A303 Amesbury to Berwick Down

Statement of Matters issued 30 November 2021:
Applicant's response to the matters on which the Secretary of State invites further representations (Paragraph 2)

Response to Bullet Point Four – Environmental Information Review

Document reference: Redetermination-1.4

Planning Act 2008

The Infrastructure Planning (Examination Procedure) Rules 2010

January 2022.

Table of contents

Table of Tables

Summary

This review has been undertaken to respond to Bullet Point Four of the Statement of Matters for the re-determination of the application by Highways England (now National Highways) (the Applicant) for an order granting development consent for the A303 Amesbury to Berwick Down (the Scheme) dated 30 November 2021.

This review considers the adequacy of the environmental information produced in support of the application for the Scheme (including the 2018 ES and all information submitted in the pre-Examination, Examination and post-Examination periods) and identifies whether there is any further or updated environmental information to be considered by the Secretary of State given the time since the examination closed. In doing so, the matters that this review has identified and considered include changes to legislation and policy, changes to methodology and any updated baseline and new cumulative information.

The environmental information submitted for the Scheme assumed the construction phase would start in 2021 and the operational phase in 2026. Given the delay to the Scheme, this review has assumed that the construction phase for the Scheme would start in 2023 and the operational phase in 2029. The environmental topics included in this review consider and report on how the change in construction and operational phases affect the adequacy of environmental information produced to date.

As a result of the review undertaken, the following topics set out in Table S.1 identify new likely significant effects that have not previously been identified.

Table S.1 Summary of new likely significant effects

Topic	Aspect	Location
Cultural Heritage	The assessment of additional heritage assets identified in the updated baseline information has identified additional Likely Significant Effects in respect of a number of possible Bronze Age barrows or ring ditches in the vicinity of Stonehenge Bottom suggested from aerial photographs.	Section 3
Landscape and Visual	Methodological updates resulting in new likely significant effects at various locations.	Section 4
Noise and Vibration	Methodological updates and sensitivity testing for updated traffic modelling resulting in a small number of additional significant effects (both adverse and beneficial), however no new areas of significant effect were identified.	Section 6
People and Communities	Methodological updates resulting in new likely significant effects in respect of impacts to County Wildlife Site soils.	Section 10
Assessment of Cumulative Effects (combination of effects section)	Methodological updates resulting in new likely significant effects due to the stand-alone effects reported in the Landscape and Visual section.	Section 11

In the Applicant's submissions, none of these new likely significant effects alters the previously articulated case for the Scheme.

To ensure that all interested parties are able to comment on these matters and all environmental information that will now be before the Secretary of State contained in this review (and the Response to Bullet Point Three of paragraph 2 of the Statement of Matters (Redetermination-1.3)) the Applicant is proposing that consultation consistent with Regulation 20 of the EIA Regulations is carried out in respect of this information. It is also noted that this document references a number of updated baseline reports. These are not submitted alongside this report but will be submitted as soon as possible following this submission to ensure that the Secretary of State has all relevant environmental information before him. Again, to ensure that all parties are able to consider the environmental information before the Secretary of State, the Applicant proposes that these reports will also be consulted upon in a manner consistent with Regulation 20 of the EIA Regulations, at the same time.

In summary, this review has identified and considered changes to the legislative and policy framework, assessment methodology, and environmental baseline as it applies to the environmental information that is presently before the Secretary of State and found that further environmental information is required to be submitted for consideration by the Secretary of State, in order for a decision to be made on the Scheme. Overall, the 2018 ES and the environmental information supporting it submitted in the pre-Examination, Examination and post-Examination period, as supplemented by this review, are adequate to inform the Secretary of State's redetermination of the application.

1 Introduction

1.1 Context of the Report

1.1.1 This review has been prepared to respond to Bullet Point Four of the Statement of Matters for the re-determination of the application by Highways England (now National Highways) (the Applicant) for an order granting development consent for the A303 Amesbury to Berwick Down (the Scheme) dated 30 November 2021, specifically:

> *"the adequacy of the environmental information produced in support of the application for the Development* [the Scheme] *and whether any further or updated environmental information is now necessary given the time since the examination closed"*

1.1.2 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) define environmental information and further information as follows.

> *"environmental information" means the environmental statement (or in the case of a subsequent application, the updated environmental statement), including any further information and any other information, any representations made by any body required by these Regulations to be invited to make representations and any representations duly made by any other person about the environmental effects of the development;*
>
> *"further information" means additional information which, in the view of the Examining authority, the Secretary of State or the relevant authority, is directly relevant to reaching a reasoned conclusion on the significant effects of the development on the environment and which it is necessary to include in an environmental statement or updated environmental statement in order for it to satisfy the requirements of regulation 14(2);*

1.1.3 This review covers all of the environmental information that is before the Secretary of State including the October 2018 Environmental Statement for the Scheme, defined to include the substitutions and corrections set out in Schedule 12 of the quashed Development Consent Order made by the Secretary of State on 12 November 2020, and including the corrections contained within the Errata Report [REP7-022] (collectively the 2018 ES); and all environmental information submitted by Highways England to the examination and post-examination and available on the PINS project website (collectively 'the environmental information').

1.1.4 In doing so, the matters that this review has identified and considered include:

- if any legislation or policy has changed such that it alters the way that an assessment is carried out, potentially resulting in new conclusions;

- changes to assessment methodology in Design Manual for Roads and Bridges (DMRB) and other guidance and whether this would affect the conclusions or the accuracy of the environmental information;

- if the position has changed in respect of the current or future baseline as set out in the 2018 ES; and

- any further baseline information (including new cumulative developments and surveys) or modelling that has been undertaken since the end of the examination for the Scheme, such that it could impact upon the adequacy of the environmental information (e.g. through new or different impacts).

1.1.5 In considering the above, this review has been undertaken to determine whether any changes since publication of the environmental information submitted to the Secretary of State would alter the adequacy of that environmental information for the purposes of the EIA Regulations.

1.2 Structure of the document

1.2.1 This document follows the structure below:

- **Section 0** sets the context, introduces and reviews the Scheme and the approach taken to the EIA;

- **Sections 2 to 10** consider changes to relevant legislation or policy, changes to assessment methodology, any updates to environmental baseline or other surrounding circumstances and conclude on the adequacy of the environmental information relevant to the specialist topics and whether the conclusions of the 2018 ES have changed. These sections do not consider the Climate topic, which is considered separately, in the Applicant's response to Bullet Point Three (Redetermination-1.3). In reaching those conclusions, the authors of each section have considered not just the 2018 ES but all the environmental information - which supports its conclusions - and so the conclusions apply equally to the environmental information as to the 2018 ES;

- **Section 0** considers the potential inter-relationships between the topics covered in Sections 2 to 10. Section 0 also considers potential inter-relationships between the Scheme and other developments in the surrounding area that have come forward since 2018, and which together have the potential to generate cumulative effects.

- **Section 0** considers whether the information presented in Sections 2 to 10 change the environmental considerations in the selection and appraisal of the relevant alternatives. (Note: further detail regarding the information before the Secretary of State regarding alternatives, and whether any updates to that information are needed, is presented in the Response to Bullet Point One of the Statement of Matters (Redetermination-1.1)).

- **Section 13** concludes that this document does include some aspects of what would otherwise be considered to be 'Further Information' and confirms National Highways' proposal that consultation pursuant to the steps required by Regulation 20 of the EIA Regulations should be carried out.

1.3 The Scheme

Project Location

1.3.1 There have been no changes to the Development Consent Order (DCO) application boundary (hereafter referred to as the Scheme boundary) and the Scheme location remains the same as that described and assessed in the environmental information.

Baseline Scenario

1.3.2 A review of the baseline information is reported by each individual topic in Sections 2 to 10 below.

Description of the Proposed Scheme

1.3.3 There have been no changes to the Scheme design from that set out in the Application and considered in the environmental information. The description of the Scheme submitted as part of the application was updated during the examination as a result of the request by the Applicant for the Examining Authority to accept into the examination eight minor, non-material changes to the Scheme [AS-067]. The Examining Authority subsequently accepted these changes and their non-materiality (including in relation to these changes not needing an update to the 2018 ES) on 27 September 2019[1]. The Scheme is also subject to the Design Principles detailed in the final Outline Environmental Management Plan (OEMP) submitted following the close of examination[2] and which form part of the embedded mitigation for the Scheme.

1.3.4 **No further environmental information is required to be submitted for consideration by the Secretary of State in relation to the Scheme design, in order for the Application to be re-determined**.

Construction and Operation

1.3.5 The environmental information assumed the construction phase for the Scheme would start in 2021 and the operational phase in 2026. Given the delay to the Scheme, this review has assumed that the construction phase for the Scheme would start in 2023 and the operational phase in 2029. Updated traffic forecasts considered in this review have also assumed the

[1] https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010025/TR010025-001725-190927_TR010025_s89%20notification%20re.%20NMCs%20-%20FINAL.pdf

[2] On the Planning Inspectorate website here: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010025/TR010025-001949-6.3%20Appendix%202.2(8)%20%E2%80%93%20Outline%20Environmental%20Management%20Plan%20(OEMP)_FINAL_DfT%20Revision.pdf

construction phase for the Scheme would start in 2023 and the operational phase in 2029. Appendix 1.1 considers changes in policy and guidance, changes in key modelling assumptions and changes in traffic forecasts since the 2018 Transport Assessment.

1.3.6 The implications of the above changes are considered in Sections 2 to 0.

1.4 Environmental Assessment Methodology

Legislative and Policy Framework

1.4.1 The current policy position is set out in the Response to Bullet Point Two of the Statement of Matters (Redetermination-1.2). **Overall, the review of national and local planning policy has not identified any changes that would result in changes to the environmental information**.

Legislation

1.4.2 The EIA Regulations set out at Schedule 4 paragraph 5 that an ES must include a "*description of the likely significant effects*" of a development on the environment, covering "*the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the development*". **There have been no substantive changes (with what changes there have been mostly related to Brexit) to the EIA Regulations relevant to the methodology required for the assessment of and description of the likely significant effects or affecting the adequacy of the environmental information**.

Assessment Methodology

Introduction

1.4.3 This section focusses on the overarching EIA methodology. Sections 2 to 0 focus on methodological changes relevant to each topic. Where methodological changes are a factor that affects the adequacy of the environmental information, this is acknowledged and so considered pursuant to Response to Statement of Matters Bullet Point Four.

Environmental Scoping

1.4.4 An EIA Scoping Report for the Scheme was submitted to the Planning Inspectorate on 20 October 2017. Subsequently the Planning Inspectorate (on behalf of the Secretary of State) published a Scoping Opinion on 30 November 2017. These documents remain valid as the Scheme has not changed since these documents were published (see paragraph 1.3.3). Each of the discipline Sections 2 to 10 have reviewed the Scoping Report and Opinion against the legislation, guidance and environmental information updates presented. There have been no changes in policy, methodology, guidance or the environmental baseline which mean that topics which were scoped out within the Scoping Report now need to be scoped in. **The scope of the environmental information remains appropriate.**

General Approach

The Design Manual for Roads and Bridges

1.4.5 The 2018 ES followed guidance published by the Highways Agency (2007) for the preparation of environmental assessments of proposed road schemes contained in the Design Manual for Roads and Bridges (DMRB) Volume 11 (Highways Agency, 2007). This set out both the general process and the methods for assessing individual environmental topics. The 2018 ES also adhered to the Interim Advice Note (IAN) 125/15 Environmental Assessment Update (Highways England, 2015), which provided a new structure of DMRB Volume 11.

1.4.6 Consideration of changes since the 2018 ES to the DMRB Volume 11 guidance in the intervening period, pertaining to topic specialisms, is set out in Sections 2 to 10 below. Consideration of changes relevant to the overarching assessment methodology are set out at paragraph 1.4.9.

Other Studies

1.4.7 Any methodology changes relevant to the Heritage Impact Assessment, Habitats Regulations Assessment, and Water Framework Directive Assessment have been considered by the relevant topics in Section 0 Cultural Heritage, Section 0 Biodiversity and Section 0 Road Drainage and Water Environment respectively.

Study area and site boundary

1.4.8 The study area assessed for the 2018 ES (which was not changed by any other submissions to the Secretary of State) has been reviewed by each environmental topic in Sections 2 to 10 below. The study area is based on the Scheme boundary, which remains the same as that considered in the 2018 ES.

Potential significant effects and mitigation

Assessing significance

1.4.9 The 2018 ES followed the guidance set out in Volume 11, Section 2, Part 5 HA 205/08 ‘Assessment and Management of Environmental Effects’ (Highways Agency, 2008). HA 205/08 provides advice on defining the significance of an environmental effect as a function of the ‘value’ or ‘sensitivity’ of the receptor and the ‘magnitude’ or ‘scale’ of the impact.

1.4.10 HA 205/08 and IAN 125/15 have since been replaced by LA 104 Environmental assessment and monitoring (Highways England, 2020). The definitions for sensitivity and magnitude within HA 205/08 and LA 104 remain the same, along with the matrix used to define significance. However, the definitions of significance have changed as highlighted in Table 1.1 below.

Table 1.1 HA 205/08 and LA 104 descriptions of significance

Significance category	HA 205/08	LA 104
Very large	Only adverse effects are normally assigned this level of significance. They represent key factors in the decision-making process. These effects are generally, but not exclusively, associated with sites or features of international, national or regional importance that are likely to suffer a most damaging impact and loss of resource integrity. However, a major change in a site or feature of local importance may also enter this category.	Effects at this level are material in the decision-making process.
Large	These beneficial or adverse effects are considered to be very important considerations and are likely to be material in the decision-making process.	Effects at this level are likely to be material in the decision-making process.
Moderate	These beneficial or adverse effects may be important, but are not likely to be key decision-making factors. The cumulative effects of such factors may influence decision-making if they lead to an increase in the overall adverse effect on a particular resource or receptor.	Effects at this level can be considered to be material decision-making factors.
Slight	These beneficial or adverse effects may be raised as local factors. They are unlikely to be critical in the decision-making process, but are important in enhancing the subsequent design of the project.	Effects at this level are not material in the decision-making process.
Neutral	No effects or those that are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error.	No effects or those that are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error.

1.4.11 As set out in Table 1.1, the level of importance for the decision-making process ascribed to each significance category is commensurate between HA 205/08 and LA 104. Therefore, the changes in the descriptions do not in general affect the conclusions of the 2018 ES and the other environmental information. LA 104 notes that individual environmental topics may set out variations in significance description requirements. Where relevant, this is discussed in more detail Section 2 to 10 below.

Assessment of cumulative and in combination effects

1.4.12 Section 11 considers the potential inter-relationships between the topics covered in Sections 2 to 10 and between the Scheme and an updated list of other developments.

Major events

1.4.13 The EIA Regulations set out at Regulation 5(4) and Schedule 4 paragraph 8 that an ES must include consideration of significant effects arising from the vulnerability of a proposed development to major accidents or disasters. There have been no substantive changes to the EIA Regulations in relation to the consideration of major accidents or disasters.

1.4.14 The 2018 ES was informed by the UK Government's Risk Register of Civil Emergencies, which was updated in 2020 by the National Risk Register (HM Government, 2020). The register has been broadened to include those items listed in Table 1.2. All of these risks fall into the following two categories and so have not been considered further:

a) Have been considered under the 2018 ES; or

b) Events that could realistically occur, but for which the Scheme, and associated receptors, are no more vulnerable than any other development.

Table 1.2 Further risks identified by the National Risk Register 2020

Identified by the National Risk Register 2020	Category
Undermining the democratic process	b)
Serious and organised crime	b)
Antimicrobial resistance	b)
Commercial failures	b)
Systematic financial crisis	b)
Industrial accidents – nuclear	a)
Industrial accidents – non nuclear	a)
Major fires	a)

1.4.15 The National Risk Register's (HM Government, 2020) "assessments for pandemics and High Consequence Infectious Disease outbreaks" do not include COVID-19, although it is included as a case study. Due to the nature of the Scheme, COVID-19 would likely fall under category b) above.

1.4.16 **Overall, the update to the UK Government's Risk Register does not change the assessment carried out in the 2018 ES and no further environmental information is required to be submitted for consideration by the Secretary of State in relation to major events, in order for the Application to be re-determined.**

2 Air Quality

2.1 Legislative and Policy Framework

2.1.1 No changes to the NPSNN have been made since the publication of the Air Quality chapter of the 2018 ES [APP-043] or the rest of the environmental information submitted during the Examination and post-Examination periods.

2.1.2 The National Planning Policy Framework (NPPF) closely aligns with the aims set out in the NPSNN. The July 2018 version (MHCLG, 2018) of the NPPF was current at the time of the work undertaken for the 2018 ES. Since then, it has been revised twice, in June 2019 and July 2021 (MHCLG, 2021). The text relating to air quality is identical in the July 2018 (paragraphs 103, 170 and 181) and July 2021 (paragraphs 105, 174 and 186) versions of the NPPF.

2.1.3 General guidance on local planning authorities' plan making and decision taking is provided in the web-based resource Planning Practice Guidance on Air Quality (PPG-N). This was originally published in 2014 and was current at the time of the ES publication in October 2018. This guidance was updated in November 2019. There are no material differences between the two versions of the PPG for air quality assessment.

2.1.4 The Environment Act was published in November 2021. Following this the Government will bring forward a consultation on $PM_{2.5}$ targets. This consultation will take place by October 2022 with the targets set thereafter. Therefore, at this time National Highways Schemes will continue to be assessed in line with the existing air quality objectives and limits as applicable and in accordance with current legislation in compliance with the NPSNN.

2.1.5 No significant changes have occurred to any of the above national policies with regard to air quality since the completion of the 2018 ES and the examination process, therefore **the conclusion of the 2018 ES that the development is consistent with the requirements and provisions of the relevant polices remains unchanged**.

2.2 Assessment Methodology

Scoping

2.2.1 The policy, methodology and guidance changes and the environmental information described in this Section would not alter the Scoping Opinion as the general approach to assessment and the types of assessment undertaken have not changed. Some details in the assessment methodology have changed and these variations are reviewed in turn below.

Design Manual for Roads and Bridges

2.2.2 The DMRB is the standard UK methodology for assessing the impact of highways schemes. The air quality section of DMRB current at the time of the air quality assessment as reported in the 2018 ES, was HA207/07 Volume 11, Section 3, Part 1, issued in 2007 (Highways Agency, 2007) as well as the associated Interim Advice Note IANs 170/12 (Highways Agency, 2012), 174/13 (Highways Agency, 2013), 175/13 (Highways Agency, 2013) and 185/15 (Highways England, 2015) issued in 2015. HA207/07 and associated IANs were replaced in November 2019 with a new version of the air quality section of DMRB: LA 105 (Highways England, 2019).

2.2.3 A number of aspects of the assessment process differ between HA207/07 (and associated IANs) and the LA 105. These are considered in the relevant sections below.

Construction Phase Dust Assessment

2.2.4 The HA207/07 methodology for the assessment of potential effects from construction dust involved identification of sensitive receptors (e.g. residential properties, schools, hospitals and designated sites) within 200m of the construction works and identification of appropriate mitigation measures. It also stated these mitigation measures should be incorporated into a Construction Environmental Management Plan (CEMP).

2.2.5 The LA 105 methodology for the assessment of potential effects from construction dust involves identifying the dust risk potential of a scheme and the receiving environment to inform the appropriate level of mitigation. The dust risk potential of a scheme is based on the size and complexity of a scheme's construction works (e.g. a large smart motorway scheme would be a large risk and a small junction improvement would be a small risk). The sensitivity of the receiving environment is based on a combination of the risk potential and the proximity of sensitive receptors to the construction works (based on distances of 0-50m, 50-100m and 100-200m). The construction mitigation measures are then to be presented within an environmental management plan (EMP) and there is no requirement to present these in the ES.

2.2.6 Whilst the LA 105 methodology introduces specific ways to identify the risk of potential adverse effects from dust, the overall solution of identifying appropriate mitigation measures and presenting them in an EMP is the same as HA207/07. Additionally, both methodologies consider the presence of receptors up to 200m from construction works therefore no new receptors would be considered under than LA 105 guidance than the HA207/07 guidance. Following identification of proposed mitigation measures in an EMP, this is then refined by the contractor carrying out the works. **Therefore, there is no change to the conclusions of the 2018 ES as a result of these changes in construction dust guidance.**

Construction Phase Traffic Assessment

2.2.7 HA207/07 identified that where construction was anticipated to last for more than six months then the effects of traffic management and additional construction vehicles needed to be assessed either qualitatively or quantitatively.

2.2.8 LA 105 sets out that construction should be assessed where the construction activities are programmed to last for more than 2 years. The assessment should use the same traffic scoping criteria as identified for the operational phase (see below) and should be proportionate and limited to the areas of key risk of exceeding air quality thresholds.

2.2.9 This change in guidance would not affect the assessment as a construction traffic assessment was undertaken for the Scheme, whose construction is to last for more than 2 years. As set out in paragraphs 3.2.6 - 3.2.8 of Appendix 1.1: Transport Assessment Review, the construction traffic forecasts which informed the construction traffic air quality assessment do not require updating. Furthermore, the change in traffic scoping criteria set out in LA 105 (and reproduced in paragraph 2.2.11) is highly unlikely to alter the air quality study area, as with the operational phase (see below). **Therefore, the conclusions of the 2018 ES remain valid.**

Operational Phase Traffic Assessment

Identification of Study Area (Scoping)

2.2.10 As within the 2018 ES, the study area is defined through the identification of road links where specific changes in traffic flows or alignment are predicted. With the implementation of LA 105, these criteria have been changed to include consideration of speed bands rather than modelled speeds over a daily period (change of 10kph or more) or peak speed (change of 20kph or more).

2.2.11 The following traffic criteria are now used within LA 105 (opening year only, no mention of worst year in first 15 years) to identify whether effects on air quality due to changes in traffic can be scoped in or out of an assessment:

- Annual average daily traffic (AADT) >= 1,000; or
- Heavy duty vehicle (HDV) >= 200; or
- A change in speed band; or
- A change in carriageway alignment by >= 5m.

2.2.12 LA 105 also specifies that the air quality assessment shall be based on the most likely forecast traffic (i.e. core) and there is no requirement to model other traffic growth sensitivity scenarios.

2.2.13 The key difference between the two sets of traffic scoping criteria within LA 105 and HA207/07 is the comparison of speed changes – moving from comparing modelled speeds to comparing changes in speed band. Where a

change in speed band occurs between Do-Minimum (DM) and Do-Something (DS) scenarios, that road link is reviewed by the competent expert for traffic and the validity of the change in speed band is confirmed. Where a very small change in speed leads to a change in speed band on pure numerical terms and it is considered that this does not reflect an actual change in the congested condition of the road, a manual alteration can be made to one of the speed bands such that the band is the same between the scenarios.

2.2.14 **Updated traffic data (see separate section below) for the currently assumed opening year of 2029 was compared against the new traffic scoping criteria and this demonstrated that the change in traffic scoping criteria has not significantly affected the study area which was set out in the 2018 ES and thus does not change the baseline against which the impact assessment was carried out. Very similar sections of the A303 corridor and surrounding road network were identified and no new areas of potential air quality effects would be brought into assessment with the updated traffic screening criteria.**

Identification of Simple vs Detailed Assessment

2.2.15 HA207/07 set out a series of scoping tests and stipulated that a simple assessment should be undertaken where there are potentially affected road links and sensitive receptors, but no exceedances of any objectives identified.

2.2.16 The approach taken in LA 105 is similar but a more detailed flow chart (Figure 2.10 in LA 105 (Highways England, 2019)) is provided which sets out when a simple assessment methodology should be used (e.g. a small junction improvement project where baseline monitoring indicates concentrations of more than 36µg/m^3 for annual mean NO_2).

2.2.17 **A detailed assessment was carried out in the 2018 ES. The application of LA 105 may have resulted in it being determined that a simple assessment was sufficient for the Scheme. A lesser simple assessment carried out for the Scheme would not identify new significant effects. Therefore the conclusions of the 2018 ES remain valid.**

Use of the DMRB Spreadsheet for Simple Assessments

2.2.18 HA207/07 identified the use of the DMRB Screening Tool spreadsheet for simple assessments. LA 105 also identifies the use of the DMRB spreadsheet as an option for air quality modelling for simple assessments, however it also offers the option of a qualitative statement being provided.

2.2.19 **This will not have an effect on the 2018 ES assessment as a detailed assessment of effects was undertaken for the Scheme rather than a simple assessment.**

Identification of Designated Habitat Receptors

2.2.20 HA207/07 sets out which designated habitat sites should be considered in the air quality assessment. These were nationally and internationally designated sites and were as follows:

- Special Areas of Conservation (SACs);
- Including Sites of Community Importance (SCIs); and
- Candidate SACs (cSACs);
- Special Protection Areas (SPAs);
- Including Proposed SPAs (pSPAs);
- Sites of Special Scientific Interest (SSSIs); and
- Ramsar sites.

2.2.21 LA 105 retained the majority of these (SACs, SPAs, SSSIs and Ramsar) and also included additional site types:

- Ancient Woodland (AWs);
- Veteran Trees (VTs);
- Local Nature Reserves (LNRs);
- Nature Improvement Areas (NIAs); and
- Local Wildlife Sites (LWSs).

2.2.22 **There is therefore a potential for adverse air quality impacts on any additional sites in close proximity to the Scheme and affected road network not assessed in the 2018 ES.** The risk associated with the additional sites is reviewed in more detail in Section 2.3 below.

Pollutants Assessment

2.2.23 HA207/07 set out a requirement to consider the effect of a scheme on concentrations of nitrogen dioxide (NO_2) and particulate matter (PM_{10}).

2.2.24 LA 105 states that the assessment should focus on impacts of nitrogen (NO_2 for human health and NO_x/nitrogen deposition for ecological sites).

2.2.25 LA 105 indicates that PM_{10} should be modelled for the baseline scenario and then that should be enough to demonstrate compliance with the objective values for PM_{10}. Where exceedances are identified then PM_{10} should be included in future year modelling with and without a scheme.

2.2.26 Additionally, LA 105 identifies that there should be no need to model $PM_{2.5}$ as the UK currently meets its legal requirements of $PM_{2.5}$ thresholds and the

modelling of PM_{10} should be sufficient to demonstrate that the scheme would not affect this.

2.2.27 **This change will have no effect on the assessment of the Scheme, as the required information on NO_2 and NO_x has been presented along with PM_{10}. Therefore, the assessment presents all the required information and more information than required by the new guidance.**

Speed Bands Applied to Traffic Data

2.2.28 LA 105 includes a method for speed pivoting and speed banding that is similar to that included within IAN 185/15 with a few notable differences.

2.2.29 There is additional advice on speed bands on links in close proximity to junctions and a continued focus on reviewing links with heavy congestion. For slip roads on and off motorways a specific speed band must be assigned to them to account for acceleration and deceleration. These speed bands are:

- Free flow on motorway off-slips; and
- Heavy congestion on motorway on-slips.

2.2.30 Additionally, for motorway links an additional speed band has been introduced for high speed flows, which has also led to a redrawing of the guideline speeds for the other bands compared to those presented in IAN 185/15.

2.2.31 As there are no motorway links within the study area for the 2018 ES assessment, this change to the speed band methodology would not affect the speed bands assigned to the road links within the assessment.

2.2.32 The emissions within the DMRB tool for each speed band are based on Defra's Emissions Factors Toolkit (EFT). When the 2018 ES assessment was undertaken the current version of the EFT was v8. The speed bands used in this review are based on EFT v10.1. Since the release of EFT v10.1 a further update has been published, v11. EFT v11 updates emissions rates and vehicle fleet mixes to a future projection year of 2050. Previous versions of the EFT projected to 2030. EFT v11 was published specifically for the assessment of emissions of carbon and as such does not affect the air quality review presented herein.

2.2.33 Whilst the exact emission rates have changed since the 2018 ES assessment was undertaken, due to updates to the EFT, annual mean concentrations predicted at receptors within the 2018 ES assessment are well below the objective values of 40 $\mu g/m^3$ for annual mean NO_2 and PM_{10}, with a maximum concentration at any receptor within the study area of 18.4 $\mu g/m^3$ for NO_2 and 13.9 $\mu g/m^3$ for PM_{10}. Therefore, these small changes in emission rates would not lead to a significant effect on air quality.

2.2.34 **Overall, changes in the LA 105 to speed banding and emission rates would not affect the conclusions of the 2018 ES.**

Gap Analysis/Long Term Trends

2.2.35 A key element of the local operational detailed assessment is the rate of improvement in air quality over time as cleaner road vehicles enter the national vehicle fleet. The methodology outlined within IAN 170/12 v3, on the assessment of future NOx and NO_2 projections, was used in the 2018 ES assessment. The method considers Defra's advice on long-term trends related to roadside NO_2 concentrations, which suggests that there is a gap between current projected vehicle emission reductions and projections on the annual rate of improvements in ambient air quality as previously published in Defra's technical guidance and observed trends. Consequently, Highways England (now National Highways) developed a set of NO_2 projection factors to inform scheme air quality assessments and these projections are referred to as LTT_{E6}. A "gap factor" is calculated using these projections, which is then applied to verified model results to uplift the predicted concentrations.

2.2.36 LA 105 includes the same LTT_{E6} projections however it also provides the opportunity to deviate from gap factors based on prevailing rates of improvement in an area:

> *'Where the gap factor is either too conservative or too optimistic when compared to local monitoring trends, justification for the deviation from the published gap factor shall be clearly laid out and evidenced in the assessment.'*
>
> *An additional note is also provided on this point that 'evidence supporting such a decision would be primarily based on the trend in air quality monitoring data from monitoring sites local to the project.'*

2.2.37 **An alternative approach to gap analysis would not change the conclusions of 2018 ES assessment due to the existing good air quality within the study area**. In addition, there is limited monitoring data in the study area to justify the development of an alternative approach.

Calculating Nitrogen Deposition at Ecological Receptors

2.2.38 The approach to predicting effects of changes in traffic at ecological receptors, in terms of NO_X, as a result of the Scheme is largely unchanged between HA207/07 and LA 105. The basic steps outlined in HA 207/07 are as follows:

- Identify sensitive sites;
- Obtain nitrogen deposition rates from APIS;
- Obtain background NO_2 and NO_X concentrations from the air quality archive website;

- Calculate NO_2 concentrations;
- Estimate dry deposition of NO_2 in a transect;
- A uniform NO_2 deposition velocity of 0.001 m/s is used to calculate deposition as kg Nitrogen (N) ha^{-1} yr^{-1} from NO_2 concentrations as $\mu g/m^3$;
- Determine road increment dry deposition of NO_2; and
- Compare with critical load from UNECE.

2.2.39 The assessment approach outlined in LA 105 guidance is generally similar to HA207/07. However, LA 105 specifies that the modelled transects for each site must include points every 10m up to a maximum of 200m, whereas HA207/07 was not specific about the spacing of the transect points, only that they extend to the edge of the ecosystem or up to 200m. LA 105 is also explicit that sites designated as a geological feature or watercourses would not be considered sensitive to air quality and would therefore not be included, whereas HA207/07 did not specify this point.

2.2.40 The most notable difference between the LA 105 and HA207/07 methods is the deposition velocity, for which a different rate is applied depending on whether the habitat is described as grassland or forest, whereas HA207/07 only had one rate (0.001 m/s). The deposition velocity is used to calculate the deposition rate of nitrogen (in kgN/ha/yr) deposited on the site from the concentration of nitrogen dioxide in the air. Recommended deposition velocities set out in LA 105 are:

- For grassland = 0.0014 m/s; and
- For forests = 0.0029 m/s

2.2.41 The changes to the methodology with higher deposition velocities across all habitats will lead to an increase in deposition predicted at these sites with the LA 105 methodology. Additionally, a general reduction in critical loads could lead to potentially significant effects based on the new criteria for assessing significance which is based on a percentage of the critical load (see section 5.3 below). **Therefore, there is potential for significant effects on ecological sites to result from these changes**.

2.2.42 This risk is considered in more detail in Section 2.3 below.

Compliance Risk Assessment Methodology

2.2.43 The compliance risk assessment set out in IAN 175/13 required the consideration of any road links within Defra's Pollution Climate Mapping (PCM) model where the predicted concentration in the opening year exceeds the $40\mu g/m^3$ Limit Value. The version of the PCM model current at that time predicted concentrations every 5 years therefore the concentration for the opening year was interpolated between the two modelled points closest to that year. Under IAN 174/13 predicted changes in concentrations

at sensitive receptors located along those road links were then identified and this predicted change was added to the interpolated opening year concentration to identify the potential effect from the Scheme. The compliance risk rating for the Scheme was then determined using a set of criteria formed as questions. These are, would the change in NO_2 concentrations result in:

- a compliant zone becoming non-compliant; and/or
- delay Defra's date for achieving compliance for the zone, i.e. change on a road link would result in concentrations higher than the existing maximum value in the zone; and/or
- an increase in length of roads in exceedance in the zone which would be greater than 1% when compared to the previous road length.

2.2.44 If the answer to any of these questions is yes then an air quality action plan (AQAP) was required to mitigate the impacts down to either do-minimum (DM) concentrations or 40 $\mu g/m^3$, whichever is highest.

2.2.45 The approach set out in LA 105 includes assessment of specific points on the PCM network. The assessment considers all links within a scheme's affected road network that coincide with the PCM modelled domain. Receptor points are modelled at qualifying features within 15m of any of these PCM links. Qualifying features include residential properties, schools, hospitals and public access (e.g. footpaths). Relevant exposure is defined as public access or sensitive human receptors within 15m of a running lane but not within 25m of a junction.

2.2.46 Concentrations of NO_2 are then predicted at the nearest qualifying features to each PCM link, as well as at a location 4m from each link. In each case, the 4m point is used to validate the local air quality modelling relative to the PCM model. The PCM model now includes predictions for every year so the modelling can be compared to the opening year predictions within the PCM model.

2.2.47 LA 105 sets out a flow chart for evaluating the potential for a risk to compliance with the EU Limit Values and this includes consideration of broadly the same questions as set out in IAN 175/13:

- Does the project modelling indicate any exceedances of the EU Limit Value with any increases of greater than 0.4$\mu g/m^3$ as a result of the project in the opening year?
- Does the project create a new maximum when compared to the latest PCM data set in the zone/agglomeration?
- Is the maximum modelled across all PCM links higher with the Scheme than without?

2.2.48 If the answer to either of the last two questions is yes then an AQAP is required to bring the annual mean concentrations below the maximum concentration for the zone and to bring the maximum increase on PCM links to be no more than 0.4µg/m^3.

2.2.49 LA 105 also states that the concentrations should be predicted using the Defra methodologies (i.e. without using the long-term trends spreadsheet).

2.2.50 **There are no PCM model links within the air quality study area for the Scheme therefore this change in methodology would not affect the outcome of the air quality assessment.**

TAG Appraisal for Local Air Quality

2.2.51 HA207/07 included a requirement to present the TAG appraisal for local air quality within the 2018 ES chapter. LA 105 does not include the requirement to present this information.

2.2.52 **This change will not have an effect on the 2018 ES assessment of the Scheme as this aspect has now been removed from consideration for air quality.** Therefore, the assessment presents more information than required by the new guidance.

Regional Assessment

2.2.53 HA207/07 included a requirement for an assessment of regional effects of a proposed scheme. LA 105 does not include the requirement for this type of assessment.

2.2.54 **This change will not have an effect on the 2018 ES assessment of the Scheme as this aspect has now been removed from consideration for air quality.** Therefore, the assessment presents more information than required by the new guidance.

Evaluation of Significant Effects

2.2.55 The overall evaluation of significance is similar between IAN 174/13 and LA 105. The only difference is that LA 105 explicitly states that a receptor can experience both a small and medium change to ensure the aggregated number of properties are compared to the guideline bands and the guideline bands are unchanged. IAN 174/13 set out a series of questions to address in order to inform the professional judgement of overall significance. These questions are not included within LA 105 but the general approach to assessing significance is the same. The introduction of specific guidance to aggregate the number of properties with potentially significant effects is not a risk for the Scheme as no affected properties were identified in the 2018 ES.

2.2.56 In IAN 174/13, for designated habitats the evaluation of significance considered firstly the annual mean NO_x concentration at the site and then the change in concentrations. Where the annual mean is below the objective (30µg/m^3) significant effects are not anticipated. Where concentrations are above the objective but the change in concentrations is less than 0.4µg/m^3 then significant effects are not anticipated. Where the

annual mean is above 30µg/m^3 and the change is greater than 0.4µg/m^3, this information, along with predicted nitrogen deposition (total and change), is to be provided to the scheme ecologist to evaluate the potential for significant effects based on their professional judgement.

2.2.57 In LA 105, the evaluation of significance of effects on designated habitats has been formalised into a flow chart where the change in nitrogen deposition rate is the key element affecting potential significance. Where a change in deposition rate is over a threshold the competent expert for biodiversity must evaluate whether the potential change is significant based on the flow chart, which centres on whether a site is being restored or maintained, potential species loss and whether an action plan can mitigate potentially significant effects. The competent expert for biodiversity will evaluate the effects and determine their potential significance, including by reference to the published dose response report by Natural England.

2.2.58 If there are predicted changes in nitrogen deposition at ecological sites above the threshold (1% of the critical load) for sensitive ecological receptors then the overall evaluation of significance may be different under the LA 105 criteria than under the previous guidance. This risk is considered in more detail in Section 2.3 below following the more detailed review of potential effects on designated habitats.

Approach to Mitigation of Significant Effects or Compliance Risks

2.2.59 HA207/07 identifies that where there is potential for an existing exceedance of the EU Limit Value to worsen, or the creation of a new exceedance, then mitigation measures should be developed and discussed with the Overseeing Organisation (National Highways).

2.2.60 IAN 175/13 identifies that where a compliance risk is identified then a Project Air Quality Action Plan (PAQAP) must be developed to mitigate the effects, quantifying the effect of the proposed mitigation measures.

2.2.61 LA 105 also identifies that a PAQAP must be prepared where an exceedance is created or worsened.

2.2.62 **The change will not have an effect on the 2018 ES assessment of the Scheme as no significant adverse effects on compliance were identified and no operational mitigation measures were required under the previous guidance.**

Reporting

2.2.63 HA207/07 sets out what should be included in the reporting of air quality assessments. LA 105 also sets out what should be included in the reporting and how each section of the air quality chapter should be structured. There are some differences in exactly what is presented and where (e.g. HA207/07 includes the presentation of the plan level TAG outputs, which is not included in LA 105; or LA 105 includes the requirement of a statement detailing how the study area was defined and that the traffic reliability area is appropriate for the air quality assessment).

2.2.64 **This will not have an effect on the assessment as the required information for LA 105 is largely presented in the 2018 ES for the Scheme**, albeit in a slightly different order. Any additional information included in the requirements in LA 105 is not of a nature that would affect the assessment work itself or the evaluation of significance.

Figures

2.2.65 HA207/07 identifies the need for a figure showing air quality constraints including the affected road network, sensitive receptors, designated sites and AQMAs.

2.2.66 LA 105 is more specific about what should be included on each of five figures, but this includes broadly similar information including: the affected road network, sensitive receptors, AQMAs, PCM links etc.

2.2.67 **This will not have an effect on the assessment as whilst the exact presentation of the figures is set out in LA 105, the figures prepared for the assessment for the Scheme in the 2018 ES present all the required information.**

Summary of Effects of Differences between HA207/07 and LA 105

2.2.68 A summary of the aspects identified above and their potential effect on the outcome of the assessment of effects of the scheme are presented in Table 2.1.

Table 2.1 Summary of review of LA105

Aspect of the Assessment	Potential Effect
Identification of study area	No adverse effect anticipated
Identification of simple vs detailed assessment	No adverse effect anticipated
Use of DMRB spreadsheet for simple assessments	No adverse effect anticipated
Identification of designated habitat receptors	**Potential effect (See section 5.3)**
Pollutants assessed	No adverse effect anticipated
Speed bands applied to traffic data	No adverse effect anticipated
Gap analysis/Long Term Trends	No adverse effect anticipated
Calculating nitrogen deposition at ecological receptors	**Potential effect (See section 5.3)**
Compliance risk assessment methodology	No adverse effect anticipated
Construction dust assessment methodology	No adverse effect anticipated
Construction phase traffic assessment	No adverse effect anticipated

Aspect of the Assessment	Potential Effect
TAG appraisal for local air quality	No adverse effect anticipated
Regional assessment	No adverse effect anticipated
Evaluation of significant effects	No adverse effect anticipated
Approach to mitigation of significant effects on compliance risk	No adverse effect anticipated
Figures	No adverse effect anticipated

2.3 Environmental Information

Baseline

2.3.1 A review of air quality information published by Wiltshire Council (Wiltshire County Council, 2021) shows that no new AQMAs have been declared in Wiltshire since the 2018 Wiltshire Council (WC) Annual Status Report (ASR) was published. There are no AQMAs within the Scheme extents; the nearest AQMAs are located in Salisbury Centre (Salisbury City Centre AQMA, Salisbury London Road AQMA and Salisbury Wilton Road (A36) AQMA), approximately 6.2 miles (10km) south of Amesbury. There are no AQMAs within the air quality study area in the immediate area along and around the Scheme.

2.3.2 Overall, the diffusion data all over Wiltshire showed an increase in NO_2 concentration in 2018 and a decrease compared to 2017 concentrations for 2019. The data for 2020 suggests a continued decrease in concentrations but temporary Covid-19 impacts are mostly responsible for that trend as the reductions year on year are greater than would have been expected for normal year to year variation.

2.3.3 The new developments identified in Appendix 11.2 as being part of the baseline do not alter the conclusions of the 2018 ES, and no further environmental information is required to be submitted for consideration by the Secretary of State, in order for the Application to be re-determined. The majority of the new developments are not located within 200m of the affected road network and so do not form part of the air quality study area. Where new developments are located along the affected road network representative receptors were modelled in the 2018 ES and these demonstrated that air quality was predicted to be good with no significant adverse effects, and this would therefore also be the case at these additional new developments.

2.3.4 **Nowhere within the study area shows a notable improvement or worsening of its air quality since the 2018 ES assessment, based on the available monitoring data.**

Future Baseline

2.3.5 The delay to the Scheme resulting in the change of the construction phase and operational phase start dates (to 2023 and 2029 respectively) does not alter the conclusions relating to the future baseline in the 2018 ES, and no further environmental information is required to be submitted for consideration by the Secretary of State, in order for the Application to be re-determined.

2.3.6 The developments identified in Appendix 11.2 as being part of the future baseline do not alter the conclusions of the 2018 ES as the majority of the new developments are not located within 200m of the affected road network and so do not form part of the air quality study area. Where new developments are located along the affected road network representative receptors were modelled in the 2018 ES and these demonstrated that air quality was predicted to be good with no significant adverse effects, and this would therefore also be the case at these additional new developments.

Construction Phase

2.3.7 Whilst a 2021 start for the construction works assumed in the 2018 ES is no longer valid, no changes have occurred to the construction source information, such as the construction activities or the volume of construction traffic generated by the works.

Air Quality Assessment and Traffic Modelling

2.3.8 The opening year of the Scheme of 2026 assumed in the 2018 ES, and the future assessment year of 2041 (15 years after opening) are no longer valid. An update to the 2018 traffic modelling, upon which the 2018 operational traffic air quality assessment was based, has been completed and is reported on in Appendix 1.1 to this review. This update is based on an opening year of 2029 and a future assessment year of 2044.

2.3.9 This traffic data has been screened against scoping criteria set out in LA 105 and reproduced in paragraph 2.2.11 above to identify the affected road network (ARN) for the opening year.

2.3.10 The ARN for the updated data and LA 105 criteria is very similar to the ARN for the 2018 ES assessment, with only a small number of additional road links identified as being potentially affected. All of these links are adjacent to road links included within the 2018 ES assessment and were modelled in the 2018 ES due to their proximity to the ARN, **therefore there are no new affected areas that were not considered within the 2018 ES assessment**.

Air Quality and Ecosystem Effects

2.3.11 As set out above, a number of additional designated habitat site types are included within LA 105 compared to HA207/07 and changes in the deposition velocities used within the assessment. The potential effect of these changes in methodology are considered in this section.

2.3.12 A review of the air quality study area has been undertaken to identify any additional ecological sites that would be considered under the LA 105 methodology with the updated traffic dataset for 2029.

2.3.13 Following identification of the sites, a review of available information from the 2018 ES has been conducted (for example a nearby ecological site that was modelled for the 2018 ES) in order to consider the potential for significant adverse effects at each site. This review is set out in Table 2.2.

Table 2.2 Additional Ecological Sites Pursuant to LA 105

Ecological Site	Links with 200m with adverse change	Change in 24 hour AADT flow (veh/day) (DS-DM)	Change in Speed Band between DM and DS	Commentary	Potential Significant Adverse Effect
Parsonage Down WS (LWS)	75114_62742 (B3083)	42	IP and PM from Light Congestion to Free Flow	The AADT change is not enough to be significant (less than 1,000 veh/day)	No
Veteran Tree 137044	62636_62626 (A36 to A303 slip road)	1,296	No change	As the tree is located only 13m from nearest road (62626_62636) and there are no other receptors in a similar location included within the 2018 ES, this location should be considered in more detail within this review.	**Yes**
	62626_62636 (A36 to A303 slip road)	1,296	No change		
	62636_62637 (A303 on slip from A36)	1,620	No change		
	62631_62626 (A303 off slip to A36)	1,703	IP and PM from Free Flow to Light Congestion		
Roakham Hill Downs (LWS)	9481_61358 (A303)	2,740	No change	The site is 140 m from the A303 at it's closest point. Receptor E08 modelled in the 2018 ES is located on the same side of the same road link and is therefore representative of this site. Receptor E08 starts adjacent to the A303 and no significant effects	No
	61358_9481 (A303)	2,740	AM and PM from High Speed to Free Flow		

Ecological Site	Links with 200m with adverse change	Change in 24 hour AADT flow (veh/day) (DS-DM)	Change in Speed Band between DM and DS	Commentary	Potential Significant Adverse Effect
				were predicted. The site is 140 m from the A303 at its closest point. Therefore no significant impacts are anticipated for this LWS.	
Stockton Wood (LWS)	9481_61358 (A303)	2,740	No change	The LWS is located adjacent to previously modelled site E08. Both sites are adjacent to the A303 at the closest point. In the 2018 ES assessment the increase in flow was 1873 veh/day and E08 predicted +0.6 µg/m^3 NO_2 (+0.1 kgN/ha/yr Ndep). Additionally, reprocessed data for E08 for updated deposition velocities in LA105 presented in Table 2.4 demonstrate anticipated effects that are also representative of this location, and no significant effect is identified.	No
	61358_9481 (A303)	2,740	AM and PM from High Speed to Free Flow		
Ancient Woodland 1410084	9481_61358 (A303)	2,740	No change	This site is another designation for the same area modelled as E08 in the ES. In the ES assessment the increase in flow was 1,873 veh/day. E08 predicted +0.6 µg/m^3 NO_2 adjacent to A303 (+0.1 kgN/ha/yr Ndep).	No
	61358_9481 (A303)	2,740	AM and PM from High Speed to Free Flow		

Ecological Site	Links with 200m with adverse change	Change in 24 hour AADT flow (veh/day) (DS-DM)	Change in Speed Band between DM and DS	Commentary	Potential Significant Adverse Effect
				Additionally, reprocessed data for E08 for updated deposition velocities in LA105 presented in Table 2.4 demonstrate anticipated effects that are also representative of this location, and no significant effect is identified.	
Ancient Woodland 1410080, 1410081 and 1410091	9481_61358 (A303)	2,740	No change	These sections of Ancient Woodland are located adjacent to site E08 and the nearest road links experience the same changes in traffic, therefore site E08 is considered representative of these locations. The closest points of these sites to the A303 are approximately 75m, 20m and 60m respectively. As the closest point of E08 (adjacent to A303) is not predicted to experience a significant change in air quality, these locations would also not be anticipated to. Additionally, reprocessed data for E08 for updated deposition velocities in LA105 presented in Table 2.4 demonstrate anticipated effects closer to the A303	No
	61358_9481 (A303)	2,740	AM and PM from High Speed to Free Flow		

Ecological Site	Links with 200m with adverse change	Change in 24 hour AADT flow (veh/day) (DS-DM)	Change in Speed Band between DM and DS	Commentary	Potential Significant Adverse Effect
				in this location, and no significant effect is identified.	
Ancient Woodland 1410077	9473_61358 (A303)	2,740	No change	This site is located to the south west along the A303 from site E08 and this section of the A303 is anticipated to experience the same changes in traffic as the section past E08, therefore the site E08 is considered representative. This site is adjacent to the A303 as E08 is. In the ES assessment the increase in flow was 1,873. E08 predicted +0.6 µg/m^3 NO_2 adjacent to A303 (+0.1 kgN/ha/yr Ndep). Additionally, reprocessed data for E08 for updated deposition velocities in LA105 presented in Table 2.4 demonstrate anticipated effects that are also representative of this location, and no significant effect is identified.	No
	61358_9473 (A303)	2,740	No change		

Ecological Site	Links with 200m with adverse change	Change in 24 hour AADT flow (veh/day) (DS-DM)	Change in Speed Band between DM and DS	Commentary	Potential Significant Adverse Effect
Hart Copse (LWS)	9473_61358 (A303)	2,740	No change	This LWS site is located on the opposite side of the A303 to AQ1410077 discussed above. As the change in traffic on this section of the A303 is the same as the section past E08, that receptor can be considered representative, (albeit this is south of A303 rather than north). The predicted change at E08 was 0.1-0.2 µg/m^3 at the approximate distance from the road as the LWS. Additionally, reprocessed data for E08 for updated deposition velocities in LA105 presented in Table 5.4 demonstrate anticipated effects closer to the A303 in this location, and no significant effect is identified.	No
	61358_9473 (A303)	2,740	No change		
Lamb Down (LWS)	9409_65259 (A303)	2,530	AM, IP and PM from High Speed to Free Flow	The closest part of this site is located adjacent to the A36. The closest modelled receptor in the ES is located to the north west along the same section of the A36, approximately 10m from the road. In the ES assessment this	No
	65259_9409 (A303)	2,530	No change		

Ecological Site	Links with 200m with adverse change	Change in 24 hour AADT flow (veh/day) (DS-DM)	Change in Speed Band between DM and DS	Commentary	Potential Significant Adverse Effect
				receptor was predicted an increase of 0.5µg/m^3 NO_2. Along this link there is a predicted increase in traffic flow but reduced emissions per vehicle from speed band changes. A potentially significant effect is therefore not anticipated at this location.	
Knook Hill West (LWS)	75045_75047 (A36)	1,958	No change	At it's closest point this site is adjacent to A36. The predicted change in traffic similar as previous assessment. Human receptors (R19, R20 and R21) to the south along the A36 at distances of 3-5m from the road were predicted increases of 0.7-0.9µg/m^3 in ES. Due to the proximity of this site to the road additional analysis is considered necessary.	**Yes**
	75047_75045 (A36)	1,958	No change		
	75045_75047 (A36)	1,958	No change		No

Ecological Site	Links with 200m with adverse change	Change in 24 hour AADT flow (veh/day) (DS-DM)	Change in Speed Band between DM and DS	Commentary	Potential Significant Adverse Effect
Knook Down (LWS)	75047_75045 (A36)	1,958	No change	This LWS is a two-part site. One section is located approximately 65m from the A36, to the north of Knook Hill West LWS. Human receptors to the south adjacent to the A36 predicted increases of 0.6-0.9µg/m^3 in 2018 ES. As the effect from road traffic on air quality reduces with distance from the road significant increases not anticipated with this set back from the road. The second site is adjacent to the B390 (9252_75133) which is predicted to experience a flow reduction, therefore significant adverse effects are not anticipated at this site.	
Fishertin de la Mere Meadow (LWS)	9409_62634 (B390)	2,529	No change	This site is located within 200m of the A303 and A36 junction. The predominant road traffic source for air quality effects at this site is theA303 which is approximately 65m from the site at it's closest point. Site E5, modelled in the ES, is located on the south side of	No
	62621_62623 (A303)	3,235	No change		
	62624_65501 (A303)	1,513	No change		
	62628_62624 (A303)	1,880	No change		
	62632_62634 (A36)	2,535	No change		
	62634_62632 (A36)	2,535	No change		
	62634_9409 (A36)	2,529	AM and IP from High		

Ecological Site	Links with 200m with adverse change	Change in 24 hour AADT flow (veh/day) (DS-DM)	Change in Speed Band between DM and DS	Commentary	Potential Significant Adverse Effect
			Speed to Free Flow	the A303 along the same section of road. In the ES site E5 was predicted to experience +0.8 µg/m^3 NO_x adjacent to road (which is +0.1 kgN/ha^{-1}/yr^{-1}) and +0.1-0.2 µg/m^3 NO_x at 60-70m from the road (the approximate distance of this site. As such no significant effects are anticipated at this site.	
Countess Cutting (LWS)	New scheme goes through the whole LWS so this will not exist with the scheme in operation.				No
Countess Farm Swamp (LWS)	New scheme moves adjacent to site however site is not considered to be sensitive to nitrogen deposition, following discussion with the Scheme Biodiversity expert. Countess Swamp is a former water meadow adjacent to the River Avon, now rank grassland, reeds and willow scrub and the species present are tolerant of nitrogen. The nutrient regime on site is influenced by periodic flooding from the river and local land management and phosphate is likely to the limiting nutrient rather than nitrate. As such the vegetation is not likely to show any response to the changes in N-deposition arising from changes in traffic. Therefore, no significant effects are anticipated at this site.				No

** DM = Do-Minimum - without scheme, and DS = Do-Something with scheme*

2.3.14 Based on the review of the new sites, two sites that were not considered in the 2018 ES have been identified as being at risk of a potentially significant effect. These sites are Veteran Tree 137044 and Knook Down LWS. Therefore, a quantitative assessment of these sites has been undertaken to confirm the potential for adverse effects at these sites.

