations [EN010158/APP/6.4]**, the proposed National Grid East Claydon Substation development would be seen at Viewpoints 23, 24, 25, 28, 30-33. Of these viewpoints, the National Grid East Claydon Substation development would be located behind the proposed Rosefield Substation and at greater distance from the receptor at Viewpoints 25, 28 and 30-33. In each case, the National Grid East Claydon Substation development would either be screened by, or subservient to the proposed Rosefield Substation, with the latter in the foreground. Hence there would be no substantive increase in scale as a result of inter-project cumulative effects.

17.6.30. Therefore, the only assessment viewpoints at which there would be any combined visibility simultaneously between the two developments would be at Viewpoints 23 and 24.

17.6.31. The locations where there would be views of both developments at the same time would be from a section of Winslow Road/East Claydon Road (assessed as negligible magnitude of effect in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]**) and from sections of the PRoW network between East Claydon/East Claydon Road and within Parcel 3 (incorporating PRoWs ECL/3/1, ECL/3/2, ECL/3A/1, ECL/4/1 ECL/4/2, ECL/5/1, ECL/6/1). The cumulative visual effects on receptors using these routes between East Claydon/East Claydon Road and to within Parcel 3 are discussed below.

17.6.32. Assessment Viewpoint 23a presented in **ES Volume 4, Appendix 10.6: Viewpoints and Visualisations [EN010149/APP/6.4]** is representative of views from footpath ECL/4/1 to the fields of the National Grid East Claydon Substation development.

17.6.33. These footpaths have been assessed in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]** as part of the receptor group which extends east/west between East Claydon and Granborough. The assessment judged that the Proposed Development would result in a large to medium scale of change in views over a wide extent of these routes. This would be experienced over a medium-term duration and would result in a moderate magnitude of effect on visual amenity and a moderate residual adverse effect, which is considered to be significant on a *solus* basis.

17.6.34. The National Grid East Claydon Substation development would be clearly visible in combined views with the Proposed Development from the PRoW extending to Winslow Road/East Claydon Road (and presumably would still be visible should the footpaths be diverted to field margins) which would result in large scale changes in views over a wide extent of this receptor group.

17.6.35. Therefore, in the scenario that the National Grid East Claydon Substation development is developed in combination with the Proposed Development, during construction, there would be a substantial/moderate magnitude of effect on visual amenity and a major/moderate adverse inter-project cumulative residual effect, which is considered to be **significant**.

17.6.36. It is considered that any sequential cumulative effects along the same footpaths would be of the same order of magnitude during construction, and hence a major/moderate adverse inter-project cumulative residual effect, which is considered to be **significant**.

Inter-project cumulative landscape effects during operation (including maintenance)

Effect on LCT 5: Shallow Valleys

17.6.37. Both the Proposed Development (the eastern fields of Parcel 2 and the whole of Parcel 3) and the National Grid East Claydon Substation are located in Landscape Character Type (LCT) 5: Shallow Valleys. Although the Proposed Development is located within two other neighbouring LCTs, neither would have a significant effect on any other LCT either individually or in combination.

17.6.38. A cumulative ZTV plan showing the extent of cumulative visibility between the Proposed Development and the National Grid East Claydon Substation development is presented in **ES Volume 3, Figure 17.3: Cumulative ZTV – Rosefield and National Grid East Claydon Substation Extension [EN010158/APP/6.3]**. As with the other ZTVs presented in **ES Volume 3 [EN010158/APP/6.3]**, the cumulative ZTVs tend to exaggerate the actual visibility of both developments.

17.6.39. It has been assessed in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]** that the sensitivity of LCT 5 to the Proposed Development is low. Given the proximity and similarities in terms of scale and nature of the infrastructure, this judgement applies equally to the type of development proposed at the National Grid East Claydon Substation.

17.6.40. It has been assessed that initially (in Year 1 of operation) the Proposed Development on its own would result in large to medium scale change to landscape character within the Order Limits and surrounding the Site, reducing to small scale change beyond a maximum distance of 750m. Following the establishment of mitigation planting (Year 10), the scale of

landscape change would be less than in Year 1, but it is likely that large or medium scale change would remain over a very limited extent of LCT 5 surrounding the Site.

17.6.41. It is likely that the proposed National Grid East Claydon Substation development would give rise to a broadly similar scale of landscape change over a similar or marginally wider radius, in particular to the north, within LCT 5.

17.6.42. As illustrated by the ZTVs in **ES Volume 3, Figure 17.3: Cumulative ZTV – Rosefield and National Grid East Claydon Substation Extension [EN010158/APP/6.3]** and **ES Volume 3 [EN010158/APP/6.3]**, the National Grid East Claydon Substation development would therefore extend large/medium scale change within LCT 5 to Winslow Road/East Claydon to the north of the Site.

17.6.43. Additional mitigation detailed in and secured by the **Outline LEMP [EN010158/APP/7.6]** has been proposed for the Proposed Development. It is assumed that a similar commitment would be agreed in relation to the National Grid East Claydon Substation development. It is further assumed that any landscape mitigation proposals implemented around the National Grid East Claydon Substation development would mature over approximately the same timeframe as that proposed around the Proposed Development. No further additional mitigation has therefore been proposed to mitigate inter-project cumulative effects between the two developments.

17.6.44. It has been assessed in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]** that during operation, the Proposed Development on its own would result in a minor residual adverse effect on landscape character within LCT 5 which extends to a maximum of 750m from the Site and this is considered to be not significant on a *solus* basis.

17.6.45. If both the Proposed Development and the National Grid East Claydon Substation development are operational in combination, this minor adverse effect on existing landscape character would extend further north to East Claydon Road; however, this would still remain a very limited extent of the total LCT 5 landscape as a whole.

17.6.46. Therefore, in the scenario that the National Grid East Claydon Substation development is operational in combination with the Proposed Development, and with regard to the landscape within LCT 5 during operation, there would be a minor adverse inter-project cumulative residual effect in both Year 1 and Year 10, which is considered to be **not significant**.

Effect on LCA 5.6: Claydon Valley

17.6.47. The Proposed Development and the National Grid East Claydon Substation development are located in neighbouring fields, albeit the Proposed Development, with the exception of one field, is located in LCA 5.7: Hogshaw Claylands whilst the National Grid East Claydon Substation development is located in LCA 5.6: Claydon Valley. Field E10, containing Solar PV modules is the only field of the Proposed Development located to within LCA 5.6.

17.6.48. A cumulative ZTV plan showing the extent of cumulative visibility between the Proposed Development and the National Grid East Claydon Substation development is presented in **ES Volume 3, Figure 17.3: Cumulative ZTV – Rosefield and National Grid East Claydon Substation Extension [EN010158/APP/6.3]**. As with the other ZTVs presented in **ES Volume 3 [EN010158/APP/6.3]**, the cumulative ZTVs tend to exaggerate the actual visibility of both developments.

17.6.49. It has been assessed in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]** that the sensitivity of LCA 5.6 to the Proposed Development is low. Given the proximity and similarities in terms of scale and nature of the infrastructure, this judgement applies equally to the type of development proposed at the National Grid East Claydon Substation development.

17.6.50. It has been assessed that initially (in Year 1 of operation) the Proposed Development on its own would result in large to medium scale change to landscape character within the Order Limits and surrounding the Site, reducing to small scale change beyond a maximum distance of 750m to the west of the Site. Following the establishment of mitigation planting (Year 10), the scale of landscape change would be less than in Year 1, but it is likely that large or medium scale change would remain over a limited extent of LCA 5.6: Claydon Valley surrounding the Site.

17.6.51. It is likely that the proposed National Grid East Claydon Substation development would give rise to a broadly similar scale of landscape change over a marginally wider radius to the north west of the Site within LCA 5.6.

17.6.52. As illustrated by the ZTVs in **ES Volume 3, Figure 17.3: Cumulative ZTV – Rosefield and National Grid East Claydon Substation Extension [EN010158/APP/6.3]** and **ES Volume 3 [EN010158/APP/6.3]** the National Grid East Claydon Substation development would extend large scale change within LCA 5.6 from the north of Rosefield Substation to Winslow Road/East Claydon Road.

17.6.53. East of Saint Mary's Road and south of East Claydon Road, a greater proportion of any impact on landscape character could be attributed to the

National Grid East Claydon Substation development. Therefore, if both developments were developed together, a greater proportion of LCA 5.6 as a whole would experience large or medium scale change than if either project was developed in isolation.

17.6.54. Additional mitigation detailed in and secured by the **Outline LEMP [EN010158/APP/7.6]** has been proposed for the Proposed Development. It is assumed that a similar commitment would be agreed in relation to the National Grid East Claydon Substation development. It is further assumed that any landscape mitigation proposals implemented around the National Grid East Claydon Substation development would mature over approximately the same timeframe as that proposed around the Proposed Development. No further additional mitigation has therefore been proposed to mitigate inter-project cumulative effects between the two developments.

17.6.55. It has been assessed in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]** that during operation, the Proposed Development on its own would result in a minor residual adverse effect on landscape character within LCA 5.6 which extends to a maximum of 750m to the west of the Site and this is considered to be not significant on a *solus* basis.

17.6.56. If both the Proposed Development and the National Grid East Claydon Substation development are operational in combination, the large and medium scale effects on existing landscape character would extend up to East Claydon Road to the north of the Site. The large/medium scale change identified above would extend over a localised extent of LCA 5.6: Claydon Valley and would be long term in duration resulting in a moderate magnitude of effect.

17.6.57. Therefore, in the scenario that the National Grid East Claydon Substation development is operational in combination with the Proposed Development, during operation, there would be a moderate/minor adverse inter-project cumulative residual effect within LCA 5.6 in both Year 1 and Year 10 to a maximum of 750m from the Site, which is considered to be **not significant**.

Effect on LCA 5.7: Hogshaw Claylands

17.6.58. As described above, the Proposed Development and the National Grid East Claydon Substation development are located in neighbouring fields, albeit the Proposed Development, with the exception of one field, is located in LCA 5.7: Hogshaw Claylands whilst the National Grid East Claydon Substation development is located in LCA 5.6: Claydon Valley.

17.6.59. A cumulative ZTV plan showing the extent of cumulative visibility between the Proposed Development and the National Grid East Claydon

Substation development is presented in **ES Volume 3, Figure 17.3: Cumulative ZTV – Rosefield and National Grid East Claydon Substation Extension [EN010158/APP/6.3]**. As with the other ZTVs presented in **ES Volume 3 [EN010158/APP/6.3]**, the cumulative ZTVs tend to exaggerate the actual visibility of both developments.

17.6.60. It has been assessed in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]** that the sensitivity of LCA 5.7 to the Proposed Development is medium/low. Given the proximity and similarities in terms of scale and nature of the infrastructure, this judgement applies equally to the type of development proposed at the National Grid East Claydon Substation development.

17.6.61. It has been assessed that initially (in Year 1 of operation) the Proposed Development on its own would result in large to medium scale change to landscape character within the Order Limits and surrounding the Site, reducing to small scale change beyond a maximum distance of 750m. Following the establishment of mitigation planting (Year 10), the scale of landscape change would be less than in Year 1, but it is likely that large or medium scale change would remain over an intermediate extent of LCA 5.7 surrounding the Site.

17.6.62. It is likely that the proposed National Grid East Claydon Substation development would give rise to a broadly similar scale of landscape change over a similar radius to the south and south east but would be largely screened by topography to the south west within LCA 5.7.

17.6.63. As illustrated by the ZTVs in **ES Volume 3, Figure 17.3: Cumulative ZTV – Rosefield and National Grid East Claydon Substation Extension [EN010158/APP/6.3]** and **ES Volume 3 [EN010158/APP/6.3]**, the National Grid East Claydon Substation development would therefore not extend large/medium scale change within LCA 5.7 to any noticeable extent.

17.6.64. West of Quainton Road/Claydon Road, any impact on landscape character could be attributed exclusively to the Proposed Development whilst to the south of Winslow Road/East Claydon Road any impact on landscape character could be attributed predominantly to the National Grid East Claydon Substation development. Therefore, if both developments were operational together, the proportion of LCA 5.7 that would experience large or medium scale change would remain unchanged.

17.6.65. Additional mitigation detailed in and secured by the **Outline LEMP [EN010158/APP/7.6]** has been proposed for the Proposed Development. It is assumed that a similar commitment would be agreed in relation to the National Grid East Claydon Substation development. It is further assumed that any landscape mitigation proposals implemented around the National Grid East Claydon Substation development would mature over

approximately the same timeframe as that proposed around the Proposed Development. No further additional mitigation has therefore been proposed to mitigate inter-project cumulative effects between the two developments.

17.6.66. It has been assessed in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]** that during operation, the Proposed Development on its own would result in a moderate residual adverse effect on landscape character within LCA 5.7 which extends to a maximum of 750m from the Site and this is considered to be significant on a *solus* basis.

17.6.67. If both the Proposed Development and the National Grid East Claydon Substation development are operational in combination, this moderate adverse effect on existing landscape character would extend no further than for the Proposed Development alone.

17.6.68. Therefore, in the scenario that the National Grid East Claydon Substation Extension is operational in combination with the Proposed Development, during operation, there would be a moderate adverse inter-project cumulative residual effect within LCA 5.7 in both Year 1 and Year 10 to a maximum of 750m from the Site, which is considered to be **significant**.

LCA 5.8: North Marston Undulating Claylands

17.6.69. The Proposed Development and the National Grid East Claydon Substation development would both be located outside of LCA 5.8: North Marston Undulating Claylands at distances of 500m and 970m to the east respectively.

17.6.70. A cumulative ZTV plan showing the extent of cumulative visibility between the Proposed Development and the National Grid East Claydon Substation development is presented in **ES Volume 3, Figure 17.3: Cumulative ZTV – Rosefield and National Grid East Claydon Substation Extension [EN010158/APP/6.3]**. As with the other ZTVs presented in **ES Volume 3 [EN010158/APP/6.3]**, the cumulative ZTVs tend to exaggerate the actual visibility of both developments.

17.6.71. It has been assessed in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]** that the sensitivity of LCA 5.8 to the Proposed Development is low. Given the proximity and similarities in terms of scale and nature of the infrastructure, this judgement applies equally to the type of development proposed at the National Grid East Claydon Substation development.

17.6.72. It has been assessed that initially (in Year 1 of operation) the Proposed Development on its own would result in medium scale change to landscape character within the Order Limits and surrounding the Site,

reducing to small scale change beyond a maximum distance of 1.2km to the east of the Site. Following the establishment of mitigation planting (Year 10) the scale of landscape change would be less than in Year 1, but it is likely that medium scale change would remain over a localised extent of LCA 5.8 surrounding the Site.

17.6.73. It is likely that the proposed National Grid East Claydon Substation development would give rise to a broadly similar scale of landscape change over a similar radius to the east of the Site within LCA 5.8.

17.6.74. As illustrated by the ZTVs in **ES Volume 3, Figure 17.3: Cumulative ZTV – Rosefield and National Grid East Claydon Substation Extension [EN010158/APP/6.3]** and **ES Volume 3 [EN010158/APP/6.3]**, the National Grid East Claydon Substation development would therefore not extend the medium scale change within LCA 5.8 to any noticeable extent. Therefore, if both developments were operational together, the proportion of LCA 5.8 that would experience medium scale change would remain the unchanged.

17.6.75. Additional mitigation detailed in and secured by the **Outline LEMP [EN010158/APP/7.6]** has been proposed for the Proposed Development. It is assumed that a similar commitment would be agreed in relation to the National Grid East Claydon Substation development. It is further assumed that any landscape mitigation proposals implemented around the National Grid East Claydon Substation development would mature over approximately the same timeframe as that proposed around the Proposed Development. No further additional mitigation has therefore been proposed to mitigate inter-project cumulative effects between the two developments.

17.6.76. It has been assessed in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]** that during operation, the Proposed Development on its own would result in a minor residual adverse effect on landscape character across the landscape within LCA 5.8 extending to a maximum of 1.2km to the east of the Site and this is considered to be not significant on a *solus* basis.

17.6.77. If both the Proposed Development and the National Grid East Claydon Substation development are operational in combination, this minor adverse effect on existing landscape character would extend no further than for the Proposed Development alone.

17.6.78. Therefore, in the scenario that the National Grid East Claydon Substation development is operational in combination with the Proposed Development, during operation, there would be a minor adverse inter-project cumulative residual effect within LCA 5.8 in both Year 1 and Year 10 to a maximum of 1.2km to the east of the Site, which is considered to be **not significant**.

LCA 9.2: Quainton Hill

17.6.79. The Rosefield Substation and the National Grid East Claydon Substation development would both be located outside of LCA 9.2: Quainton Hill at distances of 2.2km and 2.7km to the south respectively.

17.6.80. A cumulative ZTV plan showing the extent of cumulative visibility between the Proposed Development and the National Grid East Claydon Substation development is presented in **ES Volume 3, Figure 17.3: Cumulative ZTV – Rosefield and National Grid East Claydon Substation Extension [EN010158/APP/6.3]**. As with the other ZTVs presented in **ES Volume 3 [EN010158/APP/6.3]**, the cumulative ZTVs tend to exaggerate the actual visibility of both developments.

17.6.81. It has been assessed in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]** that the sensitivity of LCA 9.2 to the Proposed Development is medium. Given the proximity and similarities in terms of scale and nature of the infrastructure, this judgement applies equally to the type of development proposed at the National Grid East Claydon Substation development.

17.6.82. It has been assessed that initially (in Year 1 of operation) the Proposed Development on its own would result in medium scale change to landscape character within the Order Limits and surrounding the Site, reducing to small scale change beyond a maximum distance of 2.5km to the south of the Site. Following the establishment of mitigation planting (Year 10), the scale of landscape change would be less than in Year 1, but it is likely that medium scale change would remain over a localised extent of LCA 9.2 surrounding the Site.

17.6.83. It is likely that the proposed National Grid East Claydon Substation development would give rise to no more than a small scale of landscape change over a similar radius to the south of the Site within LCA 9.2.

17.6.84. As illustrated by the **ZTVs** in **ES Volume 3, Figure 17.3: Cumulative ZTV – Rosefield and National Grid East Claydon Substation Extension [EN010158/APP/6.3]** and **ES Volume 3 [EN010158/APP/6.3]**, the National Grid East Claydon Substation development would therefore not extend medium scale change within LCA 9.2 to any noticeable extent. Therefore, if both developments were operational together, the proportion of LCA 9.2 that would experience medium scale change would remain unchanged.

17.6.85. Additional mitigation detailed in and secured by the **Outline LEMP [EN010158/APP/7.6]** has been proposed for the Proposed Development. It is assumed that a similar commitment would be agreed in relation to the National Grid East Claydon Substation development. It is further assumed that any landscape mitigation proposals implemented around the National

Grid East Claydon Substation development would mature over approximately the same timeframe as that proposed around the Proposed Development. No further additional mitigation has therefore been proposed to mitigate inter-project cumulative effects between the two developments.

17.6.86. It has been assessed in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]** that during operation, the Proposed Development on its own would result in a moderate residual adverse effect on landscape character across the landscape within LCA 9.2 extending to a maximum of 2.5km to the south of the Site and this is considered to be not significant on a *solus* basis.

17.6.87. If both the Proposed Development and the National Grid East Claydon Substation development are operational in combination, this moderate adverse effect on existing landscape character would extend no further than for the Proposed Development alone.

17.6.88. Therefore, in the scenario that the National Grid East Claydon Substation development is developed in combination with the Proposed Development, during operation, there would be a moderate adverse inter-project cumulative residual effect within LCA 9.2 in both Year 1 and Year 10 to a maximum of 2.5km to the south of the Site, which is considered to be **not significant**.