2.3.15 Table 2.3 below presents the predicted nitrogen deposition rates at each newly identified receptor. As the change is below 1% of the relevant critical load at each of them, the impacts can be described as insignificant, as per LA 105.

Table 2.3 Predicted Effects at additional Ecological Sites

Ecological Site	Max N dep in DM (kgN ha^{-1} yr^{-1})	Max N dep in DS (kgN ha^{-1} yr^{-1})	Max N dep Change (kgN ha^{-1} yr^{-1})	Critical Load (CL) (kgN ha^{-1} yr^{-1})	Change as a percentage of the CL (%)
Knook Hill West LWS	16.8	16.8	<0.1	15	0.1
Veteran Tree 137044	27.8	27.8	<0.1	10	0.1

2.3.16 For both these sites a change in nitrogen deposition of less than 0.1 kgN ha^{-1} yr^{-1} is predicted. **This change in therefore not significant**.

2.3.17 In addition, the change in nitrogen deposition rates used within the assessment as per LA 105 guidance rather than HA207/07 has the potential to lead to a higher impact, particularly at woodland sites. Therefore, the effects at these sites, using the outputs from the 2018 ES model, have been predicted for the operational phase using the updated deposition rates. These effects are set out in Table 2.4.

Table 2.4 Nitrogen deposition rates updated using LA 105

Ecological Site	Max N dep in DS predicted in ES (kgN ha^{-1} yr^{-1})	Max N dep Change predicted in ES (kgN ha^{-1} yr^{-1})	Max N dep in DS predicted using new rates (kgN ha^{-1} yr^{-1})	Max N dep Change predicted using new rates (kgN ha^{-1} yr^{-1})*
Salisbury Plain (E1)	13.8	-0.1	23.1	-0.1 (-1.0%)
Salisbury Plain (E2)	14.1	-0.2	23.5	-0.3 (-3.2%)
Salisbury Plain (E3)	15.5	+0.1	25.4	+0.2 (+1.8%)
Yarnbury Castle (E4)	15.9	<0.1	15.9	<0.1 +0.2%)
River Avon system (E5)	15.3	+0.1	*Not considered sensitive per LA 105*	
River Avon system (E6)	15.2	+0.1	*Not considered sensitive per LA 105*	
River Avon system (E7)	14.4	<0.1	*Not considered sensitive per LA 105*	
Stockton Wood and Down (E8)	17.2	+0.1	29.2	+0.1 (+0.5%)
River Till (E9)	16.6	-1.3	*Not considered sensitive per LA 105*	
River Till (E10)	16.8	-0.1	*Not considered sensitive per LA 105*	
Salisbury Plain (E11)	14.0	-0.2	23.3	-0.2 (-2.4%)
Parsonage Down (E12)	16.1	+0.1	16.4	+0.2 (+1.2%)
Parsonage Down (E13)	16.0	<0.1	16.2	<0.1 (+0.2%)

Ecological Site	Max N dep in DS predicted in ES (kgN ha^{-1} yr^{-1})	Max N dep Change predicted in ES (kgN ha^{-1} yr^{-1})	Max N dep in DS predicted using new rates (kgN ha^{-1} yr^{-1})	Max N dep Change predicted using new rates (kgN ha^{-1} yr^{-1})*
River Till (E14)	17.5	+1.3	*Not considered sensitive per LA 105*	
River Till (E15)	17.3	+1.1	*Not considered sensitive per LA 105*	
Steeple Langford Down (E16)	*site not within 200m of operational ARN*			
* maximum change as % of critical load presented in parenthesis				

2.3.18 As presented in Table 2.4 above, updated predicted changes at all receptors are similar to the previous assessment, with maximum deviations of +/- 0.1 kgN ha^{-1} yr^{-1} compared to the predictions presented in the ES. The predicted total N deposition in the DS scenario has notably increased for receptors within Salisbury Plain and Stockton Wood and Down as a result of higher backgrounds at these sites (as provided by the Air Pollution Information System (APIS)) website (Centre for Ecology and Hydrology, *et al.*, 2021).

2.3.19 For the majority of these sites, including Stockton Wood and Down, the predicted change in nitrogen deposition following the method set out in LA 105 is less than 1%. **These effects are not considered to be significant.** One transect on Salisbury Plain (E3) and one transect on Parsonage Down (E12) experience predicted increases in nitrogen deposition of more than 1% at the transect points closest to the road. The effect drops to less than 1% 15m from the road with both of these transects.

2.3.20 These results have been reviewed by the expert for Biodiversity for the Scheme. The 2018 ES Biodiversity Chapter [APP-046] for the Scheme sets out the physical changes due to the Scheme at Parsonage Down (E12) (paragraph 8.9.189). In this paragraph it is explained that the introduction of chalk grassland adjacent to the site, between the site and the A303, for the purposes of ecological connectivity will reduce the exposure of the site to nitrogen leaching from arable land. This reduction was considered within the 2018 ES to outweigh increases in nitrogen deposition from the Scheme. This is still the case and the introduction of chalk grassland will outweigh the +0.2 kgN ha^{-1} yr^{-1} maximum increase predicted at this location in this review. **Therefore, this effect is not considered to be significant.**

2.3.21 At the Salisbury Plain location (E3) there is a woodland plantation along the edge of the A303 which is approximately 28m deep at its narrowest point. This woodland is not the feature for which the site is designated and the effect of the Scheme drops to less than 1% by 15m from the edge of the A303. **Therefore, this effect is not considered to be significant.**

2.4 Conclusion

2.4.1 This section has identified and considered changes to the legislative and policy framework, assessment methodology, and environmental baseline relevant to air quality and found that **the conclusions of 2018 ES and the environmental information supporting it remain valid and that therefore in combination with this report, the environmental information is adequate and no further or updated environmental information is required to be submitted for consideration by the Secretary of State in relation to this topic, in order for a decision to be made on the Scheme.**

2.4.2 The cumulative schemes set out within Appendix 11.2 have been reviewed. The assessment of cumulative developments contained within Appendix 11.2 does not alter the conclusions of the 2018 ES as the majority of the new developments are not located within 200m of the affected road network and so do not form part of the air quality study area. Where new developments are located along the affected road network representative receptors were modelled in the ES and these demonstrated that air quality was predicted to be good with no significant adverse effects, and this would therefore also be the case at these additional new developments.

2.4.3 The mitigation and monitoring measures reported in the 2018 ES remain applicable. No additional mitigation or monitoring measures are required.

2.4.4 This Section has been approved by David Deakin, the author of the Air Quality chapter of the 2018 ES and the relevant competent expert for this topic, as set out in Appendix 1.1 of the 2018 ES [APP-185].

3 Cultural Heritage

3.1 Legislative and Policy Framework

National Planning Policy

National Policy Statement for National Networks (NPSNN; 'the NPS')

3.1.1 Table 6.1 of the 2018 ES Chapter 6 [APP-044], identifies the NPS policies relevant to the cultural heritage assessment and where in the 2018 ES chapter information is provided to address the policy. Table 6.1 of the 2018 ES remains relevant and complete (2018 ES paragraph 6.2.1). **No change is required with regard to compliance of the 2018 ES and the other environmental information with the NPS in respect of the Applicant's cultural heritage assessment and Table 6.1 of the 2018 ES.**

National Planning Policy Framework (NPPF)

3.1.2 The NPPF was revised in February 2019 and July 2021. The 2019 revision made minor changes to wording and presentation (for example, providing clarifications as footnotes), but introduced no substantive changes. The revision of 20 July 2021 (MHCLG, 2021) introduces new paragraph 198 concerning the removal or alteration of historic statues, plaques, memorials and monuments. NPPF Chapter 16, Conserving and enhancing the historic environment, is otherwise unchanged.

3.1.3 The requirements of the NPPF which relate to the cultural heritage assessment have not substantively changed since publication of the ES in 2018; the NPSNN (above) remains the primary source of policy guidance. **The Applicant's cultural heritage assessment remains consistent with the NPPF and the changes do not alter the significance of the effects identified in the 2018 ES**.

National Planning Guidance

National Planning Practice Guidance (PPG), DCLG

3.1.4 A revised version of the section of the national Planning Practice Guidance (PPG) relating to Historic Environment was published on 23 July 2019 (MHCLG, 2019). The majority of the text in the section (previously, Conserving and Enhancing the Historic Environment) is unchanged. Clarifications or extended discussion are included in respect of the definition of heritage assets (i.e., designated or non-designated), the nature of harm to heritage assets and how this should be categorised (i.e., either less than substantial harm or substantial harm) and the extent of the harm clearly articulated, and the assessment by applicants of significance and the impact of proposals on that significance. The revised PPG reiterates that, "Whether a proposal causes substantial harm will be a judgment for the decision-maker, having regard to the circumstances of the case and the policy in the National Planning Policy Framework".

3.1.5 The revised PPG does not alter the application of the equivalent tests required under the NPSNN. **The Applicant's cultural heritage**

assessment remains consistent with the guidance and the changes do not alter the significance of the effects identified in the 2018 ES, or the conclusions reached on substantial harm / less than substantial harm in the NPSNN Accordance Table submitted with the DCO application as updated during Examination [APP-294].

Historic Environment Good Practice Advice in Planning Note 2 (GPA2) and Note 3 (GPA3).

3.1.6 GPA2 'Managing Significance in Decision Taking in the Historic Environment' (Historic England, 2015) and GPA3 'The Setting of Heritage Assets' (Historic England, 2017) are unchanged since publication of the 2018 ES. **The Applicant's cultural heritage assessment remains consistent with the guidance and the significance of the effects identified in the 2018 ES is not altered**.

Stonehenge, Avebury and Associated Sites WHS Management Plan

3.1.7 The Stonehenge, Avebury and Associated Sites WHS Management Plan policies form the framework for the protection of the WHS and its OUV (Simmonds & Thomas, 2015) (2018 ES Appendix 6.1, paragraph 4.1.5 [APP-195]). A review of the current WHS Management Plan 2015-2021 ('the 2015 Management Plan') is underway, with a new management plan anticipated to be in place by April 2023. In the meantime, the 2015 Management Plan and associated documents remain as reviewed for the 2018 ES.

3.1.8 **The Applicant's cultural heritage assessment remains consistent with the 2015 Management Plan policies.**

3.2 Assessment Methodology

Scoping

3.2.1 The Scoping Opinion in relation to cultural heritage remains valid based on the policy, methodology and guidance changes identified in this section.

Guidance

3.2.2 The cultural heritage assessment in the 2018 ES chapter 6 and the HIA (2018 ES Appendix 6.1 [APP-195]) was undertaken following the guidance in the Design Manual for Roads and Bridges (DMRB), with specific reference to the following (2018 ES paragraph 6.3.4):

- DMRB Volume 10 Environmental Design and Management, Section 6 Archaeology, Part 1 HA 75/01 Trunk Roads and Archaeological Mitigation (Highways Agency, 2001);
- DMRB Volume 11 Environmental Assessment, Section 2, Part 5, Assessment and Management of Environmental Effects HA205/08 (Highways Agency, 2008); and

- DMRB Volume 11 Environmental Assessment, Section 3, Part 2, Cultural Heritage HA 208/07 (Highways Agency, 2007).

3.2.3 Highways England has subsequently published updated advice on Sustainability and Environmental Appraisal. Relevant updated advice is set out in the following documents:

LA 104 Environmental assessment and monitoring (Revision 1, July 2019) (Highways England, 2020)

3.2.4 LA 104 supersedes advice contained in DMRB Volume 11, Section 2, Part 5 (HA 205/08 Assessment and Management of Environmental Effects), Section 2, Part 6 (HD 48/08 Reporting of Environmental Impact Assessments), IAN 125/09 (Supplementary guidance for users of DMRB Volume 11 Environmental Assessment) and IAN 133/10 (Environmental Assessment and the Planning Act 2008).

LA 106 Cultural heritage assessment (Revision 1, January 2020) (Highways England, 2020)

3.2.5 LA 106 supersedes advice contained in DMRB Volume 10, Section 1, Part 5 (HA 60/92 The Good Roads Guide - New Roads Heritage) and Section 6, Part 1 (HA 75/01 Trunk Roads and Archaeological Mitigation); and Volume 11, Section 3, Part 2 (HA 208/07 Cultural Heritage).

3.2.6 The cultural heritage assessment methodology applied in the 2018 ES Chapter 6 [APP-044] and Appendix 6.1 HIA [APP-195]) is generally consistent with the assessment methodologies set out in LA 104 and LA 106, with some minor differences:

- LA 104 sets out (section 3) an environmental assessment methodology applicable across all environmental topics; whereas the 2018 ES chapter 6 considers factors relevant to three heritage sub-topics (Archaeological Remains, Historic Buildings and Historic Landscape) following HA 208/07, this is not required in the methodology set out in LA 104. The updated guidance in LA 106 refers simply to the 'cultural heritage resource', this encompasses all three heritage sub-topics. **The ES methodology therefore covers the equivalent aspects of the heritage resource relevant to the updated guidance and no change to the assessment is required.**

- LA 106 stipulates that the study area should include the settings of any designated or other cultural heritage resource as well as the footprint of the scheme plus any land outside that footprint which includes any heritage assets which could be physically affected. The 2018 ES chapter 6 (section 6.5) refers to the ZTV and a 2km study area for designated assets. The HIA considered a study area comprising the Stonehenge part of the WHS and its setting. **The combined study areas fully encompass the requirements stipulated in LA 106. No change to the study areas is required to conform with LA 106.**

- LA 106 cross-references consideration of the setting of heritage assets with the updated advice in LA 111 (Noise and vibration (formerly HD

213/11, IAN 185/15) (Highways England, 2020)), which recognises cultural heritage resources as examples of potentially noise sensitive receptors. Noise as an aspect of the setting of heritage assets is considered in the 2018 ES (Appendix 6.9, Setting Assessment, and the HIA, section 6, Asset Group baseline description and assessment of scheme impacts and effects; and section 9.3, Impact Assessment). **No change is required in respect of the updated LA 111.**

- LA 106 refers to 'Undesignated assets', whereas the 2018 ES chapter 6 refers to 'non-designated assets'. The terms are applied to the same category of assets and are considered to be interchangeable. **No change to the assessment is required.**

- LA 106 does not provide for assignment of value (sensitivity) as 'Unknown'; whereas the 2018 ES chapter 6 assigns an unknown value to assets the importance of which has not been ascertained, following the approach in HA 208-07. **No change to the assessment is required.**

3.2.7 No amendment to the 2018 ES (including the HIA) assessment methodology or study area is required in response to publication of LA 104 and LA 106. **The Applicant's cultural heritage assessment remains consistent with the guidance and the changes do not alter the significance of the effects identified in the 2018 ES.**

ICOMOS Guidance on Heritage Impact Assessments for Cultural World Heritage Properties

3.2.8 The HIA (ES Appendix 6.1 [APP-195]) was prepared in accordance with ICOMOS[3] Guidance on Heritage Impact Assessments for Cultural World Heritage Properties (ICOMOS, 2011), published in 2011 (2018 ES Chapter 6 paragraph 6.3.2 [APP-044]). ICOMOS, together with ICCROM[4] and IUCN[5], in partnership with the UNESCO World Heritage Centre and the International Association for Impact Assessment (IAIA), are developing a new joint World Heritage impact assessment guidance document. The new guidance is intended to provide a framework that can be applied within EIA, or as a stand-alone assessment. The resulting integrated 'Guidance and Toolkit for Impact Assessment in a World Heritage Context' will introduce consideration of the OUV of Natural World Heritage Properties, to provide a comprehensive set of guidance for both Natural and Cultural World Heritage Properties. This is expected to be completed early 2022, incorporating and replacing both the 2011 ICOMOS Guidance and the 2013 IUCN World Heritage Advice Note on Environmental Assessment.

3.2.9 The changes to the ICOMOS Guidance are expected to introduce greater emphasis on the need for a multi-disciplinary approach to HIA (for example, integration of biodiversity and geological aspects). The HIA forming part of

[3] The International Council on Monuments and Sites (ICOMOS)
[4] The International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM)
[5] The International Union for Conservation of Nature (IUCN)

the 2018 ESHIA already includes multi-disciplinary aspects in its assessment, notably biodiversity (in anticipation of the updated guidance), and it is not, therefore, anticipated that updates will be required in this regard.

Principles of Cultural Heritage Impact Assessment (CHIA) in the UK (IEMA, 2021).

3.2.10 This new publication by the Institute of Environmental Management and Assessment (IEMA) in collaboration with the Institute of Historic Building Conservation (IHBC) and the Chartered Institute for Archaeologists (CIfA) aims to provide a guide to good practice in cultural heritage impact assessment (CHIA).

3.2.11 CHIA as defined in the document is distinct from EIA as required by DMRB, and the CHIA principles are intended to be more broadly applicable across a range of circumstances driving change, including those beyond development. **The Applicant's cultural heritage assessment methodology is consistent with the principles of CHIA and the new guidance does not alter the significance of the effects identified in the 2018 ES.**

Assessment Methodology

3.2.12 Baseline data for the 2018 ES was established through a desk-based review of existing sources of information, supported where appropriate by the use of field surveys, following the guidance set out in DMRB (2018 ES Appendix 6.1, paragraph 5.1.1 [APP-195]). Highways England has subsequently published updated advice on Sustainability & Environment Appraisal; the changes to relevant sections of DMRB since compilation of the 2018 ES are summarised in paragraphs 3.2.2 - 3.2.7 of this document (above).

3.2.13 The desk-based review of existing sources of information and the field surveys were undertaken in line with the Chartered Institute for Archaeologists' (CIfA) Standard and Guidance for Historic Environment Desk-based Assessment (CIfA 2014) and Standard and Guidance for Archaeological Field Evaluation (CIfA, 2014) (2018 ES Appendix 6.1, paragraph 5.1.1).

3.2.14 A substantial overhaul of the full suite of CIfA Standards and Guidance planned for 2020-21 is now expected to be completed by early 2023. It is not anticipated that this will substantially change the standards applying with regard to the environmental information. In the meantime, the CIfA Standards and Guidance remain substantially as published in 2014:

- The CIfA Standard and Guidance for Historic Environment Desk-based Assessment (CIfA, 2014) was updated in January 2017 replacing reference to PPS5 with Historic England GPA Note 2, and again in October 2020 (minor formatting changes).

- The CIfA Standard and Guidance for Archaeological Field Evaluation (CIfA, 2014) was updated in June 2020 incorporating changes to the

wording of the Standard and the definition of field evaluation, and in October 2020 (minor formatting changes).

3.2.15 **The Applicant's cultural heritage assessment remains consistent with relevant CIfA standards and guidance.**

Assessment of setting

3.2.16 The setting assessment undertaken to inform the HIA considers factors set out in Good Practice Advice in Planning 3, The Setting of Heritage Assets (Historic England, 2017), Guidelines for Landscape and Visual Impact Assessment (GLVIA3) (Landscape Institute, 2013) and DMRB Volume 11 Section 3 Part 5, Landscape Effects (2018 ES Appendix 6.1, paragraph 5.3.20).

3.2.17 Highways England has subsequently published updated advice on Sustainability and Environmental Appraisal. Relevant updated advice regarding setting assessment is set out in LA 107 Landscape and visual effects (Highways England, 2020), which supersedes advice contained in DMRB Volume 11, Section, 3, Part 5 (Landscape Effects) and IAN 135/10.

3.2.18 Note 1 of LA 107 (p 11) states that "effects on landscapes of historical, cultural or archaeological significance are assessed in LA 106 Cultural heritage assessment". LA 106 is considered in paragraphs 3.2.5 to 3.2.7 of this document (above). **The Applicant's cultural heritage assessment remains consistent with the guidance and the changes do not alter the significance of the effects identified in the 2018 ES.**

Photomontages

3.2.19 Photomontages from key viewpoints were prepared in accordance with Landscape Institute Advice Note 1/11: Photography and photomontage in landscape and visual impact assessment (Landscape Institute, 2011); and Landscape Institute Guidance Note 02/17: visual representation of development proposals (Landscape Institute, 2017) (ES Appendix 6.1, paragraph 5.3.43 [APP-195]). The Landscape Institute has subsequently published updated guidance: Technical Guidance Note (TGN) 06/19 Visual Representation of development proposals (Landscape Institute, 2019).

3.2.20 TGN 06/19 replaces Advice Note 01/11, 'Advice on Photography and Photomontage' (withdrawn) and Technical Guidance Note 02/17, 'Visual Representation of Development Proposals' (withdrawn) as supplementary guidance to GLVIA3 (Landscape Institute, 2013).

3.2.21 TGN 02/21, 'Assessing landscape value outside national designations' (Landscape Institute, 2021) was prepared to address the introduction into NPPF in February 2019 of the term 'valued landscape' and provides information and guidance to those who need to make judgments about the value of a landscape (outside national landscape designations) in planning and managing development.

3.2.22 The process for photomontages set out in TGN 06/19 is unchanged: the survey-located camera positioning and collection of survey points that

enable the modelling to be verifiable, as applied for the 2018 ES, remain current.

3.2.23 The new guidance in TGN 06/19 requires images to be presented at a larger format: no change is required with regard to the content of the image, and the ability to view or interpret the image is unaffected by this updated presentational requirement. The 2018 ES LVIA assessment [APP-045] was based on the relevant drawings for determination, not the photomontages, which served as an aid for representing the Scheme only.

3.2.24 TGN 02/21 does not seek to provide an evaluative methodology that would replace those provided by other established advisory documents.

3.2.25 **The Applicant's cultural heritage assessment remains consistent with the guidance and the changes do not alter the significance of the effects identified in the 2018 ES.**

Evaluation of heritage resource

3.2.26 The value attributed to heritage assets in the 2018 ES and HIA is based on relevant legislation and policy (see the 2018 ES Appendix 6.1, paragraph 5.7.2 [APP-195]), including ICOMOS Guidance on HIAs for Cultural World Heritage Properties (ICOMOS, 2011), NPSNN (DfT, 2014), NPPF (MHCLG, 2018), national Planning Practice Guidance (PPG) (MHCLG, 2018) and DMRB Volume 11 Environmental Assessment, Section 3 Environmental Topics, Part 2 HA 208 / 07 Cultural Heritage (Highways Agency, 2007).

3.2.27 The updated guidance replacing DMRB Volume 11 Section 3 Part 2 HA 208/07 is summarised in paragraphs 3.2.5 - 3.2.7 of this document (above). The current status of the ICOMOS HIA guidelines is discussed in paragraphs 3.2.8 - 3.2.9 above.

3.2.28 **The Applicant's cultural heritage assessment remains consistent with the guidance and the changes do not alter the significance of the effects identified in the 2018 ES.**

3.3 Environmental Information

Baseline

Baseline information

3.3.1 Current baseline conditions were set out in 2018 ES section 6.6 [APP-044]. Baseline reports and gazetteers for archaeological remains, historic buildings and historic landscape are presented in ES Appendices 6.2-6.6:

- Appendix 6.2 Archaeology baseline report [APP-211];
- Appendix 6.3 Gazetteer of archaeological assets [APP-212];
- Appendix 6.4 Historic buildings baseline report [APP-213];
- Appendix 6.5 Gazetteer of historic buildings [APP-214]; and

- Appendix 6.6 Historic landscape baseline report and gazetteer [APP-215].

3.3.2 Minor errors were subsequently identified, and corrections provided for clarification in relation to 2018 ES Appendices 6.1 (Heritage Impact Assessment) [APP-195] and 6.3 (Archaeological Gazetteer) in an Errata Report submitted to the Examination [REP7-022] (which forms part of the 2018 ES, as confirmed above at paragraph 1.1.3).

3.3.3 Following publication of a 'new discovery' by the Stonehenge Hidden Landscapes Project in June 2020 an ES Addendum[6] and HIA addendum[7] were submitted to the Secretary of State in August 2020. These Addendums form part of the 2018 ES, adding to and supplementing the baseline information as part of the environmental information.

3.3.4 The HER data used in compiling the baseline information for the 2018 ES and associated environmental information was provided on 15 March 2018. An updated dataset was provided on 10 December 2021 and compared against the 2018 ES dataset to identify additions to the HER database since compilation of the baseline information (see Appendix 3.1 of this document). In summary, the additions to the HER comprise:

- Heritage 'events' (for example, survey work) that were underway or already completed at the time the 2018 ES was compiled. These include, for example, the programme of archaeological evaluations undertaken to inform the 2018 ES, academic research surveys within the Stonehenge landscape completed in 2017, and programmes of archaeological investigation and recording in connection with the Army Basing Programme.

- Additions to the record of 'monuments' (described in the 2018 ES as 'heritage assets') arising from these heritage events and from new or updated aerial photograph transcription or other surveys.

3.3.5 Additions to the record of 'monuments' include:

[6] TR010025 Additional submission Environmental Statement – Addendum addressing 'new discovery' responding to Secretary of State letter dated 16 July 2020 https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010025/TR010025-001979-Highways%20England%20-%20Environmental%20Statement%20%E2%80%93%20Addendum%20addressing%20%E2%80%98new%20discovery%E2%80%99%20responding%20to%20Secretary%20of%20State%20letter%20dated%2016%20July%202020.pdf

[7] TR010025 Additional submission Heritage Impact Assessment – Addendum addressing 'new discovery' responding to Secretary of State letter dated 16 July 2020 https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010025/TR010025-001980-Highways%20England%20-%20Heritage%20Impact%20Assessment%20%E2%80%93%20Addendum%20addressing%20%E2%80%98new%20discovery%E2%80%99%20responding%20to%20Secretary%20of%20State%20letter%20dated%2016%20July%202020.pdf

- Heritage assets identified by the archaeological evaluations in connection with the Scheme (and assessed in the 2018 ES).

- Heritage assets excavated and recorded immediately north of the WHS at Larkhill by the Army Basing Programme; and several smaller scale investigations in connection with developments around the southern fringes of the WHS.

- The plotting of a series of possible Bronze Age barrows and pits and other possible prehistoric features such as enclosures and ditches, identified by the English Heritage Stonehenge World Heritage Site Mapping Project.

3.3.6 Heritage assets identified by the Army Basing Programme work were previously included within the 2018 ES baseline to the extent that information about them was publicly available, and are therefore not 'new' heritage assets requiring additional consideration as part of the redetermination.

3.3.7 Other additions to the HER monument records include within or close to the Order Limits a series of possible Bronze Age barrows or ring ditches in the vicinity of Stonehenge Bottom, and possible barrows and pits in the vicinity of the Countess Farm Barrows. These features were identified through the English Heritage Stonehenge World Heritage Site Mapping Project. Examination of geophysical survey data acquired as part of the 2018 ES baseline and post-dating the aerial photographic transcription has not confirmed the locations and suggested interpretations of these features.

3.3.8 These non-designated assets may convey attributes of the OUV of the WHS and are therefore assigned a Very High value in accordance with the assessment methodology. They variously fall within the scope of the Asset Groups identified and assessed in the 2018 ES, or represent additional discrete non-designated assets. Permanent construction and operational significant effects of the Scheme on these Very High value non-designated assets are assessed as follows (see Tables 3.1 and 3.2 in Appendix 3.1 of this document):

- Possible Bronze Age barrows or ring ditches in the vicinity of Stonehenge Bottom are situated in the tunnel section of the Scheme. There would be no loss of any surviving remains associated with these non-designated assets. Removal of the present A303 surface road would have a positive influence upon the setting of these possible barrows, due to the reduced visual impact of roads and associated infrastructure. This would be a permanent moderate beneficial impact on the Very High value assets and Large beneficial residual effects.

- Possible barrows and pits in the vicinity of the Countess Farm Barrows fall within the extent of Asset Group AG31A (2018 ES Appendix 6.1 HIA [APP-195]). The HIA concluded that the monuments associated with sub-group AG31A are considered to be too distant from the Scheme for it to meaningfully alter their setting, and the Scheme would result in No

Change. The additional heritage assets identified in the HER update do not alter the residual effect of the Scheme on Asset Group AG31A.

3.3.9 There would be no temporary construction significant effects on these non-designated assets. Non-significant effects are summarised in Tables 3.3 and 3.4 of Appendix 3.1 of this document.

3.3.10 Current data from the National Heritage List for England (NHLE) maintained by Historic England was accessed online on 24 December 2021. No new designated heritage assets (scheduled monuments, listed buildings, registered parks, gardens or battlefields, or conservation areas) have been added within the study area since compilation of the 2018 ES.

3.3.11 Comparison of the updated HER and NHLE datasets against the 2018 ES baseline has not identified any new heritage assets that would be adversely impacted by the Scheme. The majority of the HER updates represent heritage assets already assessed in the 2018 ES and are therefore not 'new' heritage assets requiring additional consideration as part of the redetermination. **Additional likely significant effects (Large beneficial residual effects) have been identified in respect of a number of possible Bronze Age barrows or ring ditches in the vicinity of Stonehenge Bottom suggested from aerial photographs (see Appendix 3.1). The new assets in the baseline and the new beneficial likely significant effects constitute further environmental information for consideration by the Secretary of State in his redetermination. The baseline information (contained within the 2018 ES and environmental information) remains otherwise comprehensive, and the cultural heritage assessment is otherwise not altered.**

Investigations of the Stonehenge landscape: Archaeological discoveries and publications since 2018

3.3.12 2018 ES Chapter 6 paragraph 6.6.2 [APP-044] summarised archaeological investigations of Stonehenge and the surrounding landscape, beginning with antiquarian studies and coming up to the present day. A fuller narrative of this subject, with detailed bibliographic references was provided in 2018 ES Appendix 6.10 [APP-219], including evaluation work undertaken in connection with previous A303 improvement schemes and a series of projects to develop a new Stonehenge visitor centre.

3.3.13 Since publication of the 2018 ES, a number of further archaeological reports have been published. These include, *inter alia*:

- The first of four volumes presenting the results of the Stonehenge Riverside Project (Parker Pearson, et al., 2020) (2018 ES Chapter 6, paragraph 6.6.12 [APP-044], Excavations: (a)) and a number of related articles relating to the movement of people and livestock (Evans, et al., 2019) (Madgwick, et al., 2019) (Madgwick, et al., 2021);

- Journal articles describing the emerging results of the Stonehenge Hidden Landscapes Project (SHLP) (2018 ES, paragraph 6.6.12 [APP-044], Non-intrusive surveys: (c)) (Gaffney, et al., 2018); and

- Journal articles exploring the results of Historic England's Stonehenge Southern WHS Survey (Roberts, et al., 2018) (Roberts, et al., 2020) (Worley, et al., 2019) (Bishop, et al., 2020) (Mays, et al., 2018) (Roberts, et al., 2018) (2018 ES Chapter 6, paragraph 6.6.12 [APP-044], Excavations: (e)).

3.3.14 Further publications since 2018 relate to archaeological work in connection with the Army Basing Programme (Leivers, 2021), including the results of excavations immediately outside the WHS. These include the Lark Hill causewayed enclosure and a possible associated solstitial sightline (Ruggles, et al., 2021) (Leivers, et al., 2021).

3.3.15 The 2018 ES baseline incorporated the findings of these publications, as known from earlier draft publications and assessment reports (see 3.3.4 above). **The baseline information (contained within the 2018 ES and environmental information) remains comprehensive and the cultural heritage assessment is not altered.**

Committed developments

3.3.16 The developments identified in Appendix 11.2 of this document as being part of the baseline do not alter the conclusions of the 2018 ES with regards to cultural heritage. The nearest development to the WHS (U49 at Larkhill) comprises redevelopment within an existing built-up area and will not affect the setting of the WHS or its OUV. No further environmental information regarding the cumulative effect of the Scheme in relation to cultural heritage is required to be submitted for consideration by the Secretary of State, in order for the Application to be re-determined. **No additional likely significant effects on cultural heritage are predicted based on the nature of the developments identified.**

Future Baseline

3.3.17 The delay to the Scheme resulting in the change of the construction phase and operational phase start dates (to 2023 and 2029 respectively) does not alter the conclusions relating to the future baseline in the 2018 ES with regards to cultural heritage, and no further environmental information is required to be submitted for consideration by the Secretary of State, in order for the Application to be re-determined.

3.3.18 The developments identified in Appendix 11.2 as being part of the future baseline do not alter the conclusions of the 2018 ES with regards to cultural heritage, and no further environmental information is required to be submitted for consideration by the Secretary of State, in order for the Application to be re-determined.

3.4 Conclusion

3.4.1 The legislative and policy framework, assessment methodology and environmental baseline on which the 2018 ES (in particular, Chapter 6 and the accompanying HIA (2018 ES Appendix 6.1 [APP-195])) were based have been reviewed against revised and updated guidance, and archaeological discoveries and publications brought to light since 2018. **The**

2018 ES (including the HIA) and related environmental information remain consistent with the legislative and policy framework and assessment guidance. Assessment of updated baseline information (see Appendix 3.1 of this document) has identified additional likely significant effects (Large beneficial residual effects). The new assets in the baseline and the new beneficial likely significant effects constitute further environmental information, for consideration by the Secretary of State in his redetermination. In all other respects the baseline information (in the 2018 ES including the HIA and in the environmental information including the 2020 ES Addendum and HIA Addendum submitted in the post-examination period[8]), remains comprehensive and the significance of the effects identified in the 2018 ES and the rest of the environmental information is not altered. Other than as identified here, there is no other further environmental information to be submitted for consideration by the Secretary of State in relation to this topic, in order for a decision to be made on the Scheme.

3.4.2 The cumulative schemes set out within Appendix 11.2 have been reviewed. No additional likely significant effects on cultural heritage are predicted based on the nature of the developments identified. The assessment of cumulative developments contained within Appendix 11.2 does not alter the conclusions of the 2018 ES, and no further environmental information is required to be submitted for consideration by the Secretary of State, in order for the Application to be re-determined.

3.4.3 The mitigation and monitoring measures reported in the 2018 ES remain applicable. No additional mitigation or monitoring measures are required.

3.4.4 This Section has been approved by Neil Macnab, the author of the Cultural Heritage chapter of the 2018 ES and the relevant competent expert for this topic, as set out in Appendix 1.1 of the 2018 ES [APP-185].

[8] TR010025 Additional submission Environmental Statement – Addendum addressing 'new discovery' responding to Secretary of State letter dated 16 July 2020 https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010025/TR010025-001979-Highways%20England%20-%20Environmental%20Statement%20%E2%80%93%20Addendum%20addressing%20%E2%80%98new%20discovery%E2%80%99%20responding%20to%20Secretary%20of%20State%20letter%20dated%2016%20July%202020.pdf
TR010025 Additional submission Heritage Impact Assessment – Addendum addressing 'new discovery' responding to Secretary of State letter dated 16 July 2020 https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010025/TR010025-001980-Highways%20England%20-%20Heritage%20Impact%20Assessment%20%E2%80%93%20Addendum%20addressing%20%E2%80%98new%20discovery%E2%80%99%20responding%20to%20Secretary%20of%20State%20letter%20dated%2016%20July%202020.pdf

4 Landscape and Visual

4.1 Legislative and Policy Framework

National Planning Policy Framework

4.1.1 The NPPF sets out the government's planning policies for England and how these are expected to be applied. Table 4.1 compares the relevant landscape and visual policies of the 2018 NPPF with those of the 2021 NPPF (MHCLG, 2021). The NPPF was also updated in 2019. Only a comparison with the most up to date version (2021) is provided below.

Table 4.1: NPPF 2018 and 2021 Comparison

2018 NPPF Paragraph	2021 NPPF Revision	Implications
Paragraph 118 in relation to encouraging multiple benefits from urban and rural land	The exact policy wording is retained in paragraph 120	None
Paragraph 127 in relation to planning policies and decisions in respect of development	The exact policy wording is retained in paragraph 130	None
Paragraph 130 in relation to refusing development of poor design	Replaced by paragraph 134 with revised wording to state: *"Development that is not well designed should be refused, especially where it fails to reflect local design policies and government guidance on design, taking into account any local design guidance and supplementary planning documents such as design guides and codes. Conversely, significant weight should be given to:* *a) development which reflects local design policies and government guidance on design, taking into account any local design guidance and supplementary planning documents such as design guides and codes; and/or* *b) outstanding or innovative designs which promote high levels of sustainability, or help raise the standard of design more generally in an area, so long as they fit in with the overall form and layout of their surroundings."*	No overall change as the policy wording merges 2018 NPPF paragraphs 130 and 131
Paragraph 131 in respect of giving great	As per the above, the 2018 policy is amalgamated into paragraph 134. Paragraph 131 now states the	None, as the Scheme implements tree

2018 NPPF Paragraph	2021 NPPF Revision	Implications
weight to outstanding or innovative design	importance of trees to the character and quality of urban environments and mitigating climate change.	planting, particularly in the 'urban' environment of Amesbury and at Countess Roundabout and is therefore compliant with paragraph 131
Paragraph 170 in respect of enhancing the natural and local environment	The exact policy wording is retained in paragraph 174	None
Paragraph 180 in respect to development being appropriate for its location.	The exact policy wording is retained in paragraph 185	None

4.1.2 From the above table, the revised NPPF does not alter the conclusions of the Landscape and Visual Chapter of the 2018 ES (as amended by the Errata Report [REP7-022]) ("the 2018 LVIA") [APP-045] and the environmental information in respect of the Scheme's response to policies relevant to landscape and visual matters.

National Planning Policy Guidance (PPG)

4.1.3 The 2018 LVIA also referred to several PPG in respect of the Natural Environment – Landscape; Natural Environment – Biodiversity and Light Pollution. All of these PPG have been updated in 2019, following the updated 2019 NPPF. Following a review of the updated PPG, they do not alter the iterative design approach of the 2018 LVIA.

National Design Guide, 2021 (MHCLG, 2021)

4.1.4 The National Design Guide is one of several planning practice guidance notes and illustrates how well designed places can be achieved. The focus of the National Design Guide is residential development. This Guide is therefore not pertinent to the Scheme design, which was informed by National Network's 'The Road to Good Design, (2018)' and the Design Manual for Roads and Bridges, Volume 10, Part 2, Environmental Functions (2001).

LD117 Landscape Design (LD117), 2020 (National Networks, 2020)

4.1.5 The 2018 LVIA informed the iterative design process for the Scheme, with reference to DMRB Volume 10 Part 2: Environmental Functions and landscape and visual design 'codes', i.e. 'visual screening'.

4.1.6 LD117 replaces DMRB Volume 10, Part 2; but retains the environmental function codes, as set out in LD117 Tables 4.2a to 4.2c. These function codes cover environmental mitigation and enhancement measures and mirror those used in the 2018 LVIA and iterative design process.

4.1.7 LD117 does therefore not alter the iterative design approach of the 2018 LVIA.

4.1.8 Similarly, as there have been no changes to the design from that assessed in the 2018 LVIA, the mitigation measures reported in the 2018 LVIA and the environmental information remain applicable. No additional mitigation measures are required.

Planning Practice Guidance (PPG), Natural Environment, 2019 (MHCLG, 2021)

4.1.9 The PPG retains reference to landscape character assessment, the use of Natural England's National Character Area profiles and the merits of green infrastructure. The updates are in relation to biodiversity net gain for Town and Country Planning Act applications and therefore do not alter the conclusions of the 2018 LVIA.

Wiltshire Green Blue Infrastructure Strategy (GBI) Consultation Draft, 2021 (Wiltshire Council, 2021)

4.1.10 The GBI sets out the principles for GBI across Wiltshire in support of the Local Plan. The GBI uses published landscape character assessments as part of the evidence base for GBI assets across the county. Increased tree planting and recreational access (as a part of 'healthy living') are parts of the GBI strategy. These aspects were included in the Scheme design and therefore do not alter the conclusions of the 2018 LVIA.

4.2 Assessment Methodology

Scoping

4.2.1 The policy, methodology and guidance changes and the environmental information described in this Section would not alter the Scoping Opinion. This is because the landscape and visual receptors identified in the Scoping Report remain representative, along with the two and five kilometre study areas being proportionate to the assessment of landscape and visual effects. There has also been no change to the Scheme to alter the predicted impacts from the construction and operational phases presented in the Scoping Report. The following guidance updates do not materially change the approach presented in the Scoping Report to the assessment of landscape and visual effects.

Guidance Note 1 (GN1) for the reduction of obtrusive light, 2021 (Institution of Lighting Professionals, 2021)

4.2.2 The 2018 LVIA included an assessment of the night- time impacts and effects from the construction and operational phases. The assessment

methodology included the use of environmental zones defined by the Institution of Lighting Professionals (ILP), derived from their 2018 guidance.

4.2.3 GN1 replaces the ILP 2018 guidance but retains the same environmental lighting zones. Therefore, there would be no change to the 2018 LVIA assessment methodology for the night-time assessment.

Technical Guidance Note 02/21: Assessing landscape value outside national designations (TGN 02/21), 2021 (Landscape Institute, 2021)

4.2.4 The 2018 LVIA assessed landscape value outside of national designations via a methodology derived from the Guidelines for Landscape and Visual Impact Assessment, Third Edition, 2013 (GLVIA3).

4.2.5 GLVIA3 Box 5.1 sets outs out a range of factors to consider in the identification of landscape value, all of which were included in the 2018 LVIA methodology.

4.2.6 TGN 02/21 paragraph 1.3.1 sets out that the "*TGN does not seek to provide an evaluative methodology that would replace those provided by other established advisory documents. It is intended to supplement existing advice to practitioners, such as guidance on Landscape Character Assessment and Landscape Sensitivity Assessment (Natural England, NatureScot, Natural Resources Wales, Marine Management Organisation), Local Landscape Designation (NatureScot, Natural Resources Wales) and Landscape and Visual Impact Assessment (the Landscape Institute and Institute of Environmental Management and Assessment). The TGN acknowledges and reflects all these important sources of guidance.*" (Applicant's emphasis)

4.2.7 TGN 02/21 Table 1 sets out a range of factors that can be considered when identifying landscape value. TGN 02/21 paragraph 2.4.4 states that Table 1 is *"not intended to be an exhaustive list of factors to be considered when determining the value of landscapes, but to provide a range of factors and indicators that could be considered."*

4.2.8 Table 4.2 compares the TGN 02/21 Table 1 factors with those used in the 2018 LVIA methodology and GLVIA3 Box 5.1.

Table 4.2: Comparison of Landscape Value

TGN 02/21 Table 1 Landscape Value Factors	LVIA 2018 Assessment of Landscape Value Factors	Review
Natural Heritage	Representativeness	TGN 02/21 defines natural heritage as landscapes with clear evidence of ecological, geological, geomorphological or physiographic interest which contribute positively to the landscape. Examples of evidencing natural heritage include published landscape character assessments and ecology designations.

TGN 02/21 Table 1 Landscape Value Factors	LVIA 2018 Assessment of Landscape Value Factors	Review
		The 2018 LVIA reviewed published landscape character assessments as part of the assessment of 'representativeness' and also reviewed ecological designations via the assessment of conservation interests.
Cultural Heritage	Conservation Interests	TGN 02/21 defines cultural heritage as landscapes with clear evidence of archaeological, historical or cultural interest which contribute positively to the landscape. Examples of evidencing the cultural heritage include published landscape character assessments and historic characterisation. The 2018 LVIA reviewed published landscape character assessments, historic characterisations as part of the assessment of conservation interests.
Landscape Condition	Landscape Quality	TGN 02/21 defines landscape condition as a landscape which is in a good physical state both with regard to individual elements and overall landscape structure. These factors were considered via the assessment of landscape quality within the 2018 LVIA.
Associations	Associations	TGN 02/21 defines associations as landscapes which are connected with notable people, events and the arts. These factors were considered via the assessment of landscape associations within the 2018 LVIA.
Distinctiveness	Rarity	TGN 02/21 defines distinctiveness as a landscape that has a strong sense of identity. The 2018 LVIA assessed the rarity of the landscape, e.g. ancient woodland, calcareous grassland or historical features. These features are considered to contribute to the sense of identity of a landscape and therefore there is sufficient parity between distinctiveness and rarity.
Recreational	Recreation value	TGN 02/21 defines recreational as landscapes offering recreational opportunities where experience of landscape is important. The 2018 LVIA assessed the recreational value of the landscape, via an analysis of Public Rights of Way or Open access land.
Perceptual (scenic)	Scenic Quality	TGN 02/21 defines perceptual (scenic) value as a landscape that appeals to the

TGN 02/21 Table 1 Landscape Value Factors	LVIA 2018 Assessment of Landscape Value Factors	Review
		senses, primarily the visual sense. The 2018 LVIA assessed the scenic quality of the landscape, based primarily on the visual senses, such that it reflects this aspect of the TGN.
Perceptual (wildness and tranquillity)	Perceptual aspects	TGN 02/21 defines this aspect of perceptual as a landscape with a strong perceptual value notably wildness, tranquillity and/or dark skies. These aspects were considered under the criteria of perceptual within the 2018 LVIA.
Functional	-	TGN 02/21 defines this aspect of value as a landscape which performs a clearly identifiable and valuable function, particularly in the healthy functioning of the landscape. Examples include Green Infrastructure studies and landscape character assessments. The 2018 LVIA did not include a direct similar category. The 2018 LVIA did review the relevance of ecosystem services and landscape character assessments as part of the assessment of conservation interests and recreational value. Therefore, functionality was included in the 2018 LVIA, via the assessment of other factors of landscape value, albeit there was not a specific heading for functionality in the 2018 LVIA.

4.2.9 The 2018 LVIA methodology for the assessment of landscape value outside of national designations is considered to remain appropriate in light of TGN 02/21, given the similarity in approach set out in the above table.

4.2.10 TGN 02/21 does not alter the methodology and assessment of landscape value and would not alter the conclusions of the 2018 LVIA.

LA107 Landscape and Visual Effects, (LA107), revision 2, 2020 (Highways England, 2020)

4.2.11 LA107 has replaced DMRB Interim Advice note 135/10 (IAN 135/10), 2010. LA107 is a more succinct assessment methodology in comparison to IAN 135/10, and refers specifically to GLVIA3, compared to IAN 135/10, which referred to GLVIA2.

4.2.12 LA107 retains the key principles of IAN 135/10 via separate assessments of landscape and visual effects. Compared to IAN135/10, LA107 paragraph 3.4 makes specific reference to the sensitivity of landscape and visual

receptors, being informed by judgements on value and susceptibility, so as to align with GLVIA3. LA107 also makes specific reference to magnitude (change) assessing scale, extent and duration, again to align with GLVIA3.

4.2.13 LA107 provides 'typical descriptors' for landscape and visual sensitivity and defined terminology for the magnitude of landscape and visual impacts.

4.2.14 In comparison to IAN135/10, LA107 no longer includes a tabular matrix to determine the significance of landscape and visual effects, via the relationship between sensitivity and magnitude. LA107 instead only provides 'typical descriptors' for landscape and visual sensitivity and magnitude of impacts. LA 107 does however refer to the matrix in LA104. This is set out later in this document in paragraph 4.2.46.

4.2.15 The relevant stages in the LVIA methodology and assessment process are set out below in relation to reviewing the potential implications of LA107.

Combining LA107 and GLVIA3

4.2.16 IAN135/10 formed part of the 2018 LVIA assessment methodology, along with GLVIA3. As set out in section 7.3 of the 2018 LVIA, GLVIA 3 and IAN 135/10 are complementary assessment methods.

4.2.17 This amalgamation of GLVIA3 and IAN135/10 was undertaken because IAN135/10 was specific for a highways scheme, although being published in 2010 and referenced GLVIA2. In contrast, GLVIA3 reflected best practice at the time of the 2018 LVIA and is specifically referenced in the NSPNN. This approach of combining IAN135/10 and GLVIA3 was agreed with Wiltshire Council during discussions between the Applicant and the Local Planning Authority. The approach was also set out in the Scoping Report, with the Planning Inspectorate accepting the approach and requesting that the LVIA explain how IAN135/10 and GLVIA3 were used. This explanation was presented in Section 7.3 and Appendix 4.2 of the 2018 LVIA.

4.2.18 LA107 retains a complementary relationship with GLVIA3, with direct references to GLVIA3 throughout its methodology.

4.2.19 **It is therefore considered that LA107 and GLVIA3 can be combined and there would be no change in the assessment approach of the 2018 LVIA.**

Assessing Receptor Value and Susceptibility

4.2.20 The 2018 LVIA methodology used GLVIA3 to assess landscape and visual receptor sensitivity, determined via an analysis of value and susceptibility.

4.2.21 LA107 mirrors this approach, with assessments on value and susceptibility being combined to determine the sensitivity of landscape and visual receptors. LA107 paragraph 3.4.1 states "*the assessment of susceptibility to change should be tailored to the project*."

4.2.22 The 2018 LVIA approach of using specific criteria, tailored to the project, to determine value and susceptibility therefore remains in accordance with LA107 and would not change the assessment approach.

Assessing Landscape and Visual Sensitivity

4.2.23 The 2018 LVIA methodology determined landscape and visual sensitivity via a three point scale, ranging between low, medium or high, to reflect the three point scale of IAN135/10.

4.2.24 LA107 differs from IAN135/10 by setting out a five point scale ranging between negligible and very high for landscape sensitivity in Table 3.22 and for visual sensitivity in Table 3.41.