Cumulative visual effects during operation (including maintenance)

17.6.89. The cumulative ZTV presented in **ES Volume 3, Figure 17.3: Cumulative ZTV – Rosefield and National Grid East Claydon Substation Extension [EN010158/APP/6.3]** suggests a degree of theoretical cumulative visibility between the Proposed Development and the National Grid East Claydon Substation development extending up to the full extents of the study area and beyond. Whilst the National Grid East Claydon Substation development proposal would potentially be visible over such distances, beyond 5km it would not be visually separable from the existing National Grid East Claydon Substation, i.e. they would appear as one distant development.

17.6.90. With reference to the assessment viewpoints presented in **ES Volume 4, Appendix 10.6: Viewpoints and Visualisations [EN010158/APP/6.4]**, the proposed National Grid East Claydon Substation development would be seen at Viewpoints 23, 24, 25, 28, 30-33. Of these viewpoints, the National Grid East Claydon Substation development would be located behind the proposed Rosefield Substation and at greater distance from the receptor at Viewpoints 25, 28 and 30-33. In each case, the National Grid East Claydon Substation development would either be screened by, or subservient to, the proposed Rosefield Substation, with the latter in the

foreground and hence there would be no substantive increase in scale as a result of inter-project cumulative effects.

17.6.91. Therefore, the only assessment viewpoints at which there would be any combined visibility simultaneously between the two developments would be at Viewpoints 23 and 24.

17.6.92. The locations where there would be views of both developments at the same time would be from Sion Hill Farm and Station House, a section of Winslow Road/East Claydon Road (assessed as negligible magnitude of effect in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]**) and from sections of the PRoW network between East Claydon/East Claydon Road and to within Parcel 3 (incorporating PRoWs ECL/3/1, ECL/3/2, ECL/3A/1, ECL/4/1, ECL/4/2, ECL/5/1, ECL/6/1). The cumulative visual effects on receptors using these routes between East Claydon/East Claydon Road and to within Parcel 3 are discussed below.

Residential properties

17.6.93. Sion Hill Farm is located on land neighbouring the fields of the National Grid East Claydon Substation development, with the farmhouse itself located approximately 120m to the south. In spite of their close proximity, potential views would be limited to oblique first floor views by local topography and the outbuildings and barns that lie between the National Grid East Claydon Substation development and Sion Hill Farm.

17.6.94. It has been assessed in **ES Volume 4, Appendix 10.5: Residential Visual Amenity Assessment [EN010158/APP/6.4]** that the sensitivity of this receptor is high. It was assessed at Year 1 that there would be a substantial magnitude of effect, which is major adverse and significant. By Year 10 the long term magnitude of effect was assessed as substantial/moderate, which is major/moderate and significant (with principal views from first floor windows).

17.6.95. If both the Proposed Development and the National Grid East Claydon Substation development were operational in combination, this would result in very limited additional views of the National Grid East Claydon Substation development from the first floor of the Sion Hill Farm. There would therefore be no change to the scale of view experienced at either Year 1 or Year 10 as already described for Sion Hill Farm. Inter-project cumulative effects would therefore be major adverse at Year 1 and major/moderate adverse at Year 10 and **significant** in both cases.

17.6.96. Station House is located to the north of the Proposed Development on land neighbouring the fields of the National Grid East Claydon Substation development.

17.6.97. It has been assessed in **ES Volume 4, Appendix 10.5: Residential Visual Amenity Assessment [EN010158/APP/6.4]** that the sensitivity of this receptor is high. It was assessed at Years 1 and 10 that there would be a moderate/slight magnitude of effect, which is moderate adverse and not significant (with principal views from first floor windows).

17.6.98. If both the Proposed Development and the National Grid East Claydon Substation development are operational in combination, this would result in a substantial increase in the scale of effects resulting from near distance views of the National Grid East Claydon Substation development. In Year 1 large scale effects would therefore result in a substantial magnitude of effect on visual amenity.

17.6.99. Therefore, in the scenario that the National Grid East Claydon Substation development is operational in combination with the Proposed Development during operation, inter-project cumulative effects would be major adverse at Year 1, which is considered to be **significant**.

17.6.100. Additional mitigation detailed in and secured by the **Outline LEMP [EN010158/APP/7.6]** has been proposed for the Proposed Development. It is assumed that a similar commitment would be agreed in relation to the National Grid East Claydon Substation development. It is further assumed that any landscape mitigation proposals implemented around the National Grid East Claydon Substation development would mature over approximately the same timeframe as that proposed around the Proposed Development. No further additional mitigation has therefore been proposed to mitigate inter-project cumulative effects between the two developments.

17.6.101. Based on a similar level of mitigation effects there would be a medium scale of change resulting in a substantial/moderate magnitude of effect on visual amenity.

17.6.102. Therefore, in the scenario that the National Grid East Claydon Substation development is operational in combination with the Proposed Development, during operation, inter-project cumulative effects would be major/moderate adverse at Year 10, which is considered to be **significant**.

Users of recreational routes

17.6.103. The PRoW between East Claydon Road/East Claydon and within Parcel 3 (including ECL/3/1, ECL/3A/1, ECL/3/2, ECL/4/1, ECL/4/2, ECL/5/1, ECL/6/1) cross the fields of the site of the proposed National Grid East Claydon Substation development, whilst ECL/4/2 extends to the field to the east. Assessment Viewpoint 23a presented in **ES Volume 4 [EN010149/APP/6.4]** is representative of views from footpath ECL/4/1 to the fields of the National Grid East Claydon Substation development.

17.6.104. These footpaths have been assessed in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]** as part of the receptor group which extends east to west between East Claydon and Granborough. The assessment judged that the Proposed Development would result in a large to medium scale of change in views over an intermediate extent in Year 1.

17.6.105. In the scenario that the National Grid East Claydon Substation development is operational in combination with the Proposed Development, the extent to which large and medium scale effects were experienced would be greater than if either project was developed in isolation.

17.6.106. The National Grid East Claydon Substation development would be clearly visible in combined views with the Proposed Development from much of the PRoW network (and presumably would still be visible should the footpaths be diverted to field margins). This would result in large scale changes in views over a wide extent of this receptor group.

17.6.107. It has been assessed in **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]** that during operation, the Proposed Development on its own would result in a major/moderate adverse effect on views from the receptor group in Year 1 of operation but that by Year 10, this would reduce to a moderate adverse effect on views. In both Years 1 and 10, this is considered to be significant on a *solus* basis.

17.6.108. If both the Proposed Development and the proposed National Grid East Claydon Substation development were operational in combination, large scale effects on views would extend further north approximately up to Winslow Road/East Claydon Road. In Year 1 therefore, large scale effects would therefore extend over a wide area of this receptor group, resulting in a substantial/moderate magnitude of effect on visual amenity.

17.6.109. Therefore, in the scenario that the National Grid East Claydon Substation development is operational in combination with the Proposed Development, during operation, inter-project cumulative effects would be major/moderate (tending towards major) adverse at Year 1, which is considered to be **significant**.

17.6.110. Additional mitigation detailed in and secured by the **Outline LEMP [EN010158/APP/7.6]** has been proposed for the Proposed Development. It is assumed that a similar commitment would be agreed in relation to the National Grid East Claydon Substation development. It is further assumed that any landscape mitigation proposals implemented around the National Grid East Claydon Substation development would mature over approximately the same timeframe as that proposed around the Proposed Development. No further additional mitigation has therefore been

proposed to mitigate inter-project cumulative effects between the two developments.

17.6.111. Based on a similar level of mitigation effects there would be a medium scale of change over a wide extent of the receptor group, resulting in a substantial/moderate magnitude of effect on visual amenity.

17.6.112. Therefore, in the scenario that the National Grid East Claydon Substation development is operational in combination with the Proposed Development, during operation, inter-project cumulative effects would remain major/moderate adverse at Year 10, which is considered to be **significant**.

17.7. Assessment of inter-project cumulative effects: other existing development and/or approved developments

Air quality

17.7.1. The ZoI for air quality, identified in **Table 17.2**, is 250m. There are five proposed developments and the East Claydon Substation within 250m of the Order Limits, which are: ID No. 1 (East Claydon BESS), ID No. 2 (East Claydon Greener Grid), ID No. 3 (Tuckey Solar Farm), ID No. 5 (HS2), and ID No. 7 (Calvert Solar Farm). All developments are expected to agree and follow a detailed Construction Environmental Management Plan or Dust Management Plan and Decommissioning Environmental Management Plan that will adequately control dust emissions and construction/decommissioning plant exhaust emissions from construction and decommissioning.

17.7.2. Cumulative construction phase Annual Average Daily Traffic data (two-way trips) have been considered within this assessment. Construction phase traffic data is provided in **Table 17.10**.

17.7.3. As per **ES Volume 4, Appendix 15.1: Transport Assessment [EN010158/APP/6.4]**, committed development assessments for the decommissioning phase were not undertaken as the future baseline and traffic conditions are impossible to estimate and the need for a decommissioning assessment has been scoped out.

Table 17.10: Cumulative construction phase traffic data

Link	2029 Cumulative construction traffic	
	Light Duty Vehicles (Annual Average Daily Traffic)	Heavy Duty Vehicles (Annual Average Daily Traffic)
A34	0	0
M40 North	0	0

Link	2029 Cumulative construction traffic	
	Light Duty Vehicles (Annual Average Daily Traffic)	Heavy Duty Vehicles (Annual Average Daily Traffic)
M40 South	0	0
A41	380	0
A41 Bicester	380	0
A41 West	540	0
A41 East	540	0
Station Road/Dewes Lane	0	0
Snake Lane/Fidlers Field	0	0
Claydon Road	0	0
Granborough Road	0	0

17.7.4. The predicted cumulative construction phase Light Duty Vehicles generation slightly exceeds the Environmental Protection UK and IAQM 2017 guidance screening criteria (i.e., a change of Light Duty Vehicles of more than 500 Annual Average Daily Traffic Annual Average Daily Traffic) **[Ref. 17-16]** on A41 West and A41 East. There is no exceedance of the Environmental Protection UK and IAQM 2017 guidance screening criteria for Heavy Duty Vehicles (i.e., a change of Heavy Duty Vehicles of more than 100 Annual Average Daily Traffic).

17.7.5. Despite these slight exceedances, and based on the review of baseline conditions, the annual mean NO_2 and PM_{10} concentrations at the Site are expected to be well below the Air Quality Standards. Furthermore, there is a minimal number of high sensitivity receptors located close to these affected roads. The traffic effects during construction and decommissioning will be limited to a relatively short period at each section/phase of the Proposed Development and the developments on the short list and will be along traffic routes employed by haulage/construction vehicles and workers. All of the short-listed developments are expected to agree and follow detailed Construction Traffic Management Plan and Decommissioning Environmental Management Plan that will adequately control road traffic exhaust emissions from construction and decommissioning.

17.7.6. The Proposed Development and all of the short-listed developments are not predicted to generate traffic exceeding the Design Manual for Roads and Bridges LA 105 Air Quality screening criteria (i.e. Light Duty Vehicles equal to or more than 1,000 Annual Average Daily Traffic or Heavy Duty Vehicles equal to or more than 200 Annual Average Daily Traffic) **[Ref. 17-17]** on any construction and decommissioning traffic routes within 200m of the Local Wildlife Sites (LWSs). Therefore, it is considered unlikely that the additional cumulative construction and decommissioning phases traffic emissions as a result of the Proposed Development and all of the short-listed developments will cause a significant adverse effect on the nearby LWSs.

17.7.7. Overall, with appropriate mitigation measures in place, the construction phase inter-project cumulative effect is considered to be **not significant**.

17.7.8. The Proposed Development and all of the committed developments are not expected to generate traffic exceeding the relevant screening criteria once operational (i.e. Environmental Protection UK-IAQM 2017 guidance and Design Manual for Roads and Bridges LA 105 Air Quality screening criteria **[Ref. 17-16] [Ref. 17-17]**). All of the committed developments are expected to follow best practice mitigation measures and the detailed Operational Environmental Management Plan to minimise emissions to air. Therefore, exceedance of the relevant Air Quality Standards **[Ref. 17-10]** is considered unlikely, and the cumulative operation phase effect is considered **not significant**.

Biodiversity

17.7.9. There are several other existing developments and/or approved proposed developments within 10km of the Proposed Development, including new housing, battery storage and others which will result in the loss of agricultural land that could support ground-nesting birds and foraging bat species. However, the majority of these are located a considerable distance from the core sustenance zone[7] and home range[8] for Bechstein's

[7] A Core Sustenance Zone (CSZ) is a tool used to delineate the bat home range. It refers to the area surrounding a maternity roost within which habitat availability and quality will have a significant influence on the resilience and conservation status of the colony using the roost (BCT, 2016). The CSZ size for Bechstein's bat at Rosefield has been determined as being a 3km radius from each maternity roost that has been identified through radio tracking and survey data.

[8] The home range of an animal is defined as the total area within which it lives and moves on a regular basis and contains all the resources that the animal requires to survive and reproduce. The home range of the Bechstein's bat population within the

bats which is centred on the cluster of woodlands adjacent to the Order Limits of the Proposed Development and therefore, inter-project cumulative effects with regards Bechstein's bats are considered unlikely. The majority of the additional proposed developments include habitat creation proposals likely to be of some benefit to other foraging bats species, again reducing potential for inter-project cumulative effects.

17.7.10. The continued loss of agricultural land may cause inter-project cumulative effects with regards to loss of ground nesting bird habitat. However, given that the decline in farmland birds is largely driven by intensification of agricultural practice, which has resulted in a reduction of nesting habitat and loss of foraging habitat, and considering the extent of arable land still available within the County, any such inter-project cumulative effects are considered to be unlikely.

17.7.11. There are, however, a number of developments that are either within the core sustenance zone and home range for Bechstein's bat, or are adjacent to it, and will also result in the loss of ground nesting bird habitat. These include ID No. 1 (East Claydon BESS); ID No. 2 (East Claydon Greener Grid Park); ID No. 3 (Tuckey Solar Farm); ID No. 9 (Longbreach Solar Farm); ID No. 7 (Calvert Solar Farm); ID No. 5 (HS2); ID No. 8 (East West Rail); and ID No. 11 (Grendon Prison). These developments have the potential for overlapping spatial and temporal interactions.

17.7.12. The cumulative loss of arable habitat from these developments, when combined with the Proposed Development, would change the availability of farmland habitat locally. Foraging and commuting bats, and ground nesting birds are most likely to be affected by the following inter-project cumulative effects:

- habitat loss and modification (direct land take and modification of land by the placement of Solar PV panels);
- habitat fragmentation (through loss of connectivity);
- disturbance effects (comprising light, noise and visual effects); and
- incidental mortality.

17.7.13. If foraging bats are displaced at this landscape scale, particularly by further encroachment of development into the Bechstein's bat core

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Bernwood area has been ascertained through bat trapping and radio-tracking studies between 2011 and 2022. The Bernwood area home range comprises an area of approximately 4,160 ha centred around the woodlands close to Rosefield including Sheephouse and Finemere.

sustenance zone, this could result in a **significant** inter-project cumulative effect at the **District** level.

17.7.14. The Proposed Development would result in a temporary adverse effect on bats during the construction phase from habitat loss. For Bechstein's bat this would be **adverse**, **short-term** and **temporary**, at the **District** level and **not significant**. For other bat species this would be **adverse**, **short-term** and **temporary**, at the **Local** level and **not significant**. For the Proposed Development, habitat creation/enhancement and other mitigation measures are proposed in order to minimise impacts. Mitigation measures are considered likely to be effective with regards to foraging and commuting bats, ensuring good connectivity to the wider landscape. In particular, the retention of all woodland and the majority of hedgerows with appropriate buffers will protect this key foraging and commuting bat resource, together with grassland creation for ground nesting birds and the enhancement of grassland under panels to provide improved foraging for both bats and birds. However, there is research indicating a potential displacement of foraging and commuting bats due to solar farms. Although this is not conclusive, and the mechanism causing potential displacement effects is not known, Bechstein's bats may be one of the species affected with potentially significant adverse residual effects for Bechstein's bats.

17.7.15. Based on professional judgement, and an understanding of the limited value of arable land to bats, the habitat improvement measures are considered sufficient to support the bat assemblages within the Order Limits, including Bechstein's bat. The paired static detector surveys (see **ES Volume 4, Appendix 7.16: Paired Static Bat Detector Survey Report [EN010158/APP/6.4])** indicate the importance of the hedgerow resource to the bat assemblage, including both foraging and commuting Bechstein's bat and barbastelle bat. Surveys undertaken by Natural England **[Ref. 17-18]** indicate the importance of the woodland resource for Bechstein's bat. This provides confidence that the approach to the Proposed Development design and mitigation is appropriate. However, there is limited evidence to confirm the efficacy of mitigation measures and whether they are wholly sufficient to counter the potential for a displacement effect.

17.7.16. Therefore, using the Precautionary Principle, there is anticipated to be a potential **long term**, **adverse** inter-project cumulative residual effect on Bechstein's bat due to the modification of habitat (installation of Solar PV modules) for the duration of the operation (including maintenance) phase, with other developments located within the Bechstein's bat Core Sustenance Zone. This would be ***potentially* significant** at the **District** level. It is considered that this *potentially* significant effect would not amount to, nor equate to, 'significant harm' as the predicted impacts will be of a scale that will not impact the overall favourable conservation status of the species as the Proposed Development design and mitigation has

focused on protecting and enhancing Bechsteins's bat foraging and commuting habitat.

17.7.17. Although there would be a temporary adverse effect on ground nesting birds, non-ground nesting birds and wintering birds during the construction phase from habitat loss and disturbance, this would be **adverse**, **short-term** and **temporary**, at the **Local** level and **not significant**. The amount of habitat to be retained and improved is considered sufficient to support the existing ground nesting, non-ground nesting birds and wintering bird assemblages within the Order Limits and would also provide a **significant**, **beneficial**, **long term** effect at the **Local** level for ground-nesting birds during the operation (including maintenance) phase. It is considered likely that birds would be able to use the improved habitat relatively quickly, once established, within the construction phase and through into the operation (including maintenance) phase. Therefore, any such inter-project cumulative effects are considered to be **not significant**.

17.7.18. For existing development and/or other approved developments (listed in **Table 17.2**) where planning permission has been approved, it is assumed they are subjected to their respective mitigation plans agreed with the regulatory agencies, and that adverse effects on ecological receptors have been mitigated to be not significant. Whilst not all of the other existing development and/or approved developments identified have mitigation proposals that are currently in the public domain (many are at pre-application or scoping stages in the planning process), it is assumed for the purpose of this inter-project cumulative effects assessment that sufficient mitigation strategies would similarly be provided to ensure each development proposal would not result in residual adverse effects for biodiversity including ground nesting birds and foraging bats.

17.7.19. For those developments involving the loss of arable land, woodland or hedgerow habitat that are not considering mitigation, then these could have a significant adverse inter-project cumulative effect on both ground nesting birds and foraging and commuting bats. This is considered most likely for those developments that lie within the core sustenance zone and home range for Bechstein's bats.

17.7.20. However, for ground nesting birds, this would be considered as an 'independent' effect - as the Proposed Development is not considered likely to have any significant adverse residual effects on ground nesting birds during the construction and operation (including maintenance) phases ensuring there would be no inter-project cumulative effects.

17.7.21. The inter-project cumulative effects assessment for biodiversity is provided in **Table 17.11** below.

Table 17.11: Biodiversity inter-project cumulative effects assessment

ID No.	Application reference	Other existing development or approved development description	Assessment of the inter-project cumulative effect with the Proposed Development	Additional mitigation requirements	Residual inter-project cumulative effect
1	23/03875/APP	East Claydon BESS. Development of a battery energy storage system (BESS), connected directly to the national grid with associated infrastructure including access, drainage, and landscaping.	Loss of arable habitat likely to be used by ground nesting birds and commuting and foraging bats. Mitigation measures proposed for ground nesting skylark and habitat creation and enhancement to improve foraging for bat species.	No additional mitigation required.	Located outside of the home range and core sustenance zone for Bechstein's bat (see **Paragraph 17.7.9** for an explanation of these terms). However, part of the BESS is close to the Claydon Brook which has been highlighted as a key foraging corridor for bats including *Myotis*. Given any displacement effect from the Proposed Development, there is the potential for displacement of *Myotis* (which could include Bechstein's bat) from the foraging corridor of the Claydon Brook. **Potential significant** inter-project residual cumulative residual effects are anticipated if Bechstein's bats are displaced from the Claydon Brook but this is likely to be **significant** at the **Local** level as the area lies outside of the core sustenance zone (see **Paragraph 17.7.9** for an explanation of these terms). and is more likely to support males rather than breeding females, coupled with the proposed mitigation of extensive habitat

ID No.	Application reference	Other existing development or approved development description	Assessment of the inter-project cumulative effect with the Proposed Development	Additional mitigation requirements	Residual inter-project cumulative effect
					creation along the Claydon Brook including wetland and grassland creation to secure and improve foraging habitat along the Claydon Brook Inter-project cumulative effects are considered **not significant** for ground nesting birds as, if approved, dedicated mitigation is proposed which includes dedicated mitigation for ground nesting skylark to sufficiently mitigate for loss of ground nesting bird habitat.
2	25/01297/APP	East Claydon Greener Grid Park. Construction of a Greener Grid Park comprising energy storage and grid-balancing equipment and associated infrastructure including access, drainage, landscaping and other incidental works.	Loss of arable habitat likely to be used by ground nesting birds and commuting and foraging bats.	No additional mitigation required.	Mitigation measures by the Proposed Development are considered likely to maintain foraging habitat for bat species but some doubts remain as to actual mechanism of displacement of bats by solar farms and over what distance this effect manifests itself. **Potential significant** inter-project cumulative residual effects are anticipated if Bechstein's bats are displaced from extensive areas of their core sustenance zone (see **Paragraph 17.7.9** for an explanation of these terms) dependent on the level of mitigation secured.

ID No.	Application reference	Other existing development or approved development description	Assessment of the inter-project cumulative effect with the Proposed Development	Additional mitigation requirements	Residual inter-project cumulative effect
					Likely to be **significant** at **Local** level given that it falls outside of core sustenance zone. There are likely to be some residual impacts to ground nesting birds due to loss of open ground within the landfill. However, this is regarded as an individual rather than inter-project cumulative effect as the Proposed Development has attempted to mitigate sufficiently for ground nesting birds within the Order Limits.
3	19/00983/APP	Tuckey Solar Farm. Ground mounted solar farm, ancillary infrastructure and associated works including the diversion of PRoW and landscape planting.	Mitigation measures proposed for ground nesting skylark and habitat creation and enhancement to improve foraging for bat species. It has been granted planning permission, and it is assumed that the development proposal has adequately mitigated for impacts and therefore, no significant inter-project cumulative effects are anticipated.	No additional mitigation required.	Located outside of the home range and core sustenance zone for Bechstein's bat (see **Paragraph 17.7.9** for an explanation of these terms). However, part of the Tuckey Solar Farm is close to the Claydon Brook which has been highlighted as a key foraging corridor for bats including *Myotis*. Given any displacement effect from the Tuckey Solar Farm and the Statera BESS (23/03975), there is the potential for displacement of *Myotis* (which could include Bechstein's bat) from the foraging corridor of the Claydon brook.

ID No.	Application reference	Other existing development or approved development description	Assessment of the inter-project cumulative effect with the Proposed Development	Additional mitigation requirements	Residual inter-project cumulative effect
					Potential significant inter-project cumulative residual effects are anticipated if Bechstein's bats are displaced from the Claydon Brook, but this is likely to be **significant** at the **Local** level as the area lies outside of the core sustenance zone and is more likely to support males rather than breeding females.
5	Hybrid Bill	High Speed Rail 2 ('HS2')	Retention of existing woodland and extensive mitigation including new woodland planting already completed. A mitigation structure to prevent bat mortality adjacent to Sheephouse Wood SSSI is mid-construction.	No additional mitigation required.	Located within the home range and core sustenance zone for Bechstein's bat (see **Paragraph 17.7.9** for an explanation of these terms). Mitigation measures by the Proposed Development (Rosefield Solar Farm) are considered likely to maintain foraging habitat for bat species but some doubts remain as to actual mechanism of displacement of bats by solar and over what distance this effect manifests itself. **Potential significant** inter-project cumulative residual effects are anticipated if Bechstein's bats are displaced from extensive areas of their core sustenance zone due to the Proposed Development (Rosefield Solar Farm) in combination with

ID No.	Application reference	Other existing development or approved development description	Assessment of the inter-project cumulative effect with the Proposed Development	Additional mitigation requirements	Residual inter-project cumulative effect
					displacement and mortality arising from HS2.however, given the mitigation measures in place from HS2 to reduce the risk of collision by bats with trains, and the habitat creation and enhancement measures by both HS2 and the Proposed Development to reduce fragmentation and minimise the effects of displacement, residual effects are considered to be minimised and **significant** at the **Local level** only.
7	CM/0016/21	Calvert Solar Farm. Application for the construction of solar array/solar park comprising of ground-mounted solar PV panels and associated works.	Survey work indicated very low levels of bat activity within the open areas of the landfill where the solar panels will be constructed. Important features for foraging such as woodland and hedgerow are retained. In addition, landscaping proposals may offer enhancements for foraging bats species. It is suggested that with appropriate management, mitigation proposed for	No additional mitigation required.	Thirteen skylark territories are located within the Calvert landfill site, likely to be some residual impacts due to loss of open ground within the landfill. However, this is regarded as an individual rather than inter-project cumulative effect as the Proposed Development has attempted to mitigate sufficiently for ground nesting birds within the Order Limits. Calvert Landfill is located within the home range and core sustenance zone for Bechstein's bat (see **Paragraph 17.7.9** for an explanation of these terms); however, the

ID No.	Application reference	Other existing development or approved development description	Assessment of the inter-project cumulative effect with the Proposed Development	Additional mitigation requirements	Residual inter-project cumulative effect
			ground nesting skylark, they could continue to use open areas within the solar farm.		current land use is not of value to bats. Bat foraging and commuting habitat within the landfill may be slightly improved as a result of the Proposed Development as a result of landscaping proposals. Inter-project cumulative residual effects are not anticipated given the low value of the landfill site to bats in its current condition and are therefore considered **not significant**. The longer term restoration proposals for the landfill would be delayed if this proposal is consented, affecting the mitigation effectiveness of HS2, but not the Proposed Development.
8	25/00013/DCO	East West Rail DCO: Bedford to Cambridge and Western improvements.	No information as development is at pre-application stage.	No information at this stage, but likely no additional mitigation required.	Located within the core sustenance zone for Bechstein's bats (see **Paragraph 17.7.9** for an explanation of these terms). Depending on any collision risk for bats and trains, and the loss of foraging habitat, there is the potential for **significant** inter-project cumulative effects.

ID No.	Application reference	Other existing development or approved development description	Assessment of the inter-project cumulative effect with the Proposed Development	Additional mitigation requirements	Residual inter-project cumulative effect
9	25/01865/APP	Longbreach Solar Farm. Erection of a solar farm and creation of new vehicular access, new footpath, substation compound, customer substation, inverters, CCTV Tower, storage containers, perimeter fencing, car parking and associated ancillary development.	Day time bat walkover surveys indicated the site is of moderate suitability for bats. Important features for foraging and commuting bats such as woodland, hedgerow and watercourses are to be retained with appropriate buffers. In addition, landscaping proposals including additional scrub/woodland edge planting and enhancement of grassland habitats may offer enhancements for foraging bats species. It is suggested that with appropriate landscaping mitigation proposals for ground nesting birds including the provision of skylark plots, farmland birds could continue to use open areas within the solar farm. A	No additional mitigation required.	Not located within the core sustenance zone or home range for Bechstein's bat (see **Paragraph 17.7.9** for an explanation of these terms). Loss of habitat not likely to be significant for ground nesting birds and the landscape plan indicates retention and enhancement of majority of grassland habitat within the Site. Due to the small scale of habitat loss, and the potential enhancements proposed, inter-project cumulative effects are envisaged to be **not significant**.

ID No.	Application reference	Other existing development or approved development description	Assessment of the inter-project cumulative effect with the Proposed Development	Additional mitigation requirements	Residual inter-project cumulative effect
			farmland bird mitigation strategy is to be produced to ensure the assemblage of breeding skylark at the site is not detrimentally impacted.		
11	21/A2851//NON	Grendon Prison. Outline planning application with all matters reserved for the construction a new category C prison (up to 67,000 sqm GEA) within a secure perimeter fence together with access, parking, landscaping and associated engineering works.	Very little information and no ecology survey work available, but there will be loss of hedgerow habitat to accommodate access and loss of modified grassland to accommodate the new prison. Habitat loss and lighting may affect foraging bat species.	No information at this stage, but likely no additional mitigation required.	Located within the core sustenance zone for Bechstein's bats (see **Paragraph 17.7.9** for an explanation of these terms). but adjacent to an existing prison. Loss of grassland habitat (unlikely to be optimal for foraging bats); loss of hedgerow habitat and any additional lighting may displace foraging bats (if any). There is the potential for **significant** inter-project cumulative effects on foraging bats, but these are likely to be at the **Local** level and will depend on what mitigation is proposed and secured. Considered loss of habitat unlikely to have **significant** effects on ground nesting birds as only small, modified grassland fields will be lost.
13	25/00883/AOP	Demolition of existing buildings and commercial	Small-scale loss of modified grassland fields. The	No information at this stage	Not located within the core sustenance zone or home range for Bechstein's bats (see

ID No.	Application reference	Other existing development or approved development description	Assessment of the inter-project cumulative effect with the Proposed Development	Additional mitigation requirements	Residual inter-project cumulative effect
		redevelopment with residential development, including affordable housing, along with associated access and infrastructure.	indicative masterplan shows retention of woody vegetation most likely to be used by foraging bats. There is a bat roost report which suggested existing buildings support roosting bats, but all the details have been redacted. Lighting may impact foraging bats.	other than retention of woody vegetation, but likely no additional mitigation required.	**Paragraph 17.7.9** for an explanation of these terms). Loss of habitat not likely to be significant for ground nesting birds. Due to the small scale of habitat loss, inter-project cumulative effects are envisaged to be **not significant**.
14	24/00407/APP	Erection of 10 no. dwellings and associated green infrastructure.	Given small loss of habitat, no inter-project cumulative effects are anticipated.	No additional mitigation required.	Not located within the core sustenance zone or home range for Bechstein's bats (see **Paragraph 17.7.9** for an explanation of these terms). Loss of habitat not likely to be significant for ground-nesting birds. Due to the small scale of habitat loss, inter-project cumulative effects are envisaged to be **not significant**.
16	25/01567/AOP	Outline planning permission with all matters reserved for the development of up to 24 dwellings, open space,	Given small size of development the site is unlikely to support a large number of ground nesting bird species. Habitats are of	No additional mitigation required.	Located on the western boundary edge of the core sustenance zone for Bechstein's bat and outside of home range (see **Paragraph 17.7.9** for an explanation of these terms).

ID No.	Application reference	Other existing development or approved development description	Assessment of the inter-project cumulative effect with the Proposed Development	Additional mitigation requirements	Residual inter-project cumulative effect
		sustainable drainage and associated works.	limited value to foraging and commuting bats.		Proposed habitat creation is likely to improve foraging for bat species. Inter-project cumulative effects are considered **not significant** for ground nesting birds as, if approved, mitigation is proposed to compensate for habitat loss.
19	22/03873/F	Padbury Brook Solar Farm. Installation and operation of a renewable energy generating station comprising ground-mounted photovoltaic solar arrays and battery-based electricity storage containers together with a switchgear container, inverter/transformer units, site access, internal access tracks, security measures, access gates, other ancillary infrastructure and landscaping and	Loss of arable habitat that may support ground nesting birds and also some foraging bat species.	Landscaping proposals indicate retention of existing woodland and new hedgerow planting as well as enhancement of grassland under panels that may benefit foraging bats. No mitigation of loss of habitat for ground	Not located within the core sustenance zone or home range for Bechstein's bats (see **Paragraph 17.7.9** for an explanation of these terms) and existing arable habitat not likely to be optimal for foraging bats. Loss of habitat not likely to be significant for ground nesting birds. Due to the small scale of habitat loss, inter-project cumulative effects are envisaged to be **not significant**.

ID No.	Application reference	Other existing development or approved development description	Assessment of the inter-project cumulative effect with the Proposed Development	Additional mitigation requirements	Residual inter-project cumulative effect
		biodiversity enhancements.		nesting birds proposed as only very low numbers recorded. No additional mitigation required.	
20	24/03004/APP	Hybrid application for the redevelopment of the site comprising outline planning permission, with all matters reserved except access, for a drive thru restaurant (Use Class E(b)/Sui Generis) and EV charging hub and full planning permission for an office building (Use Class E(g)(ii)) and a day nursery (Use Class E(f)) with associated landscaping,	Given small loss of habitat no inter-project cumulative effects are anticipated.	No additional mitigation required.	Not located within the core sustenance zone or home range for Bechstein's bats (see **Paragraph 17.7.9** for an explanation of these terms). Loss of habitat not likely to be significant for ground nesting birds. Due to the small scale of habitat loss, inter-project cumulative effects are envisaged to be **not significant**.

ID No.	Application reference	Other existing development or approved development description	Assessment of the inter-project cumulative effect with the Proposed Development	Additional mitigation requirements	Residual inter-project cumulative effect
		parking and access arrangements.			
21	21/04112/OUT	Outline application for the erection of up to 65 dwellings, including up to 8 live-work dwellings (use class sui generis), public open space, access, infrastructure and demolition of existing buildings (all matters reserved except principle means of access from Station Road).	Given small loss of habitat, no inter-project cumulative effects are anticipated.	No additional mitigation required.	Not located within the core sustenance zone or home range for Bechstein's bats (see **Paragraph 17.7.9** for an explanation of these terms). Loss of habitat not likely to be significant for ground nesting birds. Due to the small scale of habitat loss, inter-project cumulative effects are envisaged to be **not significant**.
22	24/03426/AOP	Outline application (all reserved apart from access) for approx. 220 residential dwellings, pre-school/nursery, SuDS and open space off Bourton Road, Buckingham, MK18 7R.	Given small loss of habitat, no inter-project cumulative effects are anticipated.	No additional mitigation required.	Only small numbers of common bird species recorded and no *Myotis* species (which could include Bechstein's bat) were recorded. This project is not located within the core sustenance zone or home range for Bechstein's bats (see **Paragraph 17.7.9** for an explanation of these terms). Loss of habitat not likely to be significant for ground nesting birds.

ID No.	Application reference	Other existing development or approved development description	Assessment of the inter-project cumulative effect with the Proposed Development	Additional mitigation requirements	Residual inter-project cumulative effect
					Due to the small scale of habitat loss, inter-project cumulative effects are envisaged to be **not significant**.
24	24/00949/F	Siting of battery storage facility; substation for the connection of the BESS to the grid; ancillary equipment; security fencing; landscaping and vehicular access alterations.	Given small loss of habitat, no inter-project cumulative effects are anticipated.	No additional mitigation required.	Not located within the ore sustenance zone or home range for Bechstein's bats (see **Paragraph 17.7.9** for an explanation of these terms). Loss of habitat not likely to be significant for ground nesting birds. Due to the small scale of habitat loss, inter-project cumulative effects are envisaged to be **not significant**.
25	21/03558/OUT	Outline application for residential development for up to 250 dwellings including affordable housing and ancillary uses including retained Local Wildlife Site, public open space, play areas, localised land remodelling, compensatory flood	Surveys have indicated a moderate assemblage of predominantly common and widespread bat species using the Site for foraging and commuting. Surveys have indicated the breeding bird assemblage comprises a majority of species associated with woodland, hedgerows, and	No additional mitigation required	Not located within the core sustenance zone or home range for Bechstein's bat (see **Paragraph 17.7.9** for an explanation of these terms). Loss of habitat not likely to be significant for ground nesting birds and the landscape plan indicates retention of the Local Wildlife Site located within the Site boundary and creation and enhancement of habitat within the boundary.

ID No.	Application reference	Other existing development or approved development description	Assessment of the inter-project cumulative effect with the Proposed Development	Additional mitigation requirements	Residual inter-project cumulative effect
		storage, structural planting and access.	scrub rather than arable habitat. Loss of habitat that may support small numbers of ground nesting birds and also some foraging bat species.		Due to the mitigation proposed, inter-project cumulative effects are envisaged to be **not significant**.
26	24/03259/F	The erection of two Use Class B8 floorspace units (with ancillary office floorspace (Use Class E(G(i))) with associated infrastructure including: a building for the use as an energy centre(details of the energy generation reserved for future approval); loading bays; service yards; external plant; bin stores, vehicle parking (HGV, lorry, car and motorcycle); cycle parking, amenity areas, landscaping including	Given small loss of habitat, no inter-project cumulative effects are anticipated.	No additional mitigation required.	Not located within the core sustenance zone or home range for Bechstein's bat (see **Paragraph 17.7.9** for an explanation of these terms). Loss of habitat not likely to be significant for ground nesting birds and the landscape plan indicates retention and enhancement of majority of grassland habitat within the airfield. Due to the small scale of habitat loss, and the potential enhancements proposed, inter-project cumulative effects are envisaged to be **not significant**.

ID No.	Application reference	Other existing development or approved development description	Assessment of the inter-project cumulative effect with the Proposed Development	Additional mitigation requirements	Residual inter-project cumulative effect
		permanent landscaped mounds; sustainable drainage details. Demolition of three vacant agricultural building (and two smaller structures) to the north east corner of the site. Access from the existing Symmetry Park estate road.			
27	21/01224/OUT	Outline planning application for Automotive Experience Quarter comprising Commercial, Business and Services uses (Class E), Light Industrial (Class B2), Local Community and Learning Uses (Class F) and vehicle circuits (Sui Generis) with all matters reserved aside from that of access).	Given small loss of habitat, no inter-project cumulative effects are anticipated.	No additional mitigation required.	Not located within the core sustenance zone or home range for Bechstein's bat (see **Paragraph 17.7.9** for an explanation of these terms). Loss of habitat not likely to be significant for ground nesting birds and the landscape plan indicates retention and enhancement of majority of grassland habitat within the Site. Due to the small scale of habitat loss, and the potential enhancements proposed, inter-project cumulative effects are envisaged to be **not significant**.

ID No.	Application reference	Other existing development or approved development description	Assessment of the inter-project cumulative effect with the Proposed Development	Additional mitigation requirements	Residual inter-project cumulative effect
28	25/00439/SCOP	EIA scoping opinion for a proposed residential-led development.	Given loss of homogenous arable or modified grassland habitat, no inter-project cumulative effects are anticipated.	No additional mitigation required.	Not located within the core sustenance zone or home range for Bechstein's bat (see **Paragraph 17.7.9** for an explanation of these terms). Loss of habitat not likely to be significant for ground nesting birds. Due to the small scale of habitat loss, inter-project cumulative effects are envisaged to be **not significant**.
31	23/01610/OUT	Outline application (matters of access to be considered, with matters of layout, scale, appearance and landscaping reserved) cross boundary with Buckinghamshire LPA (application reference 23/02180/AOP) for a Sustainable Urban Extension comprising residential development of up to 1,265 dwellings (Use Class C3), a mixed-use local centre (Class E(a)	Loss of large area of arable or modified grassland habitat on edge of Milton Keynes. Some ground nesting birds and both Barbastelle and *Myotis* bat species have been recorded in the area.	No additional mitigation required.	This project is located over 9.9km from the Proposed Development and well outside of the core sustenance zone or home range for Bechstein's bat (see **Paragraph 17.7.9** for an explanation of these terms). Therefore, inter-project cumulative effects for Bechstein's bat are considered to be **not significant**. Barbastelle have also been recorded but, given their wider foraging range and the extent of similar habitat in the vicinity, inter-project cumulative effects are envisaged to be **not significant**. Loss of habitat is not likely to be significant for ground nesting birds due to the relatively low numbers recorded and the landscaping plans

ID No.	Application reference	Other existing development or approved development description	Assessment of the inter-project cumulative effect with the Proposed Development	Additional mitigation requirements	Residual inter-project cumulative effect
		Display or retail sale of goods, other than hot food, E(b) Sale of food and drink for consumption (mostly) on the premises, E(c) provision of: E(c)(i) Financial services, E(c)(ii) professional services (other than health or medical services), or E(c)(iii) Other appropriate services in a commercial, business or service locality, E(e) Provision of medical or health services (except the use of premises attached to the residence of the consultant or practitioner), E(f) Creche, day nursery or day centre (not including a residential use)), sui-generis hot food takeaway, a care home/extra care provision, community and			will likely benefit some bird species. Therefore, inter-project cumulative effects are envisaged to be **not significant**.