4.2.25 Specific to this five point scale are 'typical descriptions', with World Heritage Sites (WHS) in landscape sensitivity Table 3.22 being classified in the highest tier of 'very high' sensitivity. Similarly, in relation to visual sensitivity, Table 3.41 sets out that "*views to and from a WHS*" are also classified as 'very high'.

4.2.26 With reference to Appendix 4.1, the Applicant has re-assessed the sensitivity of the landscape receptors based on LA107. Of the 54 landscape receptors identified in the 2018 LVIA, the re-assessment has determined that there would be changes in the sensitivity rating to 16 landscape receptors. These changes are summarised in Table 4.3.

Table 4.3: Landscape Sensitivity Re-Assessment

Landscape Receptor	2018 LVIA Sensitivity	LA107 Re-assessment	Justification
LCA04 Upper Till Valley Slopes	Medium	High	The LA107 typical descriptor in relation to susceptibility would increase the sensitivity to high.
LCA 09 Lesser Cursus and the Packway Ridges	High	Very High	As the landscape receptor covers a large part of the WHS, the sensitivity would increase to very high.
LCA 10 Winterbourne Stoke Dry Valleys	Medium	High	As the receptor covers a very small part of the WHS at the local level the sensitivity would increase to high.
LCA 11 Oatlands Hill	Medium	High	As the receptor covers a very small part of the WHS at the local level the sensitivity would increase to high.
LCA 14 Stonehenge and Normanton Ridges	High	Very High	As the landscape receptor covers a large part of the WHS in relation to the geographic extent of the LCA, the sensitivity would increase to very high.
LCA 15 Springbottom	High	Very High	As the landscape receptor is in the WHS, the sensitivity would increase to very high.

Landscape Receptor	2018 LVIA Sensitivity	LA107 Re-assessment	Justification
and Woodford Dry Valleys			
LCA 16 Durrington Down Larkhill Dry Valley	Medium	High	As the landscape receptor is in the WHS, the sensitivity would increase to high. However, as the landscape receptor covers military land uses and associated infrastructure, the sensitivity would not increase to very high.
LCA 17 Upper Stonehenge Dry Valley	High	Very High	As the landscape receptor is in the WHS, the sensitivity would increase to very high.
LCA 18 King Barrow and Coneybury Ridge	High	Very High	As the landscape receptor is in the WHS, the sensitivity would increase to very high.
LCA 19 Durrington Down Ridges	High	Very High	As the landscape receptor is in the WHS, the sensitivity would increase to very high.
LCA 20 Countess Farm Dry Valleys	High	Very High	As the landscape receptor is in the WHS, the sensitivity would increase to very high.
LCA 21 Avon Valley Slopes	Medium	High	As the receptor covers a very small part of the WHS at the local level the sensitivity would increase to high.
LCA 22 Avon Valley Floodplain and Meadows	High	Very High	As the landscape receptor is in the WHS, the sensitivity would increase to very high.
LCA 23 Amesbury Down	Medium	High	The LA107 typical descriptor in relation to susceptibility would increase the sensitivity to high.
LCA 26 Solstice Park Dry Valley	Low	Negligible	The sensitivity would decrease due to the large scale development across the LCA in relation to the LA107 descriptors.
LCA 29 Boscombe Down Airfield	Low	Negligible	The sensitivity would decrease due to the land use across the LCA in relation to the LA107 descriptors.

4.2.27 From the above table, two landscape receptors would reduce in sensitivity to negligible due to their land use reflecting the typical descriptors for this category in LA107.

4.2.28 The remaining 14 landscape receptors would increase in sensitivity, to high or very high. The majority of these changes are to the local landscape

character areas identified by the Applicant which are within or largely cover parts of the WHS.

4.2.29 Therefore, there is a difference between LA107 and IAN 135/10 in the categorisation of landscape sensitivity, and this includes the local landscape character areas within the WHS which were defined by the Applicant. **However, this change in sensitivity would not alter the 2018 LVIA methodology of identifying landscape sensitivity via an analysis of value and susceptibility and that when a local landscape character area is within the WHS, it has the potential to be assessed at the highest tier of landscape sensitivity.**

4.2.30 With reference to Appendix 4.2, the Applicant has re-assessed the sensitivity of the visual receptors. Of the 56 visual receptors identified in the 2018 LVIA, the re-assessment has identified changes to the sensitivity of 31 receptors. These changes are summarised in Table 4.4. The terms medium and moderate are interchangeable to account for the comparison between LA107 and LA104.

Table 4.4: Visual Sensitivity Re-assessment

Visual Receptor	2018 LVIA Sensitivity	LA107 Re-assessment	Justification
06B. Motorists on the A360	Low	Negligible	As the specific location of the receptor is on a main road and fast moving, the sensitivity would reduce to negligible.
08. Residents (nos. 1-4) on the eastern side of Winterbourne Stoke and to the south of the existing River Till crossing	High	Medium	LA107 would reduce the sensitivity to medium (moderate) as the receptor is representative of less populated residential areas.
08A. Foredown House	High	Medium	LA107 would reduce the sensitivity to medium (moderate) as the receptor is representative of less populated residential areas.
08B. High Down View Residents, including no.1 at the corner of the existing A303 and the B3083, Winterbourne Stoke	High	Medium	LA107 would reduce the sensitivity to medium (moderate) as the receptor is representative of less populated residential areas.
08C. Scotland Lodge including the grounds of the property	High	Medium	LA107 would reduce the sensitivity to medium (moderate) as the

Visual Receptor	2018 LVIA Sensitivity	LA107 Re-assessment	Justification
			receptor is representative of less populated residential areas.
10A. Hill Farm Cottages nos.1 – 4	High	Medium	LA107 would reduce the sensitivity to medium (moderate) as the receptor is representative of less populated residential areas.
10B. Recreational users on Restricted Byway BSJA9	High	Very High	As recreational receptors with close range views of the WHS, the sensitivity would increase to very high.
12. Tourists and Visitors at the Stonehenge Visitor Centre	High	Very High	As the receptor is in the WHS the sensitivity would increase to very high.
13. Tourists, visitors and recreational users in WHS at the World Heritage Site interpretation panel	High	Very High	As the receptor is in the WHS the sensitivity would increase to very high.
14. Tourists, visitors and recreational receptors at the Winterbourne Stoke Group within the WHS	High	Very High	As the receptor is in the WHS the sensitivity would increase to very high.
15. Recreational users on Byway WCLA1 south-east of The Diamond	High	Very High	As the receptor is in the WHS the sensitivity would increase to very high.
16. Recreational users on permissive open access land close to Normanton Gorse	High	Very High	As the receptor is in the WHS the sensitivity would increase to very high.
17. View south-west from Byway AMES12 close to the north side of the existing A303	High	Very High	As the receptor is in the WHS the sensitivity would increase to very high.
18. View north-east from Byway AMES11 at Normanton Down	High	Very High	As the receptor is in the WHS the sensitivity would increase to very high.
19. Visitors, tourists and recreational users at the WHS interpretation panel viewpoint located to the south of the Stones	High	Very High	As the receptor is in the WHS the sensitivity would increase to very high.

Visual Receptor	2018 LVIA Sensitivity	LA107 Re-assessment	Justification
20. Visitors, tourists and recreational users at the WHS interpretation panel located on Byway AMES12 adjacent to the Cursus	High	Very High	As the receptor is in the WHS the sensitivity would increase to very high.
21. Visitor, tourists and recreational users on the footpath alongside the existing A303, between King Barrow Ridge and Stonehenge Bottom	High	Very High	As the receptor is in the WHS the sensitivity would increase to very high.
22. Visitors, tourists and recreational users at the interpretation panel viewpoint located at the eastern end of The Cursus	High	Very High	As the receptor is in the WHS the sensitivity would increase to very high.
23. Visitors, tourists, recreational users at the WHS interpretation panel viewpoint where the Avenue crosses King Barrow Ridge	High	Very High	As the receptor is in the WHS the sensitivity would increase to very high.
24. Recreational users on the permissive path across Coneybury Hill tumulus	High	Very High	As the receptor is in the WHS the sensitivity would increase to very high.
25. Recreational users on Bridleway AMES39 and residential properties at Strangways	High	Very High	As the receptor is in the WHS the sensitivity would increase to very high.
26. Tourists, visitors and recreational users on Bridleway AMES9A	High	Very High	As the receptor is in the WHS the sensitivity would increase to very high.
27. Visitors, tourists and recreational users at the WHS interpretation panel viewpoint in open access land approximately 100m west of Woodhenge monument	High	Very High	As the receptor is in the WHS the sensitivity would increase to very high.
28. Visitors, tourists and recreational users at the WHS interpretation panel viewpoint in open access land approximately 100m west of Woodhenge monument	High	Very High	As the receptor is in the WHS the sensitivity would increase to very high.
29A Residential Properties adjacent to Countess Road west nos. 61 to 145	High	Very High	As the receptors are in the WHS the sensitivity

Visual Receptor	2018 LVIA Sensitivity	LA107 Re-assessment	Justification
			would increase to very high.
29B Residential Properties adjacent to Countess Road west nos. 23 to 59	High	Very High	As the receptors are in the WHS the sensitivity would increase to very high.
30A. Countess Farm	High	Very High	As the receptor is in the WHS the sensitivity would increase to very high.
31A. Residential properties adjacent to Lords Walk, Amesbury	Medium	High	As residents in a dense residential area their sensitivity would increase to high.
31B. Bowles Hatches (Amesbury Abbey	Medium	Very High	As the receptor is in the WHS the sensitivity would increase to very high.
32. View south-west from Bridleway AMES 6, between Ratfyn and Bulford	Medium	High	As the WHS is visible in the background of the view the sensitivity would increase to high.
34. View west from Beacon Hill	Medium	High	Increase in sensitivity due to views of WHS
35. View north-west from the permissive path adjacent to Fargo Plantation View to Rollestone	Medium	Very High	As the WHS forms the foreground of the view, the sensitivity would increase to very high.

4.2.31 From the above table, the sensitivity for several residential receptors would reduce in comparison to the 2018 LVIA, from high to medium. This is due to LA107 determining these receptors are in less populated areas.

4.2.32 For the majority of the visual receptors, their sensitivity would increase in comparison to the 2018 LVIA from either medium or high to high or very high. This is due to LA107 determining that views of the WHS would be of a higher sensitivity than determined in the 2018 LVIA.

4.2.33 Therefore, there is a difference between LA107 and IAN 135/10 in the categorisation of visual sensitivity, mainly for the visual receptors within the WHS and with views of the WHS. **However, this change would not alter the 2018 LVIA methodology of a visual receptor's sensitivity being assessed via their value and susceptibility and that where a receptor's view was of the WHS, the receptor had the potential to be assessed at the highest tier of visual sensitivity.**

Assessing Landscape and Visual Magnitude of Impacts

4.2.34 The 2018 LVIA methodology determined the magnitude of landscape and visual impacts via IAN135/10 Tables 1 and 2, which provided a set criteria of impacts.

4.2.35 For landscape impacts, IAN135/10 Table 1 provided a nine point scale, ranging between major adverse and major beneficial. LA107 Table 3.24 retains a nine point scale, ranging between major adverse and major beneficial. Compared to IAN135/10, LA107 replaces the term 'neutral' with 'no change'.

4.2.36 LA107 also slightly alters the 'typical descriptors', as set out in Table 4.5.

Table 4.5: Landscape Magnitude of Impact Comparison

Landscape Magnitude of Impact	IAN 135/10 Description	LA107 Description
Major Adverse	Total loss or large scale damage to existing character or distinctive features and elements, and/or the addition of new but uncharacteristic conspicuous features and elements.	Total loss or large scale damage to existing landscape character or distinctive features or elements; and/or addition of new uncharacteristic, conspicuous features or elements (i.e. road infrastructure).
Moderate Adverse	Partial loss or noticeable damage to existing character or distinctive features and elements, and/or the addition of new but uncharacteristic noticeable features and elements.	Partial loss or noticeable damage to existing landscape character or distinctive features or elements; and/or addition of new uncharacteristic, noticeable features or elements (i.e. road infrastructure).
Minor Adverse	Slight loss or damage to existing character or features and elements, and/or the addition of new but uncharacteristic features and elements	Slight loss or damage to existing landscape character of one (maybe more) key features and elements; and/or addition of new uncharacteristic features and elements.
Negligible Adverse	Barely noticeable loss or damage to existing character or features and elements, and/or the addition of new but uncharacteristic features and elements.	Very minor loss, damage or alteration to existing landscape character of one or more features and elements.
No Change (neutral)	No noticeable loss, damage or alteration to character or features or elements.	No noticeable alteration or improvement, temporary or permanent, of landscape character of existing features and elements.
Negligible Beneficial	Barely noticeable improvement of character by the restoration of existing features and elements, and/or the removal of uncharacteristic features and	Very minor noticeable improvement of character by the restoration of one or more existing features and elements.

Landscape Magnitude of Impact	IAN 135/10 Description	LA107 Description
	elements, or by the addition of new characteristic elements.	
Minor Beneficial	Slight improvement of character by the restoration of existing features and elements, and/or the removal of uncharacteristic features and elements, or by the addition of new characteristic elements.	Slight improvement of landscape character by the restoration of one (maybe more) key existing features and elements; and/or the addition of new characteristic features.
Moderate Beneficial	Partial or noticeable improvement of character by the restoration of existing features and elements, and/or the removal or uncharacteristic and noticeable features and elements, or by the addition of new characteristic features.	Partial or noticeable improvement of landscape character by restoration of existing features or elements; or addition of new characteristic features or elements or removal of noticeable features or elements.
Major Beneficial	Large scale improvement of character by the restoration of features and elements, and/or the removal of uncharacteristic and conspicuous features and elements, or by the addition of new distinctive features.	Large scale improvement of landscape character to features and elements; and/or addition of new distinctive features or elements, or removal of conspicuous road infrastructure elements.

4.2.37 From the above table, whilst there are alterations to the magnitude of impact descriptors, the extent of impact is still defined in terms of 'slight, partial or large' and the principle of the definitions remains similar. Where the 2018 LVIA assessed a 'major adverse' impact, the same rating would be applied to a revised assessment using LA107.

4.2.38 Therefore, whilst there are some differences in the terminology of landscape magnitude of impacts, **LA107 would not alter the conclusions of the 2018 LVIA in terms of magnitude of impacts**.

4.2.39 For visual impacts, IAN 135/10 Table 2 provided a five point scale, ranging between major and no change. LA107 retains a five point scale for visual impacts and uses the same 'typical descriptions' as IAN 135/10. The exception is for the definition of 'no change', with LA107 defining this as "*no part of the project work or activity would be discernible*", as opposed to IAN135/10, which defined 'no change' as "*no part of the project, or work or activity associated with it, is discernible."*

4.2.40 From the above review, it is assessed that there would be **no change to the assessment approach for visual magnitude of impacts as a result of LA107 and therefore no change to the conclusions of the 2018 LVIA in terms of visual magnitude of impact.**

4.2.41 As set out in Table 4.4, LA107 does result in changes to visual sensitivity. With reference to Table 4.6, LA107 retains the combination of visual sensitivity and visual magnitude of impact to determine the visual effect, such that there is the potential for changes to the visual effect, as set out in Table 4.8, despite no change to the visual magnitude of impact.

DMRB, LA104 Environmental Assessment and Monitoring (LA104), Revision 1, 2020 (Highways England, 2020)

Assessing the Significance of Landscape and Visual Effects

4.2.42 The 2018 LVIA determined the significance of landscape and visual effects via the IAN135/10 matrices.

4.2.43 These matrices correlated receptor sensitivity with the magnitude of impact to determine effects based on a nine point scale, ranging between very large beneficial and very large adverse.

4.2.44 For both landscape and visual receptors, effects of moderate, large, very large (beneficial or adverse) were assessed as 'significant' within the 2018 LVIA.

4.2.45 LA107 does not provide assessment matrices and refers to LA104.

4.2.46 LA104 Table 3.8.1 sets out a significance matrix, which correlates the five point scale for receptor sensitivity (negligible to very high) with the five point scale of impact (no change to major). From a review of Table 3.8.1, effects of moderate, large or very large would be deemed 'significant', as per the 2018 LVIA.

Table 4.6 Landscape and Visual Significance Matrix

Landscape and Visual Receptor Sensitivity	Magnitude of Impact				
	No Change	Negligible	Minor	Moderate	Major
Very High	Neutral	Slight	Moderate or large	Large or very large	Very Large
High	Neutral	Slight	Slight or moderate	Moderate or large	Large or very large
Moderate	Neutral	Neutral or slight	Slight	Moderate	Moderate or large
Low	Neutral	Neutral or slight	Neutral or slight	Slight	Slight or moderate
Negligible	Neutral	Neutral	Neutral or slight	Neutral or slight	Slight

4.2.47 From the above, whilst there are changes to the sensitivity criteria of landscape and visual receptors, there is no change from the 2018 LVIA in the use of a tabular matrix to guide the assessment of the landscape and visual significance of effect.

Re-assessment of landscape effects

4.2.48 This re-assessment accounts for any changes to the landscape receptors' sensitivity as set out previously. With reference to Appendix 4.1 the Applicant has re-assessed the landscape impacts and effects for the construction, year 1 and year 15 phases of the Scheme. Table 4.7 summarises the changes to landscape receptors. New Significant effects are emphasised in bold.

Table 4.7: Landscape Effects Comparison

Landscape Receptor	2018 LVIA Significance of Effect/ Construction / Year 1 / Year 15	LA104 Significance of Effect Construction / year 1 / Year 15	Justification
NCA 132 Salisbury Plain and West Wiltshire Downs	Neutral Neutral Neutral	Slight Adverse Slight Beneficial Slight Beneficial	The LA104 matrix results in an increase to slight adverse or slight beneficial, all of which are not significant, as per the 2018 LVIA.
LCT 3 High Chalk Plain	Slight Adverse Neutral Neutral	Slight Adverse Slight Beneficial Slight Beneficial	The LA104 matrix results in an increase to slight beneficial, all of which are not significant, as per the 2018 LVIA.
LCA 3A Salisbury Plain West	Slight Adverse Neutral Neutral	Slight Adverse Slight Beneficial Slight Beneficial	The LA104 matrix results in an increase to slight beneficial, all of which are not significant, as per the 2018 LVIA.
LCA 3B Salisbury Plain East	Neutral Neutral Neutral	Slight Adverse Neutral Neutral	The LA104 matrix results in an increase to slight beneficial, all of which are not significant, as per the 2018 LVIA.
LCT 5 Chalk River Valley	Neutral Neutral Neutral	Slight Adverse Neutral Neutral	The LA104 matrix results in an increase to slight adverse for the construction phase, which is not significant, as per the 2018 LVIA.
LCA 5D Upper Avon	Neutral Neutral Neutral	Slight Adverse Neutral Neutral	The LA104 matrix results in an increase to slight adverse for the construction phase, which is not significant, as per the 2018 LVIA.

Landscape Receptor	2018 LVIA Significance of Effect/ Construction / Year 1 / Year 15	LA104 Significance of Effect Construction / year 1 / Year 15	Justification
LCA 5E Wylye Valley	Neutral Neutral Neutral	Slight Adverse Neutral Neutral	The LA104 matrix results in an increase to slight adverse for the construction phase, which is not significant, as per the 2018 LVIA.
LCT A Narrow Chalk River Valley	Neutral Neutral Neutral	Slight Adverse Neutral Neutral	The LA104 matrix results in an increase to slight adverse for the construction phase, which is not significant, as per the 2018 LVIA.
LCA A1 Till Narrow Chalk River Valley	Slight Adverse Neutral Neutral	Slight Adverse Slight Adverse Slight Adverse	The LA104 matrix results in an increase to slight adverse year 1 and year 15 phases, all of which are not significant, as per the 2018 LVIA.
LCA A2 Upper Avon Narrow Chalk River Valley	Neutral Neutral Neutral	Slight Adverse Neutral Neutral	The LA104 matrix results in an increase to slight adverse for the construction phase, which is not significant, as per the 2018 LVIA.
LCT D: Chalk Grassland	Slight Adverse Neutral Neutral	Slight Adverse Slight Beneficial Slight Beneficial	The LA104 matrix results in an increase to slight beneficial in year 1 and year 15 phases, neither of which are not significant, as per the 2018 LVIA.
LCA 09: Lesser Cursus and the Packway Ridges	Moderate Adverse Slight Adverse Slight Adverse	Large Adverse **Moderate Adverse** **Moderate Adverse**	The adverse impact during construction would remain significant, but in year 1 the impact would now become a new **Significant** effect. The impact would also increase to a new **Significant** effect in year 15
LCA 14 Stonehenge and Normanton Ridges	Large Adverse Large Beneficial Very Large Beneficial	Very Large Adverse Large Beneficial Very Large Beneficial	Despite the matrix increasing the level of impact recorded, during construction, the impact remains

Landscape Receptor	2018 LVIA Significance of Effect/ Construction / Year 1 / Year 15	LA104 Significance of Effect Construction / year 1 / Year 15	Justification
			significant which is unchanged from the 2018 LVIA .
LCA 15 Springbottom and Woodford Dry Valleys	Large Adverse Large Beneficial Very Large Beneficial	Very Large Adverse Large Beneficial Very Large Beneficial	The impacts in all 3 assessment years remain significant as per the 2018 LVIA.
LCA 18 King Barrow and Coneybury Ridge	Moderate Adverse Large Beneficial Large Beneficial	Very Large Adverse Very Large Beneficial Very Large Beneficial	The impacts in all 3 assessment years remain significant as per the 2018 LVIA.
LCA 19: Durrington Down Ridges	Slight Adverse Slight Beneficial Slight Beneficial	**Moderate Adverse** **Moderate Beneficial** **Moderate Beneficial**	The construction effect would remain slight adverse, but using LA104 matrix, this increases the impact to Moderate Adverse, which is a new **Significant** effect. The beneficial effects in year 1 also increase to moderate which is a new **Significant** effect. Similarly, year 15 effects increase the benefits to a new **Significant** effect.
LCA 20 Countess Farm Dry Valleys	Moderate Adverse Slight Adverse Slight Adverse	Moderate Adverse **Moderate Adverse** Slight Adverse	The construction impact remains significant, but year 1 adverse effect increases to Moderate which is a new **Significant** effect.
LCA 22: Avon Valley Floodplain and Meadows	Moderate Adverse Moderate Adverse Slight Adverse	Large Adverse Large Adverse **Moderate Adverse**	LA 104 matrix would increase the sensitivity of all 3 years, but only the change in year 15 would be a new **Significant** effect.

4.2.49 From the above table, there are changes to the significance of landscape effects for several landscape receptors between the 2018 LVIA and this ES Review. Out of the 54 original Landscape receptors identified in the 2018 LVIA, the landscape effects would change in 18. However, the change in effect, would only result in seven additional significant impacts, five of which would be adverse and two would be beneficial.

4.2.50 There would be **one new significant adverse impact during construction in LCA 19 – Durrington Down Ridges**. This would be as a result of LA107 increasing the landscape sensitivity from high to very high, which, with the application of LA104, results in slight adverse impact causing a moderate (significant) adverse effect, albeit only temporary.

4.2.51 During year one, there would be an additional **two new significant adverse effects on LCA 09 – Lesser Cursus and Packway Ridges and LCA 20- Countess Farm Dry Valleys**. In both cases LA107 increases the landscape sensitivity from high to very high, which, with the application of LA104, results in slight adverse impacts causing moderate (significant) adverse effects.

4.2.52 During year fifteen, there would be **two new significant adverse effects on LCA 09 and LCA 22- Avon Valley Floodplain and Meadows**. Like for LCA 09, LA107 increases the sensitivity of LCA 22 from high to very high, which, with the application of LA104, results in moderate adverse effects (significant) for both LCAs.

4.2.53 The LCA to see **two new significant beneficial impacts is LCA 19 – Durrington down Ridges**, in years one and fifteen. This is because LA107 increases the sensitivity of the LCA from high to very high, meaning the slight beneficial effect would increase to moderate (significant).

Re-assessment of visual effects

4.2.54 This re-assessment accounts for any changes to the visual receptors sensitivity as set out previously. With reference to Appendix 4.2 the Applicant has re-assessed the visual impacts and effects for the construction, year 1 and year 15 phases of the Scheme. Table 4.8 summarises the changes to visual receptors. New Significant effects are emphasised in bold.

Table 4.8: Visual Effects Comparison

Visual Receptor	2018 LVIA Significance of Effect Construction / Year 1 / Year 15	LA107 Significance of Effect Construction / year 1 / Year 15	Justification
8A. Foredown House	Very Large Adverse Large Adverse Slight Adverse	Large Adverse Large Adverse Slight Adverse	LA107 lowers the sensitivity of the receptor which reduces the adverse construction effect. But the effect remains significant as per the 2018 LVIA.
10A Hill Farm Cottages nos.1 – 4	Very Large Adverse Moderate Adverse Slight Adverse	Large Adverse Moderate Adverse Slight Adverse	LA107 lowers the sensitivity of the receptor which reduces the adverse

Visual Receptor	2018 LVIA Significance of Effect Construction / Year 1 / Year 15	LA107 Significance of Effect Construction / year 1 / Year 15	Justification
			construction effect. But the effect remains significant as per the 2018 LVIA.
10B Recreational users on Restricted Byway BSJA9	Moderate Adverse Moderate Beneficial Moderate Beneficial	Large Adverse Large Beneficial Large Beneficial	LA107 increases the sensitivity of the receptor which increases the effects. All effects remain significant as per the 2018 LVIA.
12. Tourists and Visitors at the Stonehenge Visitor Centre	Moderate Adverse Slight Adverse Slight Adverse	Large Adverse **Moderate Adverse** Slight Adverse	LA107 increases the sensitivity of the receptor which increases the adverse effects for the construction and year 1 phase. The construction phase remains significant as per the 2018 LVIA. The operation year 1 effect is a new **significant** effect.
13. Tourists, visitors and recreational users in WHS at the World Heritage Site interpretation panel	Very Large Adverse Moderate Adverse Slight Adverse	Very Large Adverse Large Adverse **Moderate Adverse**	LA107 increases the sensitivity of the receptor which increases the adverse and beneficial effects. The construction and year 1 effects remain significant as per the 2018 LVIA. The year 15 effect is a new **significant** effect.
14. Tourists, visitors and recreational receptors at the Winterbourne Stoke Group within the WHS	Large Adverse Moderate Beneficial Large Beneficial	Very Large Adverse Large Beneficial Very Large Beneficial	LA107 increases the sensitivity of the receptor which increases the adverse and beneficial effects for the relevant phases. Whilst changes in the tier of effect, all effects remain significant, like the 2018 LVIA.

Visual Receptor	2018 LVIA Significance of Effect Construction / Year 1 / Year 15	LA107 Significance of Effect Construction / year 1 / Year 15	Justification
15. Recreational users on Byway WCLA1 south-east of The Diamond	Large Adverse Moderate Beneficial Large Beneficial	Very Large Adverse Large Beneficial Very Large Beneficial	LA107 increases the sensitivity of the receptor which increases the adverse and beneficial effects for the relevant phases. Whilst changes in the tier of effect, all effects remain significant, like the 2018 LVIA.
16. Recreational users on permissive open access land close to Normanton Gorse	Large Adverse Moderate Beneficial Large Beneficial	Very Large Adverse Large Beneficial Very Large Beneficial	LA107 increases the sensitivity of the receptor which increases the effects for the relevant phases. Whilst changes in the tier of effect, all effects remain significant, like the 2018 LVIA.
17. View south-west from Byway AMES12 close to the north side of the existing A303	Moderate Adverse Large Beneficial Large Beneficial	Large Adverse Very Large Beneficial Very Large Beneficial	LA107 increases the sensitivity of the receptor which increases the effects for all phases. Whilst changes in the tier of effect, all effects remain significant, like the 2018 LVIA.
18. View north-east from Byway AMES11 at Normanton Down	Slight Adverse Large Beneficial Large Beneficial	**Moderate Adverse** Very Large Beneficial Very Large Beneficial	LA107 increases the sensitivity of the receptor which increases the effects for the relevant phases. Whilst changes in the tier of effect for the operation phase, all effects remain significant, like the 2018 LVIA. The construction effect is a new **significant** effect due to LA104.
19. Visitors, tourists and recreational users at the	Slight Adverse Large Beneficial Large Beneficial	**Moderate Adverse** Very Large Beneficial	LA107 increases the sensitivity of the receptor which increases the effects

Visual Receptor	2018 LVIA Significance of Effect Construction / Year 1 / Year 15	LA107 Significance of Effect Construction / year 1 / Year 15	Justification
WHS interpretation panel viewpoint located to the south of the Stones		Very Large Beneficial	for all phases. Whilst changes in the tier of effect for the operation phase, all effects remain significant, like the 2018 LVIA. The construction effect is a new **significant** effect due to LA104.
20. Visitors, tourists and recreational users at the WHS interpretation panel located on Byway AMES12 adjacent to the Cursus	Slight Adverse Large Beneficial Large Beneficial	**Moderate Adverse** Very Large Beneficial Very Large Beneficial	LA107 increases the sensitivity of the receptor which increases the effects for all phases. Whilst changes in the tier of effect for the operation phase, all effects remain significant, like the 2018 LVIA. The construction effect is a new **significant** effect due to LA104.
21. Visitor, tourists and recreational users on the footpath alongside the existing A303, between King Barrow Ridge and Stonehenge Bottom	Slight Adverse Large Beneficial Large Beneficial	**Moderate Adverse** Large Beneficial Very Large Beneficial	LA107 increases the sensitivity of the receptor which increases the effects for two phases. Whilst changes in the tier of effect for the operation phase, all effects remain significant, like the 2018 LVIA. The construction effect is a new **significant** effect due to LA104.
22. Visitors, tourists and recreational users at the interpretation panel viewpoint located at the eastern end of The Cursus	Moderate Adverse Large Beneficial Large Beneficial	Large Adverse Large Beneficial Very Large Beneficial	LA107 increases the sensitivity of the receptor which increases the effects for two phases. Whilst changes in the tier of effect, all effects remain significant, like the 2018 LVIA.

Visual Receptor	2018 LVIA Significance of Effect Construction / Year 1 / Year 15	LA107 Significance of Effect Construction / year 1 / Year 15	Justification
23. Visitors, tourists, recreational users at the WHS interpretation panel viewpoint where the Avenue crosses King Barrow Ridge	Moderate Adverse Large Beneficial Large Beneficial	Large Adverse Large Beneficial Very Large Beneficial	LA107 increases the sensitivity of the receptor which increases the effects for two phases. Whilst changes in the tier of effect, all effects remain significant, like the 2018 LVIA.
24. Recreational users on the permissive path across Coneybury Hill tumulus	Slight Adverse Large Beneficial Large Beneficial	**Moderate Adverse** Large Adverse Very Large Adverse	LA107 increases the sensitivity of the receptor which increases the effects for two phases. Whilst changes in the tier of effect for the operation phase, all effects remain significant, like the 2018 LVIA. The construction effect is a new **significant** effect due to LA104.
25. Recreational users on Bridleway AMES39 and residential properties at Strangways	Moderate Adverse Slight Beneficial Neutral	Large Adverse **Moderate Beneficial** Neutral	LA107 increases the sensitivity of the receptor which increases the effects for two phases. Whilst changes in the tier of effect for the operation phase, construction effects remain significant, like the 2018 LVIA. The operation year 1 effect is a new **significant** effect due to LA104.
26. Tourists, visitors and recreational users on Bridleway AMES9A	Moderate Adverse Moderate Adverse Neutral	Large Adverse Large Adverse Neutral	LA107 increases the sensitivity of the receptor which increases the effects for two phases. Whilst changes in the tier of effect, these two effects remain significant, like the 2018 LVIA.

Visual Receptor	2018 LVIA Significance of Effect Construction / Year 1 / Year 15	LA107 Significance of Effect Construction / year 1 / Year 15	Justification
28. Visitors, tourists and recreational users at the WHS interpretation panel viewpoint in open access land approximately 100m west of Woodhenge monument	Moderate Adverse Slight Adverse Neutral	Large Adverse **Moderate Adverse** Neutral	LA107 increases the sensitivity of the receptor which increases the effects for two phases. Whilst changes in the tier of effect, the construction phase effect remains significant, like the 2018 LVIA. The year 1 effect is a new **significant** effect.
29A. Residential properties adjacent to Countess Road west nos. 61 to 145	Slight Adverse Neutral Neutral	**Moderate Adverse** Neutral Neutral	LA107 increases the sensitivity of the receptor which increases the construction effect. This effect is a new **significant** effect but temporary.
29B. Residential properties adjacent to the A345 (Countess Road) west nos. 23 to 59 Including Tollgate Close)	Slight Adverse Neutral Neutral	**Moderate Adverse** Neutral Neutral	LA107 increases the sensitivity of the receptor which increases the construction effect. This effect is a new **significant** effect but temporary.
30A Countess Farm	Large Adverse Large Adverse Moderate Adverse	Very Large Adverse Very Large Adverse Large Adverse	LA107 increases the sensitivity of the receptor which increases the effects. All effects remains significant as per the 2018 LVIA.
31B. Bowles Hatches	Moderate Adverse Slight Adverse Neutral	Large Adverse **Moderate Adverse** Neutral	LA107 increases the sensitivity of the receptor which increases two effects. The construction effects remain significant, whilst the operation year 1 effect is a new **significant** effect.
35. View north-west from the	Slight Adverse	**Moderate Adverse**	LA107 increases the sensitivity of the

Visual Receptor	2018 LVIA Significance of Effect Construction / Year 1 / Year 15	LA107 Significance of Effect Construction / year 1 / Year 15	Justification
permissive path adjacent to Fargo Plantation View to Rollestone	Neutral Neutral	Slight Adverse Slight Adverse	receptor which increases the effects. The construction effect is a new **significant** effect, but temporary. The year 1 and year 15 effects are not significant, as per the 2018 LVIA.

4.2.55 From Table 4.8, the application of LA107 and LA104 results in changes to the significance of visual effects for thirteen visual receptors. There would be an additional twelve significant adverse visual effects and one additional significant beneficial visual effect across the assessment phases.

4.2.56 During the construction phase there are **eight new significant adverse effects** for visual receptors within the WHS or in close proximity to the WHS. This is due to LA107 increasing the receptor sensitivity, such that the application of LA104 increases the effect reported in the 2018 LVIA from slight adverse (not significant) to moderate adverse (significant) (see Table 4.8).

4.2.57 At year 1 of operation, there is **one new significant beneficial effect** to recreational users on at visual receptor 25 and in year 1. This is due to LA107 increasing the receptor sensitivity, such that the application of LA104 increases the effect reported in the 2018 LVIA from slight beneficial (not significant) to moderate beneficial (significant) (see Table 4.8).

4.2.58 There are **three new significant adverse effects at year 1** of operation, also for visual receptors in the WHS. This is due to LA107 increasing the receptor sensitivity, such that the application of LA104 increases the effect reported in the 2018 LVIA from slight adverse (not significant) to moderate adverse (significant) (see Table 4.8).

4.2.59 There is **one new significant adverse effect at year 15** at visual receptor 13, beyond the two predicted in the 2018 LVIA. This is due to LA107 increasing the receptor sensitivity, such that the application of LA104 increases the effect reported in the 2018 LVIA from slight adverse (not significant) to moderate adverse (significant) (see Table 4.8).

Technical Guidance Note 06/19 Visual Representation of Development Proposals (TGN 06/19), 2019 (Landscape Institute, 2019)

4.2.60 TGN 06/19 focuses on the production of technical visualisations which are used within a LVIA.

4.2.61 The 2018 LVIA included two forms of visualisations. The first were annotated photographs from publicly accessible locations ('viewpoints'), as part of the visual baseline and illustration of people's views. The second were photomontages, which overlaid a digital and rendered computer model of the proposed Scheme onto an existing photograph to demonstrate the proposed Scheme within its landscape context.

4.2.62 TGN 06/19 Table 1 sets out four 'visualisation types', to reflect potential usage either as part of the iterative design process, or whether images will be in the public domain and form part of the evidence submitted to public inquiries.

4.2.63 TGN 06/19 Type 1 images are defined as annotated viewpoint photographs. They are intended to represent the context of a development and the key features in the landscape. TGN 06/19 requires the Type 1 images to be produced via a 50mm fixed lens camera. The production of the 2018 LVIA viewpoints mirror the requirements of the TGN 06/19 Type 1 images, as they are annotated images and have been produced with a 50mm fixed lens.

4.2.64 TGN 06/19 Type 4 images are defined as photomontages. They are intended to represent the scale, appearance, context form and extent of the development. TGN 06/19 requires the Type 1 images to be produced via the use of tripod, panoramic camera head, 50mm fixed lens and to be supported by locational accuracy information, e.g. measured surveys. The production of the 2018 LVIA photomontages mirrors the requirements of the TGN 06/19 Type 4 images, as they were produced via 50mm cameras mounted on tripods and supported by measured surveys across the landscape, as set out in Appendix 4.2 of the 2018 LVIA.

4.2.65 The production method required by TGN 06/19 is therefore compatible with the methods used in the 2018 LVIA and for the additional visualisations which were produced during the examination (and which form part of the environmental information). The 2018 LVIA photomontage methodology is set out in Appendix 7.11 - Visually verifiable montage methodology [APP-231]. The 2018 LVIA photomontages are set out in 2018 ES Figure 7.51 to Figure 7.68 ([APP-129] to [APP-146]). The additional visualisations which were produced during the examination are set out in [AS-079] to [AS-084]; [REP3-026] to [REP3-036]; [REP4-0010] to [REP4-017]; [REP7-026] to [REP7-038] and [REP8-022] to [REP8-026].

4.2.66 TGN 06/19 advises that where linear infrastructure is being represented, images could be presented across an A1 page, and include multiple sheets per view. The presentation of images in this format would be different to

those within the 2018 LVIA, which were scaled to fit on an A1 page. However, given that this is a matter of how the image is presented, rather than the 'content' of the image and its production, the increased scale of the imagery would not alter the conclusions of the 2018 LVIA. In addition, the LVIA assessment was based on the drawings for determination, not the photomontages, so even with the incorporation of TGN06/19, the photomontages would still not inform the LVIA assessment.

4.3 Environmental Information

Baseline

4.3.1 A desk-based review of on-line mapping, aerial photography, published landscape character assessments and fieldwork during September 2021 has been undertaken in relation to the 2018 LVIA study area to inform the following landscape and baseline review below.

4.3.2 The developments identified in Appendix 11.2 as being part of the baseline do not alter the conclusions of the 2018 LVIA, and no further environmental information is required to be submitted for consideration by the Secretary of State, in order for the Application to be re-determined. This is because the developments are either situated beyond the LVIA study area or at sufficient distance from the Scheme so as not to alter the landscape character of visual baseline. Additionally, where developments are situated within existing residential or developed areas, these would reflect the existing landscape character and baseline assessment of local landscape character areas.

Future Baseline

4.3.3 The delay to the Scheme resulting in the change of the construction phase and operational phase start dates (to 2023 and 2029 respectively) does not alter the conclusions relating to the future baseline in the 2018 LVIA, and no further environmental information is required to be submitted for consideration by the Secretary of State, in order for the Application to be re-determined.'

4.3.4 The developments identified in Appendix 11.2 as being part of the future baseline do not alter the conclusions of the 2018 LVIA, because the developments are either situated beyond the LVIA study area or at sufficient distance from the Scheme so as not to alter the landscape character of visual baseline. Additionally, where developments are situated within existing residential or developed areas, these would reflect the existing landscape character and assessment of landscape character areas.

Landscape Baseline

Landscape Features

4.3.5 There has been no change to the complex pattern of rolling landform and watercourses across the 2018 LVIA study area.

4.3.6 The vegetation patterns across the study area remain as per the 2018 LVIA. Roadside hedgerows, particularly adjacent to the A360 and the A303 to the west of Longbarrow Roundabout are slightly taller in height compared to the fieldwork for the 2018 LVIA, but this has no implications to the visual assessment.

4.3.7 The 2021 fieldwork also observed several areas of ash-die back on trees adjacent to the A303, between Longbarrow Roundabout and to the west of Winterbourne Stoke.

4.3.8 Currently, the overall form and density of the ash trees remains as per the 2018 LVIA, but their condition and form will degrade in future years. It is also possible that ash trees may be removed from the road corridor for health and safety reasons, should branches be at risk of falling on the road. Given the open character of the landscape across most of the study area, the occurrence of ash die back along parts of the highway corridor would not alter the landscape baseline in future years, as it would remain a rural landscape which is predominantly open in character.

4.3.9 The land use and settlement patterns across the LVIA study area remain as per the 2018 LVIA, consisting of tourism at the WHS, military and residential land uses and extensive areas of agriculture. There are additional military buildings within Larkhill, and additional residential land uses to the east of Larkhill, but these neither alter the local landscape character areas nor the extent of visual receptors identified within the 2018 LVIA.

4.3.10 Public Rights of Way and permissive open access land across the WHS remain as per the 2018 LVIA.

Landscape Designations

4.3.11 The landscape related designations within the study area remain as per the 2018 LVIA. This includes the Cranborne Chase and West Wiltshire Area of Outstanding Natural Beauty (AONB) to the south-east of the Scheme. Since the 2018 LVIA, the AONB Management Plan (Cranborne Chase AONB Partnership, 2019) has been updated and the AONB has also been designated an International Dark Sky Reserve in 2019. The 2018 LVIA included an assessment of the Scheme in relation to the AONB and the character of the night sky and concluded that neither the landscape character of the AONB, nor the dark skies would be impacted. As there is no change to the Scheme design and the boundaries of the AONB remain as per the 2018 LVIA, the new management plan and dark sky designation are assessed as remaining unaffected by the Scheme. There would therefore be no change to the conclusions of the 2018 LVIA in respect of the AONB.

The WHS Management Plan 2015-2021 ('the 2015 Management Plan')

4.3.12 The 2015 Management Plan remains as per the 2018 LVIA. With reference to the previous Cultural Heritage Section paragraph 3.1.7, it is noted that a new management plan is anticipated to be in place by April 2023. In the meantime, the 2015 Management Plan and associated documents remain as reviewed for the 2018 LVIA.

Published Landscape Character Assessments

4.3.13 The published landscape character assessments referenced within the 2018 LVIA remain current.

Local Landscape Character Assessment (LLCA) defined by the Applicant

4.3.14 The 2021 fieldwork has determined that the LLCA defined for the 2018 assessment remain valid, as there have been no changes to land use, settlement patterns or vegetation which would alter their boundaries.

Village Design Statements and Conservation Area Management Plans

4.3.15 As per the 2018 LVIA, there are neither village design statements nor Conservation Area management plans for Amesbury, Shrewton or Winterbourne Stoke.

Landscape Summary

4.3.16 Given the extent of agricultural land uses and the WHS across the LVIA study area, the landscape baseline remains as per the 2018 LVIA. **Therefore, the landscape receptors identified in the 2018 LVIA remain valid**.

Visual Baseline

4.3.17 Fieldwork during September 2021 revisited a select number of viewpoints identified within the 2018 LVIA. The composition of views remains as per the 2018 LVIA overall, with no changes to land use, settlement patterns or vegetation which would alter the baseline descriptions.

4.3.18 As noted previously, ash die back will reduce the density of vegetation along parts of the highway corridor in the future baseline scenario. For residents at Oatlands Hill and recreational users on Public Right of Way WST06A (which crosses Oatlands Hill), in the future baseline scenario, they will have slightly more open views of the existing A303 and subsequently the Scheme. However, these receptors are predicted to experience significant adverse visual effects during the construction and year 1 operation phases, prior to the establishment of the proposed planting and any localised removal of ash trees is therefore assessed as not altering the conclusions of the 2018 LVIA.

Visual Summary

4.3.19 **The visual receptors identified in the 2018 LVIA remain representative of people's views towards the Scheme and the visual receptors identified in the 2018 assessment therefore remain valid**.

Character of the Night Sky

4.3.20 As per the above landscape and visual sections, there have been no alterations to the existing lighting and character of the night sky across the study area. **The night time receptors identified in the 2018 assessment therefore remain valid**.

Summary

4.3.21 There are no changes to the landscape or visual baseline which would alter the landscape and visual receptors as per the 2018 LVIA. **The landscape and visual receptors identified in the 2018 LVIA therefore remain representative and proportionate to the assessment of the Scheme**.

4.3.22 The application of LA107 and L104 results in changes to the significance of landscape effects for several landscape receptors between the 2018 LVIA and this review. **Out of the 54 original Landscape receptors identified in the 2018 LVIA, the landscape effects would change in 18. However, the change in effect, would result in seven additional significant effects, five of which would be adverse and two would be beneficial.**

4.3.23 The application of LA107 and LA104 results in changes to the significance of visual effects for many of the visual receptors between the 2018 LVIA and this review. **In total there would be an additional twelve significant adverse visual effects and one additional significant beneficial visual effect. Eight of the additional significant adverse effects would be for the temporary construction phase.**

4.4 Conclusion

4.4.1 This section has identified and considered changes to legislative and policy framework, assessment methodology, and environmental baseline relevant to landscape and visual effects. **This review found the conclusions of the 2018 LVIA and the environmental information supporting it remain valid with regard to the legislative and policy framework, and baseline environmental information.**

4.4.2 LA107 Landscape and Visual Effects guidance released by Highways England (now National Highways) in 2020 provides an updated methodology for defining the sensitivity of landscape and visual receptors. The methodology for defining impact magnitude is equivalent to that set out in the 2018 LVIA. As a result, when a receptor of a different sensitivity to that defined in the 2018 LVIA is combined with the impact magnitude, this can result in different levels of effect compared to those predicted in the 2018 LVIA.

4.4.3 **In some instances, this change in the methodology results in new significant (moderate or above) effects being identified (both adverse and beneficial), for an impact where no significant effect was identified within the 2018 LVIA. These changes to effects are due to a change in the assessment methodology, rather than a revised professional judgement.** Therefore, this section has found that **further environmental information is required to be submitted for consideration by the Secretary of State in relation to this topic, in order for a decision to be made on the Scheme. Overall, the 2018 ES and the rest of the environmental information, as supplemented by this review, is adequate to inform the Secretary of State's redetermination of the application.**

4.4.4 The cumulative schemes set out within Appendix 11.2 have been reviewed. The assessment of cumulative developments contained within Appendix 11.2 does not alter the conclusions of the 2018 ES because the developments are either situated beyond the LVIA study area or at sufficient distance from the Scheme so as not to alter the landscape character of visual baseline. Additionally, where developments are situated within existing residential or developed areas, they would reflect the existing landscape character.

4.4.5 The mitigation and monitoring measures reported in the 2018 LVIA remain applicable. No additional mitigation or monitoring measures are required.

4.4.6 This section has been approved by Richard Hammond, the author of the Landscape and Visual chapter of the 2018 ES and the relevant competent expert for this topic, as set out in Appendix 1.1 of the 2018 ES [APP-185].

5 Biodiversity

5.1 Legislative and Policy Framework

5.1.1 The below section highlights changes in legislation and policy framework that have occurred since the production of the 2018 ES. Only legislation and policy that has changed or has been updated is referenced within this section. Where no updates or changes have occurred, the legislation and policy within the 2018 ES remains valid and unchanged.

The Conservation of Habitats and Species Regulations 2017 (as amended) (the 2017 Regulations)

5.1.2 The 2017 Regulations is one of the pieces of domestic law that transposed the land and marine aspects of the Habitats Directive (Council Directive 92/43/EEC) and certain elements of the Wild Birds Directive (Directive 2009/147/EC) (known as the Nature Directives). Pursuant to the UK's exit from the European Union, changes have been made to the 2017 Regulations by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (the 2019 Regulations).

5.1.3 Most of these changes involved transferring functions from the European Commission to the appropriate authorities in England and Wales. All other processes and terms in the 2017 Regulations remain unchanged and existing guidance is still relevant, as stated in the UK Government policy paper, Changes to the Habitats Regulations 2017 (1st January 2021).

5.1.4 The obligations of a Competent Authority (CA) in the 2017 Regulations for the protection of sites or species do not change. A Competent Authority is still detailed as a public body, statutory undertaker, minister or department of government, or anyone holding public office.

5.1.5 The main changes to the 2017 Regulations are:

- the creation of a National Site Network (NSN) within the UK territory comprising the protected sites already designated under the Nature Directives (Natura 2000 and Ramsar sites), and any further sites designated under these Regulations (these are referenced as 'European sites');
- the establishment of management objectives for the NSN (the 'network objectives');
- a duty for appropriate authorities to manage and where necessary adapt the NSN as a whole to achieve the network objectives;
- an amended process for the designation of Special Areas of Conservation (SACs);

- arrangements for reporting on the implementation of the Regulations, given that the UK no longer provides reports to the European Commission;

- arrangements replacing the European Commission's functions with regard to the imperative reasons of overriding public interest (IROPI) test where a plan or project affects a priority habitat or species, and

- arrangements for amending the schedules to the Regulations and the annexes to the Nature Directives that apply to the UK.

5.1.6 The 2017 Regulations (Regulation 9(1)), as amended by the 2019 Regulations, require the Secretary of State and Welsh Ministers to secure compliance with the requirements of the Nature Directives. Any new powers in the 2019 Regulations must be exercised in line with the Nature Directives and retained EU case law up to 1 January 2021. The amendments maintain existing conservation objectives but redesignate the process to appropriate authorities.

The Environment Act 2021

5.1.7 The government announced in 2019 that it would mandate biodiversity net gain to ensure that new development enhances the environment, contributes to our ecological networks and conserves precious landscapes. This announcement followed a public consultation on net gain and clarification of planning policy on biodiversity net gain in 2018.

5.1.8 The Scheme's position with regard to net gain is addressed in the Response to Bullet Point Five - Any Other Matters (Redetermination-1.5).

5.2 Assessment Methodology

Scoping

5.2.1 The policy, methodology and guidance changes and the environmental information described in this Section would not alter the Scoping Opinion. This is because the approach to scoping has not materially changed since the 2018 ES. The following guidance updates do not highlight a material change in the approach presented within the original report, which followed the still valid CIEEM (2018) Guidelines for Ecological Impact Assessment.

Design Manual for Roads and Bridges

5.2.2 The DMRB documents listed below update the previous suite of DMRB documents (Highways Agency, 2007). A brief summary of the updates that are applicable to the biodiversity chapter and the relevance is provided below. It should be noted that the current LA DMRB series is currently undergoing a review process and will be updated within 2022. Accordingly the below summary only applies to the requirements and procedures in the LA DMRB up to October 2021, although where changes are predicted, these are discussed.

5.2.3 The DMRB documents relevant to Biodiversity are as follows:

- LA108 Biodiversity; and
- LA115 Habitat Regulations Assessment.

5.2.4 These documents provide updates from the previous applicable guidance relating to aspects of process and procedure. However, none of the amendments issued would lead to any change in the conclusions of the ecological impact assessment presented in the Environmental Statement Chapter 9 Biodiversity. Additional details about the documents are given in the section below.

LA108 Biodiversity

5.2.5 LA 108 Biodiversity sets out the requirements for assessing and reporting the effects of highway projects on biodiversity. LA108 replaces DMRB: Volume 11, Section 3, Part 4 Ecology and Nature Conservation and Interim Advice Note (IAN) 130/10- Ecology and Nature Conservation: Criteria for Impact Assessment. In general the changes bring the requirements into the new format for DMRB, incorporate legislation changes including those in the Conservation of Habitats and Species Regulations (see above) and remove superseded guidance to avoid inconsistencies with current best practice.