ID No.	Application reference	Other existing development or approved development description	Assessment of the inter-project cumulative effect with the Proposed Development	Additional mitigation requirements	Residual inter-project cumulative effect
		commercial uses, a primary school, vehicle accesses from and a link road between the A421 and H6 Childs Way, diversion of existing PRoW and new pedestrian and cycle access points and routes, car and cycle parking, open space, sports provision, play areas, landscaping, plant, earthworks and ground remodelling, demolition of existing buildings, electrical substations, and associated infrastructure works. EIA development.			
32	22/03384/AOP	Littleton Green. Hybrid application to comprise: Part A - Outline Planning Application with all matters reserved (except for 2 principal points of access)	Loss of large areas of arable habitat which comprises the majority of existing ground nesting bird breeding habitat within the Site. Open space is to be created within the Site	No additional mitigation required.	Not located within the core sustenance zone or home range for Bechstein's bats (see **Paragraph 17.7.9** for an explanation of these terms). Therefore, inter-project cumulative

ID No.	Application reference	Other existing development or approved development description	Assessment of the inter-project cumulative effect with the Proposed Development	Additional mitigation requirements	Residual inter-project cumulative effect
		for a residential development of up to 535 dwellings; primary school; commercial units; mobility hubs; parking; upgraded vehicular access onto A41 and Quainton Road; vehicle accesses; cycle and pedestrian accesses; a community hub including residential care and retail; associated landscaping, parkland and woodland, ecological and environmental enhancements/habitat creation; green and blue infrastructure. Part B - A full planning application for an Energy Park development comprising a solar PV array, a wind turbine, an electric vehicle charging station, a substation, roundabout	which will be designed to benefit birds, The measures are considered to avoid a significant loss of habitat resource for the majority of farmland bird species, it is noted that Skylark require large open fields for nesting, which will be absent from the Site following development. In any case numerous suitable opportunities are present in the surrounding arable landscape for this species, such that the effects of the Proposed Development on the local conservation status of Skylark are minimal. In addition, the project is willing to contribute to any scheme that Buckinghamshire Council is co-ordinating to fund		effects for Bechstein's bat are considered to be **not significant**. Barbastelle have also been recorded but, given their wider foraging range and the extent of similar habitat in the vicinity, inter-project cumulative effects are envisaged to be **not significant**. Inter-project cumulative effects are considered **not significant** for ground nesting birds as, if approved, mitigation is proposed to compensate for habitat loss, however this is also dependant on Buckinghamshire Council having available skylark habitat creation projects in the local area and agreeing to a financial contribution from the development.

ID No.	Application reference	Other existing development or approved development description	Assessment of the inter-project cumulative effect with the Proposed Development	Additional mitigation requirements	Residual inter-project cumulative effect
		connecting to the A41 including new access roads and associated infrastructure.	compensation for skylark (such as skylark plots). Moderate to low levels of bat activity were recorded across the Site, including both Barbastelle and *Myotis* bat species. A wide range of habitat creation, enhancement and management measures are to be delivered including woodland and scrub which will provide additional foraging/commuting resources for bats.		

Cultural heritage

17.7.22. Designated heritage assets which have been assessed in Annex C and D of **ES Volume 4, Appendix 9.1: Archaeological Desk-Based Assessment and Setting Assessment [EN010158/APP/6.4]** as experiencing a negligible magnitude of impact from the Proposed Development are not included in the assessment of inter-project cumulative effects in **Table 17.12** below.

Table 17.12: Cultural heritage inter-project cumulative effects assessment

ID No.	Application reference	Other existing development and/or approved development description	Assessment of inter-project cumulative effect with the Proposed Development	Additional mitigation requirements	Residual inter-project cumulative effect
1	23/03875/APP	East Claydon BESS. Development of a battery energy storage system (BESS), connected directly to the national grid with associated infrastructure including access, drainage, and landscaping.	The presence of the BESS would extend the area of development east of East Claydon and closer to the Grade II listed Rookery Farm; however, there would be limited visibility of the BESS due to the topography, existing vegetation and the existing National Grid East Claydon Substation. No harm to the significance of any heritage assets was identified in the assessment for the BESS and therefore, no inter-project cumulative effects are predicted.	No additional mitigation required.	No harm to the significance of any heritage assets would occur as the result of the BESS and therefore the residual inter-project cumulative effects would be the same as those identified for the Proposed Development alone.
2	25/01297/APP	East Claydon Greener Grid Park. Construction of a greener grid park comprising energy storage and grid balancing equipment and associated infrastructure including access, drainage, landscaping and other incidental works	The presence of the BESS would extend the area of development north of the existing National Grid East Claydon Substation; however, no adverse effects to heritage assets were identified in the assessment for the BESS and therefore, no inter-project cumulative effects are predicted.	No additional mitigation required.	No harm to the significance of any heritage assets would occur as the result of the BESS and therefore the residual inter-project cumulative effects would be the same as those identified for the Proposed Development alone.
3	19/00983/APP	Tuckey Solar Farm. Ground mounted solar farm,	Tuckey Solar Farm was assessed as resulting in less than substantial harm to	No additional mitigation required.	Tuckey Solar Farm and the Proposed Development will

ID No.	Application reference	Other existing development and/or approved development description	Assessment of inter-project cumulative effect with the Proposed Development	Additional mitigation requirements	Residual inter-project cumulative effect
		ancillary infrastructure and associated works including the diversion of PRoW and landscape planting.	Winslow Conservation Area and no harm to any other designated heritage assets. The Proposed Development will not affect this conservation area and no inter-project cumulative effects are predicted.		result in impacts to different heritage assets and therefore no residual inter-project cumulative effects to individual heritage assets are predicted.
5	Hybrid bill	High Speed Rail 2 ('HS2')	Operation of HS2 will affect the significance of Finemerehill House (Grade II listed building, NHLE) through introducing a new feature into its agricultural setting; however, this effect will be reduced by additional tree planting as part of HS2. The inter-project cumulative effect of the Proposed Development in combination with HS2 will result in an effect of minor adverse significance and **not significant**.	No additional mitigation required.	Minor adverse **Not significant**
7	CM/0016/21	Calvert Solar Farm. Application for the construction of solar array/solar park comprising of ground mounted solar PV panels and associated works including: Distributor Network Operator switching station, client switching	The proposed solar park was assessed as resulting in, at most, a negligible effect on a group of listed buildings within Edgcott. The Proposed Development will not impact on these assets and no inter-project cumulative effects are predicted.	No additional mitigation required.	Calvert Solar Farm and the Proposed Development will result in impacts to different heritage assets and therefore no residual inter-project cumulative effects to individual heritage assets are predicted.

ID No.	Application reference	Other existing development and/or approved development description	Assessment of inter-project cumulative effect with the Proposed Development	Additional mitigation requirements	Residual inter-project cumulative effect
		station, battery containers, general storage container, access track, fencing, security cameras and cabling for a temporary period of 35 years at Calvert Landfill Site.			
8	25/00013/DCO	East West Rail DCO: Bedford to Cambridge and Western improvements.	This project is at an early stage. However, the scoping report indicates that potential significant effects may occur within 1km of the railway corridor which is understood to run 800m to 1.5km north of the Order Limits. There is therefore potential for inter-project cumulative effects on heritage assets located between the Order Limits and the East West Rail corridor. This includes Claydon House and Claydon registered park and garden; however, it is anticipated that East West Rail will incorporate appropriate mitigation measures such as vegetative screening to minimise the effects on these assets.	It is anticipated that East West Rail will incorporate appropriate mitigation measures to minimize the effects on designated heritage assets.	Minor adverse **Not significant**
9	25/01865/APP	Longbreach Solar Farm. Erection of a solar farm and creation of new vehicular	Longbreach Solar Farm will potentially affect the setting of the Scheduled Monument of the Deserted Medieval	No additional mitigation required	Minor adverse **Not significant**

ID No.	Application reference	Other existing development and/or approved development description	Assessment of inter-project cumulative effect with the Proposed Development	Additional mitigation requirements	Residual inter-project cumulative effect
		access, new footpath, substation compound, customer substation, inverters, CCTV Tower, storage containers, perimeter fencing, car parking and associated ancillary development.	Village at Fulbrook Farm, the Grade II* listed Church of St John the Baptist in Granborough and Botolph Claydon Conservation Area. The Proposed Development will not affect the Church of St John the Baptist in Granborough. In isolation the impact of the Proposed Development on the Botolph Claydon Conservation Area and on the Deserted Medieval Village at Fulbrook Farm is minor adverse and not significant The contribution of the setting to the significance of Botolph Claydon Conservation Area could be affected by the presence of Solar PV modules which will be seen as an additional area of panels in viewpoints to the southwest from the edge of the Conservation Area, altering the character of the rural landscape which contributes to its significance. Both schemes will be viewed independently from the Deserted Medieval Village of Fulbrook Farm in views to the		

ID No.	Application reference	Other existing development and/or approved development description	Assessment of inter-project cumulative effect with the Proposed Development	Additional mitigation requirements	Residual inter-project cumulative effect
			north east and north west. However, the presence of Solar PV modules which will be seen as an additional area of panels on viewpoints from DMV Fulbrook Farm will alter the character of the rural landscape which contributes to its significance. These views form only a part of the contribution of the character of rural landscape to the significance of Botolph Claydon Conservation Area and DMV Fulbrook Farm, as part of the wider setting of these assets. Therefore, the inter-project cumulative effect of the Proposed Development in combination with Longbreach Solar Farm will result in an effect of minor adverse significance and **not significant**		
11	22/00125/REF	Grendon Prison. Outline planning application with all matters reserved except for access, layout, and scale for the construction of a new category C prison (up to 67,000 sqm GEA) within a secure perimeter fence	The new prison was considered by Buckinghamshire Council to result in adverse impacts to the Grade II listed Grendon Hall and associated non-designated parkland. The Proposed Development will not impact these assets and as such no inter-project cumulative effects are predicted.	No additional mitigation required.	Grendon Prison and the Proposed Development will result in impacts to different heritage assets and therefore no residual inter-project cumulative effects to individual heritage assets are predicted.

ID No.	Application reference	Other existing development and/or approved development description	Assessment of inter-project cumulative effect with the Proposed Development	Additional mitigation requirements	Residual inter-project cumulative effect
		together with access, parking, landscaping and associated engineering works.			
13	25/00883/AOP	Demolition of existing buildings and commercial redevelopment with residential development, including affordable housing, along with associated access and infrastructure.	The proposed redevelopment was originally considered by Buckinghamshire Council to result in potential harm to the significance of Winslow conservation area but a decision is awaited following request to secure a design code through condition. The Proposed Development will not impact on Winslow conservation area and no inter-project cumulative effects are predicted.	No additional mitigation required.	The residential development and the Proposed Development will result in impacts to different heritage assets and therefore no residual inter-project cumulative effects to individual heritage assets are predicted.
14	24/00407/APP	Erection of 10 no. dwellings and associated green infrastructure.	The proposed new houses will be on the north side of Winslow and will not impact any heritage assets also affected by the Proposed Development. No inter-project cumulative effects are predicted.	No additional mitigation required.	No harm to the significance of any heritage assets would occur as the result of the residential development and therefore the residual inter-project cumulative effects would be the same as those identified for the Proposed Development alone.

ID No.	Application reference	Other existing development and/or approved development description	Assessment of inter-project cumulative effect with the Proposed Development	Additional mitigation requirements	Residual inter-project cumulative effect
16	25/01567/AOP	Outline planning permission with all matters reserved for the development of up to 24 dwellings, open space, sustainable drainage and associated works.	The proposed housing development lies to the east of Marsh Gibbon and was assessed as resulting in a low level of harm to the significance of the Marsh Gibbon conservation area and listed and non-designated buildings within it. The Proposed Development will not impact on these assets and no inter-project cumulative effects are predicted.	No additional mitigation required.	The residential development and the Proposed Development will result in impacts to different heritage assets and therefore no residual inter-project cumulative effects to individual heritage assets are predicted.
19	22/03873/F Appeal ref. APP/C3105/W/24/3353069	Padbury Brook Solar Farm. Installation and operation of a renewable energy generating station comprising ground-mounted photovoltaic solar arrays and battery-based electricity storage containers together with a switchgear container, inverter/transformer units, Site access, internal access tracks, security measures, access gates, other ancillary infrastructure and landscaping and biodiversity enhancements.	The consented development will not impact on any heritage assets also impacted by the Proposed Development. No inter-project cumulative effects are predicted.	No additional mitigation required.	Padbury Brook Solar Farm and the Proposed Development will result in impacts to different heritage assets and therefore no residual inter-project cumulative effects to individual heritage assets are predicted.

ID No.	Application reference	Other existing development and/or approved development description	Assessment of inter-project cumulative effect with the Proposed Development	Additional mitigation requirements	Residual inter-project cumulative effect
20	24/03004/APP	Hybrid application for the redevelopment of the site comprising outline planning permission, with all matters reserved except access, for a drive thru restaurant (Use Class E(b)/Sui Generis) and EV charging hub and full planning permission for an office building (Use Class E(g)(ii)) and a day nursery (Use Class E(f)) with associated landscaping, parking and access arrangements.	The redevelopment of this site is understood not to impact on any heritage assets also impacted by the Proposed Development. No inter-project cumulative effects are therefore predicted.	No additional mitigation required.	The hybrid application and the Proposed Development will result in impacts to different heritage assets and therefore no residual inter-project cumulative effects to individual heritage assets are predicted.
21	21/04112/OUT	Outline application for the erection of up to 65 dwellings, including up to 8 live-work dwellings (use class sui generis), public open space, access, infrastructure and demolition of existing buildings (all matters reserved except	The setting assessment for this application concluded that there would be less than substantial harm (at the lower end) to the significance of Grade II listed Grange Farmhouse, Loudon only. This asset is not affected by the Proposed Development. Therefore, no inter-project cumulative effects are predicted.	No additional mitigation required.	The outline application and the Proposed Development will result in impacts to different heritage assets and therefore no residual inter-project cumulative effects to individual heritage assets are predicted.

ID No.	Application reference	Other existing development and/or approved development description	Assessment of inter-project cumulative effect with the Proposed Development	Additional mitigation requirements	Residual inter-project cumulative effect
		principle means of access from Station Road).			
22	24/03426/AOP	Outline application (all reserved apart from access) for approx. 220 residential dwellings, pre-school/nursery, SuDS and open space off Bourton Road, Buckingham, MK18 7R.	The heritage statement for the residential development identified potential harm to the significance of Rose Cottage Grade II listed building which is adjacent to this development. This asset will not be affected by the Proposed Development and no inter-project cumulative effects are predicted.	No additional mitigation required.	The outline application and the Proposed Development will result in impacts to different heritage assets and therefore no residual inter-project cumulative effects to individual heritage assets are predicted.
24	24/00949/F	Siting of battery storage facility; substation for the connection of the BESS to the grid; ancillary equipment; security fencing; landscaping and vehicular access alterations.	It is understood that there are no heritage impacts from this development. There are therefore no inter-project cumulative effects.	No additional mitigation required.	No harm to the significance of any heritage assets would occur as the result of the BESS and therefore the residual inter-project cumulative effects would be the same as those identified for the Proposed Development alone.
25	21/03558/OUT	Outline application for residential development for up to 250 dwellings including affordable housing and ancillary uses including retained Local Wildlife Site,	This development would not impact on any assets also affected by the Proposed Development and no inter-project cumulative effects are predicted.	No additional mitigation required.	The outline application and the Proposed Development will result in impacts to different heritage assets and therefore no residual inter-project cumulative effects to

ID No.	Application reference	Other existing development and/or approved development description	Assessment of inter-project cumulative effect with the Proposed Development	Additional mitigation requirements	Residual inter-project cumulative effect
		public open space, play areas, localised land remodelling, compensatory flood storage, structural planting and access.			individual heritage assets are predicted.
26	24/03259/F	The erection of two Use Class B8 floorspace units (with ancillary office floorspace (Use Class E(G(i))) with associated infrastructure including: a building for the use as an energy centre (details of the energy generation reserved for future approval); loading bays; service yards; external plant; bin stores, vehicle parking (HGV, lorry, car and motorcycle); cycle parking, amenity areas, landscaping including permanent landscaped mounds; sustainable drainage details. Demolition of three vacant agricultural building (and two smaller	The assessment for this application did not identify any heritage assets that would be affected by changes in their setting. No inter-project cumulative effects are therefore predicted.	No additional mitigation required.	No harm to the significance of any heritage assets would occur as the result of the new units and therefore the residual inter-project cumulative effects would be the same as those identified for the Proposed Development alone.

ID No.	Application reference	Other existing development and/or approved development description	Assessment of inter-project cumulative effect with the Proposed Development	Additional mitigation requirements	Residual inter-project cumulative effect
		structures) to the north east corner of the site. Access from the existing Symmetry Park estate road.			
27	21/01224/OUT	Outline planning application for Automotive Experience Quarter comprising Commercial, Business and Services uses (Class E), Light Industrial (Class B2), Local Community and Learning Uses (Class F) and vehicle circuits (Sui Generis) with all matters reserved aside from that of access).	The Automotive Experience Quarter would impact on the character and appearance of the RAF Bicester conservation area and on listed buildings and scheduled monuments within it. None of these assets will be affected by the Proposed Development and as such no inter-project cumulative effects are predicted.	No additional mitigation required.	The outline application and the Proposed Development will result in impacts to different heritage assets and therefore no residual inter-project cumulative effects to individual heritage assets are predicted.
28	25/00439/SCOP	EIA scoping opinion for a proposed residential-led development.	This application is at an early stage; however, a 3km study area for setting effects was proposed and this does not overlap with the 5km study area for the Proposed Development. No assets have been identified that would experience inter-project cumulative effects from the two developments.	No additional mitigation required.	The Proposed Development and this application will result in impacts to different heritage assets and therefore no residual inter-project cumulative effects to individual heritage assets are predicted.

ID No.	Application reference	Other existing development and/or approved development description	Assessment of inter-project cumulative effect with the Proposed Development	Additional mitigation requirements	Residual inter-project cumulative effect
31	23/01610/OUT	Outline application (matters of access to be considered, with matters of layout, scale, appearance and landscaping reserved) cross boundary with Buckinghamshire LPA (application reference 23/02180/AOP) for a Sustainable Urban Extension comprising residential development of up to 1,265 dwellings (Use Class C3), a mixed-use local centre (Class E(a) Display or retail sale of goods, other than hot food, E(b) Sale of food and drink for consumption (mostly) on the premises, E(c) provision of: E(c)(i) Financial services, E(c)(ii) professional services (other than health or medical services), or E(c)(iii) Other appropriate services in a commercial, business	The proposed urban extension would impact on Tattenhow Barn Farm Grade II listed building. This asset is not affected by the Proposed Development and no inter-project cumulative effects are predicted.	No additional mitigation required.	The outline application and the Proposed Development will result in impacts to different heritage assets and therefore no residual inter-project cumulative effects to individual heritage assets are predicted.

ID No.	Application reference	Other existing development and/or approved development description	Assessment of inter-project cumulative effect with the Proposed Development	Additional mitigation requirements	Residual inter-project cumulative effect
		or service locality, E(e) Provision of medical or health services (except the use of premises attached to the residence of the consultant or practitioner), E(f) Creche, day nursery or day centre (not including a residential use)), sui-generis hot food takeaway, a care home/extra care provision, community and commercial uses, a primary school, vehicle accesses from and a link road between the A421 and H6 Childs Way, diversion of existing PRoW and new pedestrian and cycle access points and routes, car and cycle parking, open space, sports provision, play areas, landscaping, plant, earthworks and ground remodelling, demolition of existing buildings, electrical			

ID No.	Application reference	Other existing development and/or approved development description	Assessment of inter-project cumulative effect with the Proposed Development	Additional mitigation requirements	Residual inter-project cumulative effect
		substations, and associated infrastructure works. EIA development			
32	22/03384/AOP	Hybrid application to comprise: Part A - Outline Planning Application with all matters reserved (except for 2 principal points of access) for a residential development of up to 535 dwellings; primary school; commercial units; mobility hubs; parking; upgraded vehicular access onto A41 and Quainton Road; vehicle accesses; cycle and pedestrian accesses; a community hub including residential care and retail; associated landscaping, parkland and woodland, ecological and environmental enhancements/habitat creation; green and blue infrastructure. Part B - A full	The development at Littleton Manor Farm would result in harm to the significance of Waddesdon Conservation Area, Waddesdon Manor Grade I Listed Building, Waddesdon Registered Park and Garden, Wotton House Registered Park and Garden, and St Michael's Church Grade II* Listed Building. These assets would not be affected by the Proposed Development and no inter-project cumulative effects are predicted.	No additional mitigation required.	The Littleton Manor Farm application and the Proposed Development will result in impacts to different heritage assets and therefore no residual inter-project cumulative effects to individual heritage assets are predicted.

ID No.	Application reference	Other existing development and/or approved development description	Assessment of inter-project cumulative effect with the Proposed Development	Additional mitigation requirements	Residual inter-project cumulative effect
		planning application for an Energy Park development comprising a solar PV array, a wind turbine, an electric vehicle charging station, a substation, roundabout connecting to the A41 including new access roads and associated infrastructure. (Amended Description) | Littleton Manor Farm Bicester Road North-West Of Waddesdon HP18 0JR			

Inter-project cumulative effects on below ground archaeological remains

17.7.23. With the exception of the Proposed National Grid East Claydon Substation development discussed above, the only short-listed projects with potential for inter-project cumulative effects on below ground archaeological remains during construction are the ID No. 2 (East Claydon Greener Grid Park) and ID No. 1 (East Claydon BESS) which partially overlap the Order Limits. All other projects lie outside of the Order Limits. An area of Romano-British settlement within ID No. 2 (East Claydon Greener Grid Park) site boundary may be part of the same settlement identified in the Order Limits. It is anticipated that the ID No. 2 (East Claydon Greener Grid Park) project would be subject to appropriate mitigation for the archaeological impacts and that the mitigation for the Proposed Development would include analysis of any results of this work. Other remains associated with the Iron Age/Romano-British settlement site within the Order Limits are also present in the areas of ID No. 1 (East Claydon BESS) which lie outside the Order Limits of the Proposed Development. An appeal has been lodged for ID No. 1 (East Claydon BESS) and it is anticipated that if this is granted then the project would be subject to appropriate mitigation for archaeological impacts and therefore no inter-project cumulative effect would occur.

17.7.24. Overall, it is anticipated that potential inter-project cumulative effects with ID No. 2 (East Claydon Greener Grid Park) and ID No. 1 (East Claydon BESS) with the Proposed Development are **not significant**.

Landscape and visual

17.7.25. As described in **Section 17.6** above, those receptors identified and assessed in **Section 10.10** of **ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]** experiencing a negligible or slight/negligible magnitude of effect from the Proposed Development, are not included in the assessment of inter-project cumulative effects below.

17.7.26. The full detailed inter-project cumulative effects assessment for landscape and visual is set out in **ES Volume 4, Appendix 17.2: Landscape and Visual Inter-project Cumulative Effects Assessment [EN010158/APP/6.4]**. A summary is provided in **Table 17.13** below.

Table 17.13: Summary of landscape and visual inter-project cumulative effects

Receptor	Phase	Embedded or additional mitigation	Sensitivity of the receptor	Development	Magnitude of effect	Residual effect (with additional mitigation)
Landscape effects						
LCT 5: Shallow Valleys	Construction and decommissioning	Additional mitigation: Protection of existing retained vegetation Embedded mitigation: Implementation of landscape mitigation planting	Low	Proposed Development	Slight	Minor adverse (not significant)
				ID No. 1 (East Claydon BESS)	Slight	Minor adverse (not significant)
				ID No. 2 (East Claydon Greener Grid Park)	Slight	Minor adverse (not significant)
				ID No. 3 (Tuckey Solar Farm)	Slight	Minor adverse (not significant)
				ID No.5 (HS2)	Slight	Minor adverse (not significant)
				ID No. 8 (East West Rail)	Slight	Minor adverse (not significant)
				ID No. 9 (Longbreach Solar Farm)	Slight	Minor adverse (not significant)
				All	Moderate/ slight	Minor adverse (not significant)
	Operation Year 1 and Year 10	Embedded mitigation: Maintenance of	Low	Proposed Development	Moderate/ slight	Minor adverse (not significant)

Receptor	Phase	Embedded or additional mitigation	Sensitivity of the receptor	Development	Magnitude of effect	Residual effect (with additional mitigation)
		newly established landscape mitigation		ID No. 1 (East Claydon BESS)	Moderate/ slight	Minor adverse (not significant)
				ID No. 2 (East Claydon Greener Grid Park)	Moderate/ slight	Minor adverse (not significant)
				ID No. 3 (Tuckey Solar Farm)	Moderate/ slight	Minor adverse (not significant)
				ID No. 5 (HS2)	Moderate/ slight	Minor adverse (not significant)
				ID No. 8 (East West Rail)	Moderate/ slight	Minor adverse (not significant)
				ID No. 9 (Longbreach Solar Farm)	Moderate/ slight	Minor adverse (not significant)
				ID No. 32 (Littleton Manor Farm)	Moderate/ slight	Minor adverse (not significant)
				All	Substantial/ moderate	Moderate adverse (not significant)
LCA 5.6: Claydon Valley	Construction and decommissioning	Additional mitigation: Protection of existing retained vegetation Embedded mitigation:	Low	Proposed Development	Slight	Minor adverse (not significant)
				ID No. 1 (East Claydon BESS)	Slight	Minor adverse (not significant)
				ID No. 2 (East Claydon Greener Grid Park)	Moderate/ slight	Minor adverse (not significant)

Receptor	Phase	Embedded or additional mitigation	Sensitivity of the receptor	Development	Magnitude of effect	Residual effect (with additional mitigation)
		Implementation of landscape mitigation planting		ID No. 3 (Tuckey Solar Farm)	Moderate/ slight	Minor adverse (not significant)
				ID No. 8 (East West Rail)	Slight	Minor adverse (not significant)
				ID No. 9 (Longbreach Solar Farm)	Slight	Negligible (not significant)
				All	Moderate	Moderate/Minor adverse (not significant)
	Operation Year 1 and Year 10	Embedded mitigation: Maintenance of newly established landscape mitigation	Low	Proposed Development	Moderate/ slight	Minor adverse (not significant)
				ID No. 1 (East Claydon BESS)	Moderate/ slight	Minor adverse (not significant)
				ID No. 2 (East Claydon Greener Grid Park)	Moderate	Moderate/minor adverse (not significant)
				ID No. 3 (Tuckey Solar Farm)	Moderate	Moderate/minor adverse (not significant)
				ID No. 8 (East West Rail)	Moderate/ slight	Minor adverse (not significant)
				ID No. 9 (Longbreach Solar Farm)	Moderate/ slight	Minor adverse (not significant)
				ID No. 32 (Littleton Manor Farm)	Moderate/ slight	Minor adverse (not significant)

Receptor	Phase	Embedded or additional mitigation	Sensitivity of the receptor	Development	Magnitude of effect	Residual effect (with additional mitigation)
				All	Substantial/ moderate	Moderate adverse (not significant)
LCA 5.7: Hogshaw Claylands	Construction and decommissioning	Additional mitigation: Protection of existing retained vegetation Embedded mitigation: Implementation of landscape mitigation planting	Medium/ Low	Proposed Development	Moderate	**Moderate adverse (significant)**
				ID No. 1 (East Claydon BESS)	Moderate	**Moderate adverse (significant)**
				ID No. 2 (East Claydon Greener Grid Park)	Moderate	**Moderate adverse (significant)**
				ID No. 3 (Tuckey Solar Farm)	Moderate	**Moderate adverse (significant)**
				ID No. 8 (East West Rail)	Moderate	**Moderate adverse (significant)**
				ID No. 9 (Longbreach Solar Farm)	Moderate	**Moderate adverse (significant)**
				All	Moderate	**Moderate adverse (significant)**
	Operation Year 1 and Year 10	Embedded mitigation: Maintenance of newly established landscape mitigation	Medium/ Low	Proposed Development	Moderate	**Moderate adverse (significant)**
				ID No. 1 (East Claydon BESS)	Substantial/ moderate	**Moderate adverse (significant)**
				ID No. 2 (East Claydon Greener Grid Park)	Moderate	**Moderate adverse (significant)**

Receptor	Phase	Embedded or additional mitigation	Sensitivity of the receptor	Development	Magnitude of effect	Residual effect (with additional mitigation)
				ID No. 3 (Tuckey Solar Farm)	Moderate	**Moderate adverse (significant)**
				ID No. 8 (East West Rail)	Moderate	**Moderate adverse (significant)**
				ID No. 9 (Longbreach Solar Farm)	Substantial/ moderate	**Moderate adverse (significant)**
				ID No. 32 (Littleton Manor Farm)	Moderate	**Moderate adverse (significant)**
				All	Substantial	**Major/moderate adverse (significant)**
LCA 5.8: North Marston Undulating Claylands	Construction and decommissioning	Additional mitigation: Protection of existing retained vegetation Embedded mitigation: Implementation of landscape mitigation planting	Low	Proposed Development	Slight	Minor adverse (not significant)
				ID No. 1 (East Claydon BESS)	Slight	Minor adverse (not significant)
				ID No. 2 (East Claydon Greener Grid Park)	Slight	Minor adverse (not significant)
				ID No. 3 (Tuckey Solar Farm)	Slight	Minor adverse (not significant)
				ID No. 8 (East West Rail)	Slight	Minor adverse (not significant)

Receptor	Phase	Embedded or additional mitigation	Sensitivity of the receptor	Development	Magnitude of effect	Residual effect (with additional mitigation)
				ID No. 9 (Longbreach Solar Farm)	Slight	Minor adverse (not significant)
				All	Slight	Minor adverse (not significant)
	Operation Year 1 and Year 10	Embedded mitigation: Maintenance of newly established landscape mitigation	Low	Proposed Development	Slight	Minor adverse (not significant)
				ID No. 1 (East Claydon BESS)	Slight	Minor adverse (not significant)
				ID No. 2 (East Claydon Greener Grid Park)	Slight	Minor adverse (not significant)
				ID No. 3 (Tuckey Solar Farm)	Slight	Minor adverse (not significant)
				ID No. 8 (East West Rail)	Slight	Minor adverse (not significant)
				ID No. 9 (Longbreach Solar Farm)	Slight	Minor adverse (not significant)
				ID No. 32 (Littleton Manor Farm)	Slight	Minor adverse (not significant)
				All	Slight	Minor adverse (not significant)
LCT 7: Wooded	Construction and decommissioning	Additional mitigation:	Medium/ Low	Proposed Development	Slight	Minor adverse (not significant)

Receptor	Phase	Embedded or additional mitigation	Sensitivity of the receptor	Development	Magnitude of effect	Residual effect (with additional mitigation)
Rolling Lowlands		Protection of existing retained vegetation Embedded mitigation: Implementation of landscape mitigation planting		National Grid East Claydon Substation development	Slight	Minor adverse (not significant)
				ID No. 1 (East Claydon BESS)	Slight	Minor adverse (not significant)
				ID No. 2 (East Claydon Greener Grid Park)	Slight	Minor adverse (not significant)
				ID No. 3 (Tuckey Solar Farm)	Slight	Minor adverse (not significant)
				ID No.5 (HS2)	Slight	Minor adverse (not significant)
				ID No. 8 (East West Rail)	Slight	Minor adverse (not significant)
				ID No. 9 (Longbreach Solar Farm)	Slight	Minor adverse (not significant)
				All	Moderate/ slight	Moderate/minor adverse (not significant)
	Operation Year 1 and Year 10	Embedded mitigation: Maintenance of	Low	Proposed Development	Moderate/ slight	Moderate/minor adverse (not significant)
				ID No. 1 (East Claydon BESS)	Moderate/ slight	Moderate/minor adverse (not significant)

Receptor	Phase	Embedded or additional mitigation	Sensitivity of the receptor	Development	Magnitude of effect	Residual effect (with additional mitigation)
		newly established landscape mitigation		ID No. 2 (East Claydon Greener Grid Park)	Moderate/ slight	Moderate/minor adverse (not significant)
				ID No. 3 (Tuckey Solar Farm)	Moderate/ slight	Moderate/minor adverse (not significant)
				ID No. 5 (HS2)	Moderate/ slight	Moderate/minor adverse (not significant)
				ID No. 8 (East West Rail)	Moderate/ slight	Moderate/minor adverse (not significant)
				ID No. 9 (Longbreach Solar Farm)	Moderate/ slight	Moderate/minor adverse (not significant)
				ID No. 32 (Littleton Manor Farm)	Moderate/ slight	Moderate/minor adverse (not significant)
				All	Moderate	Moderate adverse (not significant)
LCA 7.3: Claydon Bowl	Construction and decommissioning	None specified	Medium	Proposed Development	Moderate	**Moderate adverse (significant)**
				ID No. 1 (East Claydon BESS)	Moderate	**Moderate adverse (significant)**
				ID No. 2 (East Claydon Greener Grid Park)	Moderate	**Moderate adverse (significant)**
				ID No. 3 (Tuckey Solar Farm)	Moderate	**Moderate adverse (significant)**

Receptor	Phase	Embedded or additional mitigation	Sensitivity of the receptor	Development	Magnitude of effect	Residual effect (with additional mitigation)
				ID No. 8 (East West Rail)	Moderate	**Moderate adverse (significant)**
				ID No. 9 (Longbreach Solar Farm)	Moderate	**Moderate adverse (significant)**
				All	Moderate	**Moderate adverse (significant)**
	Operation Year 1 and Year 10	Embedded mitigation: Maintenance of newly established landscape mitigation	Medium	Proposed Development	Substantial/ moderate	**Moderate adverse (significant)**
				ID No. 1 (East Claydon BESS)	Substantial/ moderate	**Moderate adverse (significant)**
				ID No. 2 (East Claydon Greener Grid Park)	Substantial/ moderate	**Moderate adverse (significant)**
				ID No. 3 (Tuckey Solar Farm)	Substantial/ moderate	**Moderate adverse (significant)**
				ID No. 8 (East West Rail)	Substantial/ moderate	**Moderate adverse (significant)**
				ID No. 9 (Longbreach Solar Farm)	Substantial/ moderate	**Moderate adverse (significant)**
				ID No. 32 (Littleton Manor Farm)	Substantial/ moderate	**Moderate adverse (significant)**
				All	Substantial/ moderate	**Moderate adverse (significant)**

Receptor	Phase	Embedded or additional mitigation	Sensitivity of the receptor	Development	Magnitude of effect	Residual effect (with additional mitigation)
LCT 9: Low Hills and Ridges	Operation Year 1 and Year 10	Additional mitigation: Protection of existing retained vegetation Embedded mitigation: Implementation of landscape mitigation planting	Medium	Proposed Development	Moderate/ slight	Moderate/minor adverse (not significant)
				ID No. 1 (East Claydon BESS)	Moderate/ slight	Moderate/minor adverse (not significant)
				ID No. 2 (East Claydon Greener Grid Park)	Moderate/ slight	Moderate/minor adverse (not significant)
				ID No. 3 (Tuckey Solar Farm)	Moderate/ slight	Moderate/minor adverse (not significant)
				ID No. 5 (HS2)	Moderate/ slight	Moderate/minor adverse (not significant)
				ID No. 8 (East West Rail)	Moderate/ slight	Moderate/minor adverse (not significant)
				ID No. 9 (Longbreach Solar Farm)	Moderate/ slight	Moderate/minor adverse (not significant)
				ID No. 32 (Littleton Manor Farm)	Moderate/ slight	Moderate/minor adverse (not significant)
				All	Moderate/ slight	Moderate adverse (not significant)
LCA 9.2: Quainton Hill	Construction and decommissioning	Additional mitigation: Protection of existing retained	Medium	Proposed Development	Moderate/ slight	Moderate adverse (not significant)
				ID No. 1 (East Claydon BESS)	Moderate/ slight	Moderate adverse (not significant)

Receptor	Phase	Embedded or additional mitigation	Sensitivity of the receptor	Development	Magnitude of effect	Residual effect (with additional mitigation)
		vegetation Embedded mitigation: Implementation of landscape mitigation planting		ID No. 2 (East Claydon Greener Grid Park)	Moderate/ slight	Moderate adverse (not significant)
				ID No. 3 (Tuckey Solar Farm)	Moderate/ slight	Moderate adverse (not significant)
				ID No. 8 (East West Rail)	Moderate/ slight	Moderate adverse (not significant)
				ID No. 9 (Longbreach Solar Farm)	Moderate/ slight	Moderate adverse (not significant)
				All	Moderate/ slight	Moderate adverse (not significant)
	Operation Year 1 and Year 10	Embedded mitigation: Maintenance of newly established landscape mitigation	Medium	Proposed Development	Moderate/ slight	Moderate adverse (not significant)
				ID No. 1 (East Claydon BESS)	Moderate/ slight	Moderate adverse (not significant)
				ID No. 2 (East Claydon Greener Grid Park)	Moderate/ slight	Moderate adverse (not significant)
				ID No. 3 (Tuckey Solar Farm)	Moderate/ slight	Moderate adverse (not significant)
				ID No. 8 (East West Rail)	Moderate/ slight	Moderate adverse (not significant)

Receptor	Phase	Embedded or additional mitigation	Sensitivity of the receptor	Development	Magnitude of effect	Residual effect (with additional mitigation)
				ID No. 9 (Longbreach Solar Farm)	Moderate/ slight	Moderate adverse (not significant)
				ID No. 32 (Littleton Manor Farm)	Moderate	**Moderate adverse (significant)**
				All	Moderate	**Moderate adverse (significant)**
Quainton-Wing Hills AAL	Operation Year 1 and Year 10	Additional mitigation: Protection of existing retained vegetation Embedded mitigation: Implementation of landscape mitigation planting	Medium	Proposed Development	Slight	Moderate/minor adverse (not significant)
				ID No. 1 (East Claydon BESS)	Slight	Moderate/minor adverse (not significant)
				ID No. 2 (East Claydon Greener Grid Park)	Slight	Moderate/minor adverse (not significant)
				ID No. 3 (Tuckey Solar Farm)	Slight	Moderate/minor adverse (not significant)
				ID No. 5 (HS2)	Slight	Moderate/minor adverse (not significant)
				ID No. 8 (East West Rail)	Slight	Moderate/minor adverse (not significant)
				ID No. 9 (Longbreach Solar Farm)	Slight	Moderate/minor adverse (not significant)
				ID No. 32 (Littleton Manor Farm)	Slight	Moderate/minor adverse (not significant)