5.2.6 The updates in DMRB LA 108 reference current best practice measures rather than specific DMRB requirements and guidance (as per the previous versions of the DMRB), as such, this would not affect the conclusions of the 2018 ES outcomes because the ecological assessment was based on the best practice of the Chartered Institute of Ecology and Environmental Management (CIEEM); this is still applicable.

5.2.7 LA108 includes the use of the CIEEM criteria for impact assessment. However, it also incorporates a table for bringing the CIEEM terminology in-line with other DMRB impact assessments, an approach which was used in the 2018 ES to determine significance of effects in accordance with DMRB. As such LA 108 does not change the approach to assessment used in the 2018 ES.

5.2.8 The ecological impact assessment presented in the 2018 ES was in accordance with CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland and minor updates of the CIEEM guidelines in September 2019 do not give cause to change the conclusions of the 2018 ES.

5.2.9 LA 108 also provides more detail on the information required at Scoping stage, including identification of opportunities for environmental enhancements, where applicable (LA 108 section 3.1). Opportunities for enhancement for biodiversity were identified in the Scoping Report (Highways England (2017) TR010025-000032), as is now required in LA108. The 2018 ES identifies areas of habitat losses and gains, and enhancement measures where applicable (e.g. ES section 8.8).

Accordingly, and as noted above, the LA 108 requirements relating to scoping do not alter the 2018 ES. Accordingly, the 2018 ES is considered to be in-line with this element of LA108.

5.2.10 LA108 requires that the baseline information provides a report of the baseline at the time of survey and future baseline at the time of the project proceeding. This was completed within the current 2018 ES within paragraphs 8.6.13 – 8.6.18. Whilst the future construction baseline year will change from 2021 to 2023, there have been no significant changes identified during updating surveys in 2019 to 2021 that would alter the future construction baseline or change the prediction of future baseline for a changed opening year (2026 to 2029). Accordingly the requirements of LA108 with regard to baseline information do not give cause to alter the reporting in the 2018 ES. See update surveys undertaken in Section 5.3 below.

LA115 Habitat Regulations Assessment

5.2.11 LA 115 (published October 2019, updated January 2020 (references only)), replaces HD 44/09 – Assessment of Implications (of Highways and/or Roads Projects) on European Sites (including Appropriate Assessment).

5.2.12 The new guidance introduces a section on Change Management (LA115, paragraph 2.10). If there are any changes to a proposed project (at any point within the project lifecycle) that have the potential to affect the conclusions of the HRA this has to be evaluated, assessed and reported before the change is implemented.

5.2.13 The change in assessment methodology brought by LA 115 does not impact the previously reported outcomes of the HRA process that have been included within the 2018 ES (including during the Development Consent Order Examination) because the Scheme design remains the same as was included in the environmental information (and so the Change Management provisions referred to above are not engaged) before the Secretary of State following Examination and **therefore the conclusions of the HRA remain valid**.

Habitats Regulations Screening Assessment

5.2.14 LA 115 provides guidance on the identification of sites for inclusion in the assessment. In addition to those criteria already included within HD 44/09 (LA115, paragraph 3.7). LA 115 requires the inclusion of sites which contain a Groundwater Dependent Terrestrial Ecosystem (GWDTE) with a potential hydrological or hydrogeological link to the project, which triggers the criteria for assessment of European sites in accordance with LA 113 (Road Drainage and the Water Environment), and any site which has an affected road network (ARN) which triggers the criteria for assessment of European sites in LA 105 (Air Quality) (see Section 2). Further, LA 115 identifies the potential for European sites to have ecological connectivity between the site(s) and the project outside of the listed criteria, for example, where habitats present may provide functionally linked habitats for European sites outside of the geographical criteria listed in LA115 (paragraph 3.7), such as

supporting habitat for migratory birds. These would have to be assessed on a site by site basis and would depend on the development and species in question.

5.2.15 LA 115 has removed reference to identification of mitigation/avoidance methods at the screening stage, though embedded mitigation such as standard working practices / accepted methods are retained within the screening matrix appended to LA 115. **This is in accordance with the approach taken at screening for the Scheme HRA and so does not affect the conclusions within the 2018 Habitats Regulations Assessment.**

Appropriate Assessment

5.2.16 LA 115 requires the development of an evidence plan to agree the scope of work needed to support the production of the statement to inform an appropriate assessment. The plan should include identification of:

- Further survey fieldwork;
- Survey methodology; and
- Impact prediction method(s).

5.2.17 Accordingly, a summary of the significant changes in the new guidance are:

- Change management; and
- Evidence plan.

5.2.18 **Neither of these changes would affect the work undertaken to date for the Scheme**. Regarding change management, there have been no changes to the Scheme design from that set out in the 2018 DCO submission and the associated 2018 ES that would trigger this process. As such, the conclusions of 2018 ES and Habitats Regulations Assessment are still considered to be applicable. The requirement within LA 115 for an evidence plan has already been addressed as part of the Scheme through previous consultation with Natural England, RSPB, and within the Habitats Regulations Assessment reports, 2018 ES and associated Technical Appendices.

5.3 Environmental Information

Baseline

5.3.1 Since 2018, various ecological surveys have been undertaken to inform the mitigation measures, protected species licensing requirements and to provide a baseline for post-construction monitoring surveys, as per the Environmental Statement (2018 ES paragraphs 8.8.23-8.8.24) (as summarised below).

5.3.2 To inform suitable mitigation measures for the Construction Environmental Management Plans (CEMPs), update management plans and inform

licensing requirements, the following surveys and subsequent reports have been produced:

- Invasive Non-Native Species (INNS) Report and Management Plan (2019), HE551506-AMW-EBD-SW_GN_ZZ_ZZ-RP-EN-0193.
- Invasive Non-Native Species Survey Report (2020 revised version) HE551506-AMW-EBD-SW_GN_000_Z-SU-EN-6000484.
- Countess Cutting Botanical Monitoring (2020) HE551506-AMW-EBD-ZZ_ZZ_000_ZZ-RP-EN-6000570
- Badger Sett Update Survey Report (2021) HE551506-AMW-EBD-ZZ_ZZ_ZZ_Z-SU-EN-6000680
- Otter and Water Vole Survey Report (2021) HE551506-AMW-EBD-ZZ_ZZ_ZZ_ZZ-RP-EN-6000720
- Great Crested Newt Survey Report (2021) HE551506-AMW-EBD-ZZ_ZZ_ZZ_ZZ-RP-EN-6000695

5.3.3 To provide a suitable monitoring baseline, as set out within the 2018 ES (ES paragraphs 8.8.31-8.8.32), the following surveys and subsequent reports have been produced:

- Butterfly and Pollinator Survey Baseline Report (2021) HE551506-AMW-EBD-SW_GN_000_ZZ-RP-EN-6000568
- Bat landscape scale report (2020) HE551506-AMW-EBD-SW_GN_000_ZZ-RP-EN-6000390
- Parsonage Down Stone Curlew Plot - botanical survey report (2021) HE551506-AMW-EBD-ZZ_ZZ_ZZ_ZZ-RP-EN-6000721.

5.3.4 Where update baseline information has been gathered the information has been summarised below with suitable explanation to determine whether the baseline is considered to have materially changed compared to the baseline in the 2018 ES. The updated baseline has been informed by:

- Obtaining third-party data;
- Review of openly accessible databases; and
- Update surveys (as summarised above).

5.3.5 Only ecological receptors where further data has been obtained to update the baseline are summarised below. Where baseline habitats remain largely the same as previously reported the 2018 ES baseline is still considered to be valid and is not reported here.

Habitats

5.3.6 During the update protected species surveys, no obvious changes to the habitat present within the boundaries of the Scheme were noted. An exception was the pig farm formerly located to the south of the A303 and east of the A360 which was moved on a standard rotational basis to an area further south (outside of the Scheme boundary). This is not considered to significantly change the baseline as the area is still in an agricultural usage (arable) and, as such, the baseline recorded within the 2018 ES is still considered valid.

5.3.7 It should be noted that a full update ecological survey will be undertaken prior to the start of construction.

5.3.8 The update botanical surveys undertaken at Countess Cutting and Parsonage Down have indicated that the habitats remain largely unchanged since the 2017 botanical reports (Arup Atkins Joint Venture, 2017). The 2020 surveys of Countess Cutting concluded that the habitat type has not changed substantially from 2017. The data however indicates that the Scheme Site has become increasingly encroached by wild clematis *Clematis vitalba*, with corresponding changes in the abundance / cover of upright brome *Bromopsis erecta* and with hawkweed species decreasing between 2017 and 2020. This is a continuation of the trend of natural succession reported in the ES 2018 (Appendix 8.4, section 3.2.3) and represents a reduction in the condition of the grassland habitat but is a minor change in the baseline compared to that reported in the ES 2018, which does not lead to a change in the assessment of impacts on this receptor.

Species

Bats

Bat landscape Scale surveys

5.3.9 Bat landscape-scale surveys record bat activity on transects at increasing distance from linear infrastructure, to enable any changes in bat usage of the landscape to be monitored and assessed post-construction. The 2019 / 2020 surveys did not identify any previously unidentified species of bat to be using the wider landscape. The findings of the surveys were broadly aligned to the findings of the 2016 / 2017 activity surveys, although the purpose of this type of survey is to provide a quantitative baseline that is repeatable for monitoring purposes. The results do not change the assessments within the 2018 ES. A summary of the results reported is given below.

5.3.10 The 2019 surveys recorded a total of 763 bat passes, including a minimum of eight species recorded. Common pipistrelle (*Pipistrellus pipistrellus*) was the most abundant species, making up ~53% (n=401) of the total bat passes. The other species or species groups recorded in order of abundance were:

- Soprano pipistrelle *Pipistrellus pygmaeus* (27%, n=206);

- *Nyctalus* species *Nyctalus* spp. and serotine *Eptescicus serotinus* (~17%, n=128);
- Barbastelle *Barbastella barbastellus* (~1%, n=9),
- Daubenton's bat *Myotis daubentonii* (~1%, n=7),
- Brown long-eared bat *Plecotus auritus* (~1%, n=6),
- Brandt's bat or whiskered bat *Myotis brandtii* or *Myotis mystacinus* (~1%, n=5); and,
- Natterer's bat *Myotis nattereri* (<1%, n=1).

5.3.11 The 2020 surveys recorded a total of 636 bat passes, including a minimum of eight species. Common pipistrelle (*Pipistrellus pipistrellus*) was the most abundant species, making up ~45% (n=287) of the total bat passes. The other species or species groups recorded in order of abundance were:

- Soprano pipistrelle (22%, n=142);
- *Nyctalus* species and serotine (~30%, n=193);
- Barbastelle (~1%, n=6),
- Daubenton's bat (~1%, n=7),
- Brown long-eared bat (<1%, n=1),

5.3.12 The levels of bat activity were compared across the years using a t-test with unequal variance, (t Stat-0.93, df=183, P>0.05), the result was not significant, meaning that the bat activity levels recorded in 2019 were not significantly different from the 2020 bat activity levels.

Bat crossing point surveys

5.3.13 The data obtained from the 2018 crossing point surveys does not alter any of the findings of the ecological assessment included in the 2018 ES. Indeed, most of the surveys were carried out in July, prior to the completion of the Environmental Statement so were available to inform the assessment. During the 2018 crossing point update surveys a minimum of six species was recorded, this included:

- Common pipistrelle;
- Soprano pipistrelle;
- Noctule *Nyctalus noctule;*
- Brown long-eared bat;
- Serotine bat;

- *Myotis* species; and
- Unidentified bat.

5.3.14 The highest level of bat activity was recorded along the Shrewton road near Winterbourne Stoke, where the majority of bats recorded crossing were recorded at unsafe heights (below 5m). The crossing point located along the Public Right of Way (PRoW) immediately east of the River Till valley had the lowest bat activity, with a total of only 16 passes being recorded. The crossing point located near to Yarnbury Castle at the west end of the Scheme also recorded comparatively low levels of bat activity. Approximately half of the bats that were crossing the live carriageway were crossing at heights that brought the bats directly into the path of traffic (below 5m).

5.3.15 The mitigation provided within the Environmental Masterplan of the 2018 ES remains suitable and proportionate for the likely impacts associated with the construction of the Scheme, to maintain a permeable landscape to allow free movement of bat species through the wider landscape. The locations of the crossing point survey provide a baseline to allow future monitoring of bat crossing activity and thus effectiveness of mitigation both during and after construction.

Water vole

5.3.16 The updated 2021 surveys for water vole *Arvicola amphibius* showed similar results to the survey which informed the 2018 ES, as such, the results do not change the assessments within the 2018 ES.

5.3.17 Updated 2021 surveys were undertaken to inform the requirement of any further mitigation or the application of any Natural England protected species licences. On the basis of the surveys and the construction work required for the Scheme it is not expected that a licence will be required.

5.3.18 The surveys confirmed the continued presence of water vole along the River Avon. Evidence of water vole along the River Avon included latrines, burrows, feeding stations and a dead water vole. No evidence of water voles was recorded along the River Till, however, they are likely present along the lower reaches, and may move into the upper reaches in subsequent years.

5.3.19 A further pre-works update survey will be undertaken prior to the commencement of the preliminary works, in accordance with the OEMP, to confirm the continued absence of water vole burrows within areas that may be directly / indirectly impacted by the Scheme.

Otter

5.3.20 The 2021 updated otter *Lutra lutra* surveys were undertaken to inform the requirement of any further mitigation or the application of any Natural England protected species licences. The updated 2021 survey results were similar to those that informed the 2018 ES, as such, the results do not change the assessments within the 2018 ES.

5.3.21 The surveys confirm that otters are still present along both the River Avon and River Till, with spraints and potential resting places identified. It is likely that otters are using the watercourses to forage and commute and may use the identified features as temporary places of rest. Otters use many different resting sites throughout their range (Green *et al,* 1984). Often otters will lie up above ground in places which could not be detected other than by radio-tracking. Sites such as these are typically plentiful in the otter ranges and are not a limiting resource for the species. Due to the distance of the Scheme to the potential above ground resting site, it is unlikely that any otter present would be disturbed. As such, it is not considered necessary to obtain a European Protected Species Licence from Natural England to facilitate the works associated with the Scheme. However, as otters are known to be present along the River Till, suitable mitigation measures have been incorporated into the OEMP, in accordance with the 2018 ES.

5.3.22 A pre-works update survey will be undertaken prior to the commencement of the preliminary works, in accordance with the OEMP, to confirm the continued absence of otter holts / resting places within areas that may be directly / indirectly impacted by the Scheme; this is in accordance with the 2018 ES.

Badger

5.3.23 The 2021 update surveys identified similar levels of badger *Meles meles* activity throughout the survey area as the surveys undertaken within 2016/2017 and 2018. As such, the results do not change the assessments within the 2018 ES.

5.3.24 The 2021 update surveys did not identify any changes in the main setts identified within the previous surveys. As such, no compensatory measures are required as part of the overarching mitigation measures. There were minor changes in sett usage, as is usual in badger social groups, with some new setts (outliers) being identified and some previously identified setts being considered no longer in use.

5.3.25 The update badger survey identified and classified a total of 67 badger setts within the Survey Area:

- Five Main Setts (Sett 10, 22, 58, 63, 32);
- One Annex Sett (Sett 59);
- Seven Subsidiary Setts (Sett 1, 13, 20, 30, 31, 36, 69); and
- 54 Outlier Setts.

5.3.26 A pre-works update survey will be undertaken prior to the commencement of the preliminary works, in accordance with the OEMP. The surveys will inform the application for a licence to close setts where necessary.

Stone curlew

5.3.27 Monitoring of stone curlew breeding in the vicinity of the Scheme is carried out by RSPB as part of a wider programme of strategic monitoring, funded by Wiltshire Council. Baseline data was provided by the Royal Society for the Protection of Birds (RSPB) for the assessment of the Scheme. Updating information has been provided, albeit the normal survey programme in 2020 was curtailed during the Covid19 epidemic but has resumed since. The baseline data provided by the RSPB indicate that although there have been the usual fluctuations in usage at individual plots, the distribution of breeding stone curlew in the study area remains similar to that in 2018. It should be noted that there have been no obvious trends, such as a general increase / decrease in breeding attempts based on the data returned. No additional breeding plots have been set up which would change the assessment of impacts (see the section on Operational impacts below, paragraphs 5.3.61-5.3.66). In addition, where suitable breeding habitat presents itself, breeding attempts have been recorded, this indicates that suitable breeding resources might be a limiting factor on breeding attempts. The updated baseline does not present a material change to the baseline presented within the 2018 ES.

5.3.28 The RSPB has provided the stone curlew nesting data for the years of 2018 – 2020, as summarised below:

2018

- A total of 28 confirmed breeding pairs / attempts were recorded in 2018. There was no data on whether the attempts were successful.

- A total of five unconfirmed / probable stone curlew breeding pairs /attempts (pair noted within suitable nesting habitat, but nest not confirmed).

- The closest confirmed breeding pair was recorded within land located to the south of the A303. This breeding pair was recorded during the A303 Ground Investigation works. The nesting attempt was unsuccessful due to predation. It was an opportunistic event on land which was temporarily suitable but has since changed to arable management unsuitable for breeding stone curlew.

2019

- A total of 58 confirmed breeding pairs / attempts were recorded in 2019. There was no data on whether the attempts were successful.

- A total of two unconfirmed / probable stone curlew breeding pairs /attempts were recorded (pair noted within suitable nesting habitat, but nest not confirmed).

2020

- A total of 16 confirmed stone curlew breeding pairs / attempts were recorded within the 5km Search Area. Of these, 10 of the 16 confirmed that the chicks successfully fledged.

- A total of six unconfirmed / probable stone curlew breeding pairs /attempts were recorded (pair noted within suitable nesting habitat, but nest not confirmed).

5.3.29 The updated stone curlew breeding data indicates that breeding attempts fluctuate between years. The fluctuation of breeding attempts may be due to weather conditions, management of plots or surrounding land management. It indicates that there is no obvious trend of a general increase / decrease in breeding attempts. In addition, where suitable breeding habitat is present, breeding attempts have been recorded. This indicates that suitable breeding resource might be a limiting factor on breeding attempts. The surveys also indicate that the plot which is to be replaced as part of the Scheme had attempted breeding recorded in 2019 and 2020. The replacement plot will be provided as mitigation as part of the Scheme. The updated baseline is a minor change in the baseline compared to that reported in the ES 2018, and does not lead to a change in the assessment of impacts on this receptor.

Great bustard

5.3.30 The Great Bustard Group has provided great bustard *Otis tarda* nesting data from 2012 – 2020. The data indicates a general upward trend in attempted nesting sites since 2012, whereby the number of yearly great bustard nesting attempts has risen from eight in 2018 to twenty-two in 2020. None of the 2020 nesting sites were located within the boundary of the Scheme, they were mainly centred around Enford, north of Yarnbury Castle, with additional nesting sites being noted near Cherry Lodge and to the south of the A303.

5.3.31 Although there has been a general upwards trend in the number of attempted and successful nesting sites, the geographical spread of the nesting sites (not located within the Scheme boundary) would indicate that the baseline stated within the 2018 ES is still valid. There will be further updating on the distribution of great bustard nesting prior to the commencement of preliminary works, in consultation with the Great Bustard Group as required by the OEMP[9] in PW-BIO5.

Amphibians

5.3.32 No ponds will be lost to the Scheme. One pond in the Till valley (waterbody 1) has a breeding population of great crested newts *Triturus cristatus* and the Scheme will cause temporary loss of some of the terrestrial habitat used by the newts. Great crested newt surveys (Habitat Suitability Index (HSI), eDNA, and population surveys) were undertaken between February – June 2021 to update the previous baseline and inform any further mitigation / licensing requirements. Some changes in routing a water pipeline and change in the population size mean that a European Protected Species licence will be required, for the temporary site clearance in the Till valley, but it does not change the assessment in the 2018 ES. There was possible

[9] On the Planning Inspectorate website here: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010025/TR010025-001949-6.3%20Appendix%202.2(8)%20%E2%80%93%20Outline%20Environmental%20Management%20Plan%20(OEMP)_FINAL_DfT%20Revision.pdf

requirement of a European Protected Species Licence depending on the final detailed design and utilities requirements and updating surveys, stated in the OEMP, PW-BIO2.

5.3.33 Other ponds within 500m of the Scheme were also re-surveyed to check for any new occurrences of great crested newt populations relevant to the Scheme. None were identified. A total of 18 waterbodies were assessed for their suitability for great crested newt. The majority of waterbodies were scoped out as being suitable for great crested newts, because they were dry at the time of survey The remaining four water bodies were assessed for their suitability to support great crested newts using the standard HSI methodology in the spring of 2021.

Table 5.1 Summary results of HSI assessment

Waterbody	HSI Score	HSI Category
1	0.49	Poor
3	0.50	Below average
4	0.25	Poor
18	0.31	Poor

5.3.34 Samples from waterbody 3 were analysed for the presence of great crested newt eDNA. The result of this was negative, suggesting the absence of great crested newt within these waterbodies. Further surveys of waterbody 3 were therefore not conducted.

5.3.35 Waterbodies 4 and 18 were not surveyed for great crested newt eDNA. Waterbody 4 was considered unsuitable for great crested newt due to the high densities of stickleback fish recorded during the HSI assessment. Waterbody 18 was not surveyed for great crested newt eDNA as it was dry at the time of that survey and therefore considered to only hold water during periods of heavy rainfall.

5.3.36 Waterbody 1 contained a known population of great crested newt. The previous surveys indicated that the population size class was ‘Small’ (with a peak count of 10 adults). The 2021 update surveys had a peak count of 103 adult male great crested newts and 59 adult female great crested newts (total peak of 162) and assessed as a population class estimate of ‘Large’.

5.3.37 Waterbody 1 is subject to varying climatic conditions from year to year. It is located within a pasture field and is routinely trampled by livestock. In addition, in wet years the River Till occasionally floods the pond and this may bring fish into the pond, although any fish will be lost if the pond dries up in late summer that year or a subsequent one. Taking these factors into account it is likely that the breeding population of great crested newts will also fluctuate in response to the conditions in both the current year and the breeding success in previous years. Any subsequent updating surveys may show population size class similar to this year, or down to Medium or Small size class. The 2021 survey confirms continuity of use of the waterbody by

great crested newts and the growth of the population from a 'Small' to a 'Large' population size class. This increase in population is not considered to be a material change in the baseline.

5.3.38 Due to some slight changes associated with the Preliminary Works (bringing certain activities associated with the installation of the water pipeline closer to Waterbody 1), it will be necessary to apply for a great crested newt European Protected Species Licence. This change in the outline of the Preliminary Works, is a minor change that will be appropriately addressed via the European Protected Species Licencing process and has already been discussed with Natural England during preparation of the licence application. It does not give cause to alter the assessment of impact recorded within the 2018 ES.

5.3.39 Other amphibians, including smooth newt *Lissotriton vulgaris*, common toad *Bufo bufo* and common frog *Rana temporaria*, were also recorded in Waterbody 1 during the surveys.

5.3.40 Further great crested newt population surveys will be undertaken in the breeding season prior to the start of preliminary works to inform the European Protected Species Licence that will be required to proceed with the Preliminary Works.

Reptile

5.3.41 The 2021 update reptile habitat suitability surveys did not identify any material changes to the suitability of the habitat present within the boundaries of the Scheme to support reptiles.

Invertebrates – Butterfly and Pollinators

5.3.42 The creation of extensive calcareous grassland as part of the Scheme is expected to both provide habitat for butterflies and other pollinators and improve connectivity between suitable sites within the predominantly arable landscape. Baseline surveys were carried out to provide a basis for future monitoring during and after the construction of the Scheme. Methods used were those of national monitoring programmes. Whilst the 2020 survey provides additional details about these invertebrates it does not change the assessment in the 2018 ES. A summary of the findings is presented below.

5.3.43 A wide range of butterfly species were recorded across the four transects and four survey visits. This included adonis blue *Lysandra bellargus*, a key calcareous grassland and target species. The habitats covered by the transects were either arable field margins or arable reversion.

5.3.44 Across the four transects and four survey visits a total of 1347 individual butterflies were recorded which comprised of 23 different butterfly species. Meadow brown *Maniola jurtina* was the most commonly recorded species, forming 40% of the total butterflies recorded. Small heath *Coenonympha pamphilus*, was the second most commonly recorded species forming 15% of the total. Other commonly recorded species were common blue *Polyommatus icarus*, large white *Pieris brassicae* and small white *Pieris rapae*. These five species made up 87% of the total.

5.3.45 Other abundant but less commonly recorded species were small tortoiseshell *Aglais urticae*, brown argus *Aricia agestis*, ringlet *Aphantopus hyperantus*, gatekeeper *Pyronia tithonus*, peacock *Aglais io* and red admiral *Vanessa atalanta*.

5.3.46 Rarely recorded species included marbled white *Melanargia galathea*, small copper *Lycaena phlaeas*, wall *Lasiommata megera*, speckled wood *Pararge aegeria*, brimstone *Gonepteryx rhamni*, adonis blue, large skipper *Ochlodes sylvanus,* clouded yellow *Colias croceus* and comma *Polygonia c-album.*

5.3.47 Small and Essex skipper were also recorded, but due to the difficulty in identifying between these two species they were often grouped together. In total 28 small/ Essex skippers *Thymelicus* sp. were recorded with an additional three Essex skippers *Thymelicus lineola* and one small skipper *Thymelicus sylvestris* recorded to species level.

5.3.48 The transect with the highest butterfly count across the four surveys was located along the south side of the A303 east of Longbarrow Roundabout, in a grassland margin, with 38% of all the butterflies recorded, whilst the lowest scoring transect was located on the opposite site of the A303 (north) with only 14% of the butterflies recorded.

5.3.49 The butterfly and pollinator monitoring surveys provide a current baseline for subsequent monitoring surveys, however, as it is a minor change from the current assumed baseline, this survey does not give cause to alter the conclusions of the 2018 ES.

Invasive Non-native Species

5.3.50 The 2019 update Invasive Non-native Species (INNS) survey identified three stands of variegated yellow archangel *Lamiastrum galeobdolon* subsp. *argentatum*. This information has been incorporated in the INNS Management Plan in accordance with OEMP requirements PW-BIO1 and MW-BIO8. The update baseline does not give caused to alter the conclusions of the 2018 ES.

Committed Developments

5.3.51 The developments identified in Appendix 11.2 as being part of the baseline do not alter the conclusions of the 2018 ES because either the scope of the additional developments would not result in an ecological impact (the nature of the works would not result in a discernible impact), or the developments are located at sufficient distance that they would be outside of the zone of influence for the various ecological receptors.

Summary Baseline

5.3.52 The update surveys have informed protected species licensing requirements and update mitigation measures. **The surveys have not resulted in any changes to the Biodiversity baseline that would lead to a change in the value of the ecological receptors identified during the 2018 ES or give cause to alter the ecological impact assessment within the 2018 ES or the Habitat Regulations Assessment**.

Future Baseline

5.3.53 The delay to the Scheme resulting in the change of the construction phase and operational phase start dates (to 2023 and 2029 respectively) does not alter the conclusions relating to the future baseline in the 2018 ES, and no further environmental information is required to be submitted for consideration by the Secretary of State, in order for the Application to be re-determined.

5.3.54 The developments identified in Appendix 11.2 as being part of the baseline do not alter the conclusions because either the scope of the additional developments would not result in an ecological impact (the nature of the works would not result in a discernible impact), or the developments are located at sufficient distance that they would be outside of the zone of influence for the various ecological receptors.

5.3.55 Pre-construction updating surveys will be carried out to inform mitigation during the construction phase, protected species licensing and monitoring as stated in the 2018 ES. These are outlined in the Further Surveys section below.

Further Surveys

5.3.56 Due to the anticipated delay in the commencement of the construction phase of the Scheme, further updating surveys will be undertaken as necessary to keep the pre-construction baseline up to date as described in the 2018 ES. As the Preliminary works are expected to start in 2023, the following surveys will be undertaken:

- Update information on stone curlew nesting data (2021-2022);
- Update information on great bustard nesting data (2021-2022); and
- Update Phase 1 / UK Habitat Classification Survey (to inform the Biodiversity Metric 3.0) (2022).

5.3.57 Ground-based bat roost and barn owl survey to be undertaken in 2022 to identify any further trees / buildings within the ecological zone of influence that would be suitable for roosting bats or nesting barn owls, which will inform the requirement of further surveys.

- Associated further aerial tree survey or emergence / re-entry bat roosting surveys.
- Badger sett update surveys (2022-2023).
- Otter and water vole surveys (the timing of which will depend on the final schedule and scope of the Preliminary Works).
- Dormouse surveys (2022).

- Great crested newt population surveys and eDNA surveys of surrounding waterbodies (2022).
- Reptile habitat suitability survey (2022).
- Butterfly monitoring surveys (2022).

5.3.58 Please note that it may be necessary to undertake further surveys than summarised above, depending on the final schedule of the works. The aim of the surveys is to inform mitigation, protected species licencing requirements, and a monitoring baseline that can be easily repeated both during construction and operation.

Impacts

Construction

5.3.59 The 2018 ES stated the following potential impacts that would arise during the construction phase. The potential impacts associated with construction were based on the construction phase lasting approximately five years, this has not changed. Whilst the expected start of the construction phase is later than in the 2018 ES the update surveys show there have not been changes to the baseline conditions that would lead to any new impacts or changes into the conclusions of the assessment. The potential impacts of the Scheme that relate to important biodiversity features are:

a) **Habitat loss or gain**: These are direct impacts related to the change in land use resulting from the Scheme. This would include vegetation clearance, change in use such as the creation of drainage ponds, habitat creation and enhancement;

b) **Fragmentation of populations or habitats**: Indirect impacts due to breaking up of a habitat, ecosystem, or land-use type into smaller parcels, or the creation of partial or complete barriers to the movement of species, with a consequent impairment of ecological function;

c) **Disturbance**: An indirect impact resulting from a change in normal conditions (light, noise, vibration, human activity) that would result in the important biodiversity feature changing its typical behaviour;

d) **Habitat degradation**: A direct or indirect impact resulting in the reduction in the suitability of the habitat for the identified important receptor (such as the impact of shading, changes in water quality or change in the water regime); and,

e) **Species mortality**: A direct impact on a population of a species associated with mortalities due to construction activities.

5.3.60 Following a review of the likely impacts and updated baseline surveys and as there have been no changes to the Scheme design from that set out in the 2018 DCO Application and the associated 2018 ES, there has been no change to the scope of the construction phase of the Scheme. **As such,**

there is no cause to alter the impacts and conclusions stated within the 2018 ES.

Operational

5.3.61 The operational phase of the Scheme is considered to be when the Scheme becomes active; as such, all of the potential impacts are associated with the activity of vehicles using the Scheme. The potential impacts of the Scheme during the operational phase that relate to important biodiversity features are:

a) **Species mortality:** A direct impact on a population of a species associated with mortalities from collisions with vehicles, possible pollution incidents and management practices;

b) **Habitat degradation:** An indirect impact resulting in reduction of the suitability of the habitat following construction for the identified important biodiversity features. Generally associated with increased light, noise, vibration and chemical pollution (associated with vehicles being active on the road);

c) **Fragmentation:** An indirect impact resulting in fragmentation of populations of important biodiversity features that are specifically associated with the operational phase, such as light spill associated with active vehicles; and

d) **Disturbance:** An indirect impact resulting from a change in normal conditions (human activity) that would result in the important biodiversity feature changing its typical behaviour, such as changes in roosting behaviour.

5.3.62 The following paragraphs summarise changes in either the assessment of impacts associated with the updated DMRB guidance and how this impacts the assessment of the impacts

5.3.63 The update to LA 105 Air Quality is considered in Section 2.3 and found that the conclusions of 2018 ES remain valid**.**

5.3.64 As summarised in the 2018 ES paragraphs 8.9.27 and 8.9.186 – 187, the Scheme would result in the loss of one stone curlew breeding plot on managed fallow land near Parsonage Down. This would be replaced by a new scraped plot within Parsonage Down National Nature Reserve (NNR). As part of discharging Requirement 12 of the DCO this replacement plot has been secured by legal agreement with Natural England.

5.3.65 During Examination it was agreed that three further stone curlew breeding plots (i.e. four in total including the replacement plot at Parsonage Down) would be provided as part of the Scheme. One of these is a scraped plot at Winterbourne Down nature reserve which has been secured by legal agreement with RSPB. The other two plots would be fallow plots on farmland, provided as mitigation for impacts from potential recreational disturbance. A screening study was undertaken to identify suitable

locations for fallow plots, all of which were verified on site by RSPB and discussed with landowners. During examination offers were made to three landowners to ensure that the required two fallow plots could be secured later. Legal agreements have been made with all three landowners, honouring the agreements in principle made during Examination. The increase from four to five breeding plots in total is not due to any increase in the requirement for mitigation and does not change the outcome of the ecological assessment or the Habitat Regulations Assessment.

5.3.66 The provision of breeding plots is considered to provide a net gain in the resource of suitable nesting opportunities for stone curlew. The fifth plot is not a material change to the operational impacts which would be fully mitigated by the agreed plots. **As such, there is no cause to alter the assessment of impacts reported within the 2018 ES.**

5.4 Conclusion

5.4.1 This section has identified and considered changes to the legislative and policy framework, assessment methodology, and environmental baseline relevant to biodiversity and found that **the conclusions of 2018 ES and the rest of the environmental information remain valid and that therefore in combination with this report, the environmental information is adequate. No further or updated environmental information is required to be submitted for consideration by the Secretary of State in relation to this topic, in order for a decision to be made on the Scheme.**

5.4.2 The cumulative schemes set out within Appendix 11.2 have been reviewed. The assessment of cumulative developments contained within Appendix 11.2 does not alter the conclusions of the 2018 ES, because either the scope of the additional developments would not result in an ecological impact (the nature of the works would not result in a discernible impact), or the developments are located at sufficient distance that they would be outside of the zone of influence for the various ecological receptors.

5.4.3 The mitigation and monitoring measures reported in the 2018 ES remain applicable. No additional mitigation or monitoring measures are required.

5.4.4 This section has been approved by Dr Stephanie Peay, the author of the Biodiversity chapter of the 2018 ES and the relevant competent expert for this topic, as set out in Appendix 1.1 of the 2018 ES [APP-185].

6 Noise and Vibration

6.1 Legislative and Policy Framework

6.1.1 No changes to the NPSNN have been made since the publication of the Noise and Vibration chapter of the 2018 ES [APP-047] in October 2018.

6.1.2 The National Planning Policy Framework (NPPF) closely aligns with the aims set out in the NPSNN. The July 2018 (MHCLG, 2018) version of the NPPF was current at the time of the 2018 ES publication in October 2018. Since then, it has been revised twice, in June 2019 and July 2021 (MHCLG, 2021). The text relating to noise is identical in the July 2018 (paragraph 180) and July 2021 (paragraph 185) versions of the NPPF.

6.1.3 Both the 2018 and 2021 versions of the NPPF refer to the Noise Policy Statement for England (NPSE). The NPSE (Defra, 2010) was published in 2010 and no changes have been made since publication.

6.1.4 General guidance on local planning authorities' plan making and decision taking is provided in the web-based resource Planning Practice Guidance on Noise (PPG-N). This covers a wide range of situations including aircraft noise, new residential developments etc. Of most relevance to a highways scheme is the guidance on observed effect levels i.e. the Lowest Observed Adverse Effect Level (LOAEL) and Significant Observed Adverse Effect Level (SOAEL), which are used in the 2018 ES in the identification of effects due to the scheme. The PPG-N was first published in March 2014 (Department for Communities and Local Government, 2014) and this version was current at the time of the 2018 ES publication. The guidance was updated in July 2019 (MHCLG, 2019), however, the relevant changes are minor in nature. Table 6.1 and Table 6.2 provide the guidance on LOAEL and SOAEL from the 2014 and 2019 PPG-N respectively. Within Table 6.2, text which is slightly different in the 2019 PPG-N, compared to the 2014 PPG-N is highlighted in italics.

Table 6.1 2014 PPG-N guidance on LOAEL and SOAEL

Perception	Examples of outcomes	Increasing effect level	Action
Lowest Observed Adverse Effect Level (LOAEL)			
Noticeable and intrusive	Noise can be heard and causes small changes in behaviour and/or attitude, e.g. turning up volume of television; speaking more loudly; where there is no alternative ventilation, having to close windows for some of the time because of the noise. Potential for some reported sleep disturbance. Affects the acoustic character of the area such that there is a perceived change in the quality of life.	Observed Adverse Effect	Mitigate and reduce to a minimum

Perception	Examples of outcomes	Increasing effect level	Action
Significant Observed Adverse Effect Level (SOAEL)			
Noticeable and disruptive	The noise causes a material change in behaviour and/or attitude, e.g. avoiding certain activities during periods of intrusion; where there is no alternative ventilation, having to keep windows closed most of the time because of the noise. Potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to change in acoustic character of the area.	Significant Observed Adverse Effect	Avoid

Table 6.2 2019 PPG-N guidance on LOAEL and SOAEL

Response	Examples of outcomes	Increasing effect level	Action
Lowest Observed Adverse Effect Level (LOAEL)			
Present and intrusive	Noise can be heard and causes small changes in behaviour, attitude *or other physiological response*, e.g. turning up volume of television; speaking more loudly; where there is no alternative ventilation, having to close windows for some of the time because of the noise. Potential for some reported sleep disturbance. Affects the acoustic character of the area such that there is a *small actual or* perceived change in the quality of life.	Observed Adverse Effect	Mitigate and reduce to a minimum
Significant Observed Adverse Effect Level (SOAEL)			
Present and disruptive	The noise causes a material change in behaviour, attitude *or other physiological response*, e.g. avoiding certain activities during periods of intrusion; where there is no alternative ventilation, having to keep windows closed most of the time because of the noise. Potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to change in acoustic character of the area.	Significant Observed Adverse Effect	Avoid

6.1.5 Comparison of the text in Table 6.1 and Table 6.2 illustrates the minor nature of the changes in the 2019 update. Therefore, the update to the PPG-N since the completion of the 2018 ES would not materially affect the assessment methodology adopted in the 2018 ES.

6.2 Assessment Methodology

Scoping

6.2.1 The policy, methodology and guidance changes and the environmental information described would not alter the Scoping Opinion. The following guidance updates do not materially change the approach presented in the Scoping Report to the assessment of noise and vibration effects (other than where it relates to operational traffic vibration, see paragraph 6.2.11).

Design Manual for Roads and Bridges

6.2.2 The Design Manual for Roads and Bridges (DMRB) is the standard UK methodology for assessing the impact of highways schemes. The noise and vibration section of DMRB current at the time of the noise and vibration assessment as reported in the 2018 ES, was HD 213/11 (Volume 11, Section 3, Part 7– Revision 1 (Highways Agency, 2011), issued in 2011, as well as the associated Interim Advice Note IAN 185/15 (Highways England, 2015). HD 213/11 and IAN 185/15 were replaced in November 2019 with a new version of the noise and vibration section of DMRB: LA 111. Revision 1 of LA 111 was issued in February 2020 and the current version, Revision 2, was issued in May 2020 (Highways England, 2020).

Construction noise and vibration

6.2.3 HD 213/11 provided limited guidance on the construction assessment methodology, however the approach adopted in the 2018 ES chapter, which was based on the BS 5228 (British Standards Institution, 2014) construction noise 'ABC' method, closely aligns with that prescribed in LA 111.

6.2.4 No changes to the construction source information, the construction prediction methodology, the use of the 'ABC' method for assessing the magnitude of impact of construction noise, the construction noise and vibration LOAELs and SOAELs, the thresholds for the onset of potentially significant effects, or the duration of construction impact criteria, have occurred since the 2018 ES.

6.2.5 LA 111 adopts a new magnitude of impact scale (negligible, minor, moderate and major) to describe the impacts, whereas the 2018 ES simply identified effects as significant or not significant. **However, as the thresholds for the onset of potentially significant effects are unchanged and no other changes have occurred, this would have no impact on the identification of significant adverse construction noise and vibration effects**.

Construction traffic noise

6.2.6 LA 111 includes a new requirement to explicitly consider impacts from night-time diversion routes. As stated in the 2018 ES, no planned diversions or night-time road closures are currently anticipated to be required during the works, with the exception of very short periods to tie in the Scheme to the existing road. Therefore, adopting the LA 111 methodology would not identify any significant adverse effects due to night-time diversions.

The 2018 ES assessed the potential impact of additional traffic generated by the construction works directly and re-routing of existing traffic around the works. The 2018 ES reported that moderate or major increases in traffic noise due to the addition of construction traffic or re-routing due to the works, resulting in significant adverse effects, were not identified on any existing roads. The method for predicting road traffic noise levels has been amended in LA 111 from that previously adopted in the 2018 ES, which was based on HD 213/11 and IAN 185/15. The change only relates to the traffic speeds used in the predictions, this is discussed in more detail in the 'Operational traffic noise' section below, which identifies that this change alone would not significantly affect the outcome of the assessment reported in the 2018 ES. In addition, as set out in paragraphs 3.2.6 - 3.2.8 of Appendix 1.1: Transport Assessment Review, the construction traffic forecasts which informed the construction traffic noise assessment do not need to be updated and therefore the noise assessments for that phase also do not need to be updated. **Therefore, the conclusions of the 2018 ES remain valid.**

Operational traffic noise

6.2.7 Both LA 111 and the HD 213/11 adopt the standard UK traffic noise prediction methodology as set out in the Calculation of Road Traffic Noise (DfT, 1998). No change to CRTN has occurred since the 2018 ES. However, LA 111 does make a change to which traffic speed data is used in the CRTN predictions. Traffic speeds are estimated by the traffic model for a scheme, these speeds are then 'pivoted' using measured traffic speeds to improve the correlation between modelled and measured speeds. At the time of the 2018 ES, IAN 185/15 was in place and this required a further adjustment called 'speed banding' to be carried out, in which each road link was assigned one of a limited number of speeds based on the band within which the pivoted speed fell. LA 111 removes the requirement for speed banding and the pivoted speeds are used directly in the traffic noise predictions.

6.2.8 A sensitivity test has been completed to test the impact of the change in traffic speed data on the predicted change in traffic noise levels due to the Scheme, see paragraph 6.3.9.

6.2.9 The magnitude of impact criteria and operational traffic noise LOAEL and SOAEL remain unchanged in LA 111 from that adopted in the 2018 ES.

6.2.10 LA 111 makes several other changes to the operational traffic noise assessment methodology compared to that adopted in the 2018 ES based on HD 213/11 and IAN 185/15:

a) The recommended study area for the detailed traffic noise modelling (the area where traffic noise levels are predicted at each façade of each identified receptor) is amended slightly in LA 111. A study area including 600m from a scheme and 600m from routes bypassed by a scheme is unchanged, but the requirement to also include areas within 600m of 'affected routes', extending to a maximum of 1km from the scheme and

routes bypassed by the scheme, is removed in LA 111. Changes along all 'affected routes' are now assessed in a more proportionate way using changes in the 'Basic Noise Level' (calculations based on the source level of the road rather than the level at each individual receptor). However, there is flexibility in the methodology to include these 'affected routes' in the detailed traffic noise modelling if considered appropriate. Adopting this smaller study area than that used in the 2018 ES for the detailed traffic noise modelling would exclude Church Street/High Street in Amesbury. However, based on the potential impacts in this location due to the closure of the Stonehenge Road access on to the A303, the flexibility provided by LA 111 would be adopted to include them in the detailed traffic noise assessment, and **therefore this change would have no impact on the conclusions of the 2018 ES**.

b) Consideration of the change in traffic noise levels due to a scheme in terms of likely annoyance to residents is no longer required. As the assessment of annoyance was based on the magnitude of traffic noise change it simply re-iterated the impacts identified by the traffic noise changes. **Therefore, this change would have no impact on the conclusions of the 2018 ES**.

c) The assessment of night-time traffic noise impacts is extended in LA 111 to include all receptors which are potentially sensitive at night and impacts in both the short term and long term. The HD 213/11 methodology only considered long term impacts and receptors where the $L_{night, outside}$ level is 55 dB(A) or more. This change has been included in the sensitivity test reported in paragraph 6.3.9.

d) Different façades of the same property can experience different changes in traffic noise level depending on their orientation to the noise source. HD 213/11 required the assessment to be based on the façade which experiences the least beneficial change i.e. the largest increase, or, if all façades undergo a decrease, the smallest decrease. LA 111 requires the assessment to be based on the façade which experiences the greatest magnitude of change. This change cannot result in the identification of new significant adverse effects, as for adverse effects the façade with the largest increase was used; however, it can result in the identification of new significant beneficial effects, as for beneficial effects the façade with the smallest reduction was used. This change has been included in the sensitivity test reported in paragraph 6.3.9.

Operational traffic vibration

6.2.11 LA 111 removes the requirement of HD 213/11 to assess operational traffic vibration impacts. LA 111 states that 'Operational vibration is scoped out of the assessment methodology as a maintained road surface will be free of irregularities as part of the project design and under general maintenance, so operational vibration will not have the potential to lead to significant adverse effects'. **As the 2018 ES identified no potentially significant adverse effects due to operational traffic vibration, this change would have no impact on the conclusions of the 2018 ES**.

Operational plant noise

6.2.12 The 2018 ES assessed the potential noise impact of plant associated with the operation of the tunnel, in particular the service buildings at each portal and the fans inside the tunnel. No change to the Scheme design, including the number, location and noise levels of the potential plant has occurred since the 2018 ES. The assessment of plant noise in the 2018 ES made reference to the methodology for assessing industrial type noise in BS 4142. The 2014 version of BS 4142 (British Standards Institution, 2014) was current at that time. A new version of the standard was issued in 2019 (British Standards Institution, 2019), however this update simply corrected a small number of errors/typos, no changes were made to the methodology. **Therefore, as no change to the predicted plant noise levels or assessment methodology has occurred, the conclusion of the 2018 ES that significant adverse noise effects due to plant noise are not anticipated remains unchanged**.

6.3 Environmental Information

Baseline

6.3.1 A baseline noise monitoring survey was completed in 2018, as reported in the ES. No potentially significant changes in the noise sources in the study area have occurred since 2018, for example the introduction of a new industrial facility or quarry. Road traffic noise is still the dominant noise source in the study area. Similarly, no major developments which would affect the propagation of traffic noise or introduce additional noise sensitive receptors, such as large housing developments, have occurred in the vicinity of the scheme.

6.3.2 The developments identified in Appendix 11.2 as being part of the baseline do not alter the conclusions of the 2018 ES, and no further environmental information is required to be submitted for consideration by the Secretary of State, in order for the Application to be re-determined.

Future Baseline

6.3.3 The delay to the Scheme resulting in the change of the construction phase and operational phase start dates (to 2023 and 2029 respectively) does not alter the conclusions relating to the future baseline in the 2018 ES, and no further environmental information is required to be submitted for consideration by the Secretary of State, in order for the Application to be re-determined.

6.3.4 The developments identified in Appendix 11.2 as being part of the future baseline do not alter the conclusions of the 2018 ES because they would not introduce additional noise receptors, such as large housing developments, in the vicinity of the Scheme or ARN.

Construction information

6.3.5 Whilst the 2021 start for the construction works assumed in the 2018 ES is no longer valid (the assumed start of the construction phase for the Scheme

is now 2023), no changes have occurred to the construction source information, such as the construction activities and plant or the volume of construction traffic generated by the works.

Noise model

6.3.6 With the exception of operational road traffic data, as discussed below, no change to the inputs to the 3D noise model of the study area has occurred since the 2018 ES, including the Scheme design, ground topography, OS mapping, buildings, noise sensitive receptors etc. The traffic noise mitigation measures in terms of low noise surfacing on the Scheme, noise barriers on the flyover at Amesbury and a solid parapet on the south side of the River Till viaduct remain the same.

Operational traffic data

6.3.7 The opening year of the scheme of 2026 assumed in the 2018 ES, and the future assessment year of 2041 (15 years after opening) are no longer valid. An update to the 2018 traffic modelling, upon which the 2018 operational traffic noise assessment was based, has been completed and is reported on in Appendix 1.1 to this review. This update is based on an opening year of 2029 and a future assessment year of 2044. This updated traffic data has been used in the sensitivity test reported in paragraph 6.3.9.

Operational plant

6.3.8 No change to the Scheme design, including the number, location and noise levels of the potential plant has occurred since the 2018 ES.

Operational Traffic Noise Sensitivity Test

6.3.9 A sensitivity test has been completed using the operational traffic noise model completed for the 2018 ES. The sensitivity test has considered updated traffic data for both the Do-Minimum (DM - without scheme) and Do-Something (DS - with scheme) scenarios for the revised opening year of 2029 and future assessment year of 2044, as discussed in the Transport Assessment Review at Appendix 1.1 to this document. In addition, the change from banded speeds to pivoted speeds in the LA 111 assessment methodology has also been adopted. No other changes have been made.

6.3.10 The impact of the opening year moving forward by three years compared to the 2018 ES is that traffic flows are generally slightly higher. The increase is generally slightly greater in the DS scenarios on the A303 compared to the DM scenarios as without the scheme traffic growth is constrained by the limitations of the existing road network.

6.3.11 The change from banded speeds to pivoted speeds in the DS scenarios generally results in slightly higher traffic speeds on the A303. The highest speed band is 97km/hr (around 60 mph), whereas the pivoted speeds on the Scheme are generally a little higher, closer to 70mph.

6.3.12 The revised traffic data and change from banded to pivoted speeds results in an increase in the number of residential buildings experiencing a minor

increase in traffic noise in the opening year. This is primarily driven by receptors in Amesbury which move from negligible increase to minor increase. Based on the magnitude of the change and the likely impact on residents these negligible and minor increases are not identified as resulting in significant adverse effects.

6.3.13 The moderate increases reported in the 2018 ES at two non-residential sensitive receptors on Church Street/High Street are maintained with the revised traffic data and traffic speeds.

6.3.14 **At residential properties, the number of moderate and major increases in traffic noise in the opening year increases very slightly from 22 to 25, though the number of major increases reduces from five to one.** The 2018 ES reported major and moderate increases in traffic noise at Foredown House on the northern edge of Winterbourne Stoke facing the Scheme, and on Church Street/High Street in Amesbury, due to the closure of the access onto the A303 via Stonehenge Road. The additional three properties identified as experiencing a moderate increase are located on Church Street in Amesbury. With the revised traffic data and traffic speeds the impact at these properties increases slightly from just under 3.0 dB to just over 3.0 dB. The four properties predicted to experience a moderate increase rather than major are towards the northern end of the High Street in Amesbury. With the revised traffic data and traffic speeds the impact at these properties is slightly reduced to below 5.0 dB. At Foredown House on the northern edge of Winterbourne Stoke, the major increase in traffic noise levels on the northern facade facing the Scheme, as reported in the 2018 ES, remains.

6.3.15 The significant adverse effects identified in the 2018 ES at Foredown House and on Church Street and High Street in Amesbury are comparable to those identified in the sensitivity test. **No new areas of significant adverse effect have been identified in the sensitivity test**.

6.3.16 In the 2018 ES, 50 properties were identified in the detailed traffic modelling study area as experiencing a moderate or major reduction in traffic noise, which are located in Winterbourne Stoke, Stonehenge Cottages and in the vicinity of the northern end of Stonehenge Road. Whilst the predicted reduction in traffic noise levels in these locations is similar with the revised traffic data and revised speeds, the change in the methodology in LA 111, from reporting the impact at the worst affected façade to the façade with the greatest magnitude of change, **results in a doubling of the number of residential properties identified as experiencing a significant benefit**. **In addition, the church in Winterbourne Stoke is identified as experiencing a new significant benefit in the sensitivity test**.