Receptor	Phase	Embedded or additional mitigation	Sensitivity of the receptor	Development	Magnitude of effect	Residual effect (with additional mitigation)
				All	Moderate/ slight	Moderate adverse (not significant)
Visual Effects						
Botolph Claydon	Construction and decommissioning	Additional mitigation: Protection of existing retained vegetation Embedded mitigation: Implementation of landscape mitigation planting	High/ Medium	Proposed Development	Moderate/ slight	Moderate adverse (not significant)
				ID No. 1 (East Claydon BESS)	Moderate/ slight	Moderate adverse (not significant)
				ID No. 2 (East Claydon Greener Grid Park)	Moderate/ slight	Moderate adverse (not significant)
				ID No. 3 (Tuckey Solar Farm)	Moderate/ slight	Moderate adverse (not significant)
				ID No. 8 (East West Rail)	Moderate/ slight	Moderate adverse (not significant)
				ID No. 9 (Longbreach Solar Farm)	Moderate/ slight	Moderate adverse (not significant)
				All	Moderate/ slight	Moderate adverse (not significant)
	Operation Year 1 and Year 10	Embedded mitigation: Maintenance of	High/ Medium	Proposed Development	Yr 1: Moderate/ slight Yr 10: Slight	Yr 1 & Yr 10 Moderate adverse (not significant)

Receptor	Phase	Embedded or additional mitigation	Sensitivity of the receptor	Development	Magnitude of effect	Residual effect (with additional mitigation)
		newly established landscape mitigation		ID No. 1 (East Claydon BESS)	Yr 1: Moderate/ slight	Yr 1 & Yr 10 Moderate adverse (not significant)
					Yr 10: Slight	
				ID No. 2 (East Claydon Greener Grid Park)	Yr 1: Moderate/ slight	Yr 1 & Yr 10 Moderate adverse (not significant)
					Yr 10: Slight	
				ID No. 3 (Tuckey Solar Farm)	Yr 1: Moderate/ slight	Yr 1 & Yr 10 Moderate adverse (not significant)
					Yr 10: Slight	
				ID No. 8 (East West Rail)	Yr 1: Moderate/ slight	Yr 1 & Yr 10 Moderate adverse (not significant)
					Yr 10: Slight	
				ID No. 9 (Longbreach Solar Farm)	Yr 1: Moderate/ slight	Yr 1 & Yr 10 Moderate adverse (not significant)
					Yr 10: Slight	
				ID No. 32 (Littleton Manor Farm)	Moderate/ slight	Moderate adverse (not significant)

Receptor	Phase	Embedded or additional mitigation	Sensitivity of the receptor	Development	Magnitude of effect	Residual effect (with additional mitigation)
				All	Yr 1: Moderate/ slight Yr 10: Slight	Yr 1 & Yr 10 Moderate adverse (not significant)
Granborough	Construction and decommissioning	Additional mitigation: Protection of existing retained vegetation Embedded mitigation: Implementation of landscape mitigation planting	High/ Medium	Proposed Development	Slight	Moderate/minor adverse (not significant)
				ID No. 1 (East Claydon BESS)	Moderate/ slight	**Moderate adverse (significant)**
				ID No. 2 (East Claydon Greener Grid Park)	Slight	Moderate/minor adverse (not significant)
				ID No. 3 (Tuckey Solar Farm)	Slight	Moderate/minor adverse (not significant)
				ID No. 8 (East West Rail)	Slight	Moderate/minor adverse (not significant)
				ID No. 9 (Longbreach Solar Farm)	Slight	Moderate/minor adverse (not significant)
				All	Moderate/ slight	**Moderate adverse (significant)**
	Operation Year 1 and Year 10	Embedded mitigation: Maintenance of	High/ Medium	Proposed Development	Yr 1 & Yr 10: Moderate/ slight	Moderate adverse (not significant)

Receptor	Phase	Embedded or additional mitigation	Sensitivity of the receptor	Development	Magnitude of effect	Residual effect (with additional mitigation)
		newly established landscape mitigation		ID No. 1 (East Claydon BESS)	Yr 1: Moderate Yr 10: Moderate/ slight	**Yr 1 Major/moderate adverse (significant)** Yr 10 Moderate adverse (not significant)
				ID No. 2 (East Claydon Greener Grid Park)	Yr 1 & Yr 10: Moderate/ slight	Moderate adverse (not significant)
				ID No. 3 (Tuckey Solar Farm)	Yr 1 & Yr 10: Moderate/ slight	Moderate adverse (not significant)
				ID No. 8 (East West Rail)	Yr 1 & Yr 10: Moderate/ slight	Moderate adverse (not significant)
				ID No. 9 (Longbreach Solar Farm)	Yr 1 & Yr 10: Moderate/ slight	Moderate adverse (not significant)
				ID No. 32 (Littleton Manor Farm)	Yr 1 & Yr 10: Moderate/ slight	Moderate adverse (not significant)
				All	Yr 1: Moderate Yr 10: Moderate/ slight	**Yr 1 Major/moderate adverse (significant)** Yr 10 Moderate adverse (not significant)

Receptor	Phase	Embedded or additional mitigation	Sensitivity of the receptor	Development	Magnitude of effect	Residual effect (with additional mitigation)
Steeple Claydon	Construction and decommissioning	Additional mitigation: Protection of existing retained vegetation Embedded mitigation: Implementation of landscape mitigation planting	High/ Medium	Proposed Development	Slight/ negligible	Minor adverse (not significant)
				ID No. 1 (East Claydon BESS)	Slight/ negligible	Minor adverse (not significant)
				ID No. 2 (East Claydon Greener Grid Park)	Slight/ negligible	Minor adverse (not significant)
				ID No. 3 (Tuckey Solar Farm)	Slight/ negligible	Minor adverse (not significant)
				ID No. 8 (East West Rail)	Slight	Moderate/Minor adverse (not significant)
				ID No. 9 (Longbreach Solar Farm)	Slight/ negligible	Minor adverse (not significant)
				All	Slight	Moderate/Minor adverse (not significant)
	Operation Year 1 and Year 10	Embedded mitigation: Maintenance of newly established landscape mitigation	High/ Medium	Proposed Development	Slight	Moderate/minor adverse (not significant)
				ID No. 1 (East Claydon BESS)	Slight	Moderate/minor adverse (not significant)
				ID No. 2 (East Claydon Greener Grid Park)	Slight	Moderate/minor adverse (not significant)
				ID No. 3 (Tuckey Solar Farm)	Slight	Moderate/minor adverse (not significant)

Receptor	Phase	Embedded or additional mitigation	Sensitivity of the receptor	Development	Magnitude of effect	Residual effect (with additional mitigation)
				ID No. 8 (East West Rail)	Moderate/ slight	Moderate adverse (not significant)
				ID No. 9 (Longbreach Solar Farm)	Slight	Moderate/minor adverse (not significant)
				ID No. 32 (Littleton Manor Farm)	Slight	Moderate/minor adverse (not significant)
				All	Moderate/ slight	Moderate adverse (not significant)
North Buckinghamshire Way and The Midshires Way	Construction and decommissioning	Additional mitigation: Protection of existing retained vegetation Embedded mitigation: Implementation of landscape mitigation planting	High/ Medium	Proposed Development	Moderate/ slight	**Moderate adverse (significant)**
				ID No. 1 (East Claydon BESS)	Moderate/ slight	**Moderate adverse (significant)**
				ID No. 2 (East Claydon Greener Grid Park)	Moderate/ slight	**Moderate adverse (significant)**
				ID No. 3 (Tuckey Solar Farm)	Moderate/ slight	**Moderate adverse (significant)**
				ID No. 8 (East West Rail)	Moderate/ slight	**Moderate adverse (significant)**
				ID No. 9 (Longbreach Solar Farm)	Moderate/ slight	**Moderate adverse (significant)**
				All	Moderate/ slight	**Moderate adverse (significant)**

Receptor	Phase	Embedded or additional mitigation	Sensitivity of the receptor	Development	Magnitude of effect	Residual effect (with additional mitigation)
	Operation Year 1 and Year 10	Embedded mitigation: Maintenance of newly established landscape mitigation	High/ Medium	Proposed Development	Yr 1: Moderate/ slight Yr 10: Slight	**Yr 1 Moderate adverse (significant)** Yr 10 Moderate/minor adverse (not significant)
				ID No. 1 (East Claydon BESS)	Yr 1: Moderate/ slight Yr 10 Slight	**Yr 1 Moderate adverse (significant)** Yr 10 Moderate/minor adverse (not significant)
				ID No. 2 (East Claydon Greener Grid Park)	Yr 1: Moderate/ slight Yr 10: Slight	**Yr 1 Moderate adverse (significant)** Yr 10 Moderate/minor adverse (not significant)
				ID No. 3 (Tuckey Solar Farm)	Yr 1: Moderate/ slight Yr 10: Slight	**Yr 1 Moderate adverse (significant)** Yr 10 Moderate/minor adverse (not significant)
				ID No. 8 (East West Rail)	Yr 1: Moderate/ slight Yr 10: Slight	**Yr 1 Moderate adverse (significant)** Yr 10 Moderate/minor adverse (not significant)

Receptor	Phase	Embedded or additional mitigation	Sensitivity of the receptor	Development	Magnitude of effect	Residual effect (with additional mitigation)
				ID No. 9 (Longbreach Solar Farm)	Yr 1: Moderate/ slight Yr 10: Slight	**Yr 1 Moderate adverse (significant)** Yr 10 Moderate/minor adverse (not significant)
				ID No. 32 (Littleton Manor Farm)	Yr 1: Moderate/ slight Yr 10 Moderate/ slight	**Moderate adverse (significant)** **Moderate adverse (significant)**
				All	Yr 1: Moderate/ slight Yr 10: Moderate/ slight	**Yr 1 Moderate adverse (significant)** **Yr 10 Moderate adverse (significant)**
Swan's Way/Outer Aylesbury Ring	Construction and decommissioning	Additional mitigation: Protection of existing retained vegetation Embedded mitigation:	High/ Medium	Proposed Development	Slight	Moderate/Minor adverse (not significant)
				ID No. 1 (East Claydon BESS)	Slight	Moderate/Minor adverse (not significant)
				ID No. 2 (East Claydon Greener Grid Park)	Slight	Moderate/Minor adverse (not significant)

Receptor	Phase	Embedded or additional mitigation	Sensitivity of the receptor	Development	Magnitude of effect	Residual effect (with additional mitigation)
		Implementation of landscape mitigation planting		ID No. 3 (Tuckey Solar Farm)	Slight	Moderate/Minor adverse (not significant)
				ID No. 8 (East West Rail)	Slight	Moderate/Minor adverse (not significant)
				ID No. 9 (Longbreach Solar Farm)	Slight	Moderate/Minor adverse (not significant)
				All	Slight	Moderate/Minor adverse (not significant)
	Operation Year 1 and Year 10	Embedded mitigation: Maintenance of newly established landscape mitigation	High/ Medium	Proposed Development	Moderate/ slight	**Moderate adverse (significant)**
				ID No. 1 (East Claydon BESS)	Moderate/ slight	**Moderate adverse (significant)**
				ID No. 2 (East Claydon Greener Grid Park)	Moderate/ slight	**Moderate adverse (significant)**
				ID No. 3 (Tuckey Solar Farm)	Moderate/ slight	**Moderate adverse (significant)**
				ID No. 8 (East West Rail)	Moderate/ slight	**Moderate adverse (significant)**
				ID No. 9 (Longbreach Solar Farm)	Moderate/ slight	**Moderate adverse (significant)**
				ID No. 32 (Littleton Manor Farm)	Moderate/ slight	**Moderate adverse (significant)**

Receptor	Phase	Embedded or additional mitigation	Sensitivity of the receptor	Development	Magnitude of effect	Residual effect (with additional mitigation)
				All	Moderate/ slight	**Moderate adverse (significant)**
Bernwood Jubilee Way	Construction and decommissioning	Additional mitigation: Protection of existing retained vegetation Embedded mitigation: Implementation of landscape mitigation planting	High/ Medium	Proposed Development	Moderate	**Moderate adverse (significant)**
				ID No. 1 (East Claydon BESS)	Moderate	**Moderate adverse (significant)**
				ID No. 2 (East Claydon Greener Grid Park)	Moderate	**Moderate adverse (significant)**
				ID No. 3 (Tuckey Solar Farm)	Moderate	**Moderate adverse (significant)**
				ID No. 8 (East West Rail)	Moderate	**Moderate adverse (significant)**
				ID No. 9 (Longbreach Solar Farm)	Moderate	**Moderate adverse (significant)**
				All	Moderate	**Moderate adverse (significant)**
	Operation Year 1 and Year 10	Embedded mitigation: Maintenance of newly established landscape mitigation	High/ Medium	Proposed Development	Moderate	**Major/moderate adverse (significant)**
				ID No. 1 (East Claydon BESS)	Moderate	**Major/moderate adverse (significant)**
				ID No. 2 (East Claydon Greener Grid Park)	Moderate	**Major/moderate adverse (significant)**

Receptor	Phase	Embedded or additional mitigation	Sensitivity of the receptor	Development	Magnitude of effect	Residual effect (with additional mitigation)
				ID No. 3 (Tuckey Solar Farm)	Moderate	**Major/moderate adverse (significant)**
				ID No. 8 (East West Rail)	Moderate	**Major/moderate adverse (significant)**
				ID No. 9 (Longbreach Solar Farm)	Moderate	**Major/moderate adverse (significant)**
				ID No. 32 (Littleton Manor Farm)	Moderate	**Major/moderate adverse (significant)**
				All	Moderate	**Major/moderate adverse (significant)**
PRoW between Botolph Claydon and Runt's Wood	Construction	Additional mitigation: Protection of existing retained vegetation Embedded mitigation: Implementation of landscape mitigation planting	High/ Medium	Proposed Development	Substantial/ moderate	**Major/moderate adverse (significant)**
				ID No. 1 (East Claydon BESS)	Substantial/ moderate	**Major/moderate adverse (significant)**
				ID No. 2 (East Claydon Greener Grid Park)	Substantial/ moderate	**Major/moderate adverse (significant)**
				ID No. 3 (Tuckey Solar Farm)	Substantial/ moderate	**Major/moderate adverse (significant)**
				ID No. 8 (East West Rail)	Substantial/ moderate	**Major/moderate adverse (significant)**
				ID No. 9 (Longbreach Solar Farm)	Substantial/ moderate	**Major/moderate adverse (significant)**

Receptor	Phase	Embedded or additional mitigation	Sensitivity of the receptor	Development	Magnitude of effect	Residual effect (with additional mitigation)
				All	Substantial/ moderate	**Major/moderate adverse (significant)**
	Operation Year 1 and Year 10	Embedded mitigation: Maintenance of newly established landscape mitigation	High/ Medium	Proposed Development	Yr 1: Substantial	**Yr 1 Major adverse (significant)**
					Yr 10: Substantial/ moderate	**Yr 10 Major/moderate adverse (significant)**
				ID No. 1 (East Claydon BESS)	Yr 1: Substantial	**Yr 1 Major adverse (significant)**
					Yr 10: Substantial/ moderate	**Yr 10 Major/moderate adverse (significant)**
				ID No. 2 (East Claydon Greener Grid Park)	Yr 1: Substantial	**Yr 1 Major adverse (significant)**
					Yr 10: Substantial/ moderate	**Yr 10 Major/moderate adverse (significant)**
				ID No. 3 (Tuckey Solar Farm)	Yr 1: Substantial	**Yr 1 Major adverse (significant)**
					Yr 10: Substantial/ moderate	**Yr 10 Major/moderate adverse (significant)**

Receptor	Phase	Embedded or additional mitigation	Sensitivity of the receptor	Development	Magnitude of effect	Residual effect (with additional mitigation)
				ID No. 8 (East West Rail)	Yr 1: Substantial	**Yr 1 Major adverse (significant)**
					Yr 10: Substantial/ moderate	**Yr 10 Major/moderate adverse (significant)**
				ID No. 9 (Longbreach Solar Farm)	Yr 1: Substantial	**Yr 1 Major adverse (significant)**
					Yr 10: Substantial/ moderate	**Yr 10 Major/moderate adverse (significant)**
				ID No. 32 (Littleton Manor Farm)	Yr 1: Substantial	**Yr 1 Major adverse (significant)**
					Yr 10: Substantial/ moderate	**Yr 10 Major/moderate adverse (significant)**
				All	Yr 1: Substantial	**Yr 1 Major adverse (significant)**
					Yr 10: Substantial/ moderate	**Yr 10 Major/moderate adverse (significant)**
PRoW between	Construction	Additional mitigation:	High/ Medium	Proposed Development	Slight	Moderate/minor adverse (not significant)

Receptor	Phase	Embedded or additional mitigation	Sensitivity of the receptor	Development	Magnitude of effect	Residual effect (with additional mitigation)
Steeple Claydon and Calvert Road		Protection of existing retained vegetation Embedded mitigation: Implementation of landscape mitigation planting		ID No. 1 (East Claydon BESS)	Slight	Moderate/minor adverse (not significant)
				ID No. 2 (East Claydon Greener Grid Park)	Slight	Moderate/minor adverse (not significant)
				ID No. 3 (Tuckey Solar Farm)	Slight	Moderate/minor adverse (not significant)
				ID No. 8 (East West Rail)	Slight	Moderate/minor adverse (not significant)
				ID No. 9 (Longbreach Solar Farm)	Slight	Moderate/minor adverse (not significant)
				All	Slight	Moderate/minor adverse (not significant)
	Operation Year 1 and Year 10	Embedded mitigation: Maintenance of newly established landscape mitigation	High/ Medium	Proposed Development	Slight	Moderate/minor adverse (not significant)
				ID No. 1 (East Claydon BESS)	Slight	Moderate/minor adverse (not significant)
				ID No. 2 (East Claydon Greener Grid Park)	Slight	Moderate/minor adverse (not significant)
				ID No. 3 (Tuckey Solar Farm)	Slight	Moderate/minor adverse (not significant)
				ID No. 8 (East West Rail)	Moderate/ slight	Moderate adverse (not significant)

Receptor	Phase	Embedded or additional mitigation	Sensitivity of the receptor	Development	Magnitude of effect	Residual effect (with additional mitigation)
				ID No. 9 (Longbreach Solar Farm)	Slight	Moderate/minor adverse (not significant)
				ID No. 32 (Littleton Manor Farm)	Slight	**Moderate/minor adverse (significant)**
				All	Moderate/ slight	Moderate adverse (not significant)
PRoW between East Claydon Road/Parcel 3 and Granborough/ Hogshaw Road	Construction	Additional mitigation: Protection of existing retained vegetation Embedded mitigation: Implementation of landscape mitigation planting	High/ Medium	Proposed Development	Slight	Moderate/minor adverse (not significant)
				ID No. 1 (East Claydon BESS)	Moderate	**Moderate adverse (significant)**
				ID No. 2 (East Claydon Greener Grid Park)	Slight	Moderate/minor adverse (not significant)
				ID No. 3 (Tuckey Solar Farm)	Slight	Moderate/minor adverse (not significant)
				ID No. 8 (East West Rail)	Slight	Moderate/minor adverse (not significant)
				ID No. 9 (Longbreach Solar Farm)	Slight	Moderate/minor adverse (not significant)
				All	Moderate	**Moderate adverse (significant)**

Receptor	Phase	Embedded or additional mitigation	Sensitivity of the receptor	Development	Magnitude of effect	Residual effect (with additional mitigation)
	Operation Year 1 and Year 10	Embedded mitigation: Maintenance of newly established landscape mitigation	High/ Medium	Proposed Development	Yr 1 & Yr 10: Slight	Yr 1 & Yr 10 Moderate/minor adverse (not significant)
				ID No. 1 (East Claydon BESS)	Yr 1: Moderate Yr 10: Moderate/ slight	**Yr 1 Major/moderate adverse (significant)** Yr 10 Moderate adverse (not significant)
				ID No. 2 (East Claydon Greener Grid Park)	Yr 1 & Yr 10: Slight	Yr 1 & Yr 10 Moderate/minor adverse (not significant)
				ID No. 3 (Tuckey Solar Farm)	Yr 1 & Yr 10: Slight	Yr 1 & Yr 10 Moderate/minor adverse (not significant)
				ID No. 8 (East West Rail)	Yr 1 & Yr 10: Slight	Yr 1 & Yr 10 Moderate/minor adverse (not significant)
				ID No. 9 (Longbreach Solar Farm)	Yr 1 & Yr 10: Slight	Yr 1 & Yr 10 Moderate/minor adverse (not significant)
				ID No. 32 (Littleton Manor Farm)	Yr 1 & Yr 10: Slight	Yr 1 & Yr 10 Moderate/minor adverse (not significant)

Receptor	Phase	Embedded or additional mitigation	Sensitivity of the receptor	Development	Magnitude of effect	Residual effect (with additional mitigation)
				All	Yr 1: Moderate Yr 10: Moderate/ slight	**Yr 1 Major/moderate adverse (significant)** Yr 10 Moderate adverse (not significant)
PRoW between East Claydon/East Claydon Road and to within Parcel 3	Construction	Additional mitigation: Protection of existing retained vegetation Embedded mitigation: Implementation of landscape mitigation planting	High/ Medium	Proposed Development	Moderate	**Moderate adverse (significant)**
				ID No. 1 (East Claydon BESS)	Moderate	**Moderate adverse (significant)**
				ID No. 2 (East Claydon Greener Grid Park)	Moderate	**Moderate adverse (significant)**
				ID No. 3 (Tuckey Solar Farm)	Moderate	**Moderate adverse (significant)**
				ID No. 8 (East West Rail)	Moderate	**Moderate adverse (significant)**
				ID No. 9 (Longbreach Solar Farm)	Moderate	**Moderate adverse (significant)**
				All	Substantial/ moderate	**Major/moderate adverse (significant)**
	Operation Year 1 and Year 10	Embedded mitigation: Maintenance of	High/ Medium	Proposed Development	Yr 1: Moderate Yr 10: Moderate/ slight	**Yr 1 Major/moderate adverse (significant)** Yr 10 Moderate adverse (not significant)

Receptor	Phase	Embedded or additional mitigation	Sensitivity of the receptor	Development	Magnitude of effect	Residual effect (with additional mitigation)
		newly established landscape mitigation		ID No. 1 (East Claydon BESS)	Yr 1: Moderate Yr 10: Moderate/ slight	**Yr 1 Major/moderate adverse (significant)** Yr 10 Moderate adverse (not significant)
				ID No. 3 (Tuckey Solar Farm)	Yr 1: Moderate Yr 10: Moderate/ slight	**Yr 1 Major/moderate adverse (significant)** Yr 10 Moderate adverse (not significant)
				ID No. 8 (East West Rail)	Yr 1: Moderate Yr 10: Moderate/ slight	**Yr 1 Major/moderate adverse (significant)** Yr 10 Moderate adverse (not significant)
				ID No. 9 (Longbreach Solar Farm)	Yr 1: Moderate Yr 10: Moderate/ slight	**Yr 1 Major/moderate adverse (significant)** Yr 10 Moderate adverse (not significant)
				ID No. 32 (Littleton Manor Farm)	Yr 1: Moderate Yr 10: Moderate/ slight	**Yr 1 Major/moderate adverse (significant)** Yr 10 Moderate adverse (not significant)
				All	Yr 1: Moderate	**Yr 1 Major/moderate adverse (significant)**

Receptor	Phase	Embedded or additional mitigation	Sensitivity of the receptor	Development	Magnitude of effect	Residual effect (with additional mitigation)
					Yr 10: Moderate/ slight	Yr 10 Moderate adverse (not significant)
Sion Hill Farm	Operation Year 1 and Year 10	Embedded mitigation: Maintenance of newly established landscape mitigation	High	Proposed Development	Yr 1: Substantial	**Yr 1 Major adverse (significant)**
					Yr 10: Substantial/ moderate	**Yr 10 Major/moderate (significant)**
				ID No. 1 (East Claydon BESS)	Yr 1: Substantial	**Yr 1 Major adverse (significant)**
					Yr 10: Substantial/ moderate	**Yr 10 Major/moderate (significant)**
				ID No. 2 (East Claydon Greener Grid Park)	Yr 1: Substantial	**Yr 1 Major adverse (significant)**
					Yr 10: Substantial/ moderate	**Yr 10 Major/moderate (significant)**
				ID No. 3 (Tuckey Solar Farm)	Yr 1: Substantial	**Yr 1 Major adverse (significant)**
					Yr 10: Substantial/ moderate	**Yr 10 Major/moderate (significant)**

Receptor	Phase	Embedded or additional mitigation	Sensitivity of the receptor	Development	Magnitude of effect	Residual effect (with additional mitigation)
				ID No. 8 (East West Rail)	Yr 1: Substantial	**Yr 1 Major adverse (significant)**
					Yr 10: Substantial/ moderate	**Yr 10 Major/moderate (significant)**
				ID No. 9 (Longbreach Solar Farm)	Yr 1: Substantial	**Yr 1 Major adverse (significant)**
					Yr 10: Substantial/ moderate	**Yr 10 Major/moderate (significant)**
				ID No. 32 (Littleton Manor Farm)	Yr 1: Substantial	**Yr 1 Major adverse (significant)**
					Yr 10: Substantial/ moderate	**Yr 10 Major/moderate (significant)**
				All	Yr 1: Substantial	**Yr 1 Major adverse (significant)**
					Yr 10: Substantial/ moderate	**Yr 10 Major/moderate (significant)**
Station House	Operation Year 1 and Year 10	Embedded mitigation:	High	Proposed Development	Moderate/ slight	Moderate adverse (not significant)

Receptor	Phase	Embedded or additional mitigation	Sensitivity of the receptor	Development	Magnitude of effect	Residual effect (with additional mitigation)
		Maintenance of newly established landscape mitigation		ID No. 1 (East Claydon BESS)	Moderate/ slight	Moderate adverse (not significant)
				ID No. 2 (East Claydon Greener Grid Park)	Moderate/ slight	Moderate adverse (not significant)
				ID No. 3 (Tuckey Solar Farm)	Moderate/ slight	Moderate adverse (not significant)
				ID No. 8 (East West Rail)	Moderate/ slight	Moderate adverse (not significant)
				ID No. 9 (Longbreach Solar Farm)	Moderate/ slight	Moderate adverse (not significant)
				ID No. 32 (Littleton Manor Farm)	Moderate/ slight	Moderate adverse (not significant)
				All	Moderate/ slight	Moderate adverse (not significant)

Land and groundwater

17.7.27. The ZoI for land and groundwater, identified in **Table 17.2**, is 1km. There are six developments within 1km of the Order Limits, one of which is ongoing (ID No. 5 (HS2)), two are approved (both relating to ID No. 3 (Tuckey Solar Farm)), four are pending a decision or in appeal (ID No. 1 (East Claydon BESS), ID No. 2 (East Claydon Greener Grid Park), ID No. 7 (Calvert Solar Farm), and (ID No. 8 (East West Rail)).

17.7.28. Impacts that could occur as a result of these developments during construction, operation (including maintenance) and decommissioning include:

- Accidental spills or leaks of fuel, oils or other chemicals affecting land or groundwater;
- Run-off from construction activities affecting groundwater quality;
- Mobilisation of existing contamination, affecting land or groundwater;
- Introducing new potential pathways for the movement of pollutants (for example due to excavations, piling or foundation construction works), affecting land or groundwater;
- Affecting the level or flow of groundwater due to influencing existing drainage conditions (either by damaging existing drainage infrastructure, or affecting the nature of the surface, so changing the behaviour of surface water ingress into the ground);
- Geological units could be physically affected by excavations, piling and foundation works; and
- Fire-fighting water could be released to the environment, resulting in potential impacts on land and groundwater.

17.7.29. No interaction of impacts on receptors associated with land would be expected between the Proposed Development and ongoing and/or approved developments within the short list, as all potential impacts relating to land would be limited in lateral extent. For example, the excavation of foundations, or an area where piling is undertaken. Therefore, inter-project cumulative effects during construction, operation (including maintenance) and decommissioning phases are anticipated to be **not significant**.

17.7.30. There is potential for adverse effects on groundwater from more than one project to have a combined effect on groundwater receptors. However, it is assumed that all five developments will be subject to the respective mitigation plans agreed with the relevant authorities, and that adverse effects on groundwater receptors would be mitigated and remain highly localised. This would mean that any impacts would not be expected to

overlap therefore, there would be no inter-project cumulative effect during construction, operation (including maintenance) and decommissioning phases. In view of this, the probability of significant inter-project cumulative effects occurring on groundwater is anticipated to be **low**.

Soil

17.7.31. The ZoI for soil identified in **Table 17.2** is 1km. There are six developments within 1km of the Order Limits, one of which is ongoing (ID No. 5 (HS2)), two are approved (both relating to ID No. 3 (Tuckey Solar Farm)), four are pending a decision (ID No. 7 (Calvert Solar Farm), ID No. 2 (East Claydon Greener Grid Park), ID No. 1 (East Claydon BESS), and ID No. 8 (East West Rail)).

17.7.32. As a result of these developments there could be an increased soil disturbance and reduction in agricultural land quality. During the construction phase, the land will be removed from agricultural production therefore reducing agricultural productivity. Additionally, the soil will be temporarily disturbed due to soil handling.

17.7.33. In accordance with 'A New Perspective on Land and Soil in Environmental Impact Assessment' **[Ref. 17-19]**, a permanent land loss of over 20ha is considered a high magnitude of change from the baseline. However, all of the soil within the developments are mapped or expected to be Grade 3b which is non-BMV land. These results were achieved through detailed ALC survey and predicted the unsurveyed area as 3b which has been agreed by Natural England. Additionally, the soil is mapped as heavy textured with field capacity days fewer than 150, therefore a medium soil resilience and sensitivity is assessed. A medium sensitivity for both soil resilience and agricultural land quality and a high magnitude means there is a moderate or large adverse significant effect from cumulative developments within the 1km ZoI.

17.7.34. As part of this DCO Application an **Outline SMP [EN010158/APP/7.7]** has been produced to prevent damage to soil structure, as well as potential damage to field drains (and subsequent effects on drainage of agricultural land). There is either a commitment to follow these similar principles, or similar alternative chapters and outline soil management plans submitted as part of the applications for the cumulative projects. Therefore, there will be a significant effect on agricultural quality due to the loss of land however this loss will not occur on BMV, the loss will be of worse performing agricultural land and therefore keeping the best performing land within agricultural production.

Population

17.7.35. The approach to identifying cumulative developments relevant to the assessment of socio-economic and population effects is based on a

review of projects of local and wider regional significance within the local labour market areas.

17.7.36. Determining a ZoI for certain topic areas is less appropriate because of the nature of the assessment. The cumulative impact assessment for socio-economic effects is based on a different approach from other disciplines of the ES, in that it utilises broader "macro" projections of cumulative influences relevant to particular potential effects (e.g. effects on local and regional labour market), rather than focusing on potential cumulative effects of specific developments on individual receptors.

17.7.37. Primarily, cumulative socio-economic effects (related to employment, skills, supply chain and GVA) are driven by the potential for net additional (i.e. above trend) changes to demand for labour and skills during the construction phase particularly at the regional level, as identified in the overarching national policy statement for energy (para 5.12.3).

17.7.38. In the case of labour demand, construction labour demand would be a small part of a wider regional and national construction labour market with smaller individual schemes forming part of an overall background trend in demand. Other developments are therefore taken to be included in the background trend (see 'Future Baseline').

17.7.39. For some potential cumulative effects (such as worker expenditure, and supply chain/GVA, and operational employment), there is substantial uncertainty about the spatial and temporal effects that may combine to affect the receptors identified as being potentially sensitive to change. These effects are reported as beneficial for but not significant in EIA terms, and any additional cumulative effect is likely to result in slight but unquantifiable additions to this beneficial effect.

17.7.40. For some potential cumulative effects (such as the effect on community and recreational facilities and tourism), the effects identified by the Proposed Development are based on highly localised effects on specific receptors that would not be affected by the identified cumulative projects.

17.7.41. The other Nationally Significant Infrastructure Projects (NSIPs) in the principal study areas for population and socio-economic effects (i.e. the CLMA Focus Area and local authority administrative areas) have the potential for significant impacts on employment and skills and therefore need to be considered individually.

17.7.42. The Proposed Development is likely to interact with cumulative projects on an 'economic' scale effect (where cumulative projects are within the Proposed Development's wider study areas (CLMA Focus Area and Local Authority/County scale) (see **ES Volume 2, Chapter 14: Population [EN010158/APP/6.2]**) – this considers (quantitatively) the interaction

between the Proposed Development and other solar projects (and other projects identified in **Table 17.3**) in those areas for the following effects:

- Construction employment and economic impacts during construction of the cumulative developments and the Proposed Development (CLMA Focus Area);
- Effects on tourist accommodation occupancy during construction of the cumulative developments and the Proposed Development (CLMA Focus Area); and
- Effects on the agricultural economy during the construction and operation (including maintenance) phases (Buckinghamshire).

17.7.43. It is important to note that cumulative socio-economic effects are driven by net additional (above trend) changes including NSIPs, while smaller Town and Country Planning Act schemes are assumed to form a part of the overall background trend in demand. General construction activity (includes the construction of Town and Country Planning Act developments) is accounted for through local plans as highlighted within the 'Future Baseline' section of **ES Volume 2, Chapter 14: Population [EN010158/APP/6.2]** (**Paragraphs 14.5.89** to **14.5.98**), with the level of activity generated by non-NSIP applications being continuous. As a result of this, the socio-economic cumulative assessment is focused around NSIPs which have the potential to create significant socio-economic impacts.

17.7.44. As the scale of assessments necessitates going beyond the limit of the ZoI set within this chapter, this element of the Population assessment draws on information published by the Department for Energy Security & Net Zero (January 2025) Renewable Energy Planning Database **[Ref. 17-20]** which provides a list of all solar projects in planning or under construction by type and site area in Buckinghamshire. This includes the solar projects within the short list of cumulative developments set out at **Table 17.3** in this chapter.

17.7.45. **Table 17.14** sets out the cumulative projects within Buckinghamshire considered for these assessments, including the project/site name, application reference, and site area.

Table 17.14: Cumulative projects for economic-scale cumulative population effects

ID No.	Site/project name	Location	Application reference	Site area (Ha)
N/A	Bumpers Farm Phase 2	CLMA Focus Area	14/01926/APP	50
3	Tuckey Farm	CLMA Focus Area	19/00983/APP	63

ID No.	Site/project name	Location	Application reference	Site area (Ha)
N/A	Wood End, Mursley Road	CLMA Focus Area	19/04485/APP	48
N/A	Hale Solar Farm	CLMA Focus Area	20/00779/APP	70
N/A	Manor Farm	CLMA Focus Area	21/00130/APP	23
N/A	Stratford Road Solar Farm	CLMA Focus Area	20/04311/APP	8
N/A	Lower Waldridge Farm, Ford - Solar Farm	CLMA Focus Area	21/02310/APP	97
N/A	Whirlbush Farm, Kingsey - Solar Farm & Battery Storage	CLMA Focus Area	21/02821/APP	49
N/A	Moat Farm - Solar Farm	CLMA Focus Area	21/03182/APP	36
7	Calvert Landfill Site Solar Array	CLMA Focus Area	CM/0016/21	137
N/A	Wicken Farm, Leckhampstead - Solar Farm	CLMA Focus Area	21/04925/APP	29
N/A	Bury Farm - Solar Farm	Rest of Buckinghamshire	21/02775/APP	37
N/A	Callie's Solar Farm	CLMA Focus Area	22/00986/APP	62
N/A	Manor Farm, Beachampton - Solar Farm	CLMA Focus Area	22/03492/APP	43
N/A	Straws Hadley Solar Farm	CLMA Focus Area	23/01094/APP	59
N/A	Kimblewick Road Solar Farm	CLMA Focus Area	23/02077/APP	39
N/A	Liscombe Business Park - Ground	CLMA Focus Area	23/01505/APP	0.4

ID No.	Site/project name	Location	Application reference	Site area (Ha)
	Mounted Solar Array			
N/A	Littleton Green - Energy Park	CLMA Focus Area	22/03384/AOP	11
N/A	Crockmore Lane, Fawley - Solar Panels	Rest of Buckinghamshire	24/07796/FUL	0.3
9	Longbeach Solar Farm	CLMA Focus Area	25/01865/APP	64
N/A	Fox Covert Solar Farm	CLMA Focus Area	20/02582/APP	47

Construction and operation (including maintenance) employment and economic effects

17.7.46. During the construction phase of the Proposed Development, inter-project cumulative effects related to the labour market may arise in-combination with other infrastructure projects (including NSIPs) likely to share similar construction skillsets and then contribute to productive operational employment.

17.7.47. The cumulative projects identified have the potential to generate cumulative economic effects in terms of opportunity for long-term, skilled and transferable employment for the area, and demand for employment and skills in the regional construction labour market and local economy (as the result of creation of employment opportunities and sustainable careers, skills and training benefits).

17.7.48. It is not possible to accurately predict the extent to which the projects listed at **Table 17.14** would generate construction or operational employment - in some cases information is not in the public domain about the quantity or spatial scale of employment generated, and in some cases it is not clear where there is potential for spatial (i.e. labour market) or temporal overlap between these projects.

17.7.49. However, for consistency it is assumed that the cumulative projects may support similar ratios of construction employment per hectare of land to be developed due to the similarity in likely construction techniques, labour and skills demand and technology.

17.7.50. On this basis, it is estimated that the cumulative solar projects could support (gross) around 2,150 construction years of employment, in

addition to the 1,500 construction years of employment supported by the Proposed Development. If delivered over 10 years, this would result in an average of 190 temporary net full time equivalent jobs per year across the construction labour market area in addition to the average of 600 jobs supported by the Proposed Development (for 30 months). It is accepted that there are several variables and that little is known about the construction duration and potential for peaks within this hypothetical period.

17.7.51. On this basis (and applying the same net additionality assumptions as per the Proposed Development in **ES Volume 2, Chapter 14: Population [EN010158/APP/6.2]**), the cumulative solar projects inclusive of the Proposed Development would temporarily create demand equivalent to 2.5% of existing resident construction workers in the CLMA Focus Area today.

17.7.52. Given the scale of the labour market, the characteristics of the construction labour market, the cumulative employment supported is likely to result in a low magnitude effect on a medium sensitivity receptor resulting in a temporary, minor beneficial effect (**not significant**).

17.7.53. While the employment, skills and opportunity provided by the cumulative developments reflect a positive contribution to the economic and social policy objectives of local, regional and national policy reported in **ES Volume 2, Chapter 14: Population [EN010158/APP/6.2]**, and therefore present the potential for a beneficial (though **not significant**) effect, the Applicant is cognisant that stakeholders may be concerned about the ability for the labour market to deliver the number of skilled construction workers without causing shortages in supply, and the policy responsibility for the Applicant to promote employment, skills and supply chain benefits within the local area.