6.3.17 **Consideration of the night-time changes in traffic noise levels in the opening year, which was not reported in the 2018 ES, does not identify any additional significant effects**.

6.3.18 Outside of the detailed traffic noise modelling study area, the 2018 ES identified a significant beneficial effect at a total of 40 residential buildings

on the section of the B390 between Chitterne and Shrewton. This was due to a moderate reduction in the 'Basic Noise Level' due to the Scheme (traffic noise levels calculated based on the source level of the road rather than the level at each individual receptor). Using the revised traffic data and traffic speeds the reduction in the calculated traffic noise levels on this section of the B390 is slightly smaller (minor). **Therefore, the significant beneficial effect at this location is no longer anticipated in the sensitivity test**.

6.3.19 Both the significant adverse and significant beneficial effects in the vicinity of the Scheme are anticipated to occur in the same locations and the conclusions of the 2018 ES remain valid. The removal of the significant beneficial effect at a small number of properties in the wider area is considered to not fundamentally alter the conclusions of the assessment. **The sensitivity test demonstrates that updates to the assessment methodology in LA 111 and the traffic data does not result in significant changes to the significant effects identified in the 2018 ES**.

6.3.20 **With regard to compliance with policy, the discussion provided in the 2018 ES is still applicable, the outcome of the sensitivity test would not change the conclusion that the Scheme complies with the relevant planning policies**.

6.4 Conclusion

6.4.1 This section has identified and considered changes to the legislative and policy framework, assessment methodology, and environmental baseline relevant to noise and vibration and found that **further environmental information is required to be submitted for consideration by the Secretary of State in relation to this topic, in order for a decision to be made on the Scheme. Overall, the 2018 ES and the rest of the environmental information, as supplemented by this review, is adequate to inform the Secretary of State's redetermination of the application.**

6.4.2 The cumulative schemes set out within Appendix 11.2 have been reviewed. Based on the nature of these schemes and their distant location in the vicinity of Salisbury, the assessment of cumulative developments contained within Appendix 11.2 does not alter the conclusions of the 2018 ES.

6.4.3 The mitigation and monitoring measures reported in the 2018 ES remain applicable. No additional mitigation or monitoring measures are required.

6.4.4 This Section has been approved by Suzanne Scott, the author of the Noise and Vibration chapter of the 2018 ES and the relevant competent expert for this topic, as set out in Appendix 1.1 of the 2018 ES [APP-185].

7 Geology and Soils

7.1 Legislative and Policy Framework

7.1.1 No changes to the NPSNN have been made since the publication of the Geology and Soils chapter [APP-048] of the 2018 ES. There have been two versions of the National Planning Policy Framework (NPPF) since 2018; the NPPF was updated in February 2019 and also revised in July 2021. There are no material changes to the 'Ground conditions and pollution' section of the NPPF since 2018. The requirements which relate to the geology and soils assessment provided in the Environmental Statement (ES) have not substantively changed, and the NPSNN remains the primary source of policy guidance.

7.1.2 The NPPF Planning Practice Guidance (PPG) sections on "land affected by contamination" and "land instability" had been taken into account in the 2018 ES. Updates to the PPG since 2018 do not result in any changes to the outcome of the 2018 ES.

Policy

7.1.3 Wiltshire Council Core Strategy Development Plan Document – core policy 50 (geodiversity) and core policy 68 (water resources) have not been updated since 2018 (Wiltshire Council, 2015).

7.1.4 Part 2A of the Environmental Protection Act (EPA) 1990 (the Contaminated Land Regime) Department of Environment, Food and Rural Affairs (DEFRA, 2012) has not been updated since 2018.

7.1.5 Defra guidance 'Safeguarding our Soil – A Strategy for England' (Defra, 2009) has not been updated since 2018.

7.1.6 Wiltshire and Swindon Waste Core Strategy 2006 - 2026 (Swindon Borough Council and Wiltshire Council, 2009) has not been updated since 2018.

7.2 Assessment Methodology

Scoping

7.2.1 The policy, methodology and guidance changes and the environmental information described in this Section would not alter the Scoping Opinion. This is because the general approach to assessment has not changed (other than where it relates to agricultural soils, see paragraph 7.2.4). Where there have been changes in approach, due to changes in guidance, these are reviewed in turn below.

Withdrawal of Design Manual for Roads and Bridges (Volume 11)

7.2.2 The Geology and Soils 2018 ES chapter [APP-048] assessed the potential impacts of the construction and operation of the Scheme, following the methodology set out in Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 11 and associated Interim Advice Notes (IANs)

(Highways England, 1993), with the details of the method adopted presented in Section 10.3 of Chapter 10 of the 2018 ES.

7.2.3 Since the 2018 ES, DMRB, Volume 11, Section 3, Part 11 has been withdrawn and replaced with DMRB Sustainability and Environment Appraisal LA 109 Geology and Soils (Highways England, 2019).

7.2.4 A key change is that agricultural soils are now included as part of the Geology and Soils scope, whereas previously there was some overlap with the People and Communities topic, and hence for the 2018 ES submission it was undertaken as part of the People and Communities chapter [APP-051]. Whilst the agricultural assessment is now part of this topic's scope, its inclusion and the assessment undertaken by the People and Communities team is discussed in Section 10 (to be consistent with the 2018 ES).

7.2.5 Minerals is no longer referred to within the Geology and Soils topic scope as defined in LA 109, instead it is now referred to under LA 110 Materials Assets and Waste. However, as there are no new minerals receptors (see paragraph 7.3.15), this would still be scoped out of the assessment.

7.2.6 For land contamination, the main changes between the guidance adopted for the 2018 ES and the revised LA 109 are summarised below;

- LA 109 (Highways England, 2019) includes a table defining receptor sensitivity which DMRB's withdrawn version did not. LA 109 includes an extra category of sensitivity (very high) which was not used in the 2018 ES. The 2018 ES also considers the receptor sensitivity for the natural and built environment which LA 109 does not require. However, the contaminated land assessment presented in the 2018 ES followed the principles of risk assessment as set out in CLR11 (Environment Agency, 2004 (now superseded))[10] which was valid at the time and which LA 109 refers to.

- The approach taken in the 2018 ES to assess the potential impacts of the Scheme (the significance of effects) from land contamination generally aligns with the methodology described to determine the 'magnitude of impact (change)' described in LA 109. However, as only land contamination impacts were assessed in the 2018 ES, due to other receptors such as geological and mineral designations being scoped out, and in the absence of prescriptive guidance within DMRB (Volume 11, Section 3, Part 11), the significance of effect in relation to land contamination was determined by comparing the levels of risk at baseline for each receptor, with the levels of risk at construction and operational stages of the Scheme, with the magnitude of the change in risk level between stages determining the significance. Receptor

[10] CLR11 was withdrawn in 2020 and has been replaced with Land Contamination Risk Management (LCRM) guidance. The differences between these guidance documents are summarised below in 'Withdrawal of CLR11'.

sensitivity was a material consideration when considering the severity of the risk as part of the risk assessment process.

- In LA 109, the terminologies for reporting the 'magnitude of impact' compared to the 'significance of effect' criteria in Table 10.3 of the 2018 ES are slightly different to those adopted in the 2018 ES, for example, LA 109 uses the terms '*no change*', '*negligible*', '*minor beneficial/adverse effects*', '*moderate beneficial/adverse effects*' and '*major beneficial/adverse effects*' and the land contamination assessment in the 2018 ES uses the terms '*neutral effect*', '*minor beneficial/adverse effects*', '*moderate beneficial/adverse effects*' and '*major beneficial/adverse effects*'. The LA 109 descriptions for the magnitude of impact (change) are more prescriptive than those in Table 10.3 of the 2018 ES (change in risk level). Whilst there are some differences in terminology, the definitions and basis of this part of the assessment broadly align, **and it is not considered that there would be a substantive difference to the outcome of the land contamination assessment presented in the 2018 ES**.

- In LA 109, reference is made to LA 104 Environmental Assessment and Monitoring (Highways England, 2020) which is also new guidance published since submission of the 2018 ES. LA 109 states that LA 104 shall be used for the approach to derive the impact significance by using the receptor sensitivity, as well as the magnitude of impact. Significance criteria in LA 104 refer to '*neutral*', '*slight*', '*moderate*', '*large*' and '*very large*'. LA 104 considers '*neutral*' and '*slight*' as having no material effect in decision making. 'Significant' effects typically comprise effects that are within the '*moderate*', '*large*' or '*very large*' significance categories. In the 2018 ES, the significance criteria described in the previous bullet point were used to determine whether there were any 'significant' effects or not; 'significant' being '*moderate*' or '*major*' effects and '*neutral*' or '*minor*' effects classed as 'not significant'.

7.2.7 For the purposes of confirming if there would be any changes in the outcome of the assessment by using the LA 109 and LA 104 methodology, compared to that adopted for the 2018 ES, a review has been undertaken of the assessment of the perceived higher risk potential land contamination sites, as defined in the 2018 ES. This review has included the Esso oil pipeline, military land (within the Scheme boundary), petrol filling stations and a former gas works. Any differences in the receptor sensitivities have also been accounted for in this review; for example, the sensitivity of residential land users has been increased from high to very high (as defined in the LA 109 guidance). The review is presented in Appendix 7.1 for reference and comparison with the published 2018 ES. **It is confirmed that there are no changes to the conclusions of the 2018 ES assessment arising from the change in DMRB methodology**.

Withdrawal of CLR11

7.2.8 Since submission of the 2018 ES, CLR11 (Environment Agency, 2004 (now superseded)) has been withdrawn and replaced with Land Contamination Risk Management (LCRM) in 2020 (Environment Agency, 2021).

7.2.9 The main changes/additions in the LCRM guidance are summarised below:

- Reporting checklists included at the end of each risk based approach stage.
- Site investigation is now an integral part of the risk assessment guide.
- Improved clarity on tiers and stages of assessment.
- Inclusion of climate change as a consideration.
- Greater emphasis on using a sustainable approach throughout the stages.
- Greater alignment to British Standards.
- Inclusion of reference to unexploded ordinance, risk communication, piling risk, links to geotechnical issues, and treatability studies.
- Removal of reference to C552 for Preliminary Risk Assessment (PRA) (CIRIA, 2001) and replacement with reference to R&D66 (NHBC, Environment Agency, CIEH, 2008) for qualitative risk scoring. Note that R&D66 was used in the 2018 ES.
- Removal of reference to these categories of risk ("minimal or negligible", "tolerable or acceptable" and "unacceptable") and replacement with just "acceptable" and "unacceptable".

7.2.10 **The overall approach taken in the 2018 ES and the conclusions remain the same**, despite the change in this guidance as the principles established by CLR11 have largely been carried through to LCRM.

7.2.11 The only exception to this is the inclusion of climate change as a consideration for land contamination in LCRM. Table 7.1 presents a summary of potential impacts of climate change with respects to land contamination during the construction and operation phases of the Scheme.

Table 7.1 Potential impacts of climate change to the Scheme

Climate Hazard Type and Projection	Sensitive Receptor and Description	Project Phase	Embedded Design Measures to Limit, Reduce or Eliminate Project Risks to Receptor
Increase in winter rainfall/	Groundwater –	Construction	The potential rise in groundwater level and increased potential for surface flooding will be mitigated through

Climate Hazard Type and Projection	Sensitive Receptor and Description	Project Phase	Embedded Design Measures to Limit, Reduce or Eliminate Project Risks to Receptor
surface flooding	Potential increase in groundwater levels and amount of surface water. Increased surface water percolating into soil may increase the potential for contaminated soil leachate to be generated in areas where soil contamination is present. Groundwater level rises may also bring groundwater into direct contact with shallower soil contamination. This would increase the likelihood of potential impacts from soil contamination on groundwater quality.		temporary works design and by incorporating the measures and requirements that are defined in the OEMP around dewatering and the management of soil and groundwater contamination.
		Operation	Known soil and groundwater contamination, and any unforeseen contamination encountered during construction, where assessed as unacceptable will be managed in accordance with the measures and commitments already defined in the OEMP. Maintenance and operation of the Scheme will be in accordance with established environmental legislation and good practice.
Increase in annual temperature	Human health – Increase in dust generation from extended dry periods which may increase potential exposure to dusts/ contaminants.	Construction	This consequence would be minimised , through the dust control measures and commitments already detailed in the OEMP.

7.2.12 Given consideration of the embedded design measures indicated in Table 7.1, no likely significant effects from climate change from the Scheme are anticipated for the geology and soils topic.

7.3 Environmental Information

Baseline

7.3.1 This section discusses any material changes in the Geology and Soils baseline information (Section 10.6 of the 2018 ES [APP-278]) since 2018. This has been reviewed by making reference to the online sources of information and ground investigation reports undertaken since 2018 that are listed below.

7.3.2 Online sources of information referenced includes:

- British Geological Survey Geoindex (BGS, 2021);
- Magic Maps (Defra, 2021);

- Enviro Data Viewer (Groundsure, 2021); and
- Google Earth Pro (historical aerial maps) and Google maps.

7.3.3 Ground investigation reports available since 2018:

- A303 Stonehenge - Phase 6 & 7 Ground Investigation - Final Factual Report on Ground Investigation (Structural Soils Ltd, 2019);
- A303 Amesbury to Berwick Down - Phase 7ai - Factual Report (Geotechnics Ltd, 2019);
- A303 Amesbury to Berwick Down - Phase 7aii - Factual Report (Geotechnics Ltd, 2019);
- Geotechnics Ltd (2020) A303 Amesbury to Berwick Down - Phase 7a Countess - Factual Report (Geotechnics Ltd, 2020);
- A303 Amesbury to Berwick Down Phase 7B GI - Factual Report (RPS Group, 2021); and
- A303 - Amesbury to Berwick Down; Stage 1, Tier 2 Land Contamination Assessment Report (AmW, 2021).

Published geology

7.3.4 There are three small areas (approximately 0.2ha each) of artificial ground mapped in proximity to each other, in the eastern extent of the study area to the east of Amesbury Road. These appear to be in the locations of three Tumuli (ancient burial grounds) that are indicated on current OS mapping.

7.3.5 There have been no changes in the superficial deposits or bedrock mapped across the study area.

Ground investigations

7.3.6 Since 2018, additional ground investigations (referenced in paragraph 7.3.3) have been undertaken across the Scheme. A summary of these ground investigations is presented below.

Structural Soils, Phase 6 and 7 (2019)

7.3.7 The Phase 6 and 7 ground investigations were carried out across the Scheme and comprised 48 rotary boreholes (to between 15m and 85m below ground level (bgl)).

Geotechnics Ltd, Phase 7ai (2019a)

7.3.8 The Phase 7ai ground investigation was carried out across the Scheme and comprised ten cable percussion boreholes (to between 10m and 50m bgl), 14 rotary boreholes (to between 29m and 50.65m bgl) and 14 trial pits (to between 1.6m and 2.5m bgl).

Geotechnics Ltd, Phase 7aii (2019b)

7.3.9 The Phase 7aii ground investigation was carried out across the Scheme and comprised five dynamic sample boreholes (to between 5.2m and 6m bgl), 26 rotary boreholes (to between 15.4m and 50.7m bgl) and 20 trial pits (to between 2.5m and 3.5m bgl).

Geotechnics Ltd, Phase 7a Countess (2020)

7.3.10 The Phase 7a Countess ground investigation was carried out in vicinity of Countess Roundabout and comprised eight cable percussion boreholes (to between 12.6m and 21.32m bgl), six rotary boreholes (to between 16m and 30.73m bgl), three dynamic sample boreholes (to 6m bgl), and six trial pits (to 1.2m bgl).

RPS Group, Phase 7b (2021)

7.3.11 The Phase 7b ground investigation was carried out across the Scheme and comprised 42 dynamic sample/rotary boreholes (to between 5m and 71m bgl), five cable percussion boreholes (to between 5.1m and 15m bgl), 21 hand excavated trial pits (to between 0.3m and 1.4m bgl), and 27 mechanically excavated trial pits (to between 3.2m and 4.2m bgl).

AmW, Stage 1, Tier 2 Land Contamination Assessment Report (2021)

7.3.12 This report provides a Stage 1, Tier 2 land contamination risk assessment that seeks to quantify soil and groundwater geochemical sample data recovered from all historical phases of ground investigation across the Scheme (those summarised above, as well as the ground investigations summarised in Chapter 10.6 [APP-278] of the 2018 ES), with specific reference to the key potential contaminated sites that were identified and described in the 2018 ES.

7.3.13 The report summarises, where applicable, any unacceptable residual risks with regards to the potential contaminated sites identified and details recommended further assessment and/or appropriate mitigation (remediation) which may be required, in line with the Development Consent Order (DCO) requirements.

7.3.14 **The assessment of effects presented in the 2018 ES does not change following the outcome of the land contamination risk assessment as the land contamination risk assessment simply represents a more detailed stage of assessment than was presented, and was necessary, for the 2018 ES,** as is required by the staged approach to land contamination risk assessment, as defined in LCRM and the now withdrawn CLR11.

Mining and mineral resources

7.3.15 The Wiltshire and Swindon Aggregate Minerals Site Allocations Local Plan (Wiltshire Council, 2013) has not been updated since 2018, and therefore there are still no Mineral Consultation Areas (MCA), Mineral Safeguarding Areas (MSA) or Preferred Areas (PA) within the study area. Similarly, there are no active mines, quarries or designated mineral resources in the study area.

Committed developments

7.3.16 The developments identified in Appendix 11.2 as being part of the baseline do not alter the conclusions of the 2018 ES. All baseline developments are outside of the 250m study area for geology and soils, except U57 (proposed distribution centre). It is assumed that any requirement to address land contamination, if present or encountered, would be regulated through the planning process. No resulting significant adverse effects are anticipated. There may be beneficial effects associated with remediation if the development affects contaminated land that results in removal of potential contaminant sources or mitigation. However, it is not considered that this will result in any significant beneficial effects.

Future Baseline

7.3.17 The delay to the Scheme resulting in the change of the construction phase and operational phase start dates (to 2023 and 2029 respectively)does not alter the conclusions relating to the future baseline in the 2018 ES, . as all future baseline developments are outside of the 250m study area for geology and soils, except U54 (proposed buildings). It is anticipated that any requirement to address land contamination, if present or encountered, would be regulated through the planning application approval process. No resulting significant adverse effects are therefore anticipated. There may be beneficial effects associated with remediation if the development affects contaminated land that results in removal of potential contaminant sources or mitigation. However, it is not considered that this will result in any significant beneficial effects.

Conceptual Site Model

Receptors

7.3.18 From review of baseline information, no additional receptors to contaminated land have been identified since 2018.

Additional potential sources of contamination

7.3.19 A review of the baseline information, together with recent historical mapping (since 2018) and current aerial mapping has indicated some additional potentially contaminative land uses that are presented in Table 7.2.

Table 7.2 Additional potential contaminated sites within the study area

Name	Location
Pig farm extension	In the centre of the Scheme and study area east of Longbarrow roundabout. This area appears to be an extension of CL034, which was a pig farm to the west (identified in the ES).
Electronics manufacturer[1]	In the eastern extent of the study area, to the south of Solstice Park Avenue.
Large warehouse[1]	In the eastern extent of the study area, to the south of Solstice Park Avenue and Equinox Drive.

Name	Location
Three small areas (approximately 0.2ha each) of artificial ground	In the eastern extent of the study area, to the east of Amesbury Road.

[1] *Were not visible on historical maps available at the time of writing the 2018 ES (most recent at the time of writing was dated 2016)*

Pathways

7.3.20 From review of baseline information, no additional pathways have been identified since 2018.

Assessment of Effects

7.3.21 In line with the assessment methodology set out in Section 10.3 and Appendix 10.2 [APP-274] of the 2018 ES, an initial screening process has been undertaken on the potential land contamination sites identified in Table 7.2. This is to determine whether any of the additional potential contaminated sites identified would change the outcome of the 2018 ES. The screening assessment and baseline site rating for each of the additional potential contaminated sites is presented in Table 7.3. Sites that present a low risk (site ratings of zero to two) in accordance with Appendix 10.2 of the 2018 ES, have been scoped out of further assessment. Site ratings of three or more (moderate to higher risk sites) will be scoped in for further assessment.

Table 7.3 Additional potential contaminated sites within the study area

Name	Proximity Zone	Land Use Class	Vertical Alignment	Baseline Site Rating	Scope In/Out
Pig farm extension	1	1	Cutting	3	Scope in
Electronics manufacturer	3	2	At grade	2	Scope out
Large warehouse	3	1	At grade	1	Scope out
Three small areas (approximately 0.2ha each) of artificial ground	2	1	At grade	2	Scope out

7.3.22 Only the pig farm has been scoped in for further assessment. A site-specific CSM was produced in Appendix 10.2 [APP-274] of the 2018 ES for 'farm sites located within the Scheme boundary'; the pig farm extension site would be classed as part of this group. For this potential contaminated site, no additional receptors require consideration, and all risks and construction/post-construction impacts would remain the same.

7.3.23 **It is considered that the additional potential contaminated land sites would not change the outcome of the temporary, permanent or operational effects assessment in the 2018 ES**.

7.4 Conclusion

7.4.1 This section has identified and considered changes to the legislative and policy framework, assessment methodology, and environmental baseline relevant to geology and soils and found that **the conclusions of 2018 ES and the rest of the environmental information supporting it remain valid and that therefore in combination with this report, the environmental information is adequate and no further or updated environmental information is required to be submitted for consideration by the Secretary of State in relation to this topic, in order for a decision to be made on the Scheme.**

7.4.2 The cumulative schemes set out within Appendix 11.2 have been reviewed. The assessment of cumulative developments contained within Appendix 11.2 does not alter the conclusions of the 2018 ES because all but one of the committed developments and all but one of the future developments are outside of the geology and soils study area. It is also assumed that any requirement to address land contamination, if present or encountered, would be regulated through the planning process. There may be beneficial effects associated with remediation if the development affects contaminated land that results in removal of potential contaminant sources or mitigation. However, it is not considered that this will result in any significant beneficial effects.

7.4.3 The mitigation and monitoring measures reported in the 2018 ES remain applicable. No additional mitigation or monitoring measures are required.

7.4.4 This section has been approved by Phil Hough, the author of the Geology and Soils chapter of the 2018 ES and the relevant competent expert for this topic, as set out in Appendix 1.1 of the 2018 ES [APP-185].

8 Road Drainage and the Water Environment

8.1 Legislative and Policy Framework

8.1.1 No changes to the NPSNN have been made since the publication of the Road Drainage and the Water Environment chapter [APP-049] of the 2018 ES. Scheme proposals and commitments align with current national planning policy, National Highways design standards and Risk Management Authority requirements.

8.1.2 The National Planning Policy Framework (NPPF) closely aligns with the aims set out in the NPSNN. The July 2018 version (MHCLG, 2018) of the NPPF was current at the time of the work undertaken for the 2018 ES. Since then, it has been revised twice, in June 2019 and July 2021 (MHCLG, 2021). There have been no changes to NPPF in respect of road drainage and the water environment since the 2018 ES. There has been minor change to the PPG for flood risk relating to permitted development rights which is not of relevance to the Scheme.

8.1.3 The Floods and Water (Amendment etc.) (EU Exit) Regulations 2019 ensure that floods and water legislation continue to be operable in the United Kingdom following withdrawal from the EU in January 2021. The instrument addresses deficiencies in retained EU law arising from the UK's withdrawal from the EU. The purpose of the instrument is to preserve and protect the existing policy regime rather than to introduce new policy.

8.2 Assessment Methodology

Scoping

8.2.1 The Scoping Opinion remains valid for Road Drainage and the Water Environment based on the guidance changes and the environmental information described in this Section.

Assessment Methodology

8.2.2 The Road Drainage and the Water Environment assessment methodology has not changed since production of the 2018 ES and the anticipated outcomes in terms of water environment impacts remain the same. Similarly, **the design standards for road drainage have not changed since publication of the 2018 ES**.

8.2.3 The Water Framework Directive (WFD) Compliance Assessment was undertaken in consultation with the Environment Agency. **There have been no changes to the requirements of the Environment Agency since publication of the 2018 ES**.

8.2.4 The groundwater risk assessment (GRA) was undertaken in consultation with the Environment Agency. Risk assessments were undertaken using the source-pathway-receptor approach promoted by Defra and the Environment Agency. **There have been no changes to the requirements of the Environment Agency since publication of the 2018 ES**.

8.3 Environmental Information

Baseline

Surface Water

8.3.1 The Environment Agency published the 2019 update to the Water Framework Directive (WFD) status of each surface water and groundwater body on the Catchment Data Explorer (Environment Agency, 2021) in 2020. This was an update from the previously published data in 2016, which was reported in the 2018 ES.

8.3.2 The latest data shows a change in overall status from 'Poor' to 'Moderate' for the Hampshire Avon (Upper) upstream of the Nine Mile confluence (GB108043022351). It should be noted that the catchment for this waterbody lies upstream and outside of the immediate red line boundary for the Scheme, as shown in Figure 4.1 of the WFD Compliance Assessment (Appendix 11.2 [APP-280]). The overall status for all other surface water bodies within the study area remain unchanged in the latest published data.

8.3.3 The Scheme proposals for road drainage were assessed as having a significant beneficial effect on water quality due to the improved pollution control measures. The baseline change described above does not change the conclusions of the Water Quality Risk Assessments (Appendix 11.1[APP-279]) since the road drainage for the Scheme does not discharge into this stretch of the River Avon.

8.3.4 The third cycle of the River Basin Management Plans (RBMPs) were issued for consultation from 22 October 2021 to 22 April 2022. The draft RBMPs outline the objectives for each surface water and groundwater body based on the changes that have taken place since 2015. The draft objectives for the surface waterbodies within the study area for the Scheme, which are outlined in the draft South West RBMP (2021), are largely unchanged from the current South West RBMP (2015). The small number of changes have been outlined in Table 8.1 below.

Table 8.1 Summary of changes to RBMP objectives for surface waterbodies

Surface waterbody	Classification item (and 2019 status)	Current South West RBMP (2015) objectives		Draft South West RBMP (2021) objectives	
		Status (and year)	*Reasons*	*Status (and year)*	*Reasons*
Hampshire Avon (Upper) u/s Nine Mile River confl Water Body	Chemical (Fail)	Good (2015)	-	Good (2063)	Natural conditions: Chemical status recovery time
	Priority hazardous substances (Fail)	Does not require assessment (2015)	-	Good (2063)	Natural conditions: Chemical status recovery time

Surface waterbody	Classification item (and 2019 status)	Current South West RBMP (2015) objectives		Draft South West RBMP (2021) objectives	
		Status (and year)	*Reasons*	*Status (and year)*	*Reasons*
Hampshire Avon (Upper) d/s Nine Mile River confl Water Body	Ecological (Moderate)	Good (2021)	-	Good (2027)	Disproportionately expensive: Disproportionate burdens
	Biological quality elements (Moderate)	Good (2015)	-	Good (2027)	Disproportionately expensive: Disproportionate burdens
	Macrophytes and Phytobenthos Combined (Moderate)	Good (2015)	-	Good (2027)	Disproportionately expensive: Disproportionate burdens
	Chemical (Fail)	Good (2015)	-	Good (2063)	Natural conditions: Chemical status recovery time
	Priority hazardous substances (Fail)	Does not require assessment (2015)	-	Good (2063)	Natural conditions: Chemical status recovery time
Till (Hampshire Avon) Water Body	Chemical (Fail)	Good (2015)	-	Good (2063)	Natural conditions: Chemical status recovery time
	Priority hazardous substances (Fail)	Does not require assessment (2015)	-	Good (2063)	Natural conditions: Chemical status recovery time

The WFD Compliance Assessment concluded that the Scheme is unlikely to result in any effects which may cause a deterioration in the status of any quality element for the surface water bodies, including the River Avon (Upper). The WFD Compliance Assessment also concluded that the Scheme is unlikely to prevent future attainment of the identified WFD objectives for each of the respective waterbodies, including the River Avon (Upper) and River Till. **The baseline changes described above do not change the assessment undertaken in the WFD Compliance Assessment, therefore, the conclusions are still valid.**

Groundwater

8.3.5 The baseline information for understanding the impact of the tunnel on groundwater came from groundwater level measurements from a series of boreholes monitoring the Chalk aquifer across the Scheme area, including the catchment areas north and south of the scheme area; groundwater

monitoring of superficial deposits associated with archaeological remains at Blick Mead; and aquifer properties calculated from pumping tests in 2002 and 2004, as well as new pumping tests.

Groundwater Levels – Chalk aquifer

8.3.6 Groundwater monitoring data in the area of the road alignment used in the development of the conceptual model was limited to that collected during previous investigations, generally between 2002 and 2006, and new data collected during the development of the 2018 ES in 2017-18.

8.3.7 After submission of the 2018 ES with the Scheme application, a groundwater monitoring report (Groundwater Monitoring 2018-19 Conceptual Model Review [AS-019]) was published in March 2019 as an additional submission accepted at the discretion of the Examining Authority. This larger dataset (both duration of monitoring and additional locations) provided an opportunity to review the conceptual model that formed the basis of the Groundwater Risk Assessment (GRA) [APP-282] and the numerical modelling that assessed impacts to groundwater and surface waters from the tunnel.

8.3.8 Groundwater level seasonal changes were shown to vary with the hydrogeological setting as described in the GRA. New monitoring data offered more detail to variations in groundwater behaviour in the Chalk aquifer in the study area. This detail fitted within the overall conceptual model of groundwater flow from north to south and discharge to the rivers Avon and Till-Wylye. Groundwater flow directions interpolated from this additional groundwater level data were very similar to the flow directions interpreted from typical high and low groundwater levels from the Wessex Basin groundwater model provided in the GRA.

8.3.9 Groundwater monitoring is ongoing at the monitoring sites. The data has been reviewed up to June 2021. The data shows that groundwater levels reach their peak in February to March each year and low point in October. Groundwater levels tend to recover in rapid increments from November in each year. Groundwater levels show different seasonal patterns depending on their location, such as interfluve, valley and dry valley.

8.3.10 **These trends across the monitoring period 2018-21 remain consistent with the understanding described in the 2018 ES and the rest of the environmental information**. Groundwater flow directions and peak and low level periods are also consistent with those described in the Groundwater Monitoring 2018-19 Conceptual Model Review [AS-019].

8.3.11 **No extreme climate events have occurred during 2018-2021 to suggest that the peak and drought modelled impacts described in the 2018 ES are no longer representative of extreme conditions. No further environmental information is required to be submitted to the Secretary of State.**

Groundwater Levels – Blick Mead

8.3.12 Groundwater level data at Blick Mead was not available at the time of the publication of the 2018 ES, and approximate levels were estimated based on the development of a conceptual model of the site. A report describing the installation of groundwater monitoring at Blick Mead (Blick Mead monitoring to March 2019 [AS-015]) was an additional submission accepted at the discretion of the Examining Authority, published in April 2019.

8.3.13 Water level measurements recorded the approximate seasonal low point for water levels in the Blick Mead strata in November-December 2018, and levels approaching the seasonal high point in March 2019. Ongoing monitoring up to June 2021 has recorded very similar low and high points each year. Winter highs are similar in 2019 and 2021, with 2020 peak levels up to 0.4m higher.

8.3.14 These levels are very similar to those of the shallow and deeper Chalk aquifer monitored near the River Avon at Amesbury, described in the 2018 ES. The 2018 ES also described the likely Blick Mead Chalk groundwater catchment area based on modelled groundwater contours from the Wessex Basin groundwater model. This catchment was approximately to the north of Blick Mead and not in the tunnel area.

8.3.15 The 2018 ES concluded that Chalk groundwater flow into the superficial deposits along the flow path to discharging to the River Avon may support water levels in the deposits where the archaeological remains are located.

8.3.16 Groundwater levels in the Blick Mead deposits are at an elevation very close to the long term Chalk aquifer levels, and follow very similar seasonal patterns. This indicates that the Blick Mead deposits, river terrace gravels, and Chalk aquifer are in hydraulic continuity. Low groundwater levels are limited by River Avon levels. These observations are consistent with the conceptual model presented in the 2018 ES.

8.3.17 The monitoring data indicates that there can be a significant vertical gradient, nor an extended time period seasonally, to allow significant drainage of the Blick Mead deposits into deeper strata.

8.3.18 Chalk groundwater contours around the winter peak reflect the contours presented in the 2018 ES, showing groundwater flow from the north toward Blick Mead and the River Avon. Ongoing monitoring shows that from the winter peak through the summer recession in groundwater levels, groundwater flow toward Blick Meads turns north easterly, away from the tunnel area.

8.3.19 **Therefore, the conclusions of the 2018 ES and the rest of the environmental information remain valid for Blick Mead**.

Aquifer Properties

8.3.20 Pumping tests have been undertaken to establish the hydraulic properties of the Chalk aquifer in the vicinity of the A303 Stonehenge Tunnel. Test results in 2002 and 2004 were compared with the Wessex Basin groundwater

model that was to be used to assess the impact of the tunnel on groundwater levels and river flows. Modifications to the aquifer properties in the groundwater model were made based on these local pumping tests and a good local calibration was obtained.

8.3.21 After submission of the 2018 ES a pumping test report (Stonehenge Area Pumping Test 2018 Interpretative Report [AS-016]) was published in April 2019 as an additional submission accepted at the discretion of the Examining Authority. This reported pumping tests conducted in 2018 at three locations; Stonehenge Down, Stonehenge Bottom and Coneybury Hill, undertaken during low groundwater level conditions.

8.3.22 The implications of the 2018 pumping tests were considered in a further report as an additional submission (Implications of 2018 Ground Investigations to the Groundwater Risk Assessment [AS-017]) accepted at the discretion of the Examining Authority.

8.3.23 The modified groundwater model contains a higher hydraulic conductivity zone in the Stonehenge Bottom dry valley and this was supported by the 2018 pumping test. The transmissivity on the interfluves was generally similar to that calculated in the 2002 and 2004 pumping tests, however the aquifer storage coefficients were different. The groundwater model had an appropriate storage value in the western part of the Stonehenge Down interfluve but across the eastern part of Stonehenge Down and Coneybury Hill interfluve the model value could be too high. The modelled value in Stonehenge Bottom valley was considered a reasonable storage estimate.

8.3.24 Additional model runs were undertaken to test the sensitivity of changes to aquifer properties on the model calibration and impact of the tunnel. This was reported as an additional submission (Implications of 2018 Ground Investigations to the Groundwater Risk Assessment [AS-018]) accepted at the discretion of the Examining Authority.

8.3.25 This concluded that the groundwater model used in the GRA remained the most conservative for the impact assessment. Each model shows a similar magnitude and extent of impact of the tunnel in causing water levels to rise during peak groundwater level periods, and insignificant differences in river flows between models.

8.3.26 In 2021 an additional pumping test was conducted in Stonehenge Bottom valley at high groundwater levels. This test calculated higher transmissivities than in the same borehole at low groundwater levels in 2018, reflecting the increase in aquifer saturated thickness. The transmissivities were lower than the results from 2002. Aquifer storage values were wide ranging reflecting aquifer heterogeneity as in 2018. The average value was higher than the 2018 value reflecting the increase in aquifer saturated thickness.

8.3.27 The implications of higher aquifer storage is to flatten groundwater levels, thereby reducing the peaks during extreme periods. Conversely higher

storage will limit falling groundwater levels during drought and enable greater river flows.

8.3.28 **Therefore, the findings of the 2021 pumping test are consistent with the modelled predictions of the impact of the tunnel and the assessment of effects in the 2018 ES and the rest of the environmental information**. The model setup in the 2018 ES remains conservative for the range of aquifer properties recorded.

Groundwater quality

8.3.29 The draft objectives for the groundwater body within the study area for the Scheme, which are outlined in the draft South West RBMP (2021), are largely unchanged from the current South West RBMP (2015). The small number of changes have been outlined in Table 8.2 below.

Table 8.2 Summary of changes to RBMP objectives for groundwater

Groundwater body	Classification item (and 2019 status)	Current South West RBMP (2015) objectives		Draft South West RBMP (2021) objectives	
		Status (and year)	*Reasons*	*Status (and year)*	*Reasons*
Upper Hampshire Avon Water Body	Overall Water Body (Poor)	Poor (2015)	Disproportionately expensive: Unfavourable balance of costs and benefits; Natural conditions: Background condition	Good (2027)	Disproportionately expensive: Disproportionate burdens
	Quantitative (Good)	Poor (2015)	Disproportionately expensive: Unfavourable balance of costs and benefits	Good (2021)	Disproportionately expensive: Disproportionate burdens
	Quantitative Status element (Good)	Poor (2015)	Disproportionately expensive: Unfavourable balance of costs and benefits	Good (2021)	Disproportionately expensive: Disproportionate burdens
	Quantitative Dependent Surface Water Body Status (Good)	Poor (2015)	Disproportionately expensive: Unfavourable balance of costs and benefits	Good (2021)	Disproportionately expensive: Disproportionate burdens
	Chemical Dependent Surface Water Body Status (Good)	Good (2027)	Natural conditions: Background condition	Good (2021)	Disproportionately expensive: Disproportionate burdens

8.3.30 The WFD Compliance Assessment concluded that the Scheme is unlikely to result in any effects which may cause a deterioration in the status of any quality element for the groundwater body (Upper Hampshire Avon). The WFD Compliance Assessment also concluded that the Scheme is unlikely to prevent future attainment of the identified WFD objectives for each of the respective waterbodies. **The baseline changes described above do not change the assessment undertaken in the WFD Compliance Assessment, therefore, the conclusions are still valid**.

Flood Risk

8.3.31 The Environment Agency released an update to the climate change guidance for peak river flows and rainfall estimates in the UK on 20th July 2021 (Environment Agency, 2021). This update takes into account the latest UK climate change projections (UKCP18). Within the new guidance peak river flow allowances for the River Avon and River Till catchment have increased compared to the previous guidance (2016) that was the most up to date at the time of the DCO assessment.

Fluvial flood risk

8.3.32 Within the latest guidance the 'higher central allowance' used to assess the Scheme has increased to 56%, from 40% in the 2016 guidance. The 'upper end allowance', used as a sensitivity test to assess the robustness of the Scheme to more extreme events, has increased to 102%, from 85% in the 2016 guidance.

8.3.33 Further flood model simulations with the new climate change allowances (using the existing wider model setup) were undertaken to determine if there was any impact of this change in guidance upon the conclusions of the Flood Risk Assessment (FRA) [REP3-008] and 2018 ES.

The River Avon

8.3.34 The results for the previous River Avon maximum flood depth difference plot for the 1% Annual Exceedance Probability (AEP) + 40% climate change simulation and the equivalent plot for the newly simulated 1% AEP + 56% climate change event are comparable.

8.3.35 The primary differences are that for the 1% AEP + 56% climate change event the area showing a depth decrease of between 0.01m and 0.025m extends further upstream to the north of the Scheme than for the 1% AEP + 40% climate change event and an increase in flood depth of between 0.01m to 0.025m to the south of the Scheme is observed over an area of 0.03 km^2 for the 1% AEP + 56% climate change event rather than the 0.003 km^2 for the 1% AEP + 40% climate change event. It should be noted that this minor increase in flooding is confined to an area of undeveloped green space on the floodplain adjacent to the river channel and does not increase flood risk to receptors such as properties. The identified differences are not considered significant and the commentary relating to the River Avon presented in paragraphs 8.2.1 to 8.2.9 of the FRA remains unchanged.

8.3.36 The 'upper end' allowance was applied to test the sensitivity of the scheme to more extreme change, and results were not included within the FRA, but

in the supporting Fluvial Hydraulic Modelling Report (FRA Annex 1A). The results for the previous River Avon maximum flood depth difference plot for the 1% AEP + 85% climate change simulation and the equivalent plot for the newly simulated 1% AEP + 102% climate change event are essentially equivalent.

8.3.37 Whilst the results of the flood model simulations with the new climate change allowances (Environment Agency, 2021)for the River Avon demonstrate some differences with the previous climate change allowances (2016), **the magnitude of this difference does not change the conclusions of the FRA and 2018 ES**.

The River Till

8.3.38 The results for the previous River Till maximum flood depth difference plot for the 1% Annual Exceedance Probability (AEP) + 40% climate change simulation and the equivalent plot for the newly simulated 1% AEP + 56% climate change event are comparable overall.

8.3.39 The primary differences are that for the 1% AEP + 56% climate change event, the area showing a depth decrease of between 0.01m and 0.1m extends over a larger area to the south of the Scheme, than for the 1% AEP + 40% climate change event; and, an increase in flood depth of between 0.01m to 0.1m to the north of the Scheme, is observed over an area of 0.03km^2 for the 1% AEP + 56% climate change event, rather than the 0.02km^2 for the 1% AEP + 40% climate change event. The identified differences are not considered significant and the commentary relating to the River Till presented in paragraphs 8.2.10 to 8.2.16 of the FRA remains unchanged.

8.3.40 The ‘upper end’ allowance was applied to test the sensitivity of the Scheme to more extreme change, and therefore results were not included within the FRA, but in the supporting Fluvial Hydraulic Modelling Report (FRA Annex 1A). The results for the previous River Till maximum flood depth difference plot for the 1% AEP + 85% climate change simulation and the equivalent plot for the newly simulated 1% AEP + 102% climate change event are largely comparable.

8.3.41 An area located immediately to the south of the existing A303, where a decrease in depth is shown in the scheme scenario for the 1% AEP + 85% climate change event, is not shown for the 1% AEP + 102% climate change event.

8.3.42 An increase in depth of between 0.01m and 0.025m in the scheme scenario is shown for the 1% AEP + 102% climate change event on the existing route of the A303, as well as a small area located to the north of an existing carriageway adjacent to one property in Winterbourne Stoke, which is not shown for the 1% AEP + 85% climate change event. Given that these areas are shown to flood in the baseline scenario, increases in depth are less than 0.025m, and for the latter occur adjacent to rather than within the property, it is not considered that this would result in a change in the conclusions of the FRA.

8.3.43 Whilst the results of the flood model simulations with the new climate change allowances (Environment Agency, 2021) for the River Till demonstrate some differences with the previous climate change allowances (2016), **the magnitude of this difference does not change the conclusions of the FRA and 2018 ES**.

Surface water flood risk

8.3.44 Climate change allowances for peak rainfall intensity, applied for the Parsonage Down surface water modelling completed as part of the 2018 ES, have not changed as part of the latest update to the Environment Agency climate change guidance. To ensure the Scheme is robustly assessed as part of this review, climate change allowances for peak river flows have been applied to the Parsonage Down surface water modelling.

8.3.45 Further flood model simulations with the new climate change allowances for peak river flows (using the existing wider model setup) were undertaken to determine if there was any impact of this change in guidance upon the conclusions of the FRA and 2018 ES.

8.3.46 The results for the previous Parsonage Down maximum flood depth difference plot for the 1% AEP + 40% climate change simulation and the equivalent plot for the newly simulated 1% AEP + 56% climate change event are consistent for the 6 hour duration, 12 hour duration and with 50% blockage applied to the Scheme culvert.

8.3.47 A direct comparison of hydrographs extracted from the surface water model downstream of the Scheme for the 1% AEP + 40% climate change event and the 1% AEP + 56% climate change event (with a 6 hour duration) for the baseline and proposed scenarios at Parsonage Down show that the results are largely consistent. The increase in peak flow observed in the proposed scenario is smaller within the 1% AEP + 56% climate change event (+0.10 m3/s), compared to the 1% AEP + 40% climate change event (+0.17 m3/s). This indicates that the small increase in flow onto the Till floodplain is relatively lower when updated climate change allowances are used, indicating that the implemented drainage solution operates effectively when more conservative climate change allowances are applied.

8.3.48 The peak flow increased in both the baseline and the scheme scenarios for the 1% AEP + 56% climate change event as would be expected due to the increase in modelled extreme rainfall.

8.3.49 Similar results for the peak flow were also observed with comparison of the 1% AEP + 40% climate change and the 1% AEP + 56% climate change event with a 12 hour duration.

8.3.50 A direct comparison of hydrographs extracted from the surface water model downstream of the Scheme for the 1% AEP + 40% climate change event and the 1% AEP + 56% climate change event with 50% blockage applied to the Scheme culvert show that the results are consistent, which confirms that the Scheme culvert and drainage scheme are able to convey surface flows for the design event, even in the event of blockage.

8.3.51 The ‘upper end’ allowance (102% climate change) was applied to the critical 6 hour storm duration to test the sensitivity of the Scheme to more extreme future climate change. Changes in maximum flood depths through Parsonage Down attributable to the Scheme are consistent with those shown for the higher allowance (56% climate change). Flood water is attenuated in the Parsonage Down valley, upstream of the Scheme culvert, to greater depths, whilst the changes in key flow pathways are similar to those observed for the other simulated scenarios. Importantly, there are no increases in flood depth outside the red line boundary or to any vulnerable receptors.

8.3.52 The hydrographs extracted from the surface water model downstream of the Scheme for the 1% AEP + 102% climate change event shows a small reduction in peak flows downstream of the Scheme in the scheme scenario (2.08m^3/s) compared to the baseline scenario (2.23m^3/s). This shows that in the more extreme ‘upper’ climate change scenario, the Scheme drainage solution attenuates flow effectively in a similar manner to the ‘higher’ climate change scenario.

8.3.53 Whilst the results of the flood model simulations with the new peak river flow climate change allowances (Environment Agency, 2021)for Parsonage Down demonstrate some differences with the rainfall climate change allowances, **the magnitude of this difference does not change the conclusions of the FRA and 2018 ES**.

Committed Developments

8.3.54 The developments identified in Appendix 11.2 as being part of the baseline do not alter the conclusions of the 2018 ES, because no significant impediment to groundwater flow is anticipated from the developments, and the majority (other than U49) are located outside the zone of influence of the Scheme. For surface water and flood risk, this is because the runoff from the developments is anticipated to be managed to prevent the release of contaminants and any increase in flood risk.

Future Baseline

8.3.55 The delay to the Scheme resulting in the change of the construction phase and operational phase start dates (to 2023 and 2029 respectively) does not alter the conclusions relating to the future baseline in the 2018 ES, and no further environmental information is required to be submitted for consideration by the Secretary of State, in order for the Application to be re-determined.

8.3.56 The developments identified in Appendix 11.2 as being part of the future baseline do not alter the conclusions of the 2018 ES. For groundwater, this is because no significant impediment to groundwater flow is anticipated from the developments, and the majority (other than U49) are located outside the zone of influence of the Scheme. For surface water and flood risk, this is because the runoff from the developments is anticipated to be managed to prevent the release of contaminants and any increase in flood risk.

8.4 Conclusion

8.4.1 This section has identified and considered changes to the legislative and policy framework, assessment methodology, and environmental baseline relevant to road drainage and the water environment and found that **the conclusions of 2018 ES and the rest of the environmental information supporting it remain valid and that therefore in combination with this report, the environmental information is adequate and no further or updated environmental information is required to be submitted for consideration by the Secretary of State in relation to this topic, in order for a decision to be made on the Scheme.**

8.4.2 The cumulative schemes set out within Appendix 11.2 have been reviewed. The assessment of cumulative developments contained within Appendix 11.2 does not alter the conclusions of the 2018 ES. For groundwater, this is because no significant impediment to groundwater flow is anticipated from the developments, and the majority (other than U49) are located outside the zone of influence of the Scheme. For surface water and flood risk, this is because the runoff from the developments is anticipated to be managed to prevent the release of contaminants and any increase in flood risk.

8.4.3 The mitigation and monitoring measures reported in the 2018 ES remain applicable. No additional mitigation or monitoring measures are required.

8.4.4 This Section has been approved Dr Jane Sladen and Bernadine Maguire, competent experts with the relevant and appropriate experience in this topic. Appendix 8.1 summarises their qualifications.

9 Material Assets and Waste

9.1 Legislative and Policy Framework

9.1.1 No changes to the NPSNN have been made since the publication of the Material Assets and Waste chapter [APP-050] of the 2018 ES.

9.1.2 The National Planning Policy Framework (NPPF) closely aligns with the aims set out in the NPSNN. The July 2018 version (MHCLG, 2018) of the NPPF was current at the time of the work undertaken for the 2018 ES. Since then, it has been revised twice, in June 2019 and July 2021 (MHCLG, 2021). Whilst the NPPF has been updated, there are no changes relevant to this material assets and waste.

9.1.3 The Waste Management Plan for England (Defra, 2021) was updated in 2021 and draws on the document "Our Waste, Our Resources: A Strategy for England" (HM Government, 2018).

9.1.4 The Waste Management Plan for England provides an analysis of current waste management practices in England and evaluates the implementation of the objectives and provisions of the Waste (England and Wales) Regulations 2011. It does not impose any additional legal or policy requirements that are directly relevant to the Scheme nor would it change the conclusions in the assessment of the 2018 ES Material Assets and Waste chapter [APP-050].

9.1.5 The Wiltshire and Swindon Waste Core Strategy 2006-2026 (Wiltshire Council, 2009) and Wiltshire and Swindon Waste Site Allocations Development Plan (Wiltshire Council, 2013) are still the most recent versions of these documents available which were taken into account in the 2018 ES and have not been updated.

9.2 Assessment Methodology

Scoping

9.2.1 The policy, methodology and guidance changes and the environmental information described in this Section would not alter the Scoping Opinion because the types and quantities of waste generated by the Project and the method for assessing their impacts have not changed.

Design Manual for Roads and Bridges

9.2.2 The 2018 assessment was undertaken in accordance with the guidance provided in the IAN 153/11 "Guidance on the Environmental Assessment of Material Resources". IAN 153/11 has since been superseded by LA 110 "Material assets and waste".

9.2.3 **However, the assessment criteria presented in LA 110[11] are identical to those used in the 2018 ES Chapter, and hence there is no change in how the significance of impacts is assessed**.

9.3 Environmental Information

Baseline

Landfill Capacity

9.3.1 Updated data has been published by the Environment Agency on landfill void capacity in the study area. The latest available data is shown below in Table 9.1, Table 9.2 and Table 9.3.

Table 9.1 Wiltshire landfill inputs and capacity 2020

Landfill type	Input (tonnes)	Capacity (m^3)
Hazardous merchant	30,000	285,000
Hazardous restricted	-	-
Non-hazardous with SNRHW cell*	15,000	882,000
Non-hazardous	388,000	3,700,000
Non-hazardous Restricted	-	-
Inert	157,000	31,000
Total	**590,000**	**4,898,000**

9.3.2 The total capacity in Wiltshire has declined from 6,033,000m^3 in 2016 (as stated in the 2018 ES) to 4,898,000m^3 in 2020.

Table 9.2 South West landfill inputs and capacity 2020

Landfill type	Input (tonnes)	Capacity (m^3)
Hazardous merchant	44,000	1,310,000
Hazardous restricted	-	-
Non-hazardous with SNRHW cell*	416,000	3,481,000
Non-hazardous	1,092,000	7,578,000
Non-hazardous Restricted	-	-
Inert	1,339,000	17,251,000
Total	**2,891,000**	**29,620,000**

[11] LA 110 defines significance categories and criteria directly, without separately defining sensitivities and magnitudes of impacts. The 2018 ES Chapter follows the same approach as LA 110.

9.3.3 The total capacity in the South West has increased from 26,898,000m^3 in 2016 (as stated in the 2018 ES) to 29,620,000m^3 in 2020.