17.7.54. As such, the Applicant has produced an **Outline Employment, Skills and Supply Chain Plan [EN010158/APP/7.14]**, with a detailed Skills, Employment and Supply Plan being secured by a Requirement to the **Draft DCO [EN010158/APP/3.1]**. The **Outline Employment, Skills and Supply Chain Plan [EN010158/APP/7.14]**, intends to:

- Promote opportunities for people who are employed, unemployed and economically active and young people who are not in Education, Employment or Training to access employment and skills development opportunities;
- Create opportunities for businesses to tender for work and join the supply chain of the Proposed Development;
- Clearly define the workforce, skills and supply chain requirements of the Proposed Development and articulate these in a clear and timely way to relevant stakeholders involved at a County- and Regional-level

in supporting education, access to employment, skills development and business engagement;

- Harness the motivational potential of the Proposed Development to inspire the next generation of talent, particularly, to confidently invest in a career and future in Buckinghamshire, benefitting all employers; and
- Contribute to an evidence base to support the planning and delivery of education and skills curricula and training capable of delivering the workforce and skills needed across the County and wider Region, at the right time, to support the business competitiveness of all energy and construction projects.

17.7.55. A key tenet of this approach is collaboration. It is further anticipated that each individual cumulative project would also produce similar strategies to enhance and promote local employment, skills and supply chain opportunities and as set out above the Applicant is keen to collaborate with developers, sectors and public and voluntary and community stakeholders in this regard (see **Outline Employment, Skills and Supply Chain Plan [EN010158/APP/7.14]**).

17.7.56. Based on standard Gross Value Added (GVA) per worker rates and daily spending set out within **ES Volume 2, Chapter 14: Population [EN010158/APP/6.2]**, this may result in a net cumulative contribution to GVA of around 1.4% of the current construction GVA in the CLMA Focus Area during construction.

17.7.57. Beyond the solar projects, there would be employment supported by other infrastructure projects within the CLMA Focus Area set out in **Table 17.3** including ID No. 5 (HS2), ID No. 1 (East Claydon BESS), Substation and ID No. 2 (East Claydon Greener Grid Park) and Grendon Prison. While detailed, localised employment figures are not available for HS2 (which reports a total of 14,000 construction jobs for the entirety of Phase 1) and ID No. 1 (East Claydon BESS), application materials for Grendon Prison suggest a construction workforce estimated at 45 workers.

17.7.58. In the absence of detailed information, applying construction employment to site area ratios for HS2, and East Claydon projects, and published estimates for Grendon Prison would increase the above estimates by around 46%.

17.7.59. The cumulative GVA/spend supported during construction is likely to result in a low magnitude effect on a medium sensitivity receptor resulting in a temporary, minor beneficial effect (**not significant**).

Effects on tourist accommodation occupancy during construction

17.7.60. The approach to the assessment of inter-project cumulative effects of increased occupancy rates resulting from the Proposed Development and

cumulative projects is based on the approach outlined in **ES Volume 2, Chapter 14: Population [EN010158/APP/6.2]**.

17.7.61. During the construction phase of the Proposed Development, inter-project cumulative effects on occupancy rates of temporary (tourist sector) accommodation as a result of the non-local construction workers may arise.

17.7.62. The anticipated construction phase timings suggest that there is potential for the Proposed Development's construction phase to overlap with these projects and therefore they have been assessed with regards to the potential for inter-project cumulative effects on occupancy.

17.7.63. This inter-project cumulative effects assessment is based on the anticipated peak number of construction staff working on the construction phase of each project in order to address the potential worst-case scenario. However, it is unlikely that the peak number of construction staff are anticipated on-site for all of the NSIPs at one time due to differing project programmes and the phasing of construction works.

17.7.64. The NSIPs included in this assessment are at different stages of the DCO Application process and therefore the anticipated peak number of construction workers is not available for some of the applications. Therefore, this assessment is based on data that is publicly available as of the time of preparation of this assessment.

17.7.65. The maximum number of construction workers expected within the study area as a result of the construction phases of the cumulative projects (assuming a 5-year average construction phase for the cumulative projects, overlapping with the 30-month construction phase for the Proposed Development) is approximately 850.

17.7.66. Research undertaken by Construction Industry Training Board in 2023, highlighted that around 6% of construction workers stay in temporary accommodation whilst working on site. Therefore, for this inter-project cumulative effects assessment, it is assumed that 6% of the total maximum number of construction workers will require temporary accommodation. Therefore, an estimate of approximately 50 construction workers would require temporary accommodation in Serviced and Non-Serviced accommodation at one time.

17.7.67. **Tables 14.16**, **Table 14.17** and **Table 14.18** in **ES Volume 2, Chapter 14: Population [EN010158/APP/6.2]** shows the number of available bedspaces from serviced and non-serviced accommodation in Buckinghamshire. In terms of occupancy rates for tourist accommodation, Visit Britain produces monthly reports **[Ref. 17-21]** at a national and regional scale for serviced (hotel) accommodation. For the south east,

annual average occupancy ranges from 83% in peak months to 63% in off peak months, with an annual average of 76-77%.

17.7.68. Assuming 50 construction workers use temporary accommodation when considered against the average number of bedspaces used generally, accommodation rates within the region will not hit capacity during any months of the year.

17.7.69. This demonstrates that it is likely that temporary accommodation providers will be able to cater for the tourist population as well as any temporary construction staff during the construction periods of all cumulative projects, whilst still having capacity remaining to accommodate additional people should it be necessary.

17.7.70. It should be noted that whilst the anticipated project programmes of the cumulative projects included in this inter-project cumulative effects assessment overlap, different project phasing and programmes suggest that it is unlikely that the maximum number of staff will be on site all at one time for all projects.

17.7.71. The significance of cumulative construction phase accommodation demand effect is assessed using the significance criteria stated in ES **Volume 2, ES Chapter 14: Population [EN010158/APP/6.2]**. The receptors for occupancy rates are business owners that offer accommodation within the study area. Their sensitivity to changed occupancy rates as a result of increased visitor numbers to the area is medium and the magnitude of impact following additional mitigation is minor. Therefore, there is likely to be a temporary slight residual impact on occupancy rates as a result of increased visitor numbers to the area which may be beneficial in terms of economic benefit, which is considered to be **not significant**.

Effects on the agricultural economy

17.7.72. As set out in **Table 17.3** and **Table 17.14**, there are several solar and other infrastructure projects likely to be constructed and operated within Buckinghamshire that are either currently in planning or under development, which are likely to lead to a reduction in the indicative employment capacity of agricultural land.

17.7.73. It is important to note that any inter-project cumulative effects assessment of the potential impact on the agricultural economy is hypothetical and does not consider individual landowner agreements which - for example in the case of the Proposed Development - could safeguard the employment supported by landholdings by moving the employment and/or productivity to a nearby site.

17.7.74. While information relating to the amount and type of agricultural land within the site area of other existing development and/or approved developments is available, it is not known whether agricultural activity could be on-going during construction or operation (including maintenance) phases (for example in the form of agrivoltaics) or whether it is anticipated that all of the agricultural land within the site areas for those developments would be taken out of agricultural use.

17.7.75. Furthermore, any project developing on agricultural land would be subject to a consideration of negotiated or statutory compensation relating to the operation of resident agricultural operations which would be addressed outside of the planning system and could offset the economic effect on a landholder/operator.

17.7.76. Nonetheless, it is possible to apply broad assumptions set out within **ES Volume 2, Chapter 14: Population [EN010158/APP/6.2]** to consider the potential effect of agricultural land and activity being changed in terms of an average and indicative employment per hectare ratio.

17.7.77. To assess a 'worst case' it is assumed that all of the land within the cumulative schemes is in agricultural use, if the information from each of the cumulative developments is not available.

17.7.78. The cumulative projects comprise approx. 1,400 hectares of predominantly agricultural land across a range of grades (in addition to the c. 677 hectares of agricultural land within the Proposed Development's Order Limits). Applying an average employment rate per hectare in Buckinghamshire using Defra data identifies that this land has the potential cumulative indicative employment capacity for 45 full time equivalent jobs.

17.7.79. As set out in set out within **ES Volume 2, Chapter 14: Population [EN010158/APP/6.2]**, Buckinghamshire currently supports approx. 2,237 full time equivalent jobs in agriculture. The cumulative developments therefore account for 2% of the indicative agricultural employment capacity in agriculture in Buckinghamshire.

17.7.80. The agricultural economy at the Buckinghamshire scale is considered to be a medium sensitivity receptor due to its capacity to experience annual and seasonal change, and ability to absorb or respond to this change without substantial socio-economic effect. The magnitude of the change upon the receptor is considered to be low (representing only 2% of employment capacity). As such, the inter-project cumulative effect on the agricultural economy (in terms of indicative employment capacity) during the construction, operation (including maintenance) and decommissioning phases is considered to be temporary, long-term and minor adverse (**not significant**).

17.7.81. It is noted, however, that the Proposed Development - while temporarily reducing employment capacity - is not likely to actually result in a loss of employment as jobs supported by the owners, tenants and operators of agricultural land would be moved to another landholdings via a land swap or through agreement of compensation, and therefore is not likely to contribute to an actual cumulative reduction in employment supported in the agricultural economy.

Noise and vibration

17.7.82. Based on the noise and vibration ZoI identified in **Table 17.2**, the following other existing development and/or approved developments have the potential to act cumulatively with the Proposed Development and have therefore been considered below:

- ID No. 1 (East Claydon BESS) (23/03875/APP);
- ID No. 3 (Tuckey Solar Farm) (19/00983/APP);
- ID No. 7 (Calvert Solar Farm) (CM/0016/21); and
- ID No. 5 (HS2) (and associated applications).

17.7.83. Noise from cumulative construction phase traffic has also been considered, based on the traffic flows presented in **Section 4.10** 'Committed Developments' of **ES Volume 4, Appendix 15.1: Transport Assessment [EN010158/APP/6.4]**.

ID No. 1 (East Claydon BESS)

17.7.84. ID No. 1 (East Claydon BESS) development is situated adjacent to the eastern boundary of Parcel 3 of the Proposed Development. The key shared noise sensitive receptor is Sion Hill Farm which is located to the west of Parcel 3 of the Proposed Development, approximately 420m from the ID No. 1 (East Claydon BESS) site boundary.

17.7.85. For the construction phase, ID No. 1 (East Claydon BESS) development considered three main phases of works. From this, the predicted noise levels from the construction works are up to 43 dB $L_{Aeq,12hr}$ at Sion Hill Farm, which is significantly lower than the daytime significance threshold of 65 dB $L_{Aeq,T}$.

17.7.86. Construction activities for the Proposed Development would take place closer to Sion Hill Farm, and as a result, are predicted to generate higher levels of daytime noise at the receptor than those from ID No. 1 (East Claydon BESS) development. The cumulative construction phase noise effects would therefore not be greater than the Proposed Development in isolation, as presented in **ES Volume 2, Chapter 13: Noise and Vibration [EN010158/APP/6.2]**.

17.7.87. The predicted operation phase noise levels from ID No. 1 (East Claydon BESS) development at Sion Hill Farm are 33 dB $L_{Ar,T}$ and 28 dB $L_{Ar,T}$ for the daytime and night-time periods respectively. The equivalent noise levels from the Proposed Development are 31 dB $L_{Ar,T}$ during both daytime and night-time periods. When considered cumulatively, the resultant noise levels would be 35 dB $L_{Ar,T}$ and 33 dB $L_{Ar,T}$ for the daytime and night-time periods respectively. When considered in the context of the significance criteria set out in **ES Volume 2, Chapter 13: Noise and Vibration [EN010158/APP/6.2]**, the resultant inter-project cumulative noise levels would constitute a direct, permanent minor adverse effect, which is considered **not significant**.

17.7.88. There is potential that the noise levels generated by the proposed National Grid East Claydon Substation development would also act cumulatively with the noise levels generated by the Proposed Development and ID No. 1 (East Claydon BESS) development at Sion Hill Farm; however, it is considered that this can be introduced (with appropriate mitigation) so as not to give rise to significant adverse inter-project cumulative effects at common receptors.

ID No. 3 (Tuckey Solar Farm)

17.7.89. A noise assessment was not submitted as part of the ID No. 3 (Tuckey Solar Farm) planning application. As a result of this, planning condition 25 for the development was imposed which stipulates that an acoustic assessment be undertaken which demonstrates that the operation phase rating levels generated by the development do not exceed background at the nearest residential property.

17.7.90. A noise impact assessment was subsequently submitted for the development to discharge the planning condition; the report demonstrated that the highest noise levels at the most exposed receptors would be 29 dB $L_{Ar,T}$ at Tuckey Farm/Tuckey Barn.

17.7.91. Given the location of noise emitting infrastructure associated with the ID No. 3 (Tuckey Solar Farm) development, the resultant noise levels at receptors considered within the assessment for the Proposed Development would be at a sufficiently low level that they would not act cumulatively. As a result, likely significant effects are not predicted during the operation (including maintenance) phase, and hence it is considered that inter-project cumulative effects are **not significant**.

ID No. 7 (Calvert Solar Park)

17.7.92. There does not appear to be a noise impact assessment report prepared for the ID No. 7 (Calvert Solar Farm) development; however, the Planning, Design and Access Statement which forms part of the planning application

references the operation phase noise levels in stating that "emitted noise levels would be low and unlikely to be discernible by local residents".

17.7.93. The noise emitting equipment associated with the ID No. 7 (Calvert Solar Farm) development is situated within the south western extents of the application site. As a result, the resultant noise levels at receptors considered within the assessment for the Proposed Development would be at a sufficiently low level that they would not act cumulatively in a manner that would give rise to adverse effects. As a result, likely significant effects are not predicted during the operation (including maintenance) phase, and hence it is considered that inter-project cumulative effects are **not significant**.

ID No. 5 (HS2) (and associated applications)

17.7.94. ID No. 5 (HS2) is located to the south west of Parcel 1 and Parcel 2 of the Proposed Development and as a result, there is potential for inter-project cumulative noise levels. For noise sensitive receptors in the vicinity of ID No. 5 (HS2), the predicted operation (including maintenance) phase noise levels from the Proposed Development are predicted to be considerably lower than the noise generated by ID No. 5 (HS2); on this basis, inter-project cumulative effects are considered to be **not significant**.

Noise from cumulative construction traffic

17.7.95. For the purposes of a cumulative traffic noise assessment, consideration has been given to the traffic flows presented in **Section 4.10** 'Committed Developments' of **ES Volume 4, Appendix 15.1: Transport Assessment [EN010158/APP/6.4]**.

17.7.96. The committed development traffic flows are reproduced in **Table 17.15**.

Table 17.15: Committed development traffic flows (per day)

Ref. No.	Description	Cars & LGV	HGV	Total traffic
1	A34	0	0	0
2	M40 North	0	0	0
3	M40 South	0	0	0
4	A41	380	0	0
5	A41 Bicester	380	0	0
6	A41 West	540	0	0
7	A41 East	540	0	0
8	Station Road/Dewes Lane	0	0	0
9	Snake Lane/Fidlers Field	0	0	0

Ref. No.	Description	Cars & LGV	HGV	Total traffic
10	Claydon Road	0	0	0
11	Granborough Road	0	0	0

17.7.97. For the road links that are expected to experience cumulative traffic flows (A41), the construction phase traffic associated with the Proposed Development were predicted to give rise to a negligible change. As a result, the inter-project cumulative traffic flows with the Proposed Development would be **not significant**.

Transport and access

17.7.98. A detailed review of other committed developments that could share the same study area road network at the same time as the Proposed Development has been undertaken in **ES Volume 4, Appendix 15.1: Transport Assessment [EN010158/APP/6.4]**.

17.7.99. The review has indicated two committed developments where significant traffic flows could interact. These are:

- ID No. 11 (Grendon Prison); and
- ID No. 5 (HS2).

17.7.100. ID No. 5 (HS2) traffic flows that are accurate for 2029 are not publicly available and as such, the existing ID No. 5 (HS2) flows operating at the time of the traffic surveys are being retained and subject to traffic growth assumptions to provide a robust assessment.

17.7.101. Traffic flows from the proposed ID No. 11 (Grendon Prison) have been obtained from the Transport Assessment for that project. The daily traffic flows are provided for a short section of the A41 and have been extended to extremes of the Proposed Development study area on that road.

17.7.102. ID No. 11 (Grendon Prison) only provides traffic flows for its operation phase. No construction traffic details are provided. It has been assumed that the prison would be fully operational at the time of peak construction traffic generation. This is an overestimate as the prison development will take some time to discharge planning conditions and start construction works; however, it provides a robust assessment scenario.

17.7.103. An undetermined (at the time of writing) planning application at Littleton Manor Farm (Planning Ref 22/03384/AOP) has been resubmitted in early 2025. Transport planning details for the proposed outline application for 535 dwellings, a primary school, commercial units, community hub, charging station and energy park.

17.7.104. The planning documents for the proposed Littleton Manor Farm development suggest that the full development could be completed by 2036. This is up to five years after the Rosefield Solar Farm will have been completed and commissioned. As such, the peaks of development traffic between Rosefield Solar Farm and the Littleton Manor Farm project will not coincide.

17.7.105. Construction traffic associated with early elements of the Littleton Manor Farm may coincide, should the application be consented. The construction traffic associated with the energy park elements of Littleton Manor Farm appears to be circa 44 movements per day at the peak (22 associated with the solar elements and 22 with the wind turbine). This level of traffic represents a 0.37% increase in A41, which is not considered to be of significance.

17.7.106. Should the Littleton Manor Farm development be consented, any accumulation of traffic flows would be addressed through the detailed Construction Traffic Management Plan, which is secured by a Requirement to the **Draft DCO [EN010158/APP/3.1]**.

17.7.107. The inter-project cumulative effects associated with these projects would occur on the A41 corridor. No traffic from any other committed development appears to use Station Road/Dewes Lane, Snake Lane/Fidlers Field, Claydon Road or Granborough Road, where the Proposed Development impact is at its highest.

17.7.108. The impact of cumulative traffic is therefore focussed on a district distributor A-class road, which has sufficient capacity to absorb additional traffic flows.

17.7.109. Inter-project cumulative effects of the AIL access route will be limited due to the small number of AIL movements (14 at most). As these movements will be police escorted and subject to a specialist Transport Management Plan, the likely interactions with cumulative traffic flows and other road users are naturally managed or avoided by the police escort or movements outwith peak periods.

Water

17.7.110. The ZoI for water, identified in **Table 17.2**, is 1km. There are six developments within 1km of the Order Limits, one of which is ongoing (ID No. 5 (HS2)), two are approved (both relating to ID No. 3 (Tuckey Solar Farm)), and four are pending a decision or are in appeal (ID No. 7 (Calvert Solar Farm), ID No. 2 (East Claydon Greener Grid Park), ID No. 1 (East Claydon BESS)), and (ID No. 8 (East West Rail)).

17.7.111. There is potential for temporary construction related accidental spills and/or silt runoff to have a combined effect on water quality in the

identified surface water receptors, including Water Framework Directive Watercourses. However, it is assumed that the developments listed above in **Table 17.3** will be subject to the respective mitigation plans agreed with the relevant authorities, and that adverse effects on surface water receptors would be mitigated and not be significant. In view of this, the probabilities of significant inter-project cumulative effects occurring on surface water quality during construction and decommissioning is anticipated to be **low**.

17.7.112. There is potential for construction, operation (including maintenance) and decommissioning phase effects on flood risk and surface water drainage, if no mitigation on the developments listed in **Table 17.3** is proposed. However, it is assumed that these developments will be subject to the respective mitigation plans and assessments agreed with the relevant authorities, and that adverse effects on flood risk and surface water drainage receptors would be mitigated and be **not significant**. In view of this, the probabilities of significant inter-project cumulative effects occurring on flood risk and surface water drainage during construction, operation and decommissioning is anticipated to be **low**.

17.8. Difficulties and uncertainties

17.8.1. The following difficulties and uncertainties have been encountered in undertaking the cumulative assessment:

- Information was limited to publicly available information obtained from relevant planning applications on the planning portals of Cherwell District Council, Buckinghamshire Council, and the Planning Inspectorate.
- For some of the short-listed other existing developments and/or approved developments, relevant information to inform this assessment has not been available. As a result, some assessment considerations have been based upon assumptions and professional judgement and some statements made would rely on the review of mitigation measures proposed at the other existing developments and/or approved developments.

17.9. References

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