Table 9.3 South East landfill inputs and capacity 2020

Landfill type	Input (tonnes)	Capacity (m^3)
Hazardous merchant	13,000	146,000
Hazardous restricted	19,000	117,000
Non-hazardous with SNRHW cell*	2,704,000	22,197,000
Non-hazardous	1,729,000	13,556,000
Non-hazardous Restricted	-	-
Inert	3,571,000	27,174,000
Total	**8,036,000**	**63,190,000**

9.3.4 The total capacity in the South East has declined from 76,979,000m^3 in 2016 (as stated in the 2018 ES) to 63,190,000m^3 in 2020.

9.3.5 The 2018 ES Chapter [APP-050] assessed the impacts of disposal of 30,000m^3 of waste from the Scheme against the then-existing landfill capacity in the south of England (of all types) of 100 million m^3, concluding that (based on a worst-case assumption that all waste generated from the Scheme would be disposed of to landfill) this would utilise approximately 0.03% of the regional landfill capacity. Because the Scheme would result in less than 1% reduction or alteration in the regional capacity of waste infrastructure, the effects were assessed as being slight and not significant.

9.3.6 The updated baseline landfill capacity in the South of England has changed from 100 million m^3 to 94 million m^3, and the proportion of capacity utilised by the Scheme has changed from 0.030% to 0.032%: **a negligible increase that does not change the assessment of the effects, which remain slight and not significant**.

Committed developments

9.3.7 In accordance with assessment methodology of the Material Assets and Waste chapter [APP-050] of the 2018 ES (and in light of this review), the developments identified in Appendix 11.2 as being part of the baseline are not considered relevant to the material assets and waste assessment baseline, and so have not been considered in this section.

Future Baseline

9.3.8 The delay to the Scheme resulting in the change of the construction phase and operational phase start dates (to 2023 and 2029 respectively) does not alter the conclusions relating to the future baseline in the 2018 ES.

9.3.9 In accordance with assessment methodology of the Material Assets and Waste chapter [APP-050] of the 2018 ES (and in light of this review), the developments identified in Appendix 11.2 as being part of the future baseline are not considered relevant to the material assets and waste assessment future baseline, and so have not been considered in this section.

Appendix 12.1: Tunnels Arising Management Strategy

9.3.10 A review of waste planning applications to Wiltshire County Council has been carried out and no new off-site locations for potential disposal of tunnel arisings have been identified. There have been proposals made for the development of Quidhampton Quarry for housing identified in Appendix 12.1 [APP-285] of the 2018 ES. However, these proposals have not been confirmed and so Quidhampton Quarry would still be considered in the tunnels arising management strategy. The comparative assessment of on-site management versus off-site disposal presented in Section 3 of Appendix 12.1 therefore remains valid.

9.3.11 There is no change to the potential on-site options which are evaluated in Section 4 of Appendix 12.1 [APP-285] and hence the conclusions of this Section remain valid.

9.4 Conclusion

9.4.1 This section has identified and considered changes to the legislative and policy framework, assessment methodology, and environmental information relevant to material assets and waster and found that **the conclusions of 2018 ES and the rest of the environmental information supporting it remain valid and that therefore in combination with this report, the environmental information is adequate and no further or updated environmental information is required to be submitted for consideration by the Secretary of State in relation to this topic, in order for a decision to be made on the Scheme.**

9.4.2 In accordance with assessment methodology of the Material Assets and Waste chapter [APP-050] of the 2018 ES (and in light of this review), the developments identified in Appendix 11.2 as being part of the cumulative scenario are not considered relevant to the material assets and waste assessment, and so have not been considered in this section.

9.4.3 The mitigation and monitoring measures reported in the 2018 ES remain applicable. No additional mitigation or monitoring measures are required.

9.4.4 This section has been approved by Mike Bains, the author of the Material Assets and Waste chapter of the 2018 ES and the relevant competent expert for this topic, as set out in Appendix 1.1 of the 2018 ES [APP-185].

10 People and Communities

10.1 Legislative and Policy Framework

10.1.1 Changes to legislation of relevance to People and Communities since the October 2018 ES include the updated National Planning Policy Framework (NPPF) (MHCLG, 2021). Whilst the NPPF was revised in February 2019 and July 2021, the requirements related to this assessment have not substantively changed. The paragraph number in the NPPF (MHCLG, 2021) that refers to best and most versatile agricultural land is now paragraph 174 (and NPPF 2019, although it was formerly paragraph 170 in NPPF 2018 and paragraph 112 in NPPF 2012). The 2014 National Policy Statement for National Networks (NPSNN) (DfT, 2014) remains the primary source of policy guidance relating to legislation. All other existing legislation relevant to this section remains unchanged.

10.1.2 The policy context changes of relevance to People and Communities since the October 2018 ES are summarised below. The 2014 Planning Practice Guidance (MHCLG, 2014), which provides further policy guidance that is relevant to the 2018 ES, was revised in 2019 (MHCLG, 2019). Guidance of relevance, including community cohesion, open spaces, sports and recreation facilities, and public rights of way remain unchanged. There is therefore no change to 2018 ES chapter conclusions.

10.1.3 Since the October 2018 ES, Public Health England (PHE) has implemented a new Health Strategy for 2020-25 (Public Health England, 2019). Its purpose is to protect and improve the nation's health and reduce health inequalities. PHE aims to keep people safe, prevent poor health, narrow the health gap and support a strong economy. The strategy lays out PHE's priorities over the next 5 years.

10.1.4 Whilst the policy changes summarised above provide an updated context in respect of People and Communities, **there are no changes to the 2018 ES chapter conclusions**.

10.2 Assessment Methodology

Scoping

10.2.1 The policy, methodology and guidance changes and the environmental information described in this Section remain in accordance with the Scoping Opinion (other than where it relates to agricultural soils, see paragraph 10.2.6, motorised travellers, see paragraph 10.2.20, and amenity, see paragraph 10.2.22).

Design Manual for Roads and Bridges

10.2.2 The assessment methodology for People and Communities has been updated following the publication of revised guidance in DMRB:

a) LA 109 - Geology and Soils, issued in October 2019 (Highways England, 2019);

b) LA 112 - Population and human health, issued in January 2020 (Highways England, 2020).

10.2.3 Given the guidance available at the time of the 2018 ES submission and DCO examination, a People and Communities chapter [APP-051] was produced along with Appendix 13.2 - Human Health [APP-287] covering health and wellbeing impacts.

10.2.4 Whilst the updated guidance now effectively groups People and Communities and Health together in the same chapter as Population and Health, this does not affect the validity of the assessment conclusions in the 2018 ES. The baseline, mitigation and assessment of effects on agricultural land and soil would now be reported in Chapter 10: Geology and Soils [APP-048], however to be consistent with the 2018 ES this is discussed in this Section. The revised DMRB guidance does not include an assessment of effects on motorised travellers in respect of driver views and driver stress or amenity.

10.2.5 The revised guidance provides details for assessment of sensitivity and impact magnitude for the various receptors considered in the People and Communities assessment. The matrix of significance of effect – the combination of the magnitude of the impact and the sensitivity of the receptor – has not changed.

Agricultural Land and Soils

10.2.6 The revised DMRB has altered the criteria used in the assessment. The sensitivity of agricultural soils is set out in DMRB LA 109 Geology and Soils and is assessed according to specific use in a designated site (i.e. SSSI, SAC, etc) or its grade within the Agricultural Land Classification (ALC). The relevant parts of *DMRB LA 109 Table 3.11* are set out in Table 10.1and Table 10.2.

10.2.7 The sensitivity of agricultural land in the 2018 ES was also related to its grade within the ALC. The value categories differ between the two sets of criteria, and the value ascribed to each grade of land has changed, as shown in Table 10.1.

10.2.8 The introduction of the criteria in LA 109 has increased the sensitivity of agricultural land from predominantly medium to high and very high. It was assessed in the 2018 ES that no category of agricultural land would be very high, and the criteria in LA 109 now assess 42% of agricultural land in England as high or very high sensitivity.

Table 10.1 Sensitivity criteria for agricultural land used in 2018 ES and in LA109

Receptor Value (sensitivity)	2018 ES	LA 109
Very High	Not used	Grades 1 and 2
High	Grade 1	Subgrade 3a

Medium	Grades 2 and 3a	Subgrade 3b
Low	Grades 3b and 4	Grades 4 and 5
Negligible	Grade 5	Previously developed land formerly in 'hard uses' with little potential to return to agriculture.

10.2.9 The sensitivity of soils in the 2018 ES was related to the characteristics of the soil resource itself, and particularly its textural characteristics and its susceptibility to the effects of handling during construction, rather than to the habitat it supports, as is now the case with the criteria in LA 109 as shown in Table 10.2.

Table 10.2 Sensitivity criteria for soils used in 2018 ES and in LA109

Receptor Value (sensitivity)	2018 ES	LA 109
Very High	Not used	Soils directly supporting an EU designated site (e.g. Special Area of Conservation, Special Protection Area, Ramsar)
High	Soils with high clay and silt fractions (clays, silty clays and sandy clays) and organic and peaty soils	Soils directly supporting a UK designated site (e.g. Site of Specific Scientific Interest)
Medium	Heavy loams (heavy silty clay loams and heavy clay loams)	Soils supporting non-statutory designated sites (e.g. Local Nature Reserves, Sites of Nature Conservation Importance)
Low	Silty loams, medium silty clay loams, medium clay loams and sandy clay loams	Soils supporting non-designated notable or priority habitats
Negligible	Soils with a high sand fraction (sands, loamy sands, sandy loams and sandy silt loams)	Previously developed land formerly in 'hard uses' with little potential to return to agriculture.

10.2.10 The magnitude of impact on agricultural land for the 2018 ES and within DMRB LA 109 Geology and Soils, Table 3.12, as supplemented by LA109 Table E/2.1 are reproduced in Table 10.3. The key difference is the scale of impact, with LA 109 assessing all agricultural land loss or sealing of agricultural land over 1 hectare as a moderate or major impact, with paragraph E/2.1.1 indicating that the physical removal or permanent sealing of less than 1 hectare of agricultural land should be reported as not discernible.

Table 10.3 Magnitude of impact for agricultural land in 2018 ES and LA 109

Magnitude of impact (change)	2018 ES	LA 109
Major	The development would lead to the loss of over 50ha of agricultural land	Physical removal or permanent sealing of more than 20ha of agricultural land
Moderate	The development would lead to the loss of between 20ha and 50ha of agricultural land	Physical removal or permanent sealing of 1ha - 20ha of agricultural land
Minor	The development would lead to the loss of between 5ha and 20ha of agricultural land	Not used
Negligible	The development would lead to the loss of less than 5ha of agricultural land	Not used
No change	Not used	Not used

10.2.11 The magnitude of impact on soils for the 2018 ES and within DMRB LA 109 Geology and Soils, Table 3.12 are reproduced in Table 10.4. Both sets of criteria concentrate on the loss or reduction in soil functions but LA 109 also differentiates between permanent and temporary losses or reduction in function.

Table 10.4 Magnitude of impact for soils in 2018 ES and LA 109

Magnitude of impact (change)	2018 ES	LA 109
Major	The soil displaced from the Scheme is unable to fulfil one or more of the primary soil functions	Physical removal or permanent sealing of soil resource
Moderate	The soil displaced from the Scheme mostly fulfils the primary soil functions off-site or has a reduced capacity to fulfil the primary functions on site	Permanent loss/reduction of one or more soil function(s) and restriction to current or approved future use (e.g. through degradation, compaction, erosion of soil resource)
Minor	The soil displaced from the Scheme mostly fulfils the primary soil functions on-site	Temporary loss/reduction of one or more soil function(s) and restriction to current or approved future use (e.g. through degradation, compaction, erosion of soil resource)
Negligible	The soil retains its pre-existing functions on-site	No discernible loss/reduction of soil function(s) that restrict current or approved future use

No change	Not used	No loss/reduction of soil function(s) that restrict current or approved future use

10.2.12 The change in the criteria used to define the sensitivity of agricultural land and the magnitude of impact means that **the temporary effect of the Scheme on best and most versatile (BMV) agricultural land would increase to a very large adverse effect (from a large adverse effect reported in the 2018 ES) and the permanent effect on BMV land would increase to a large or very large adverse effect (from the moderate adverse effect reported in the 2018 ES). Whilst the level of effect reported would be different, there would be no new significant effects introduced as a result of the use of LA 109 criteria.**

10.2.13 Under the LA 109 criteria for the sensitivity of soils, no soils would be of very high or high sensitivity. Soils within the Luxenborough Banks County Wildlife Site (CWS), Countess Cutting CWS, Countess Farm Swamp CWS and Parsonage Down CWS would be of medium sensitivity. These soils would be subject to temporary land-take, except for Countess Cutting CWS which would be permanent and Parsonage Down CWS which would be partly covered by tunnel arisings and revegetated (other than in the north-east where soils would be retained due to archaeological interest).

10.2.14 LA 109 defines the physical removal or permanent sealing of the soil resource as a major magnitude of effect, such that the effects on the Countess Cutting CWS and Parsonage Down CWS soils would be moderate or large adverse (from Table 3.8.1 of LA 104).The 2018 ES assessed the effect on soil resources as slight adverse, which is not significant. **The use of the LA 109 criteria would therefore introduce new significant effects on CWS soils.**

Agricultural Holdings

10.2.15 The revised DMRB has altered the criteria used in the assessment.

10.2.16 The sensitivity of agricultural land holdings in the 2018 ES and DMRB LA 112 Population and Human Health Table 3.11 are reproduced at Table 10.5.

10.2.17 The two sets of criteria follow the same broad principles in relating the sensitivity of land and farm holdings to the spatial relationship between land and key farm infrastructure, and the frequency of need to access the land. The key difference between the criteria is that farm holdings assessed as high sensitivity would now be split into high and very high sensitivity with LA 112.

Table 10.5 Sensitivity criteria for agricultural land holdings used in 2018 ES and LA 112

Receptor value (sensitivity)	2018 ES	LA 112
Very High	Not used	Areas of land in which the enterprise is wholly reliant on the spatial relationship of land to key agricultural infrastructure; and Access between land and key agricultural infrastructure is required on a frequent basis (daily).
High	Farm types in which the operation of the enterprise is dependent on the spatial relationship of land to key infrastructure, and where there is a requirement for frequent and regular access between the two, or dependent on the existence of the infrastructure itself, for example: dairying, in which milking cows travel between fields and the parlour at least twice a day; irrigated arable cropping and field-scale horticulture, which are dependent on irrigation water supplies; and intensive livestock or horticultural production which is undertaken primarily within buildings, often in controlled environments.	Areas of land in which the enterprise is dependent on the spatial relationship of land to key agricultural infrastructure; and Access between land and key agricultural infrastructure is required on a frequent basis (weekly).
Medium	Farm types in which there is a degree of flexibility in the normal course of operations, e.g. combinable arable farms; and grazing livestock farms (other than dairying).	Areas of land in which the enterprise is partially dependant on the spatial relationship of land to key agricultural infrastructure; and Access between land and key agricultural infrastructure is required on a reasonably frequent basis (monthly).
Low	Off-lying areas of land that are not contiguous with the main farm holding.	Areas of land which the enterprise is not dependent on the spatial relationship of land to key agricultural infrastructure; and Access between land and key agricultural infrastructure is required on an infrequent basis (monthly or less frequent).

Receptor value (sensitivity)	2018 ES	LA 112
Negligible	Off-lying areas of agricultural land used on a non-commercial basis.	Areas of land which are infrequently used on a non-commercial basis.

10.2.18 The magnitude of impact on agricultural land holdings in the 2018 ES and DMRB LA 112 Population and Human Health, Table 3.12, are reproduced in Table 10.6. Both sets of criteria are similar and concentrate on the loss of the resource (land or farm infrastructure) and the impacts of severance. **Other than points of detail, the two sets of criteria are broadly comparable in defining the magnitude of impact such that the assessment methodology remains applicable and there are no changes to likely significant effects on agricultural land holdings**.

Table 10.6 Magnitude of impact for agricultural land holdings in 2018 ES and LA 112

Magnitude of impact (change)	2018 ES	LA 112
Major	Loss of >20% of all land farmed No access available to severed land Direct loss of farm dwelling, building or structure Disruption discontinues land use or enterprise	Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features or elements. e.g. direct acquisition and demolition of buildings and direct development of land to accommodate highway assets; and/or Introduction (adverse) or removal (beneficial) of complete severance with no/full accessibility provision.
Moderate	Loss of >10% - 20% of all land farmed Access available to severed land via the public highway Loss of or damage to infrastructure affecting land use Disruption necessitates change to scale or nature of land use or enterprise	Partial loss of/damage to key characteristics, features or elements, e.g. partial removal or substantial amendment to access or acquisition of land compromising viability of agricultural holdings; and/or Introduction (adverse) or removal (beneficial) of severe severance with limited/moderate accessibility provision.
Minor	Loss of > 5% - 10% of all land farmed Access available to severed land via private way Infrastructure loss/damage does not affect land use Disruption does not affect land use or enterprise	A discernible change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements, e.g., amendment to access or acquisition of land resulting in changes to operating conditions that do not compromise

Magnitude of impact (change)	2018 ES	LA 112
		overall viability of agricultural holdings; and/or Introduction (adverse) or removal (beneficial) of severance with adequate accessibility provision.
Negligible	Loss of 5% or less of all land farmed No new severance No impact on farm infrastructure No disruption on land use or enterprise	Very minor loss or detrimental alteration to one or more characteristics, features or elements. e.g. acquisition of non-operational land or buildings not directly affecting the viability of agricultural holdings; and/or Very minor introduction (adverse) or removal (beneficial) of severance with ample accessibility provision.
No change	Not used	No loss or alteration of characteristics, features, elements or accessibility; no observable impact in either direction.

Non-Motorised Users

10.2.19 The revised DMRB guidance LA 112 Population and Health describes non-motorised users (NMUs) as walkers, cyclists and horse-riders and sets out significance, sensitivity and magnitude criteria for the assessment of effects on these receptors. **The assessment criteria remains similar or unchanged. Therefore, the conclusion of 2018 ES remain valid in respect of likely significant effects**.

Motorised Travellers

10.2.20 The revised DMRB guidance does not set out guidance for the assessment of effects on motorised travellers and as such **an assessment of effects is no longer required.**

Private Assets

10.2.21 The revised DMRB guidance sets out significance, sensitivity and magnitude criteria for the assessment of effects on private assets. **The assessment criteria remains similar or unchanged. Therefore, the conclusion of 2018 ES remain valid in respect of likely significant effects**.

Amenity

10.2.22 The revised DMRB guidance does not set out guidance for the assessment of effects on amenity and as such **an assessment of effects is no longer required.**

Development Land

10.2.23 The revised DMRB guidance sets out significance, sensitivity and magnitude criteria for the assessment of effects on development land. **The assessment criteria remains similar or unchanged. Therefore, the conclusion of 2018 ES remain valid in respect of likely significant effects**.

Human Health

10.2.24 The revised DMRB guidance sets out criteria for identifying sensitivity of communities in respect of human health and outlines an outcomes-based assessment approach. **The assessment criteria remains similar or unchanged. Therefore, the conclusion of 2018 ES remain valid in respect of likely significant effects**.

10.3 Environmental Information

Study Area

10.3.1 **The study area for People and Communities remains unchanged on the basis that the Scheme proposed in the 2018 ES has not changed and the guidance does not require the area to be amended**.

Baseline

10.3.2 For completeness, all baseline information gathered for the 2018 ES assessment has been reviewed, with updates set out below as relevant. **These are summarised below and do not change the 2018 ES chapter conclusions in respect of likely significant effects, except in regard to motorised travellers which are no longer assessed. The updates do not result in changes to sensitivity. No further environmental information is required to be submitted to the Secretary of State.**

Population

10.3.3 The following population estimates have been updated, taking into account the most recent ONS mid-year population estimates:

10.3.4 The county of Wiltshire now has as estimated population of 504,070, an increase of 15,670 from the 2018 ES (Office for National Statistics, 2020).

10.3.5 In 2020, the total population of the study area defined for the assessment of human health was 37,480, an increase of 3,236 from the 2018 ES (Office for National Statistics, 2020).

10.3.6 The population of Amesbury, the main location for services and community facilities in the study area, has increased by 1,905 since the 2018 ES to 12,605 inhabitants (Office for National Statistics, 2020).

Agricultural Land and Soils

10.3.7 The available baseline information for soils and agricultural land quality has not changed.

Agricultural Holdings

10.3.8 There are no known substantive changes to the farm holding baseline information set out in the 2018 ES based on analysis of field boundaries and land ownership/tenancies undertaken as part of this review.

Non-Motorised Users

10.3.9 The network of Public Rights of Way and cycling infrastructure available for use by NMUs continue to provide connections within and across the study area. The routes remain as previously reported and continue to serve a wide range of users, including equestrians, hikers and cyclists, both local people and tourists.

Motorised Travellers

10.3.10 As the updated DMRB guidance informing the assessment methodology no longer requires that effects on motorised travellers are assessed, baseline conditions relating to driver stress and driver views are no longer relevant for this chapter. The assessment conclusions of the 2018 ES in respect of effects on motorised travellers can be disregarded, meaning that a significant adverse effect on driver views during operation and a significant beneficial effect on reduced driver stress on the A303 would no longer be reported.

Private Assets

10.3.11 The residential properties, business premises and community facilities have primarily remained the same since the 2018 ES. The only significant change is regarding the name of the public house (The Solstice Rest), which has been renamed The Bell Inn. However, this does not result in changes to the 2018 ES chapter conclusions.

Development Land

10.3.12 Since the 2018 ES, the following developments associated with the relevant planning applications are either in progress or have been completed:

a) 515 new homes and associated community infrastructure, including a primary school with playing fields at Archers Gate Amesbury (ref: 15/02530/OUT);

b) 460 new homes and associated community infrastructure, south of Archers Gate, Amesbury (ref: S/2012/0497);

c) New dwellings (143 units) and associated community infrastructure, south of Archers Gate, Amesbury (ref: 13/06181/OUT);

d) Expansion of Stonehenge School at Antrobus Road, Amesbury (ref: 17/05583/DP3);

e) Mixed-use development at Bulford Garrison (Army 2020 rebasing) including living accommodation and associated community infrastructure (refs: 15/05950/FUL, 15/04006/FUL, 17/02739/REM);

f) Mixed-use development at and adjacent to Larkhill Garrison (Army 2020 rebasing) including living accommodation and associated community infrastructure (refs: 15/06682/FUL, 16/00032/FUL, 18/00397/FUL, 17/06370/FUL, 17/03959/FUL, 17/06373/FUL); and

g) New Cricket ground including 2 storey club house at Nett Road, Shrewton (ref: 14/06488/FUL).

10.3.13 Additional planning applications which have been added since the 2018 ES which are provided at Appendix 11.2. The location of these developments is such that they are not considered to be likely to experience any direct or indirect effects as a result of the Scheme. Therefore there are no changes to the 2018 ES chapter conclusions in respect of development land.

Human Health

10.3.14 The data sources for the indicators used to inform the ward-level profile of human health in the study area have mostly not been updated and these therefore remain unchanged. Ward-level mid-year population estimates have been updated, however this does not result in a change to the 2018 ES chapter conclusions.

10.3.15 A review of the Air Quality, Noise and Vibration and Landscape and Visual Sections, along with the Response to Bullet Point Three of the Statement of Matters (Redetermination-1.3) focussing on climate, has been undertaken and no new combined significant effects on human health have been identified.

Future Baseline

10.3.16 The delay to the Scheme resulting in the change of the construction phase and operational phase start dates (to 2023 and 2029 respectively) does not alter the conclusions relating to the future baseline in the 2018 ES, and no further environmental information is required to be submitted for consideration by the Secretary of State, in order for the Application to be re-determined.

10.3.17 The developments identified in Appendix 11.2 as being part of the future baseline do not alter the conclusions of the 2018 ES as the location of these developments is such that they would not experience any direct or indirect likely significant effects.

10.4 Conclusion

10.4.1 This section has identified and considered changes to legislative and policy framework, assessment methodology, and environmental baseline relevant to people and communities. **This review found the conclusions of the 2018 ES and the rest of the environmental information supporting it remain valid with regard to the legislative and policy framework and baseline environmental information, with the exception of the matters listed below.**

10.4.2 The temporary and permanent effects on BMV agricultural land effects would worsen because of changes in sensitivity and magnitude criteria introduced by LA 109, although there would be **no new significant effects.** However, the change in the sensitivity and magnitude criteria for soil resources would introduce **new significant effects** on CWS soils. Therefore, this section has found that **further environmental information is required to be submitted for consideration by the Secretary of State in relation to this topic, in order for a decision to be made on the Scheme.**

10.4.3 The permanent moderate adverse significant effect on driver views during operation would no longer apply, and neither would the permanent beneficial effect on driver stress on the A303, given the updated assessment methodology no longer consider effects on motorised travellers. As such two significant effects are removed.

10.4.4 **Overall, the 2018 ES, the environmental information supporting it, as supplemented by this review, is adequate to inform the Secretary of State's redetermination of the application.**

10.4.5 The cumulative schemes set out within Appendix 11.2 have been reviewed. The assessment of cumulative developments contained within Appendix 115.2 does not alter the conclusions of the 2018 ES as the location of these cumulative schemes is such that they would not experience any direct or indirect likely significant effects.

10.4.6 The mitigation and monitoring measures reported in the 2018 ES remain applicable. No additional mitigation or monitoring measures are required.

10.4.7 This Section has been approved by Dave Widger, the author of the People and Communities chapter of the 2018 ES and the relevant competent expert for this topic, as set out in Appendix 1.1 of the 2018 ES [APP-185].

11 Assessment of Cumulative Effects

11.1 Legislative and Policy Framework

11.1.1 The assessment of cumulative effects carried out for the 2018 ES was undertaken in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 ('the EIA Regulations'). The EIA Regulations state that EIA should include consideration of both the interaction between the different aspects of the environment likely to be affected by the development (Regulation 5 (2)(e)), and the likely significant effects of the development resulting from the cumulation of effects with other existing and/or approved projects (Schedule 4, Paragraph 5(e)).

11.1.2 The EIA Regulations have not been superseded since the 2018 ES. There have also been no substantive changes made the to the EIA Regulations pertaining to the assessment of cumulative effects.

11.2 Assessment Methodology

Guidance

11.2.1 The 2018 ES adopted the methodology set out in the Planning Inspectorate's Advice Note 17 (Planning Inspectorate, 2015), alongside consideration of guidance set out within the Highways Agency's DMRB Volume 11, Section 2 Part 5: Assessment and Management of Environmental Effects (HA205/08) (Highways Agency, 2008).

11.2.2 The above guidance documents have both been updated since the 2018 ES. The Planning Inspectorate's Advice Note 17 (Planning Inspectorate, 2019) update took into account changes occurring as a result of the introduction of the EIA Regulations, and changes in industry good practice and other relevant guidance. There have been no substantive changes in the guidance pertaining to cumulative effects.

11.2.3 HA205/08 has been replaced by Highways England LA 104 Environmental assessment and monitoring (Highways England, 2020). According to the release notes, the guidance was re-written to make it compliant with the new Highways England drafting rules. There have been no substantive changes in the guidance pertaining to cumulative effects.

11.2.4 Notwithstanding the above, LA 104 (Highways England, 2019) sets out at E/1.6 that environmental assessments for Nationally Significant Infrastructure Projects, such as the Scheme, shall undertake cumulative assessments in line with the Planning Inspectorate guidance, i.e. Advice Note 17 (Planning Inspectorate, 2019). In accordance with this, Section 11.3 below updates the cumulative assessment carried out for the 2018 ES in accordance with the updated Advice Note 17, and with regard to LA 104.

11.2.5 Advice Note 17 identifies the possible need to update the list of cumulative developments as a project progresses in order to ensure identification of

cumulative developments with potential to give rise to significant effects. This review addresses this possible need.

Methodology

11.2.6 This review considers the two forms of cumulative impact set out below. This is consistent with the 2018 ES.

a) Combinations of impacts which have been identified as part of the review reported within Sections 2 to 10 of the report and those identified within the 2018 ES, which are considered likely to result in a new or different likely significant effect, or an effect of greater significance, than any one of the impacts on their own.

b) Impacts which, in combination with impacts associated with other proposed development identified as part of this review, are likely to result in an effect of greater significance, or a new or different likely significant effect, than the Scheme in isolation.

11.2.7 The Planning Inspectorate's Advice Note 17 (Planning Inspectorate, 2019) on the assessment of cumulative effects identifies a four stage approach set out below. This is the same as the approach identified in the Planning Inspectorate's previous iteration of Advice Note 17 (Planning Inspectorate, 2015).

a) **Stage 1** – establish the project's zone of influence (ZoI) and identify a long list of 'other development' (Appendix 11.1);

b) **Stage 2** – identify a shortlist of 'other development' for the cumulative impact assessment;

c) **Stage 3** – information gathering; and

d) **Stage 4** – assessment.

Significance Criteria

11.2.8 Table 11.1 sets out the significance criteria used in Chapter 15 [APP-053] of the 2018 ES, which was also used to inform this review to provide a consistent approach:

Table 11.1 Combined and cumulative effects significance

Significance category	Typical descriptors of effect
Very Large (Adverse or Beneficial)	Where the combined impacts of the Scheme or cumulative impacts of the Scheme in association with other development upon an individual or collection of environmental receptors would be very highly significant (positive or negative). Effects would be permanent for receptors of very high value.

Significance category	Typical descriptors of effect
Large (Adverse or Beneficial)	Where the combined impacts of the Scheme or cumulative impacts of the Scheme in association with other development upon an individual or collection of environmental receptors would be highly significant (positive or negative). Effects would be: • Permanent for a receptor or receptors of high value; • Localised for a receptor or receptors of very high value; or • Temporary for a receptor or receptors of very high value.
Moderate (Adverse or Beneficial)	Where the combined impacts of the Scheme or cumulative impacts of the Scheme in association with other development upon an individual or collection of environmental receptors would be significant (positive or negative). Effects would be: • Permanent for a receptor or receptors of medium value; • Localised for a receptor or receptors of high value; or • Temporary for a receptor or receptors of high value.
Slight (Adverse or Beneficial)	Where the combined impacts of the Scheme or cumulative impacts of the Scheme in association with other development upon an individual or collection of environmental receptors would be noteworthy but not significant (positive or negative). Effects would be: • Permanent for receptors of low value; • Localised for a receptor or receptors of medium value; or • Temporary for a receptor or receptors of medium value.
Neutral	Where the combined impacts of the Scheme or cumulative impacts of the Scheme in association with other development upon an individual or collection of environmental receptors would be negligible and not significant (positive or negative).

Study Area

11.2.9 Table 11.2 has been reproduced from the 2018 ES and explains the rationale for the ZoI extent for potential cumulative impacts with other development used by each environmental topic of the 2018 ES. These individual ZoIs were also used in this report and have been combined to define an overall ZoI representing the search area within which other developments have been identified, as shown on **Figure 11.1** (excluding the ZoI for Materials due to the study area for that topic encompassing the entire region, and the ZoI for climate due to the national / global scale of climate impacts). The ZoI used in this report remains unchanged from that used in the 2018 ES.

Table 11.2 ZoI extents for assessment of potential cumulative impacts

Topic	ZoI
Air Quality	**Construction:** 200m from construction activities for construction dust and emissions. **Operation:** The 'affected road network' within the traffic model defines the ZoI. As the operational phase traffic data includes traffic associated with other developments, the air quality

Topic	ZoI
	impact assessment reported within Chapter 5 of the 2018 ES and reviewed in Section 2 of the document is inherently cumulative.
Cultural Heritage	**Construction and Operation:** 2km from the Scheme boundary based on the sensitivity of features within the surrounding WHS and other designated assets.
Landscape and Visual	**Construction and Operation:** 2km from the centreline of the Scheme. Beyond this, any other development in combination with the Scheme would be unlikely to give rise to any significant effects on landscape or visual receptors due to the distance reducing the perceived scale and massing of the proposed built elements and associated operational elements (i.e. the traffic moving along the road); and the screening from intervening landform and vegetation.[12]
Biodiversity	**Construction and Operation:** 2km from the Scheme boundary based on proximity to statutory designated sites. Within this, the ZoI for assessment purposes varies according to specific biodiversity receptors, is informed by SSSI risk zones and for species by Natural England and best practice guidance from the Chartered Institute of Ecology and Environmental Management and other sources.
Noise and Vibration	**Construction:** The ZoI is defined as 600m from the Scheme boundary, as this is the extent over which construction noise impacts are considered within the noise and vibration assessment. **Operation:** As for air quality, this is defined by the traffic model which includes consideration of other development; therefore the assessment reported within Chapter 9 of the 2018 ES and reviewed in Section 0 of the document is inherently cumulative.
Geology and Soils	**Construction** and **Operation:** The ZoI in respect of land contamination includes the area inside the Scheme boundary and an additional radial zone of 250m.
Road Drainage and the Water Environment	**Construction** and **Operation**: The ZoI is defined by the extent of the surface water body catchments of the River Till and River Avon (upstream and downstream of the Nine Mile River), including the groundwater body and groundwater source protection zones.
Materials	**Construction:** The ZoI comprises the Scheme footprint and the region within which waste management facilities are located and from where construction materials may be sourced.[13] **Operation:** Operational phase material and waste management issues are scoped out of the assessment due to the negligible impact of the Scheme once operational.

[12] The methodology adopted for the 2018 ES LVIA requires that any impacts associated with the presence of new infrastructure are taken into account during the operational stage assessment, and therefore differs from the approach used for other topic assessments. The cumulative effects assessment therefore considers a 'worst case' scenario in respect of landscape and visual impacts.
[13] The ZoI for materials includes the South East and South West of England regions for waste and the whole of the UK for construction materials.

Topic	ZoI
People and Communities	**Construction** and **Operation**: The ZoI is defined as 2km from the Scheme, as this represents the anticipated catchment area for community facilities likely to be affected by severance impacts.[14]

11.2.10 As for the 2018 ES, a review of current and previous planning applications, DCO (under construction development, projects on The Inspectorate's programme of projects where a scoping report has or has not been submitted) and Transport and Works Act Order (TWAO) applications, hybrid bills and development plan documents and frameworks, was undertaken to identify relevant developments within the combined ZoI (and just outside the extent of the ZoI where appropriate).

11.2.11 The Wiltshire Housing Site Allocations Plan was approved by Wiltshire Council on 25 February 2020. All allocations identified from this plan that are also within the ZoI were included in Wiltshire Council's previous housing allocations and have therefore been previously assessed in the 2018 ES. All other local and neighbourhood plans have not been updated since 2018.

11.2.12 The final check for proposed developments for the 2018 ES was undertaken in August 2018. Therefore, a review of proposed developments which have come forward since August 2018 to September 2021 has been undertaken in the search area defined by the ZoI in Table 11.2. The criteria used in the 2018 ES to screen out development of insufficient scale, or of a type which would not result in cumulative impacts with the Scheme, is set out below and was also used in this review to generate a 'long list' of developments provided at Appendix 11.1.

a) Construction of small-scale agricultural buildings (e.g. storage of livestock, machinery or feed).

b) House extensions or cosmetic changes to buildings.

c) Work to trees.

d) Micro-generation wind turbines.

e) Roof mounted solar PV panels (or ground mounted less than 50kW output).

f) Renewal of planning permission for retention of existing operational use.

g) Variation to planning permissions, including reserved matters applications (where the original application would not have been considered within the assessment).

[14] The in-combination effects in respect of human health are considered separately in Section 13.

h) Small scale residential uses (specifically, less than two dwellings) or changes of buildings' use (unless it could itself result in a cumulative effect, such as a conversion of several barns into a holiday village).

Approach to the consideration of combined impacts

11.2.13 An appraisal of the reviews reported in Sections 2 to 10, and those identified within the 2018 ES, was undertaken to identify new or different environmental effects, or those which may result in effects of greater significance than those arising from any one impact in isolation, to those identified in the 2018 ES. The conclusion of this review is set out in Section 11.3 below.

Approach to the consideration of other developments

Traffic Flows

11.2.14 The forecasts used for the DCO application were informed by an Uncertainty Log (which captures a list of all developments) developed in March 2018. The Uncertainty Log was updated in Winter 2020 and informs the post-decision traffic forecasts set out in Appendix 1.1 Transport Assessment Review. This shows there are no major substantive changes relating to the traffic impact of the Scheme. A further review of the status of developments during the period from Winter 2020 to Autumn 2021 shows there are no developments which would materially after the traffic forecasts.

11.2.15 As with the 2018 ES, the predicted traffic flows during construction and operation were used in the review of noise, air quality, water, people and communities, and climate assessments. Therefore, these reviews have inherently taken into account cumulative developments.

Baseline and Future Baseline

11.2.16 The 2018 ES included any development completed by February 2018 within the baseline assessments carried out in the topic chapters. Any development that had been permitted, but construction had not started, was included in the future baseline for the construction and operation scenarios and assessed in the topic chapters. In the 2018 ES construction of the Scheme was assumed to start in 2021, with the Scheme being operational in 2026.

11.2.17 For those additional developments identified by this review, any development completed by September 2021 has been considered as part of the baseline. This review has also categorised those developments included in the future baseline using the same approach as the 2018 ES set out above but has assumed that the construction phase for the Scheme would start in 2023 and the operational phase in 2029. There are five developments which have been considered as part of the baseline and eight which have been considered as part of the future baseline. These developments are considered in Sections 2 to 10 above.

Potential for cumulative impacts

11.2.18 For this review where a development is proposed but not yet permitted, it has been considered in the cumulative scenario below for the construction phase (2023) and future baseline for the operational phase (2029) assessment. There are three developments in this category (refer to Appendix 11.2). This is the same approach as taken in the 2018 ES but with updated dates assumed for the construction phase and the operational phase.

11.3 Environmental Information

Combined Effects Assessment

11.3.1 This section provides a summary of the potential combinations of impacts which have been considered within Sections 2 to 10, and which are considered likely to affect a single receptor.

11.3.2 The Response to Bullet Point Three of the Statement of Matters (Redetermination-1.3) focussing on climate also includes specific consideration of combined climate impacts. Therefore, climate is not considered in detail within this section.

11.3.3 The majority of other topics considered in this review do not identify any new receptors which would alter the 2018 ES assessment and therefore have not been considered further. However, there are some topics where changes to methodology have led to newly identified likely significant effects from the Scheme which need to be considered when reviewing the combined effects assessment. As such, the following topics are reviewed in further detail below:

- Air Quality;
- Noise;
- Geology and Soils;
- People and communities; and
- Landscape and Visual.

Air Quality Receptors

11.3.4 Section 2 Air Quality refers to LA 105 which is the relevant DMRB guidance that was released since the publication of the 2018 ES. LA 105 requires that additional designated ecological sites within 200m of the Affected Road Network which were not assessed in the 2018 ES Air Quality chapter are considered (paragraph 2.2.21) as receptors, due to the potential for these sites to be impacted by an increase in nitrogen deposition rates as a result of the Scheme. The majority of these sites can be screened out because the predicted nitrogen deposition rates are considered to be insignificant (see Table 2.2). Two designated sites (Knook Hill West Local Wildlife Site (LWS) and Veteran Tree 137044) have the potential for significant effects,

but the quantitative assessment reported in paragraph 2.3.16 concludes that nitrogen deposition rates are too low to have a significant effect.

11.3.5 The air quality impacts identified at Veteran Tree 137044 and Knook Hill West LWS are unlikely to interact with the majority of topics, as these receptors are located further than 3.2km from the Scheme. However, Veteran Tree 137044 and Knook Hill West LWS have the potential to experience in combination effects as a result of interaction with noise impacts. In combination effects have not been considered further as Veteran Tree 137044 is not considered to be sensitive to noise impacts. Knook Hill West LWS is located approximately 800m south of the B390 (see 2018 ES Figure 9.2 [APP-165]) which is the nearest route affected by noise, and is expected to experience a decrease in traffic noise (as reported in the 2018 ES), and therefore is also not expected to be impacted, and is not considered further within this section.

11.3.6 The assessment methodology set out in LA 105 also updates the nitrogen deposition velocities used to assess ecological receptors (paragraph 2.2.40). Following a review it can be concluded that this would not result in significant effects for the ecological receptors assessed in the 2018 ES (paragraphs 2.3.19 2.3.21). As the conclusion of no significant effects remains unchanged, and as these ecological receptors were included in the 2018 ES they have not been considered further within this section.

11.3.7 The only aspect of the combined effects assessment that has changed since the 2018 ES is the consideration of ecological sites. **In summary, the conclusions of the 2018 ES combined effects assessment remain unchanged in relation to air quality impacts.**

Noise

11.3.8 A sensitivity test carried out as part of this review (paragraph 6.3.9 onwards) considers updates to the operational assessment methodology in LA 111. The sensitivity test sets out the following differences compared to the assessment carried out in the 2018 ES:

a) Three additional residential receptors on Church Street (which changes to the High Street to the north east), Amesbury are identified as experiencing a significant moderate adverse increase in noise;

b) Approximately 50 additional properties are identified as experiencing a significant benefit in the receptor group Winterbourne Stoke, at Stonehenge Cottages and the northern end of Stonehenge Road;

c) The church in Winterbourne Stoke is identified as experiencing a new significant benefit; and

d) Outside of the detailed traffic noise modelling study area, the downgrading of moderate beneficial (significant) to minor beneficial (not significant) of 40 residential buildings along the B390 is identified.

11.3.9 These are not newly identified receptors and the change in effect leads to only minor changes to the reporting of combined effects set out in the 2018 ES. Due to the locations of the above receptors, no interaction with the other topics for which this review identifies new significant effects is anticipated. Receptors in a) to d) above are considered against effects reported in the 2018 ES (and in light of this review) below:

a) Due to their location, combined effects with air quality are possible. The 2018 ES reports that the closest modelled air quality receptor at the A345, where it intersects the High Street, would experience a not significant small decrease in air quality. Therefore, it is not considered likely that noise receptors at Church Street would experience significant combined effects.

b) The three locations are split out as follows:

i. The 2018 ES reports a significant large beneficial combined effect for receptors in Winterbourne Stoke, including as a result of noise impacts. Further residential receptors experiencing a beneficial noise effects are not anticipated to increase the significance level of the combined effect.

ii. Effects at Stonehenge Cottages remain unchanged since the 2018 ES.

iii. Due to the location, combined effects with air quality and visual impacts are possible at the northern end of Stonehenge Road. The 2018 ES identifies not significant imperceptible air quality changes and neutral visual effect in the long term at this location. No significant combined effects with noise are anticipated.

c) The 2018 ES reports a significant large beneficial combined effect for receptors in Winterbourne Stoke, including as a result of noise impacts. The additional significant benefit for the church at Winterbourne Stoke is not anticipated to increase the significance level of the combined effect.

d) Due to the location, combined effects with air quality are possible. The 2018 ES identifies not significant small and imperceptible air quality benefits to receptors along the B390. No significant combined effects with noise are anticipated.

11.3.10 **In summary, the conclusions of the 2018 ES combined effects assessment remain unchanged in relation to noise impacts**.

Geology and Soil

11.3.11 Section 7 Geology and Soils identifies further sources of contamination at Table 7.3. However, no new source receptor pathways are identified that would change the assessment in the 2018 ES, and therefore the further sources of contamination have not been considered further here.

People and communities

11.3.12 Section 10 People and Communities identifies at paragraphs 10.2.12 to 10.2.14 that using the sensitivity criteria defined in LA 109 for agricultural land, and soils supporting designated sites results in different levels of significance compared those reported in the 2018 ES. Agricultural land is not considered vulnerable to combined effects from other topics set out in this review and so is not discussed further here. Combined effects experienced by designated sites are considered by the Air Quality and Biodiversity topics and so are also not considered further here.

Landscape and Visual

11.3.13 Following the application of LA 107, Section 4 Landscape and Visual identifies that the individual visual receptors listed in Table 11.3 have the potential to experience significant adverse effects previously not defined as significant within the 2018 ES. These receptors have been considered with the effects identified in the 2018 ES, taking into account the findings of this review, to determine if they would result in significant combined effects. Where it is considered that the combination of impacts may increase the overall effect magnitude, the resulting effect has been assigned based upon the professional judgement and in accordance with the significance criteria set out within Table 11.1. No potential for significant in-combination effects have been identified for viewpoints 12, 13, 20, 24, 29A, 34, and 35 following a review of impacts discussed in 2018 ES and taking into account the findings of this review.

Table 11.3 Consideration of combined effects

Receptor	Value[1]	Potential in combination impact	Duration	Scale	Cumulative effect
Construction					
18 – View northeast from Byway AMES11 at Normanton Down	Very high	Visual (minor adverse) Dust (not significant) Air Quality construction traffic (not significant)	Temporary	Local	Moderate adverse effect[2]
19 - Tourists, visitors and recreational users at WHS interpretation panel south of the stones	Very high	Visual (minor adverse) Dust (not significant) Air Quality construction traffic (not significant)	Temporary	Local	Moderate adverse effect[2]
21 – Visitors, tourists and recreational users on	Very high	Visual (minor adverse) Dust (not significant)	Temporary	Local	Moderate adverse effect[2]

Receptor	Value[1]	Potential in combination impact	Duration	Scale	Cumulative effect
footpath alongside existing A303 between King Barrow ridge and Stonehenge Bottom		Air Quality construction traffic (not significant)			
29B– Residential properties adjacent to Countess Road west nos. 23 to 58 including Tollgate Close	Very high	Visual (minor adverse) Dust (not significant) Air Quality construction traffic (not significant) Noise (not significant)	Temporary	Local	Moderate adverse effect[2]
Operation					
25 – Recreational users on Bridleway AMES39 and residential properties at Strangways	Very high	Visual (minor beneficial) Noise (not significant)	Permanent	Local	Moderate beneficial effect[2]
31B – Bowles Hatches (Amesbury Abbey)	Very high	Visual (minor adverse) Noise (not significant)	Permanent	Local	Moderate adverse effect[2]

[1] Value derived from the Section 4 Landscape and Visual.
[2] Due to stand-alone effect reported in individual topic assessment.

11.3.14 The receptors at the viewpoints set out above would experience combined effects slightly worse than those identified in Section 4 Landscape and Visual alone. However, the receptors would not experience combined effects of a greater significance level (e.g. moderate to large) than those identified as part of this review in Section 4.

Cumulative Effects Assessment

11.3.15 As described in the topic sections above, no new significant effects resulting from interaction between the Scheme and the cumulative developments have been identified. These have been considered in full in the assessment matrix provided at Appendix 11.2, but in summary they are too small and/or distant from the Scheme to result in significant cumulative effects. **The conclusions of 2018 ES remain valid and therefore no further environmental information is required to be submitted for**

consideration by the Secretary of State in relation to cumulative developments, in order for a decision to be made on the Scheme.

11.3.16 This Section has been approved by Robert Beaumont, the author of the Assessment of Cumulative Effects chapter of the 2018 ES and the relevant competent expert for this topic, as set out in Appendix 1.1 of the 2018 ES [APP-185].

12 Assessment of Alternatives

12.1 Legislative and Policy Framework

12.1.1 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 ('the EIA Regulations') set out at Regulation 14(2)(d) and Schedule 4 paragraph 2 that an ES must include a description of the reasonable alternatives studies by the applicant, which are relevant to the proposed development and its specific characteristics; and an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment. **There have been no substantive changes to the EIA Regulations in relation to the consideration and assessment of alternatives.**

12.1.2 The National Policy Statement for National Networks (NPSNN) sets out at paragraph 4.26 that alternatives to proposed developments should be considered in accordance with legal requirements, and any policy requirements set out in NPS. The NPSNN has not been updated since December 2014.

12.1.3 Paragraph 5.4.73 of the Examining Authority's (ExA) Recommendation Report states that "the ExA is satisfied that the relevant legal requirement in relation to the EIA assessment of alternatives has been met by the [2018] ES". There have been no updates to the legislative and policy framework which affect the assessment of alternatives in the 2018 ES. **Therefore, there is no change to the conclusions of the assessment of alternatives carried out in the 2018 ES resulting from any changes to the legislative or policy framework since it was prepared.**

12.2 Guidance

12.2.1 There have been no substantive industry guidance changes in relation to assessment of alternatives.

12.3 Environmental Information

12.3.1 A Technical Appraisal Report (TAR) [REP1-031] and a Scheme Assessment Report (SAR) [REP1-024] have been produced for the Scheme. The TAR reports on the problems and constraints along the existing A303 between Amesbury and Berwick Down and details the identification, sifting and appraisal of route options (including environmental considerations) to determine which should be taken forward for public consultation. The SAR provides a summary of the TAR, reports on public consultation, and recommends a preferred option. The information on the options considered in the TAR and SAR, along with other information generated during the examination, has been collated in the Response to Bullet Point One of the Statement of Matters (Redetermination-1.1).

12.3.2 The 2018 ES Chapter 3 Assessment of alternatives [APP-041] builds on the findings of the SAR. The 2018 ES Chapter 3 sets out the main reasons for the option chosen in the development of the Scheme, taking into account

the effects of the Scheme on the environment and whether various options would be more or less preferable for relevant environmental topics.

12.3.3 During Examination the Applicant expanded on the Chapter 3 Assessment of alternatives [APP-041] in response to the first written questions on alternatives [REP2-024].

12.3.4 In light of the review carried out in Sections 2 to 10 of this document, we consider whether any changes to the environmental assessment of the Scheme or the alternatives to it change the reasons for selecting the Scheme as the chosen option, taking into account its effect on the environment, as set out in Chapter 3 of the 2018 ES. This is undertaken by reference to the alternative options considered in the Response to Bullet Point One of the Statement of Matters (Redetermination-1.1). Conclusions in relation to the initial alternative appraisals are set out below.

Noise

F010 Surface Route option to the south

12.3.5 A high level quantitative webTAG appraisal of this option was completed, along with two partially tunnelled options, at Stage 4 of the Option Identification process. As reported in chapter 3 of the ES, noise was not a key differentiator in reaching the conclusion that, on balance, the partially tunnelled options performed better than F010. On this basis the minor changes in policy or noise methodology discussed in section 6 do not change the conclusions of the environmental appraisal in respect of F010.

New Route South of Salisbury (Corridor G)

12.3.6 A high level qualitative appraisal of this route corridor was completed using the Early Assessment and Sifting Tool (EAST) from webTAG at Stage 1 of the Option Identification process. As reported in chapter 3 of the ES, noise was not a key differentiator in reaching the conclusion not to take forward this route corridor to the next stage. On this basis the minor changes in policy or noise methodology discussed in section 6 do not change the conclusions of the environmental appraisal in respect of the New Route South of Salisbury.

New Route to the North of the WHS (Corridor A)

12.3.7 A high level qualitative appraisal of this route corridor was completed at Stage 1 of the Option Identification process using the EAST from webTAG. As reported in chapter 3 of the ES, noise was not a key differentiator in reaching the conclusion not to take forward this route corridor to the next stage. On this basis the minor changes in policy or noise methodology discussed in section 6 do not change the conclusions of the environmental appraisal in respect of the New Route to the North of the WHS.

Air Quality

F010 Surface Route option to the south

12.3.8 A high level quantitative webTAG appraisal of this option was completed, along with two partially tunnelled options, at Stage 4 of the Option

Identification process. As reported in chapter 3 of the ES, air quality was not a key differentiator in reaching the conclusion that, on balance, the partially tunnelled options performed better than F010. On this basis the changes in policy or air quality appraisal methodology discussed in section 2 do not change the conclusions of the environmental appraisal in respect of F010.

New Route South of Salisbury (Corridor G)

12.3.9 A high level qualitative appraisal of this route corridor was completed using the EAST from webTAG at Stage 1 of the Option Identification process. As reported in chapter 3 of the ES, air quality was not a key differentiator in reaching the conclusion not to take forward this route corridor to the next stage. On this basis changes in policy or air quality appraisal methodology discussed in section 2 do not change the conclusions of the environmental appraisal in respect of the New Route South of Salisbury.

New Route to the North of the WHS (Corridor A)

12.3.10 A high level qualitative appraisal of this route corridor was completed at Stage 1 of the Option Identification process using the EAST from webTAG. As reported in chapter 3 of the ES, air quality was not a key differentiator in reaching the conclusion not to take forward this route corridor to the next stage. On this basis changes in policy or air quality appraisal methodology discussed in section 2 do not change the conclusions of the environmental appraisal in respect of the New Route to the North of the WHS.

Greenhouse Gases

F010 Surface Route option to the south

12.3.11 A high level quantitative webTAG appraisal of this option was completed, along with two partially tunnelled options, at Stage 4 of the Option Identification process. As reported in chapter 3 of the ES, greenhouse gases from vehicle emissions were not a key differentiator in reaching the conclusion that, on balance, the partially tunnelled options performed better than F010. On this basis changes in policy or greenhouse gas appraisal methodology discussed in the Response to Bullet Point Three (Redetermination-1.3) do not change the conclusions of the environmental appraisal in respect of F010.

New Route South of Salisbury (Corridor G)

12.3.12 A high level qualitative appraisal of this route corridor was completed using the EAST from webTAG at Stage 1 of the Option Identification process. As reported in chapter 3 of the ES, greenhouse gases from vehicle emissions was not a key differentiator in reaching the conclusion not to take forward this route corridor to the next stage. On this basis changes in policy or greenhouse gas appraisal methodology discussed in the Response to Bullet Point Three (Redetermination-1.3) do not change the conclusions of the environmental appraisal in respect of New Route South of Salisbury.

New Route to the North of the WHS (Corridor A)

12.3.13 A high level qualitative appraisal of this route corridor was completed at Stage 1 of the Option Identification process using the EAST from webTAG. As reported in chapter 3 of the ES, greenhouse gases from vehicle

emissions was not a key differentiator in reaching the conclusion not to take forward this route corridor to the next stage. On this basis changes in policy or greenhouse gas appraisal methodology discussed in the Response to Bullet Point Three (Redetermination-1.3) do not change the conclusions of the environmental appraisal in respect of New Route to the North of the WHS.

Landscape and Visual Effect

Cut and Cover Tunnel Extension to WHS boundary

12.3.14 There is no change to the predicted improvement in landscape connectivity and tranquillity within the western section of the WHS for this option set out in the response to AL1.29. This is because there have not been material changes to landscape and visual policies within the NPPF and relevant PPG.

12.3.15 The change in assessment methodology (from IAN135.10 to LA107 rev2) would not alter the cut and cover extension having a beneficial magnitude of impact (change). Whilst LA107 rev2 results in a higher sensitivity of some receptors in comparison to that stated in the ES Assessment, this higher sensitivity would retain the beneficial effects and predicted improvements in tranquillity and landscape connectivity arising from the cut and cover tunnel extension option.

12.3.16 In respect of the baseline, none of the changes to the baseline are relevant to the cut and cover study area and the landscape and visual receptors remain as per those at the time of the ES Assessment and the production of the other environmental information.

Bored Tunnel Extension to 600m beyond WHS boundary

12.3.17 There is no change in the predicted landscape improvements within the WHS and worsening landscape impacts beyond the WHS set out in the response to AL1.29. This is because there have not been material changes to landscape and visual policies within the NPPF and relevant PPG.

12.3.18 The change in assessment methdology (from IAN135.10 to LA107 rev2) would not alter the identification of beneficial and adverse magnitude of impacts (change) set out in the response to AL1.29. LA107 rev 2 results in a higher sensitivity of some receptors in comparison to the sensitivity stated in the ES. However, these changes are predominantly to landscape and visual receptors within the WHS, which are predicted to experience a beneficial effect. Therefore, the stated improvements to receptors in the WHS for this option remains pertinent. For the landscape and visual receptors outside the WHS, their sensitivity remains largely unchanged, and the predicted worsening of the effects would be due to the increase in the magnitude of impact (i.e. changes to landform and vegetation patterns) rather than changes to their sensitivity. Therefore, the predicted worsening of effects for this option remains pertinent.

12.3.19 In respect of the baseline, none of the changes to the baseline would alter the landscape visual context relevant to the bored tunnel extension study

area. The identified landscape and visual receptors remain as per that at the time of the 2018 ES and the considerations set out in the production of the other environmental information.

F010 Surface Route option to the south (corridor G)

12.3.20 There is no change to the very large adverse landscape effect predicted for F010, as set out in the response to AL1.11 and there have not been material changes to landscape and visual policies within the NPPF and relevant PPG.

12.3.21 The F010 appraisal methodology was based upon webTAG, not IAN135/10 and its replacement LA107 rev 2. Therefore, changes to IAN135/10 and LA107 rev2 do not alter the assessment methodology. Whilst webTAG was updated in July 2021, no material changes were made to landscape and visual matters to require a re- appraisal.

12.3.22 In terms of the baseline, the landscape and visual context identified for F010 remains a high-quality rural landscape crossed by two valley systems and is therefore unchanged in terms of landscape character to that originally assessed.

New Route South of Salisbury (Corridor G)

12.3.23 There is no change to the assessment undertaken for corridor G. The conclusion was a 'red' rating (adverse effect) due to the high quality landscape, which included the Cranborne Chase and West Wiltshire Downs AONB (AONB). There have not been material changes to landscape and visual policies within the NPPF and relevant PPG such that the policy considerations remain as per the original appraisal. In respect of the AONB, this is now a designated International Dark Sky Reserve and therefore more sensitive than at the time of the appraisal.

12.3.24 The original appraisal was not based on IAN135/10. Therefore changes to IAN135/10 and the introduction of LA107 rev2 does not alter the appraisal methodology.

12.3.25 In terms of the baseline, the AONB extent remains and changes to the baseline have not altered the high quality landscape character.

New Route to the North of the WHS (Corridor A)

12.3.26 There is no change to the assessment undertaken for corridor A. The conclusion was an 'amber' rating due to the high quality landscape and high number of visual receptors. There have not been material changes to landscape and visual policies within the NPPF and relevant PPG such that the policy considerations remain as per the appraisal. The original appraisal was not based on IAN135/10 and the introduction of LA107 rev 2, does not alter the methodology.

12.3.27 In terms of the baseline, the landscape character remains high quality along with a high number of visual receptors which would have views of the Scheme.

Biodiversity

Cut and Cover Tunnel Extension to WHS boundary

12.3.28 There are no changes in legislation, policy or methods which would change the alternatives appraisal regarding biodiversity. The Cut and Cover Tunnel Extension to WHS boundary is within the study area for biodiversity. The updating of biodiversity baseline surveys has not led to any change which would alter the previous consideration of this alternative in the response to AL1.29., which is similar to the Scheme in terms of its effects on biodiversity.

Bored Tunnel Extension to 600m beyond WHS boundary

12.3.29 There are no changes in legislation, policy or methods which would change the alternatives appraisal regarding biodiversity. The Bored Tunnel Extension to 600m beyond WHS boundary is within the study area for biodiversity for the Scheme. The updating of biodiversity baseline surveys has not led to any change which would alter the previous consideration of this alternative in the response to AL1.29.

F010 Surface Route option to the south

12.3.30 There are no changes in legislation, policy or methods which would change the alternatives appraisal regarding biodiversity. F010 Surface Route option to the south was assessed as having greater impacts on biodiversity than the Scheme because of its greater length (more than 20km), greater effects of severance and impacts on protected sites. There is no known change in features of this route that would alter the previous appraisal.

New Route South of Salisbury (Corridor G)

12.3.31 There are no changes in legislation, policy or methods which would change the alternatives appraisal regarding biodiversity. New Route South of Salisbury is by far the longest route, with potential for impact on more designated sites than the Scheme, as well as on habitats and protected species and impacts from increased severance. There is no known change in features of this route that would alter the previous appraisal. It remains a poor option for biodiversity compared to the Scheme.

New Route to the North of the WHS (Corridor A)

12.3.32 There are no changes in legislation, policy or methods which would change the alternatives appraisal regarding biodiversity. The New Routh to the North of the WHS would have greater impacts on biodiversity than the Scheme because of its greater length and impacts on severance and Salisbury Plain SAC and SPA. There is no known change in features of this route that would alter the previous appraisal.

Road Drainage and the Water Environment

F010 Surface Route option to the south

12.3.33 F010 Surface Route option to the south was assessed as having the potential for greater impacts on the water environment than the Scheme because of the need for two new river crossings and potential to cross Source Protection Zone (SPZ) 1. For the F010 Surface Route option there

is no change to the water body status that were previously considered to be affected. The updates to the 2018 ES do not change the previous assessment and it remains a poor option for road drainage and the water environment compared to the Scheme.

New Route South of Salisbury (Corridor G)

12.3.34 New Route South of Salisbury was only considered in a high level desk study but was assessed as having the potential for greater impacts on the water environment than the Scheme because of the need for new crossings of extensive floodplain associated with two rivers and potential to cross Source Protection Zone (SPZ) 1. The updates to the 2018 ES do not change the previous assessment and it remains a poor option for road drainage and the water environment compared to the Scheme.

New Route to the North of the WHS (Corridor A)

12.3.35 New Route to the North of the WHS was only considered in a high level desk study but was assessed as having the potential for greater impacts on the water environment than the Scheme because of the need for two new river crossings. The updates to the 2018 ES do not change the previous assessment and it remains a poor option for road drainage and the water environment compared to the Scheme.

People and Communities

Cut and Cover Tunnel Extension to WHS boundary

12.3.36 There are no changes to the conclusions arising from the changes noted in the Response to Statement of Matters Bullet Point Four – Environmental Information Review. This is because the options appraisal conclusions reached for the relevant aspect of the People and Communities assessment, the effects on NMUs arising from the NMU route on the downgraded A303 in WHS would be unchanged.

Bored Tunnel Extension to 600m beyond WHS boundary

12.3.37 There are no changes to the conclusions arising from the changes noted in the Response to Statement of Matters Bullet Point Four – Environmental Information Review. This is because the options appraisal conclusion reached for the relevant aspect of the People and Communities assessment, the effects on NMUs arising from the NMU route on the downgraded A303 in WHS would be unchanged.

F010 Surface Route option to the south

12.3.38 There would no longer be a Motorised Travellers assessment or an assessment of Amenity as a result of the changes identified in the Environmental Information Review. There would be no other changes to the conclusions in respect of people and communities. The removal of these aspects of the assessment does not alter the overall conclusion reached in respect of people and communities for this option.

New Route South of Salisbury (Corridor G)

12.3.39 There would no longer be a Motorised Travellers assessment or an assessment of Amenity as a result of the changes identified in the

Environmental Information Review. There would be no other changes to the conclusions in respect of people and communities. The removal of these aspects of the assessment does not alter the overall conclusion reached in respect of people and communities for this option.

New Route to the North of the WHS (Corridor A)

12.3.40 There would no longer be a Motorised Travellers assessment or an assessment of Amenity as a result of the changes identified in the Environmental Information Review. There would be no other changes to the conclusions in respect of people and communities. The removal of these aspects of the assessment does not alter the overall conclusion reached in respect of people and communities for this option.

Cultural Heritage

12.3.41 Cultural Heritage is discussed in the Response to Bullet Point One of the Statement of Matters (Redetermination-1.1).

12.4 Conclusion

12.4.1 The changes to the assessment of the Scheme identified within Sections 2 to 11 above, and the re-consideration of the previous appraisals in this Section 12, do not change the alternatives appraisals contained within the Environmental Information submitted in terms of the conclusions reached regarding their overall environmental performance and the Scheme remains the preferred option from an environmental perspective.

12.4.2 As noted above there have been no changes to legislation or policy that are relevant that affect the environmental appraisal of the Scheme, and this also applies to the appraisal of alternatives. The changes in methodology and guidance which have resulted in new likely significant effects do not change the main reasons for selecting the Scheme as the preferred option. As stated in each of the sections above, there are no material changes to the baseline since the 2018 ES, and therefore there is no reason from that perspective to change the appraisal of the alternative options. Furthermore, there are no changes to the considerations reported in the TAR and SAR that affect the environmental appraisal of the various options, for example there have been no changes to environmental designations since the 2018 ES.

12.4.3 **In summary, there have been no changes in legislation or policy, methodology, likely significant effects, guidance or the environmental baseline, including those identified in this review, which change the conclusions set out in 2018 ES Chapter 3, and supporting environmental information, including in relation to the choice of the preferred Scheme.**

13 Conclusion and Next Steps

13.1.1 Table 13.1 below summarises the key conclusions in respect of where new likely significant effects have been identified.

Table 13.1 Summary of newly identified likely significant effects

Topic	Aspect
Air Quality	None identified.
Cultural Heritage	The assessment of additional heritage assets identified in the updated baseline information has identified additional Likely Significant Effects in respect of a number of possible Bronze Age barrows or ring ditches in the vicinity of Stonehenge Bottom suggested from aerial photographs.
Landscape and Visual	Methodological updates resulting in new likely significant effects at various locations.
Biodiversity	None identified.
Noise and Vibration	Methodological updates resulting in new significant effect for some individual receptors, but no new receptor groups/areas.
Geology and Soils	None identified.
Road Drainage and Soils	None identified.
Material Assets and Waster	None identified.
People and Communities	Methodological updates resulting in new likely significant effects in respect of impacts to County Wildlife Site soils.
Climate	None identified. Refer to the Response to Bullet Point Three of the Statement of Matters (Redetermination-1.3).
Assessment of Cumulative Effects (combination of effects section)	Methodological updates resulting in new likely significant effects due to the stand-alone effects reported in the Landscape and Visual section.

13.1.2 Where such information is required, this review supplies it. The Applicant can therefore confirm the adequacy of the environmental information, as supplemented by this review, to inform the Secretary of State's redetermination of the application.

13.1.3 To ensure that all interested parties are able to comment on these matters and all environmental information that will now be before the Secretary of State contained in this review and the response to Bullet Point Three of paragraph 2 of the Statement of Matters (Redetermination-1.3), the Applicant is proposing that consultation consistent with Regulation 20 of the EIA Regulations is carried out in respect of this information.

13.1.4 It is also noted that this document references a number of updated baseline reports. These are not submitted alongside this report but will be submitted as soon as possible following this submission to ensure that the Secretary

of State has all relevant environmental information before him. Again, to ensure that all parties are able to consider the environmental information before the Secretary of State the Applicant proposes that these reports will also be consulted upon in a manner consistent with Regulation 20 of the EIA Regulations, at the same time.

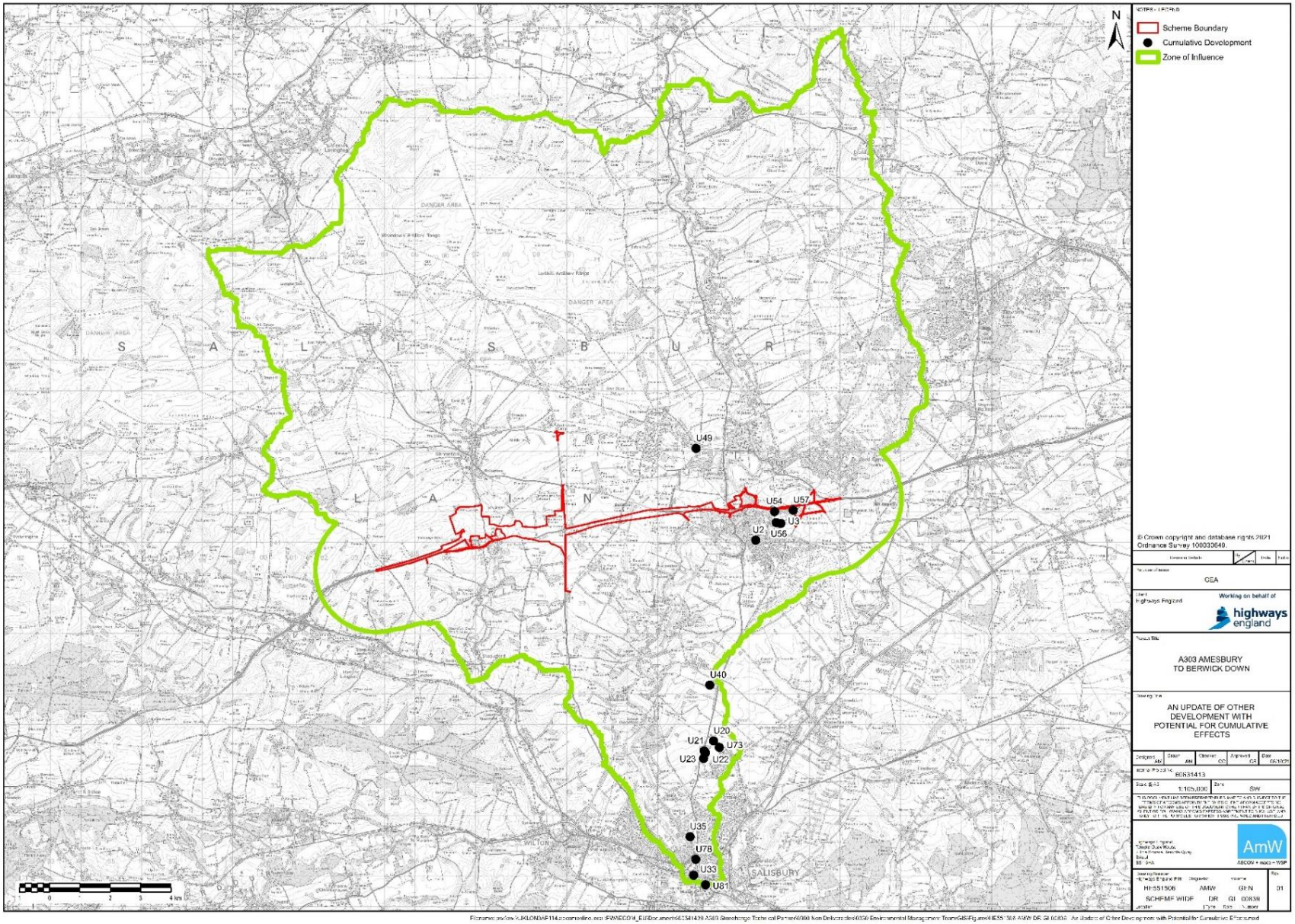


Figure 11.1 An Update of Other Development with Potential for Cumulative Effects

References

AmW, 2021. *A303 - Amesbury to Berwick Down; Stage 1, Tier 2 Land Contamination Assessment Report,* s.l.: s.n.

Arup Atkins Joint Venture, 2017. *A303 Stonehenge Amesbury to Berwick Down. Botanical Survey Report 2017,* s.l.: Arup Atkins Joint Venture.

BEIS, 2016. *Carbon Budgets,* s.l.: Department for Business, Energy & Industrial Strategy.

BGS, 2021. *GeoIndex (onshore).* [Online]
Available at: [redacted]
[Accessed September 2021].

Bishop, B. et al., 2020. Flintworking in the Middle Neolithic: Techniques, Technologies and Deposition on Salisbury Plain in the late 4th Millenium BC. *Journal of Lithic Studies,* Volume 40, pp. 5-40.

British Standards Institution, 2014. *BS 4142:2014 Methods for rating and assessing industrial and commercial sound,* s.l.: British Standards Institution.

British Standards Institution, 2014. *BS 5228:2009 + A1:2014 Code of Practice for noise and vibration control on construction and open sites,* s.l.: British Standards Institution.

British Standards Institution, 2019. *BS 4142:2014+A1:2019 Methods for rating and assessing industrial and commercial sound,* s.l.: British Standards Institution.

Centre for Ecology and Hydrology, Natural Resources Wales (NRW), the Environment Agency, Northern Ireland Environment Agency, Natural England, the Joint Nature Conservation Committee (JNCC), Scotland and Northern Ireland Forum for Environmental Research , 2021. *Air Pollution Information System (APIS).* [Online]
Available at: [redacted]
[Accessed November 2021].

CIfA, 2020. *Updates to 4 x Standard and guidance documents,* Reading: CLfA.

CIHT, 2021. *Manual for Streets,* s.l.: CIHT.

CIRIA, 2001. *Contaminated land risk assessment. A guide to good practice (C552),* s.l.: s.n.

Committee on Climate Change, 2020. *Sixth Carbon Budget: The UK's Path to Net Zero,* s.l.: Committee on Climate Change.

Cranborne Chase AONB Partnership, 2019. *Cranbourne Place Partnership Plan 2019-2024,* s.l.: Cranborne Chase AONB Partnership.

Defra, 2009. *Safeguarding our Soils - A Strategy for England,* London: Defra.

Defra, 2010. *Noise Policy Statement for England (NPSE),* London: Department for Environment, Food and Rural Affairs.

DEFRA, 2012. *Environmental Protection Act 1990: Part 2A, Contaminated Land Statutory Guidance,* s.l.: s.n.

Defra, 2020. *Defra Emissions Factor Toolkit (V10.1),* s.l.: Department of Environment, Food and Rural Affairs.

Defra, 2021. *Magic Map.* [Online]
Available at: https://magic.defra.gov.uk/MagicMap.aspx
[Accessed September 2021].

Defra, 2021. *Waste Management Plan for England,* s.l.: Defra.

Department for Communities and Local Government, 2014. *Planning Practice Guidance - Noise,* s.l.: Department for Communities and Local Government.

DfT, 1998. *Calculation of Road Traffic Noise,* s.l.: Department of Transport, Welsh Office.

DfT, 2014. *National Policy Statement for National Networks,* s.l.: Department for Transport.

DfT, 2018. *Traffic Signs Manual,* London: Department for Transport.

DfT, 2020. *Road Investment Strategy 2: 2020-2025,* s.l.: Department for Transport.

DfT, 2021. *Transport Decarbonisation Plan,* s.l.: Department for Transport.

Environment Agency, 2004 (now superseded). *Contaminated Land Report (CLR11) Model Procedures for the Management of Land Contamination,* s.l.: s.n.

Environment Agency, 2021. *Catchment Data Explorer.* [Online]
Available at: https://environment.data.gov.uk/catchment-planning/
[Accessed November 2021].

Environment Agency, 2021. *Flood Risk Assessments: climate change allowances.* [Online]
Available at: https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances
[Accessed November 2021].

Environment Agency, 2021. *Land Contamination Risk Assessment - https://www.gov.uk/government/publications/land-contamination-risk-management-lcrm ,* s.l.: s.n.

Evans, J. et al., 2019. Strontium and oxygen isotope evidence for the origin and movement of cattle at Late Neolithic Durrington Walls, UK. *Archaeological and Anthropological Sciences,* Volume 11, pp. 5181-5197.

Gaffney, V. et al., 2020. A Massive, Late Neolithic Pit Structure associated with Durrington Walls HengeOpen Data. *Internet Archaeology,* Volume 55.

Gaffney, V. et al., 2018. Durrington walls and the Stonehenge Hidden Landscape Project 2010–2016. *Archaeological Prospection,* 25(3), pp. 255-269.

Geotechnics Ltd, 2019. *A303 Amesbury to Berwick Down - Phase 7ai - Factual Report,* s.l.: s.n.

Geotechnics Ltd, 2019. *A303 Amesbury to Berwick Down - Phase 7aii - Factual Report,* s.l.: s.n.

Geotechnics Ltd, 2020. *A303 Amesbury to Berwick Down - Phase 7a Countess - Factual Report,* s.l.: s.n.

Google, n.d. [redacted]. [Online]
[Accessed September 2021].

Groundsure, 2021. *Groundsure.* [Online]
Available at: [redacted]
[Accessed September 2021].

Highways Agency, 2001. *Design Manual for Roads and Bridges, Volume 10 Environmental,* s.l.: Highways Agency.

Highways Agency, 2007. *Design Manual for Roads and Bridges: Volume 11 ,* s.l.: Highways Agency.

Highways Agency, 2007. *HA 207/07.* s.l.:s.n.

Highways Agency, 2008. *Design Manual for Roads and Bridges (DMRB) Volume 11, Section 2 Part 5: Assessment and Management of Environmental Effects (HA205/08),* s.l.: Highways Agency.

Highways Agency, 2008. *Design Manual for Roads and Bridges, Volume 11 Environmental,* s.l.: Highways Agency.

Highways Agency, 2011. *Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 7, HD 213/11 Revision 1,* s.l.: Highways Agency.

Highways Agency, 2012. *Interim Advice Note 170/12 v3, Updated air quality advice on the assessment of future NOx and NO2 projections for users of DMRB Volume 11, Section 3, Part 1 'Air Quality' (HA 207/07),* s.l.: Highways Agency.

Highways Agency, 2013. *Interim Advice Note 174/13 Updated advice for evaluating significant local air quality effects for users of DMRB Volume 11, Section 3, Part 1 'Air Quality' (HA 207/07),* s.l.: Highways Agency.

Highways Agency, 2013. *Interim Advice Note 175/13 Updated air quality advice on risk assessment related to compliance with the EU Directive on ambient air quality and on the production of Scheme Air Quality Action Plans for users of DMRB Volume 11, Section 3. Part 1,* s.l.: Highways Agency.

Highways England , 2020. *Highways England Delivery Plan 2020-2025,* s.l.: Highways England .

Highways England, 1993. *Design Manual for Roads and Bridges, Volume 11 Section 3 Part 11 - Geology and Soils (withdrawn),* s.l.: s.n.

Highways England, 2015. *Highways England Delivery Plan 2015-2020 ,* s.l.: Highways England.

Highways England, 2015. *Interim Advice Note 125/15, Environmental Assessment Update,* s.l.: Highways England.

Highways England, 2015. *Interim Advice Note 185/15 Updated traffic, air quality and noise advice on the assessment of link speeds and generation of vehicle data into 'speed-bands' for users of DMRB Volume 11, Section 3, Part 1 'Air Quality and Volume 11, Section 3. Part 7 Noise,* s.l.: Highways England.

Highways England, 2019. *Design Manual for Roads and Bridges, LA109 - Geology and Soils,* s.l.: s.n.

Highways England, 2019. *Design Manual for Roads and Bridges: LA 105 Air quality,* s.l.: Highways England.

Highways England, 2019. *Design Manual for roads and Bridges: LA 114 Climate (Revision 0),* s.l.: Highways England.

Highways England, 2019. *LA116 Cultural heritage asset management plans,* s.l.: Highways England.

Highways England, 2020. *CD 350 The design of highway structures,* s.l.: Highways England.

Highways England, 2020. *Design Manual for Roads and Bridges, LA 111 Noise and Vibration, Revision 2,* s.l.: Highways England.

Highways England, 2020. *Design Manual for Roads and Bridges, LA104 - Environmental Assessment and Monitoring,* s.l.: s.n.

Highways England, 2020. *DMRB LA106 Cultural heritage assessment,* s.l.: Highways England.

Highways England, 2020. *LA 107 Landscape and Visual Effects,* s.l.: Standards for Highways.

Highways England, 2020. *LA107 Landscape and visual effects,* s.l.: Highways England.

Highways England, 2020. *LA112 Population and Human Health,* s.l.: Highways England.

Historic England, 2015. *Historic Environment Good Practice Advice in Planning Note 2.,* s.l.: Historic England.

Historic England, 2017. *Historic Environment Good Practice Advice in Planning Note 3. The,* s.l.: Historic England.

HM Government, 2008. *Climate Change Act 2008,* s.l.: The Stationery Office Limited.

HM Government, 2017. *The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017.,* s.l.: HM Government.

HM Government, 2018. *Our Waste, Our Resources: A Strategy for England,* s.l.: Defra.

HM Government, 2020. *National Risk Register 2020.,* s.l.: HM Government.

HM Government, 2020. *State of Conservation Report,* London: HM Government.

HM Government, 2020. *The Ten Point Plan for a Green Industrial Revolution,* s.l.: HM Government.

HM Government, 2020. *United Kingdom of Great Britain and Northern Ireland's Nationally Determined Contribution,* s.l.: HM Government.

ICOMOS, 2011. *Guidance on Heritage Impact Assessments for Cultural World Heritage,* Paris: International Council on Monuments and Sites.

IEMA, 2021. *Principles of Cultural Heritage Impact Assessment in the UK,* Lincoln: Institute of Environmental Management and Assessment (IEMA).

Institution of Lighting Professionals, 2021. *Guidance Note 1 for the reduction of obtrusive light 2021,* Rugby: Institution of Lighting Professionals.

Landscape Institute, 2011. *Photography and photomontage in landscape and visual impact assessment Advice Note 01/11,* London: Landscape Institute.

Landscape Institute, 2013. *Guidelines for Landscape and Visual Impact Assessment 3rd Edition,* Abingdon: Landscape Institute with the Institute of Environmental Management and Assessment.

Landscape Institute, 2017. *Visual representation of development proposals. Technical Guidance Note 02/17,* London: Landscape Institute.

Landscape Institute, 2019. *Visual Representation of Development Proposals. TGN 06/19,* London: Landscape Institute.

Landscape Institute, 2021. *Assessing landscape value. Technical Guidance Note | 02/21,* s.l.: Landscape Institute.

Leivers, M., 2021. The Army Basing Programme, Stonehenge and the Emergence of the Sacred Landscape of Wessex. *Internet Archaeology,* Volume 56.

Leivers, M., Ruggles, C. & Chadburn, A., 2021. A new midsummer solstice alignment in the Stonehenge landscape at the Lark Hill causewayed enclosure. *British Archaeology,* Volume 96, pp. 8-9.

Madgwick, R. et al., 2019. Multi-isotope analysis reveals that feasts in the Stonehenge environs and across Wessex drew people and animals from throughout Britain. *Science Advances,* 5(3).

Madgwick, R. et al., 2021. A veritable confusion: use and abuse of isotope analysis in archaeology. *Archaeological Journal,* 178(2), pp. 361-385.

Mays, S. et al., 2018. Lives before and after Stonehenge: An osteobiographical study of four prehistoric burials recently excavated from the Stonehenge World Heritage Site. *Journal of Arcaheological Science,* Volume 20, pp. 692-710.

MHCLG, 2014. *National Planning Practice Guidance,* s.l.: Ministry of Housing, Communities and Local Government.

MHCLG, 2018. *National Planning Policy Framework (archived),* s.l.: Ministry of Housing, Communities and Local Government.

MHCLG, 2018. *Planning Practice Guidance – Conserving and enhancing the historic,* London: Ministry of Housing, Communities and Local Government.

MHCLG, 2018. *Planning Practice Guidance – Conserving and enhancing the historic,* London: Ministry of Housing, Communities and Local Government.

MHCLG, 2019. *National Planning Practice Guidance.* s.l.:Ministry of Housing, Communities and Local Government.

MHCLG, 2019. *Planning Practice Guidance - Noise,* s.l.: Ministry of Housing Communities and Local Government.

MHCLG, 2021. *Guidance: Natural Environment.* [Online]
Available at: https://www.gov.uk/guidance/natural-environment

MHCLG, 2021. *National Design Guide,* London: Ministry of Housing, Communities and Local Government.

MHCLG, 2021. *National Planning Policy Framework,* s.l.: Ministry of Housing, Communities and Local Government.

Ministry of Housing, Communities & Local Government (MHCLG), 2019. *National Planning Practice Guidance: Historic environment.* [Online]
Available at: https://www.gov.uk/guidance/conserving-and-enhancing-the-historic-environment
[Accessed November 2021].

National Highways, 2021. *National Highways Net Zero Plan,* s.l.: National Highways.

National Networks, 2020. *Design Manual for Roads and Bridges. LD 117. Revision 0,* s.l.: National Networks (Formerly Highways England).

Network Rail, 2019. *Route CP6 Weather Resilence and CLimate Change Adaption Plans,* London: Network Rail.

NHBC, Environment Agency, CIEH, 2008. *R&D 66: Guidance for the Safe Development of Housing on Land Affected by Contamination,* s.l.: s.n.

Office for National Statistics, 2020. *Estimates of the population for the UK, England and Wales, Scotland and Northern Ireland,* s.l.: Office for National Statistics.

Parker Pearson, M. et al., 2020. *Stonehenge for the Ancestors: Part 1 Landscape and Monuments.* Leiden: Sidestone Press.

Planning Inspectorate, 2015. *Advice note seventeen: Cumulative effects assessment relevant to nationally significant infrastructure projects,* s.l.: The Planning Inspectorate.

Planning Inspectorate, 2019. *Advice note seventeen: Cumulative effects assessment relevant to nationally significant infrastructure projects,* s.l.: The Planning Inspectorate.

Planning Inspectorate, 2020. *TR10025, A303 Amesbury to Berwick Down Examining Authority's Report of Findings and Conclusions and Recommendation to the Secretary of State for Transport,* s.l.: s.n.

Public Health England, 2019. *Public Health England Strategy 2020-25 ,* s.l.: Public Health England.

Roberts, D. et al., 2020. Middle Neolithic pits and a burial at West Amesbury, Wiltshire. *Archaeological Journal,* 177(2), pp. 167-213.

Roberts, D. et al., 2018. The Early Field Systems of the Stonehenge Landscape. *Landscapes,* 18(2), pp. 120-140.

Roberts, D. et al., 2018. Recent Investigations at Two Long Barrows and Reflections on their Context in the Stonehenge World Heritage Site and Environs. *Internet Archaelology.*

RPS Group, 2021. *A303 Amesbury to Berwick Down Phase 7B GI - Factual Report,* s.l.: s.n.

Ruggles, C., Chadburn, A., Leivers, M. & Smith, A., 2021. A Possible New Solstitial Sightline in the Stonehenge Landscape. *Journal of Skyscape Archaelogy,* 7(1), pp. 144-156.

Save Stonehenge World Heritage Site Ltd, R (On the Application Of) v Secretary Of State For Transport (2021).

Simmonds, S. & Thomas, B., 2015. *Stonehenge, Avebury and Associated Sites World Heritage Site Management Plan 2015,* s.l.: Chippenham: World Heritage Site Coordination Unit.

Structural Soils Ltd, 2019. *A303 Stonehenge - Phase 6 & 7 Ground Investigation - Final Factual Report on Ground Investigation,* s.l.: s.n.

Swindon Borough Council and Wiltshire Council, 2009. *Wiltshire and Swindon Minerals Core Strategy 2006 – 2026,* s.l.: s.n.

The Chartered Institute for Archaeologists (CIfA), 2014. *Standard and guidance for archaeological field evaluation.* Reading: s.n.

The Chartered Institute for Archaeologists (CIfA), 2014. *Standard and guidance for historic environment desk-based assessment.* Reading: s.n.

UK Climate Impacts Programme , 2009. *UK Climate Projections 2009. ,* s.l.: UK Climate Impacts Programme .

UK Climate Impacts Programme, 2018. *UK Climate Projections 2018,* s.l.: Met Office.

UNESCO, 2019. *Decisions adopted during the 43rd session of the World Heritage Committee,* Baku: United Nations Educational, Scientific and Cultural Organization.

UNESCO, 2021. *Decisions adopted during the extended 44th session of the World Heritage Committee,* Fuzhou: United Nations Educational, Scientific and Cultural Organization.

UNFCCC, 2015. *Paris Agreement,* s.l.: United Nations Framework Convention on Climate Change.

Wiltshire Council, 2009. *Wiltshire and Swindon Waste Core Strategy 2006-2026,* s.l.: Wiltshire Council.

Wiltshire Council, 2013. *Wiltshire and Swindon Aggregate Minerals Site Allocations Local Plan ,* s.l.: s.n.

Wiltshire Council, 2013. *Wiltshire and Swindon Waste Site Allocations,* s.l.: Wiltshire Council.

Wiltshire Council, 2015. *Wiltshire Core Strategy,* s.l.: Wiltshire Council.

Wiltshire Council, 2021. *Green and blue infrastructure.* [Online]
Available at: https://www.wiltshire.gov.uk/planning-bio-green-blue-infrastructure

Wiltshire Council, 2021. *https://www.wiltshire.gov.uk/planning-policy-local-plan-review-consultation.* [Online].

Wiltshire County Council , 2015. *Wiltshire Joint Health and Wellbeing Strategy 2015-2018.,* s.l.: Wiltshire County Council .

Wiltshire County Council, 2019. *Wiltshire Joint Health and Wellbeing Strategy 2019-2022 ,* s.l.: Wiltshire County Council.

Wiltshire County Council, 2021. *ASR.* [Online]
Available at: [redacted]

Worley, F. et al., 2019. Understanding Middle Neolithic food and farming in and around the Stonehenge World Heritage Site: An integrated approach. *Journal of Archaeological Science,* Volume 26.

Appendices

Appendix 1.1 Transport Assessment Note (Redetermination-1.4.1)

Appendix 3.1 Assessment of updated heritage baseline

The below tables are supported by Figures 1.A-1.E below, in which additional heritage assets are identified in blue.

Table 3.1: Summary of significant effects – construction (permanent)

Asset	Name and Description	Asset Value	Impact description Scheme element Description of impact Permanent / temporary	Design and Mitigation Measures	Impact Magnitude (post-mitigation)	Residual Effect
Archaeological assets (identified by UID [7*] and corresponding WSHER [MWI*****] references)**						
7045 MWI76622	Bronze Age Ring Ditch, South of the A303 Cropmark of a possible Bronze Age round barrow visible as a cropmark of a ring ditch immediately to the south of the A303 on aerial photographs taken in 1943.	Very High	Tunnel (removal of present A303 surface road) Feature not confirmed by subsequent geophysical survey. Positive influence upon setting. Reduced visual impact of roads and associated infrastructure. Restored or enhanced sightlines with other monument groups. Permanent impact	Retained in situ in tunnel section of Scheme.	Moderate beneficial	Large beneficial
7046 MWI76623	Bronze Age Ring Ditch, South of Stonehenge Bottom Cropmark of a possible Bronze Age round barrow seen on aerial photographs taken in 1943.	Very High	Tunnel (removal of present A303 surface road) Feature not confirmed by subsequent geophysical survey. Positive influence upon setting. Reduced visual impact of roads and associated infrastructure. Restored or enhanced sightlines with other monument groups. Permanent impact	Retained in situ in tunnel section of Scheme.	Moderate beneficial	Large beneficial
7047 MWI76624	Bronze Age Ring Ditch, Larkhill [sic]	Very High	Tunnel (removal of present A303 surface road)	Retained in situ in tunnel section of Scheme.	Moderate beneficial	Large beneficial

Asset	Name and Description	Asset Value	Impact description Scheme element Description of impact Permanent / temporary	Design and Mitigation Measures	Impact Magnitude (post-mitigation)	Residual Effect
	The cropmark traces of a possible Bronze Age round barrow visible as single ring ditch of c.12m diameter seen at Stonehenge Bottom on aerial photographs taken in 1943.		Feature not confirmed by subsequent geophysical survey. Positive influence upon setting. Reduced visual impact of roads and associated infrastructure. Restored or enhanced sightlines with other monument groups. Permanent impact			
7048 MWI76626	Bronze Age Ring Ditch, Stonehenge Bottom Cropmark trace of a small ring ditch, possibly the remains of a levelled Bronze Age round barrow, visible on aerial photographs taken in 1943.	Very High	Tunnel (removal of present A303 surface road) Feature not confirmed by subsequent geophysical survey. Positive influence upon setting. Reduced visual impact of roads and associated infrastructure. Restored or enhanced sightlines with other monument groups. Permanent impact	Retained in situ in tunnel section of Scheme.	Moderate beneficial	Large beneficial

Asset	Name and Description	Asset Value	Impact description Scheme element Description of impact Permanent / temporary	Design and Mitigation Measures	Impact Magnitude (post-mitigation)	Residual Effect
7049 MWI76627	Undated Enclosure, Stonehenge Bottom Slight earthwork and cropmark traces of fragmented ditches around a small natural knoll on the side of a dry valley which may be the remains of an enclosure of uncertain date, though may equally be natural in origin.	Very High	Tunnel (removal of present A303 surface road) c. 250m south of existing surface A303. Feature not confirmed by subsequent geophysical survey. Immediately west of AG24 Luxenborough Barrows asset group, undated and uncertain function but assigned Very High value accordingly. Positive influence upon setting. Reduced visual impact of roads and associated infrastructure. Restored or enhanced sightlines with other monument groups. Permanent impact	Retained in situ in tunnel section of Scheme.	Moderate beneficial	Large beneficial
7050 MWI76628	Bronze Age Ring Ditch, Stonehenge Bottom Cropmark trace of a subcircular, possibly ditched enclosure seen on photographs taken in 1921 thought to be either the remains of a small quarry pit or perhaps a Bronze Age round barrow.	Very High	Tunnel (removal of present A303 surface road) Feature not confirmed by subsequent geophysical survey. Positive influence upon setting. Reduced visual impact of roads and associated infrastructure. Restored or enhanced sightlines with other monument groups. Permanent impact	Retained in situ in tunnel section of Scheme.	Moderate beneficial	Large beneficial

Asset	Name and Description	Asset Value	Impact description Scheme element Description of impact Permanent / temporary	Design and Mitigation Measures	Impact Magnitude (post-mitigation)	Residual Effect
7051 MWI76629	Undated Quarry, Stonehenge Bottom Slight earthwork remains of a sub-circular depression, probably a small former quarry of uncertain date [or] pit visible on aerial photographs taken in 1943.	Very High	Tunnel (removal of present A303 surface road) c. 60m south of existing surface A303. Feature not confirmed by subsequent geophysical survey. Within AG24 Luxenborough Barrows asset group, undated and uncertain function but assigned Very High value accordingly. Positive influence upon setting. Reduced visual impact of roads and associated infrastructure. Restored or enhanced sightlines with other monument groups. Permanent impact	Retained in situ in tunnel section of Scheme.	Moderate beneficial	Large beneficial
7062 MWI76640	Bronze Age Barrow, Stonehenge Bottom A possible levelled Bronze Age round barrow visible as an oval chalky spread on aerial photographs.	Very High	Tunnel (removal of present A303 surface road) Feature not confirmed by subsequent geophysical survey. Positive influence upon setting. Reduced visual impact of roads and associated infrastructure. Restored or enhanced sightlines with other monument groups. Permanent impact	Retained in situ in tunnel section of Scheme.	Moderate beneficial	Large beneficial

Asset	Name and Description	Asset Value	Impact description Scheme element Description of impact Permanent / temporary	Design and Mitigation Measures	Impact Magnitude (post-mitigation)	Residual Effect
7063 MWI76641	Bronze Age Ring Ditch, Stonehenge Bottom The faint cropmark of a possible arc of ring ditch which could indicate a levelled Bronze Age round barrow visible on aerial photographs.	Very High	Tunnel (removal of present A303 surface road) Feature not confirmed by subsequent geophysical survey. Positive influence upon setting. Reduced visual impact of roads and associated infrastructure. Restored or enhanced sightlines with other monument groups. Permanent impact	Retained in situ in tunnel section of Scheme.	Moderate beneficial	Large beneficial
7064 MWI76642	Bronze Age Barrow, Stonehenge Bottom A large chalky spread/cropmark, possibly the remains of a Bronze Age round barrow seen on aerial photographs.	Very High	Tunnel (removal of present A303 surface road) Feature not confirmed by subsequent geophysical survey. Positive influence upon setting. Reduced visual impact of roads and associated infrastructure. Restored or enhanced sightlines with other monument groups. Permanent impact	Retained in situ in tunnel section of Scheme.	Slight beneficial	Large beneficial

Table 3.2: Summary of significant effects – operation (permanent)

Asset	Name and Description	Asset Value	Impact description Scheme element Description of impact Permanent / temporary	Design and Mitigation Measures	Impact Magnitude (post-mitigation)	Residual Effect
Archaeological assets (identified by UID [7*] and corresponding WSHER [MWI*****] references)**						

Asset	Name and Description	Asset Value	Impact description Scheme element Description of impact Permanent / temporary	Design and Mitigation Measures	Impact Magnitude (post-mitigation)	Residual Effect
7045 MWI76622	Bronze Age Ring Ditch, South of the A303 Cropmark of a possible Bronze Age round barrow visible as a cropmark of a ring ditch immediately to the south of the A303 on aerial photographs taken in 1943.	Very High	Tunnel (removal of present A303 surface road) Reduced impact of traffic: positive influence upon setting. Permanent impact	Retained in situ in tunnel section of Scheme.	Moderate beneficial	Large beneficial
7046 MWI76623	Bronze Age Ring Ditch, South of Stonehenge Bottom Cropmark of a possible Bronze Age round barrow seen on aerial photographs taken in 1943.	Very High	Tunnel (removal of present A303 surface road) Reduced impact of traffic: positive influence upon setting. Permanent impact	Retained in situ in tunnel section of Scheme.	Moderate beneficial	Large beneficial
7047 MWI76624	Bronze Age Ring Ditch, Larkhill [sic] The cropmark traces of a possible Bronze Age round barrow visible as single ring ditch of c.12m diameter seen at Stonehenge Bottom on aerial photographs taken in 1943.	Very High	Tunnel (removal of present A303 surface road) Reduced impact of traffic: positive influence upon setting. Permanent impact	Retained in situ in tunnel section of Scheme.	Moderate beneficial	Large beneficial
7048 MWI76626	Bronze Age Ring Ditch, Stonehenge Bottom Cropmark trace of a small ring ditch, possibly the remains of a levelled Bronze Age round barrow, visible on aerial photographs taken in 1943.	Very High	Tunnel (removal of present A303 surface road) Reduced impact of traffic: positive influence upon setting. Permanent impact	Retained in situ in tunnel section of Scheme.	Moderate beneficial	Large beneficial

Asset	Name and Description	Asset Value	Impact description Scheme element Description of impact Permanent / temporary	Design and Mitigation Measures	Impact Magnitude (post-mitigation)	Residual Effect
7049 MWI76627	Undated Enclosure, Stonehenge Bottom Slight earthwork and cropmark traces of fragmented ditches around a small natural knoll on the side of a dry valley which may be the remains of an enclosure of uncertain date, though may equally be natural in origin.	Very High	Tunnel (removal of present A303 surface road) Reduced impact of traffic: positive influence upon setting. Permanent impact	Retained in situ in tunnel section of Scheme.	Moderate beneficial	Large beneficial
7050 MWI76628	Bronze Age Ring Ditch, Stonehenge Bottom Cropmark trace of a subcircular, possibly ditched enclosure seen on photographs taken in 1921 thought to be either the remains of a small quarry pit or perhaps a Bronze Age round barrow.	Very High	Tunnel (removal of present A303 surface road) Reduced impact of traffic: positive influence upon setting. Permanent impact	Retained in situ in tunnel section of Scheme.	Moderate beneficial	Large beneficial
7051 MWI76629	Undated Quarry, Stonehenge Bottom Slight earthwork remains of a sub-circular depression, probably a small former quarry of uncertain date [or] pit visible on aerial photographs taken in 1943.	Very High	Tunnel (removal of present A303 surface road) Reduced impact of traffic: positive influence upon setting. Permanent impact	Retained in situ in tunnel section of Scheme.	Moderate beneficial	Large beneficial
7062 MWI76640	Bronze Age Barrow, Stonehenge Bottom A possible levelled Bronze Age round barrow visible as an oval chalky spread on aerial photographs.	Very High	Tunnel (removal of present A303 surface road) Reduced impact of traffic: positive influence upon setting. Permanent impact	Retained in situ in tunnel section of Scheme.	Moderate beneficial	Large beneficial

Asset	Name and Description	Asset Value	Impact description Scheme element Description of impact Permanent / temporary	Design and Mitigation Measures	Impact Magnitude (post-mitigation)	Residual Effect
7063 MWI76641	Bronze Age Ring Ditch, Stonehenge Bottom The faint cropmark of a possible arc of ring ditch which could indicate a levelled Bronze Age round barrow visible on aerial photographs.	Very High	Tunnel (removal of present A303 surface road) Reduced impact of traffic: positive influence upon setting. Permanent impact	Retained in situ in tunnel section of Scheme.	Moderate beneficial	Large beneficial
7064 MWI76642	Bronze Age Barrow, Stonehenge Bottom A large chalky spread/cropmark, possibly the remains of a Bronze Age round barrow seen on aerial photographs.	Very High	Tunnel (removal of present A303 surface road) Reduced impact of traffic: positive influence upon setting. Permanent impact	Retained in situ in tunnel section of Scheme.	Slight beneficial	Large beneficial

Table 3.3: Summary of non-significant effects – construction (permanent)

Asset	Name and Description	Asset Value	Impact description Scheme element Description of impact Permanent / temporary	Design and Mitigation Measures	Impact Magnitude (post-mitigation)	Residual Effect
Archaeological assets (identified by UID [7*] and corresponding WSHER [MWI*****] references)**						
7049 MWI76627	Undated Enclosure, Stonehenge Bottom Slight earthwork and cropmark traces of fragmented ditches around a small natural knoll on the side of a dry valley which may be the remains of an enclosure of uncertain date, though may equally be natural in origin.	Very High	Tunnel (removal of present A303 surface road) c. 250m south of existing surface A303. Feature not confirmed by subsequent geophysical survey. Immediately west of AG24 Luxenborough Barrows asset group, undated and uncertain function but assigned Very High value accordingly. Positive influence upon setting. Reduced visual impact of roads and associated infrastructure. Restored or enhanced sightlines with other monument groups. Permanent impact	Retained in situ in tunnel section of Scheme.	Negligible beneficial	Slight beneficial

Asset	Name and Description	Asset Value	Impact description Scheme element Description of impact Permanent / temporary	Design and Mitigation Measures	Impact Magnitude (post-mitigation)	Residual Effect
7051 MWI76629	Undated Quarry, Stonehenge Bottom Slight earthwork remains of a sub-circular depression, probably a small former quarry of uncertain date [or] pit visible on aerial photographs taken in 1943.	Very High	Tunnel (removal of present A303 surface road) c. 60m south of existing surface A303. Feature not confirmed by subsequent geophysical survey. Within AG24 Luxenborough Barrows asset group, undated and uncertain function but assigned Very High value accordingly. Positive influence upon setting. Reduced visual impact of roads and associated infrastructure. Restored or enhanced sightlines with other monument groups. Permanent impact	Retained in situ in tunnel section of Scheme.	Negligible beneficial	Slight beneficial
7054 MWI76632	Bronze Age Barrow, Normanton Gorse 2018 ES UID2019 Cropmark of the remains of a Bronze Age round barrow such as a disc barrow visible on aerial photographs identified as Amesbury 11e in Goddard's gazetteer of 1913.	Very High	Tunnel / removal of present A303. Feature is 260m north of A303. Positive influence upon setting. Reduced visual impact of roads and associated infrastructure. Restored or enhanced sightlines with other monument groups. Permanent impact.	Retained in situ in tunnel section of Scheme.	Negligible beneficial	Slight beneficial
7055 MWI76633	Bronze Age Ring Ditch, South of the A303 Cropmark of a single ring ditch, possibly the remains of a levelled Bronze Age round barrow visible on aerial photographs taken in 1943.	Very High	Tunnel / removal of present A303. Positive influence upon setting. Permanent impact.	Retained in situ in tunnel section of Scheme.	Negligible beneficial	Slight beneficial

Asset	Name and Description	Asset Value	Impact description Scheme element Description of impact Permanent / temporary	Design and Mitigation Measures	Impact Magnitude (post-mitigation)	Residual Effect
7058 MWI76636	Undated Pit, Normanton Gorse The traces of a sub-circular chalky blob with a diameter of c.15.5m seen on aerial photographs taken in 1943, 1976 and 1988 which could be the remains of a levelled Bronze Age round barrow, though could also be an infilled chalk pit of uncertain date.	Very High	Western tunnel portal / removal of present A303. c. 20m south of existing surface A303. West of Normanton Down barrows asset group. Undated and uncertain function but assigned Very High value accordingly. Positive influence upon setting. Reduced visual impact of roads and associated infrastructure. Restored or enhanced sightlines with other monument groups. Permanent impact Positive influence upon setting. Permanent impact.	Retained in situ in tunnel section of Scheme.	Minor beneficial	Slight beneficial

Asset	Name and Description	Asset Value	Impact description Scheme element Description of impact Permanent / temporary	Design and Mitigation Measures	Impact Magnitude (post-mitigation)	Residual Effect
7066 MWI76644	Undated Pit, North of A303 Cropmark of a single small pit 2m x 1.7m and of uncertain origin and date visible on aerial photographs.	Very High	c. 140m north of eastern portal approach cutting. Within extent of Asset Group AG31B, Countess Farm barrows (south-west). Feature not confirmed by subsequent geophysical survey. Undated and uncertain function but assigned Very High value accordingly. Positive influence upon setting. Reduced visual impact of roads and associated infrastructure. Restored or enhanced sightlines with other monument groups. Permanent impact	A short length of canopy would be placed over the top of the eastern portal that would assist in concealing the eastern portal from the Asset Group, alongside the positioning of the eastern portal within a concealing dry valley	Negligible adverse	Slight adverse
7084 MWI76676	Post Medieval Bank, South East of Stonehenge A length of raised bank visible on lidar data captured in 2001 appears to follow the course of what is either the line of a boundary or trackway marked on the OS 1st Edition map.	Low	Tunnel (removal of present A303 surface road) Feature not confirmed by subsequent geophysical survey. Positive influence upon setting. Reduced visual impact of roads and associated infrastructure. Permanent impact	Retained in situ in tunnel section of Scheme.	Minor beneficial	Slight beneficial

Table 3.4 Summary of non-significant effects – operation (permanent)

Asset	Name and Description	Asset Value	Impact description Scheme element Description of impact Permanent / temporary	Design and Mitigation Measures	Impact Magnitude (post-mitigation)	Residual Effect
Archaeological assets (identified by UID [7*] and corresponding WSHER [MWI*****] references)**						
7049 MWI76627	Undated Enclosure, Stonehenge Bottom Slight earthwork and cropmark traces of fragmented ditches around a small natural knoll on the side of a dry valley which may be the remains of an enclosure of uncertain date, though may equally be natural in origin.	Very High	Tunnel (removal of present A303 surface road) Reduced impact of traffic: positive influence upon setting. Permanent impact	None	Negligible beneficial	Slight beneficial
7051 MWI76629	Undated Quarry, Stonehenge Bottom Slight earthwork remains of a sub-circular depression, probably a small former quarry of uncertain date [or] pit visible on aerial photographs taken in 1943.	Very High	Tunnel (removal of present A303 surface road) Reduced impact of traffic: positive influence upon setting. Permanent impact	None	Negligible beneficial	Slight beneficial
7054 MWI76632	Bronze Age Barrow, Normanton Gorse 2018 ES UID2019 Cropmark of the remains of a Bronze Age round barrow such as a disc barrow visible on aerial photographs identified as Amesbury 11e in Goddard's gazetteer of 1913.	Very High	Tunnel (removal of present A303 surface road) Reduced impact of traffic: positive influence upon setting. Permanent impact	None	Negligible beneficial	Slight beneficial
7055 MWI76633	Bronze Age Ring Ditch, South of the A303 Cropmark of a single ring ditch, possibly the remains of a levelled Bronze Age round barrow visible on aerial photographs taken in 1943.	Very High	Tunnel (removal of present A303 surface road) Reduced impact of traffic: positive influence upon setting. Permanent impact	None	Negligible beneficial	Slight beneficial

Asset	Name and Description	Asset Value	Impact description Scheme element Description of impact Permanent / temporary	Design and Mitigation Measures	Impact Magnitude (post-mitigation)	Residual Effect
7058 MWI76636	Undated Pit, Normanton Gorse The traces of a sub-circular chalky blob with a diameter of c.15.5m seen on aerial photographs taken in 1943, 1976 and 1988 which could be the remains of a levelled Bronze Age round barrow, though could also be an infilled chalk pit of uncertain date.	Very High	Western tunnel portal / removal of present A303. Reduced impact of traffic: positive influence upon setting. Permanent impact.	None	Minor beneficial	Slight beneficial
7066 MWI76644	Undated Pit, North of A303 Cropmark of a single small pit 2m x 1.7m and of uncertain origin and date visible on aerial photographs.	Very High	c. 140m north of eastern portal approach cutting. Within extent of Asset Group AG31B, Countess Farm barrows (south-west). Increase in visible traffic. Increase in traffic noise. Negative influence upon setting Permanent impact.	None	Negligible adverse	Slight adverse
7084 MWI76676	Post Medieval Bank, South East of Stonehenge A length of raised bank visible on lidar data captured in 2001 appears to follow the course of what is either the line of a boundary or trackway marked on the OS 1st Edition map.	Low	Tunnel (removal of present A303 surface road) Reduced impact of traffic: positive influence upon setting. Permanent impact	None	Minor beneficial	Slight beneficial

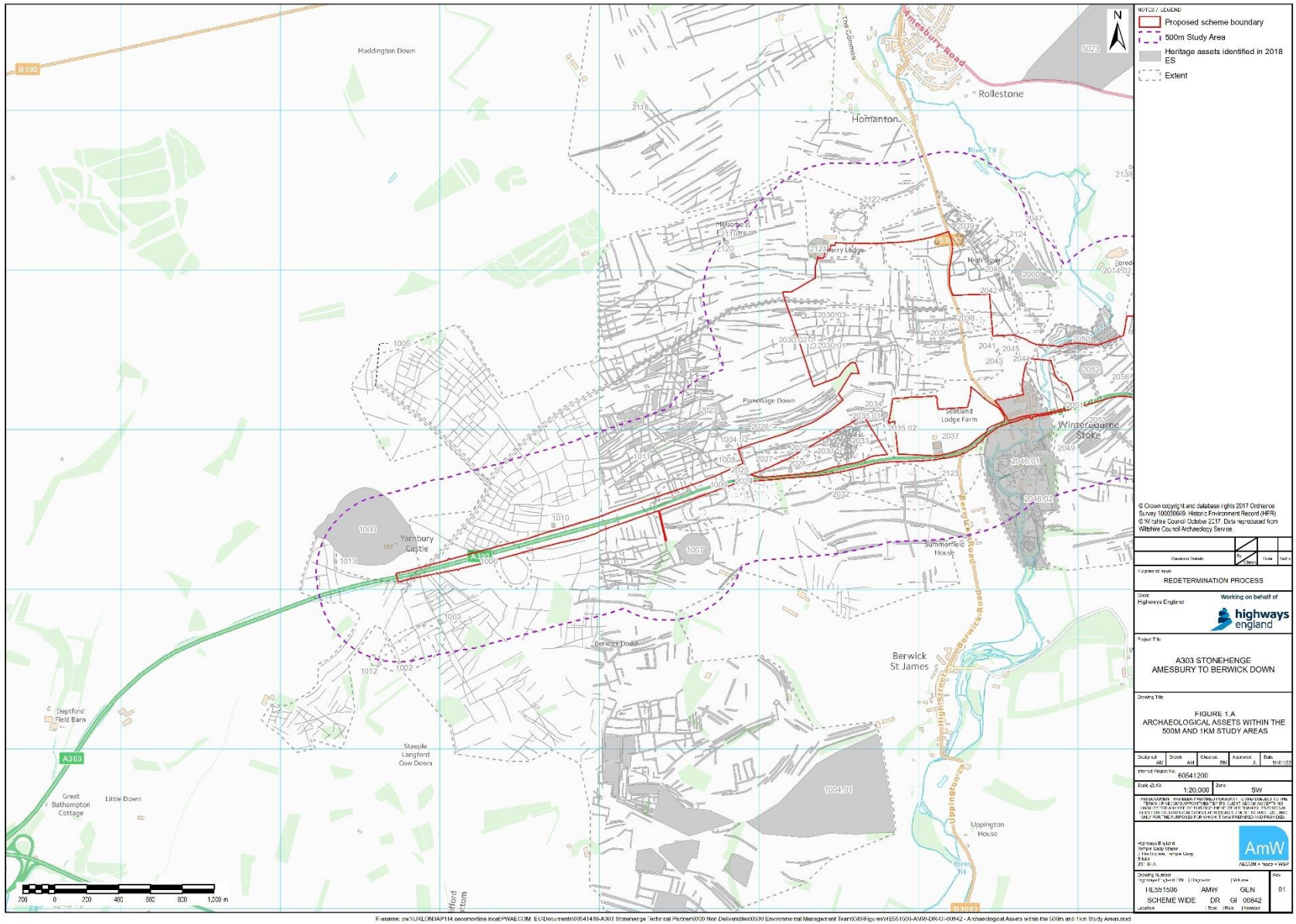


Figure 1.A Archaeological Assets Within The 500m And 1km Study Areas

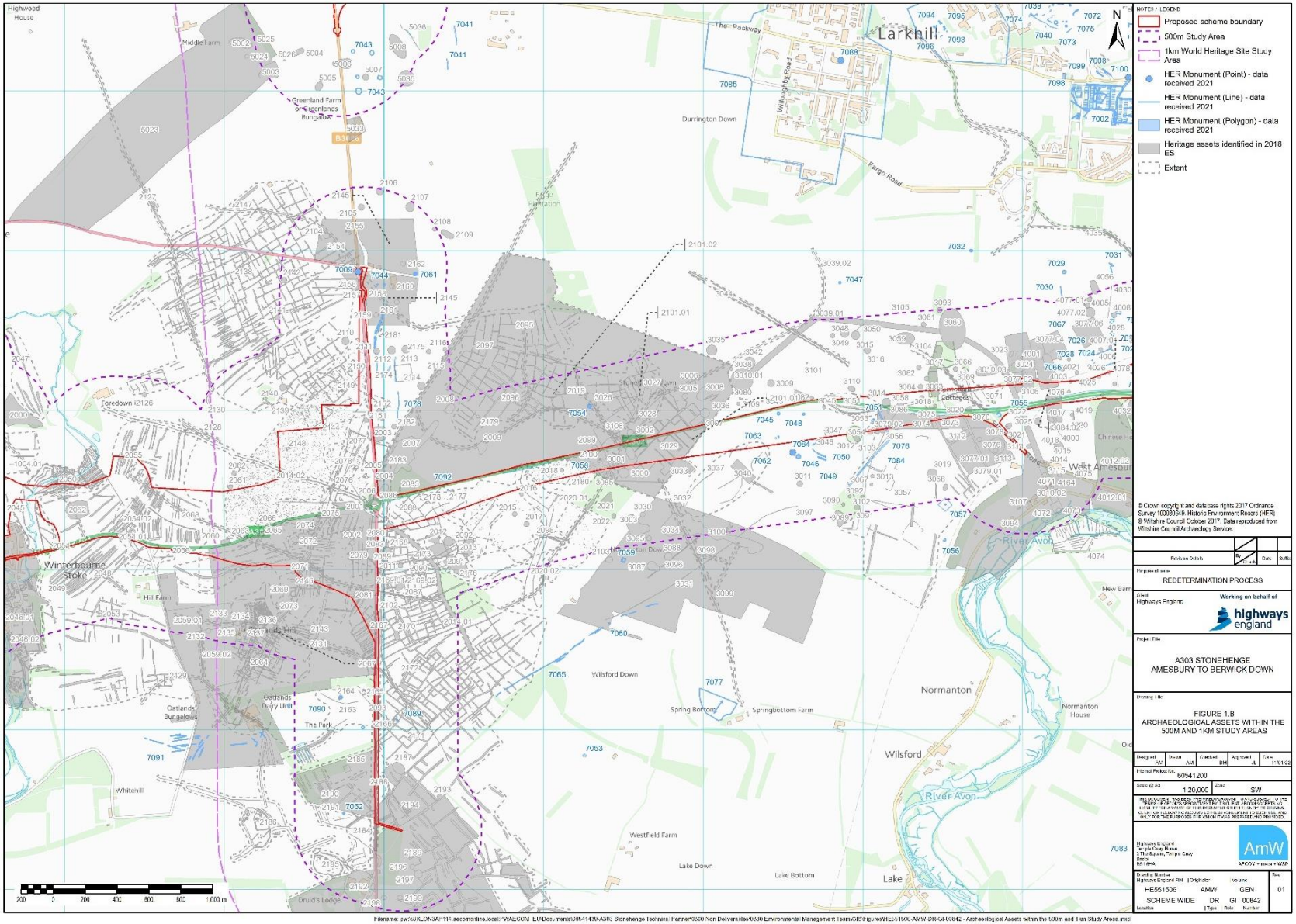


Figure 1.B Archaeological Assets Within The 500m And 1km Study Areas

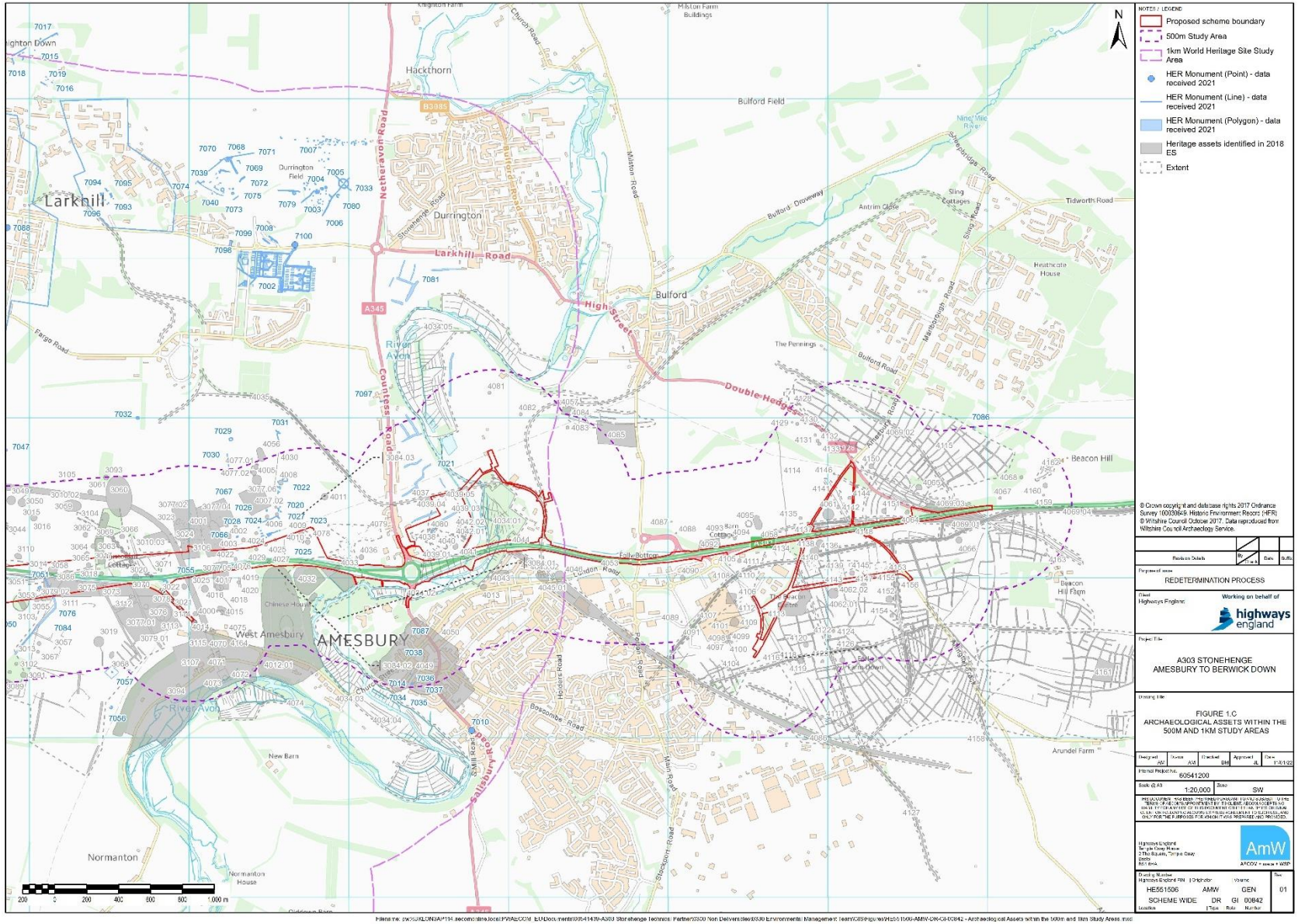


Figure 1.C Archaeological Assets Within The 500m And 1km Study Areas

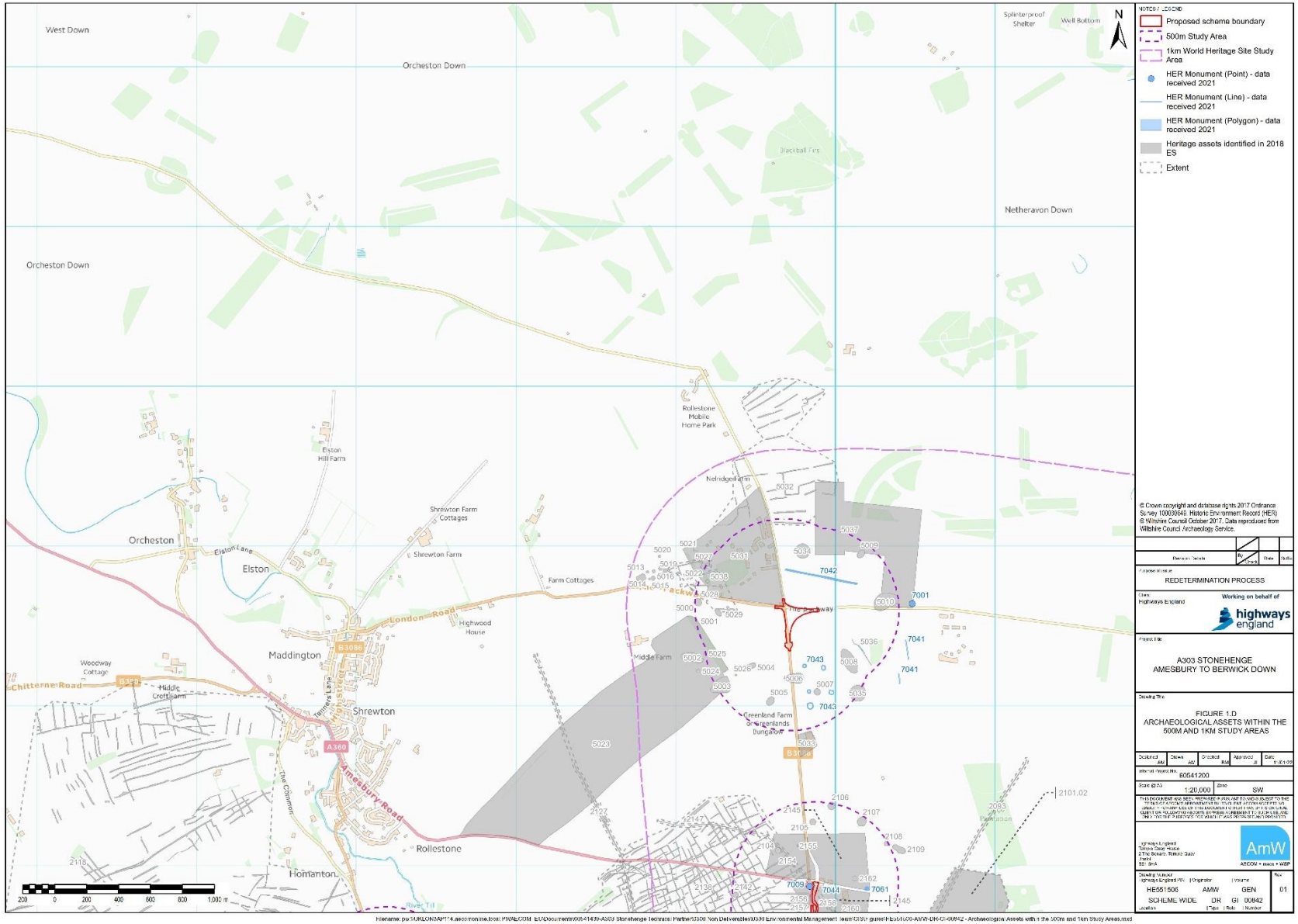


Figure 1.D Archaeological Assets Within The 500m And 1km Study Areas

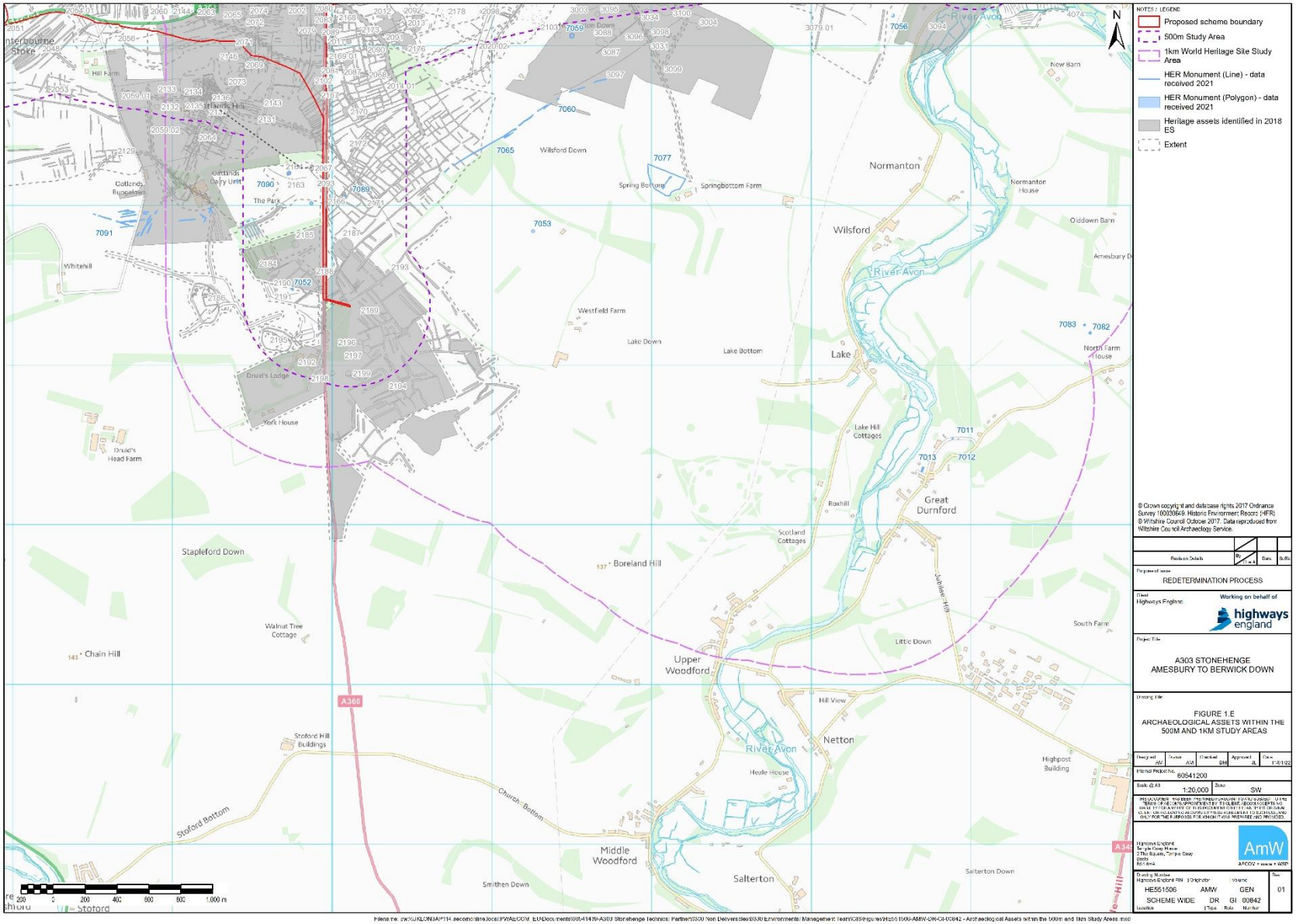


Figure 1.E Archaeological Assets Within The 500m And 1km Study Areas

Appendix 4.1 Re-assessment of Landscape Effects

Summary

The following table is reproduced from the 2018 LVIA and sets out the predicted landscape effects from the Scheme during the construction, year 1 and year 15 phases.

A re-assessment of the landscape effects has been undertaken following the publication of LA107 Landscape and Visual Effects, 2020 (LA107) and LA104 Environmental Assessment and Monitoring, 2020 (LA 104). LA107 replaced Interim Advice Note 135/10, which along with the Guidelines for Landscape and Visual Impact Assessment, Third Edition, formed the 2018 LVIA assessment methodology.

The re-assessment is set out in red text below, to highlight similarities or changes from the 2018 LVIA. The re-assessment covers the receptor sensitivity, magnitude of impact and significance of effect. There is no change to the Scheme design from that presented and assessed in the DCO.

Where there is a difference in sensitivity, magnitude or effects from that predicted in the 2018 LVIA, the relevant cell is highlighted in yellow.

LA107 table 3.22 assesses landscape sensitivity based upon a five point scale, ranging between negligible and very high.

LA107 table 3.24 assesses landscape magnitude of impact on a nine point scale between major adverse and major beneficial.

LA104 table 3.8.1 sets out a matrix for the significance of landscape effects, through the combination of receptor sensitivity and magnitude of impact. Professional judgement is also used in determining the significance of effect where LA104 requires a decision to be made from two significance categories, e.g. large or very large.

Table 1: Schedule of Landscape Effects based upon GLVIA3 and LA107

Landscape Receptor	Sensitivity	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
Published Landscape Character Assessments								
Natural England National Character Areas (NCA)								
NCA 132 Salisbury Plain and West Wiltshire Downs	High The receptor is assessed as remaining at high sensitivity, as in accordance with LA107 the landscape receptor would be of national importance and includes designated areas and has a strong sense of place.	Construction (winter) The physical construction activity within the WHS would be limited to the excavation of the retained cutting, implementation of the long bridge, and tunnel canopies. The contractor compounds and stockpile areas would not be located within the WHS, nor the more sensitive landscape areas of chalk grassland within the NCA. The existing A303 would remain operational during the majority of the construction phase until the breaking out of the existing A303, thereby retaining the existing transport linkages across the character area. The key characteristics of remoteness and openness within the NCA would remain during the construction phase as the proposed scheme is located adjacent to existing road infrastructure, tourist land uses and within Amesbury. The impact of the construction phase would also be lessened by it being consolidated to a part of the NCA which is already characterised by the A303, which is noted as negatively impacting the NCA and where military land uses are stated as visually prominent. Whilst the physical footprint of the construction activity is very small in relation to the wider extent of the NCA, the perception of the construction activity and that it is in part within a WHS, would result in a barely perceptible impact to the NCA.	Negligible adverse The LA107 definition for negligible adverse remains applicable.	Neutral The LA104 matrix would alter the effect to slight adverse. This remains not significant as per the 2018 LVIA.	Negligible beneficial The LA107 definition for negligible beneficial remains applicable	Neutral The LA104 matrix would alter the effect to slight beneficial. This remains not significant as per the 2018 LVIA.	Negligible beneficial The LA107 definition for negligible beneficial remains applicable	Neutral The LA104 matrix would alter the effect to slight beneficial. This remains not significant as per the 2018 LVIA.

Landscape Receptor	Sensitivity	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
		However, professional judgement considers that the actual effect of the construction activity would not alter the existing character of the NCA and would enable a sense of place to be retained. Operation Year 1 (winter) The proposed scheme would respond positively to the following Statements of Environmental Opportunity: a. SEO 1: by enhancing the WHS landscape through the tunnelling of the A303 and enabling new chalk grassland; developing new network connectivity through the physical reconnection of the landscape within the WHS, via the tunnel canopies, long bridge and reversion of the existing A303 to a green byway, as well as reversion of intensive agricultural fields to the east of Parsonage Down NNR to chalk grassland; b. SEO 3: by protecting, conserving and sustainably managing the WHS landscape, for its value in sense of place improving the tranquillity, as well as for new recreational opportunities; and c. SEO 4: protecting the NCA's agriculture interest, by returning land to agriculture and extending the benefit and scope for access to nature and other recreation via the NMU routes, green bridges, long bridge, and land to the east of Parsonage Down NNR. The reversion of the existing A303 to a green byway is also considered to reflect the stated positive development from the restoration and closure of the A344. The visible removal of the A303 within the WHS would improve the sense of place within the WHS, the tranquillity and dark night skies. These beneficial impacts would be balanced with the technical increase in highways infrastructure between the WHS and Berwick Down as a result of a new dual carriageway with associated signage, MS4 signs and Longbarrow Junction, the River till viaduct, as well as the existing A303 remaining in operation between Winterbourne Stoke and Longbarrow Junction. The impact of this section of the proposed scheme on the NCA is lessened by the earthwork design, which is considered to sympathetically integrate the sections of cutting and embankment within the rolling landform. On balance therefore, the impact of the proposed scheme is considered to result in a barely noticeable improvement to the NCA. Professional judgement considers that the proposed scheme on balance would maintain the character of the landscape.						
County Landscape Character Types (LCT) and Areas (LCA) from the Wiltshire Landscape Character Assessment, 2005								
LCT 3 High Chalk Plain	High The receptor is assessed as remaining at high sensitivity. In accordance with LA107 the receptor is one which contains distinctive features, as well as designated areas and a strong sense of place.	Construction (winter) The majority of the construction activity would be located within this LCT, with the exception of the River Till viaduct within the River Till valley and the utility connections across the River Avon. The construction activity within the WHS would be limited to the excavation of the retained cutting, implementation of the long bridge, and tunnel canopies. The contractor compounds and stockpile areas would not be located within the WHS, nor the more sensitive landscape areas of chalk grassland within the LCT. The existing A303 would remain operational during the construction phase, thereby retaining the existing transport linkages across the character area.	Negligible adverse The LA107 definition for negligible adverse remains applicable.	Slight adverse LA104 retains a slight adverse effect, which as per the 2018 LVIA is not significant.	Negligible beneficial The LA107 definition for negligible beneficial remains applicable.	Neutral The LA104 methodology would result in a slight beneficial effect. As per the 2018 LVIA this effect is not significant.	Negligible beneficial The LA107 definition for negligible beneficial remains applicable.	Neutral The LA104 methodology would result in a slight beneficial effect. As per the 2018 LVIA this effect is not significant.

Landscape Receptor	Sensitivity	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
		The key characteristics of the LCT being a very large scale and open landscape would remain during construction, with any loss of field patterns or vegetation being very minor and localised in scale. The impact of the construction phase would also be lessened by it being consolidated to a part of the LCT which is already characterised by the A303. Operation Year 1 (winter) In operation, the proposed scheme would visually remove vehicles from the majority of the WHS via the long bridge, retained cut and the tunnel. The proposed scheme would retain the key characteristics of a very large scale and open, exposed landscape, rolling landform and panoramic views, by being located in tunnel or false cutting and sympathetically regrading existing landform into the surrounding landscape. The proposed scheme is considered to respond positively to the forces for change within the LCT through providing supporting infrastructure to address visitors to the WHS. The proposed scheme does not include any of the identified tall structures (telecommunication masts or renewable energy schemes) which it is suggested could have an impact on the sense of remoteness. The proposed scheme responds positively towards the LCT management strategy by conserving the open and isolated character of the plain along with the vast areas of calcareous grassland and sites of historic interest. The proposed scheme responds positively towards the broad management strategies by reinstating chalk grassland and protecting the sites of historic interest and archaeological features. The adverse changes to the LCT are the technical loss of fields to the west of the WHS and the introduction of additional road infrastructure and associated signage. On balance, the impact of the proposed scheme in relation to the extent of the LCT would therefore be a barely perceptible change. However, professional judgement considers that the actual effect of the construction activity would not alter the existing character of the LCT and would enable a sense of place to be retained. Operation Year 15 (summer) The main change by year 15 would be the establishment of the new planting and areas of chalk grassland. This would reinforce the key characteristics of the LCT and the landscape connectivity. Due to the permanence of the proposed scheme, the impacts would remain as stated for year 1,						
LCA 3A Salisbury Plain West	High The receptor is assessed as remaining at high sensitivity. In accordance with LA107 the receptor is one which contains distinctive features, as well as designated areas.	Construction (winter) The majority of the construction activity would be located within this LCA, with the exception of the River Till crossing, utilities and the changes to Allington Track, to the east of Amesbury. The construction activity would therefore reflect much of the LCT impacts. Operation Year 1 (winter) In operation, the proposed scheme would reflect the impacts to the LCT.	Negligible adverse The LA107 definition for negligible adverse remains applicable.	Slight adverse The LA104 methodology would retain the slight adverse effect which like the 2018 LVIA is not significant.	Negligible beneficial The LA107 definition for negligible beneficial remains applicable.	Neutral The LA104 methodology would result in a slight beneficial effect. As per the 2018 LVIA this	Negligible beneficial The LA107 definition for negligible beneficial remains applicable.	Neutral The LA104 methodology would result in a slight beneficial effect. As per the 2018 LVIA this

Landscape Receptor	Sensitivity	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
		In addition, the proposed scheme would respond positively to the stated restricted access in the LCA, via the new NMU routes, green bridges and reconnection of the landscape within the WHS. Operation Year 15 (summer) The main change by year 15 would be the establishment of the new planting and areas of chalk grassland. This would reinforce the key characteristics of the LCA and the landscape connectivity. Due to the permanence of the proposed scheme, the impacts would remain as stated for year 1,				effect is not significant.		effect is not significant.
LCA 3B Salisbury Plain East	High The receptor is assessed as remaining at high sensitivity. In accordance with LA107 the receptor contains distinctive features and contains designated areas.	Construction (winter) The construction activity would be limited to the work to the Allington Track and Amesbury Road at the eastern edge of the proposed scheme boundary. The scale of this work in relation to that of the wider LCA would not result a noticeable change to the character area. Operation Year 1 (winter) In operation, the proposed scheme would reflect the existing landscape pattern with the new connection between the Allington Track and Amesbury Road via an existing track. Operation Year 15 (summer) The main change by year 15 would be the establishment of the new chalk grassland. This would reinforce the key characteristics of the LCA; however in the scale of the LCA, there would be no noticeable change.	Negligible Adverse The LA107 definition for negligible adverse is assessed as remaining applicable.	Neutral LA104 results in a slight adverse effect, via the combination of high sensitivity and negligible adverse impact. As per the 2018 LVIA, this remains not significant.	No Change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect, which as per the 2018 LVIA is not significant.	No Change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect, which as per the 2018 LVIA is not significant.
LCT 5 Chalk River Valley	High The receptor is assessed as remaining at high sensitivity. In accordance with LA107 the receptor contains distinctive features with a limited ability to accommodate change.	Construction (winter) The construction activity would be located in the upper part of the River Till, associated with the implementation of the River Till viaduct, as well as part of the haul road and at Countess Roundabout, associated with the flyover and construction compound to the north-east of the existing services. Due to the very small scale of the construction activity and that it is either located in proximity to the existing A303 or within the existing highways boundary there would be no noticeable loss to the character type. Operation Year 1 (winter) The proposed scheme would technically increase the amount of road infrastructure within the upper part of the River Till valley, due to the viaduct and the existing A303. However, the crossing points over the River Till would be consolidated within the valley. The very localised loss of a low number of trees to the south of the viaduct would not alter the overall vegetated character of the valley. Countess Flyover would introduce additional built form within the character type; however it is within the existing A303 footprint. The proposed scheme would not impact the stated key characteristics, with the split deck viaduct enabling light to the valley floor and thereby retaining the vegetation patterns. The proposed scheme would respond positively to the broad management objectives by re-planting hedgerows and hedgerow trees where these have been lost adjacent to the existing and .adjacent to the River Till. The viaduct structure itself will limit any disruption to the visual unity along the valley floor by enabling views under it. By removing the existing A303 from Winterbourne Stoke, the rural character of the village will be improved,	Negligible adverse The LA107 definition for negligible adverse remains applicable.	Neutral LA104 results in a slight adverse effect, via the combination of high sensitivity and negligible adverse impact. As per the 2018 LVIA, this remains not significant.	No Change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect, which as per the 2018 LVIA is not significant.	No Change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect, which as per the 2018 LVIA is not significant.

Landscape Receptor	Sensitivity	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
		reflecting the management objective of protecting the rural character of villages and lanes. The impact to the wider character area will however be no change, due to the very localised scale of the proposed scheme and the balance between the beneficial and adverse change. Operation year 15 (summer) The new planting at Countess Roundabout would have established, however the impact will reflect the year 1 assessment.						
LCA 5D Upper Avon	High The receptor is assessed as remaining at high sensitivity. In accordance with LA107 the receptor contains designated areas, as well as features with a limited ability to accommodate change.	Construction (winter) The construction activity would be associated with the implementation of Countess Flyover and construction compound to the north-east of the existing services. Due to the very small scale of the construction activity situated in part within the existing highways boundary there would be no noticeable loss to the character area. Operation Year 1 (winter) Countess Flyover would introduce additional built form within the character area; however it is within the existing A303 footprint. The proposed scheme would not impact the stated key characteristics of the LCA. The impact to the wider character area will however be no change, due to the very localised scale of the proposed scheme and the balance between the beneficial and adverse change. Operation year 15 (summer) The new planting at Countess Roundabout would have established, to aid in softening the mass of the structure; however the impact will reflect the year 1 assessment.	Negligible Adverse The LA107 definition for negligible adverse remains applicable.	Neutral LA104 results in a slight adverse effect, via the combination of high sensitivity and negligible adverse impact. As per the 2018 LVIA, this remains not significant.	No Change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect, which as per the 2018 LVIA is not significant.	No Change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect, which as per the 2018 LVIA is not significant.
LCA 5E Wylye Valley	High The receptor is assessed as remaining at high sensitivity. In accordance with LA107 the receptor contains distinctive features with limited ability to accommodate change.	Construction (winter) The construction activity would be located in the upper part of the River Till, associated with the implementation of the River Till viaduct, as well as part of the haul road. Due to the very small scale of the construction activity and that it is either located in proximity to the existing A303 or within the existing highways boundary there would be no noticeable loss to the character type. Operation Year 1 (winter) The proposed scheme would technically increase the amount of road infrastructure within the upper part of the River Till valley, due to the viaduct and the existing A303. However, the crossing points over the River Till would be consolidated within the valley. The very localised loss of a low number of trees to the south of the viaduct would not alter the overall vegetated character of the valley. The proposed scheme would not impact the stated key characteristics, with the split deck viaduct enabling light to the valley floor and thereby retaining the vegetation patterns. The proposed scheme would respond positively to the broad management objectives by re-planting hedgerows and hedgerow trees where these have been lost adjacent to WST04. The viaduct structure itself will limit any	Negligible adverse The LA107 definition for negligible adverse remains applicable.	Neutral LA104 results in a slight adverse effect, via the combination of high sensitivity and negligible adverse impact. As per the 2018 LVIA, this remains not significant.	No Change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect, which as per the 2018 LVIA is not significant.	No Change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect, which as per the 2018 LVIA is not significant.

Landscape Receptor	Sensitivity	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
		disruption to the visual unity along the valley floor by enabling views under it. By removing the existing A303 from Winterbourne Stoke, the rural character of the village will be improved, reflecting the management objective of protecting the rural character of villages and lanes. The impact to the wider character area will however be no change, due to the very localised scale of the proposed scheme and the balance between the beneficial and adverse change. Operation year 15 (summer) The impacts would reflect the year 1 assessment.						
District Landscape Character Areas from the Salisbury Landscape Character Assessment, 2008								
LCT A: Narrow Chalk River Valley	High The receptor is assessed as remaining at high sensitivity. In accordance with LA107 the receptor contains distinctive features and has a limited ability to accommodate change.	The construction and operational phases would reflect the LCT 5 Chalk River Assessment.	Negligible adverse The LA107 definition for negligible adverse remains applicable.	Neutral LA104 results in a slight adverse effect, via the combination of high sensitivity and negligible adverse impact. As per the 2018 LVIA, this remains not significant.	No Change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect, which as per the 2018 LVIA is not significant.	No Change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect, which as per the 2018 LVIA is not significant.
LCA A1 Till Narrow Chalk River Valley	High The receptor is assessed as remaining at high sensitivity. In accordance with LA107 the receptor contains distinctive features and has a limited ability to accommodate change.	Construction (winter) During construction, there would be slight disruption to the landscape pattern and tranquillity resulting from construction of the Till viaduct and a temporary haul road, and the operation of machinery including cranes, piling machines and excavators within the northern part of the LCA. The haul road and Bailey Bridge would locally disrupt the pattern of the valley floor and break up views within the valley. Due to the localised impact of the construction activity, the impact is assessed as a slight loss. Operation Year 1 (winter) The elevated design and split deck of the viaduct would retain the landscape pattern of the valley floor and allow light to reach the valley floor, decreasing the enclosure and mass of the structure from the valley floor beneath. The key characteristics would remain, with the noted noise and movement within Winterbourne Stoke being reduced by the realignment of the existing A303 The adverse impacts on the Till valley north of Winterbourne Stoke would also be balanced with the beneficial impacts on the village of Winterbourne Stoke (also within the LCA), where there would be a notable reduction in vehicles, improving tranquillity within the village and reducing the severance effect the existing road has on movement along the valley. In relation to the overall management strategy for the LCA, the proposed scheme would conserve the predominantly rural character of Winterbourne Stoke. Excessive signage has been addressed by the proposed scheme introducing MS4s rather than gantries on the approach to the River Till viaduct. In addition the elevated position of the viaduct aids in limiting the	Minor adverse LA107 criteria for minor adverse is assessed as remaining applicable.	Slight adverse LA104 allows for professional opinion to consider whether the effect is slight adverse or moderate adverse. Professional judgement considers that due to the localised extent of the construction activity the effect would remain slight adverse, as per the 2018 LVIA and not significant.	Negligible adverse LA107 criteria for negligible adverse is assessed as remaining applicable.	Neutral The LA104 methodology would result in a slight adverse effect. Like the 2018 LVIA this is not significant.	Negligible adverse LA107 criteria for negligible adverse is assessed as remaining applicable.	Neutral The LA104 methodology would result in a slight adverse effect. Like the 2018 LVIA this is not significant.

Landscape Receptor	Sensitivity	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
		disruption to the visual unity across the valley floor. Additionally, opportunities for new hedgerow planting adjacent to WST04 respond positively to the management strategy to considering opportunities for replanting. The magnitude of impact would therefore on balance be a barely noticeable change to the character area. Operation Year 15 (summer) At Year 15, the planting around the abutments would have matured and seeded areas would be established, thereby softening the approach embankments. The impact would however remain, due to the permanence of the proposed scheme.						
LCA A2 Upper Avon Narrow Chalk River Valley	High The receptor is assessed as remaining at high sensitivity. In accordance with LA107 the receptor contains designated areas, as well as features with a limited ability to accommodate change.	The assessment would reflect that of 5D: Upper Avon.	Negligible Adverse The LA107 definition for negligible adverse remains applicable.	Neutral LA104 results in a slight adverse effect, via the combination of high sensitivity and negligible adverse impact. As per the 2018 LVIA, this remains not significant.	No Change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect, which as per the 2018 LVIA is not significant.	No Change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect, which as per the 2018 LVIA is not significant.
LCT B: Broad Chalk River Valley Slopes	High The receptor is assessed as remaining at high sensitivity. In accordance with LA107 the receptor consists of distinctive features with a limited ability to accommodate change.	The proposed scheme would not directly or indirectly impact this LCA at either the construction or operational phases. The magnitude of landscape impact will be no change.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect, which as per the 2018 LVIA is not significant.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect, which as per the 2018 LVIA is not significant.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect, which as per the 2018 LVIA is not significant.
LCA B1 Wylye Broad Chalk River Valley Slopes	High The receptor is assessed as remaining at high sensitivity. In accordance with LA107 the receptor consists of distinctive features with a limited ability to accommodate change.	The proposed scheme would not directly or indirectly impact this LCA at either the construction or operational phases. The magnitude of landscape impact will be no change.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect, which as per the 2018 LVIA is not significant.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect, which as per the 2018 LVIA is not significant.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect, which as per the 2018 LVIA is not significant.
LCT D: Chalk Grassland	High The LCT contains low density settlement, military land uses and is covered in part by the WHS. Therefore, the sensitivity is	Construction (winter) The majority of the construction activity would be located within this LCT, with the exception of the River Till viaduct within the River Till valley and the utility connections across the River Avon.	Negligible adverse The LA107 definition for negligible adverse is	Slight adverse LA104 retains a slight adverse effect, mirroring that of the 2018 LVIA, with the	Negligible beneficial The LA107 definition for negligible beneficial is	Neutral LA104 would increase the effect to slight beneficial.	Negligible beneficial The LA107 definition for negligible beneficial is	Neutral LA104 would increase the effect to slight beneficial.

Landscape Receptor	Sensitivity	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
	assessed as remaining high.	The construction activity within the WHS would be limited to the excavation of the retained cutting, implementation of the long bridge, and tunnel canopies. The contractor compounds and stockpile areas would not be located within the WHS, nor the more sensitive landscape areas of chalk grassland within the LCT. The existing A303 would remain operational during the construction phase, thereby retaining the existing transport linkages across the character area. The key characteristics of the LCT being a very large scale and open landscape would remain during construction, with any loss of field patterns or vegetation being very minor and localised in scale. The impact of the construction phase would also be lessened by it being consolidated to a part of the LCT which is already characterised by the A303. Operation Year 1 (winter) In operation, the proposed scheme would visually remove vehicles from the majority of the WHS via the long bridge, retained cut and the tunnel. The proposed scheme would retain the key characteristics of a very large scale and open, exposed landscape, rolling landform and panoramic views, by being located in tunnel or false cutting and sympathetically regrading existing landform into the surrounding landscape. Operation Year 15 (summer) The main change by year 15 would be the establishment of the new planting and areas of chalk grassland. This would reinforce the key characteristics of the LCT and the landscape connectivity. Due to the permanence of the proposed scheme, the impacts would remain as stated for year 1,	assessed as remaining applicable.	effect being not significant.	assessed as remaining applicable.	This is not significant.	assessed as remaining applicable.	This is not significant.
LCA D2 Tilshead Chalk Downland	High The sensitivity is assessed as remaining high due to designated areas across the LCA, distinctive features and a strong sense of place, with a limited ability to accommodate change.	Construction (winter) During construction there will be notable disruption to the landform, landscape pattern, and tranquillity at a local level within the proposed scheme boundary. There would be extensive re-grading works across the land east of Parsonage Down National Nature Reserve, as well as localised earthworks along the length of the proposed scheme to create embankments, cuttings and false cuttings. Additionally, there would be new haul roads, temporary compounds and storage of materials. The construction phase in relation to the extent of the character area would therefore results in slight damage to the character area. Operation Year 1 (winter) The new earthworks associated with the proposed scheme would be reflect the existing rolling landform across Parsonage Down and the land to the east of Parsonage Down NNR, where the dry valley landform would be retained There would be adverse impacts associated with the upgrading of the A303 to dual carriageway within the rural landscape, and a localised reduction in tranquillity in the landscape across the land to the east of Parsonage Down NNR. This would be balanced with beneficial impacts associated with the recreation of substantial areas of characteristic chalk grassland, the	Minor adverse The LA107 definition for negligible adverse remains applicable.	Slight adverse LA104 allows for professional opinion to consider whether the effect is slight adverse or moderate adverse. Professional judgement considers that due to the localised extent of the construction activity the effect would remain slight adverse, as per the 2018 LVIA and not significant.	Negligible adverse The LA107 definition for negligible adverse remains applicable.	Slight adverse LA104 allows for professional opinion to consider whether the effect is slight adverse or moderate adverse. Professional judgement considers that due to the localised extent of the construction activity the effect would remain slight adverse, as per the 2018	No change The LA107 definition for no change remains applicable.	Neutral LA104 retains a neutral effect, which as per the 2018 LVIA is not significant.

Landscape Receptor	Sensitivity	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
		planting of hedgerows, as well as maintain views across the chalk downland, in response to the published management objectives of the LCA, improved recreational access as a result of green bridges, and reduced landscape severance. The existing A303 would be down-graded west of Scotland Lodge Farm, and the B3083 would be slightly re-aligned beneath the new A303 which will be on over bridge. The balance between these beneficial and adverse impacts is therefore assessed as resulting in a barely noticeable change to the character area. Operation Year 15 (summer) At Year 15, the areas of chalk grassland that were bare chalk in Year 1 would have established, reducing the perception of disturbed landform to the east of Parsonage Down NNR. Similarly, the. Areas of tree planting around Scotland Lodge Farm and north of Green Bridge no1, and sections of hedgerow and tree planting around the re-aligned B3083 would have matured, integrating the proposed scheme with the existing landscape. The magnitude of landscape impact to the character area is therefore assessed as no change due to the balance between the beneficial and adverse impact of the scheme, as there would be no noticeable loss to the character area.				LVIA and not significant.		
LCA D3 Larkhill Chalk Downland	High As LCA D3 covers the WHS, as well as landscapes outside of the WHS and parts of Larkhill the sensitivity is assessed as remaining high, as there is a limited ability to accommodate change.	Construction Phase (winter) During construction there will be disruption to the land use of the LCA, with construction activity prominent in the vicinity of the construction compounds, Slurry Treatment Plant and associated haul roads, Longbarrow Junction, retained cut, the implementation of the long bridge, the Western Portal and approach, Eastern Portal and approach, and Rollestone Junction. There will also be further disruption within the WHS as a result of the decommissioning of the existing A303. The engineering works within this LCA would be localised area to a part of the LCA which is already influenced by the existing A303. The openness of the landscape and dramatic views would be somewhat disturbed as a result of the combined impact of the extensive construction compounds and construction of the Longbarrow Junction Overall the scale of the construction activity would result in a slight damage to the character area during construction and variance with characteristic features. Operation Year 1 (winter) There would be beneficial landscape effects across the WHS as a result of putting the A303 into tunnel, beneath the long bridge. This would also reduce the severance effect of the existing A303, increase tranquillity within the WHS, and enable new recreational access and the physical pattern and visual connectivity of the landscape to be restored. This would be balanced with adverse impacts arising from the increased extent of highways infrastructure at the Longbarrow Junction and west of the A360, the technical addition of the highways infrastructure and associated signage. The regraded earthworks are considered to be sympathetically regraded into the landscape, which in combination with the return of land to agriculture reduces the impact to the existing landform.	Minor adverse The LA107 definition for minor adverse remains applicable.	Slight adverse LA104 allows for professional opinion to consider whether the effect is slight adverse or moderate adverse. Professional judgement considers that due to the localised extent of the construction activity the effect would remain slight adverse, as per the 2018 LVIA and not significant.	Negligible beneficial The LA107 definition for negligible beneficial remains applicable.	Slight beneficial For these beneficial effects at year 1 the extent and perception of the change would be localised and therefore would not alter the wider character of the LCA. Therefore, the effect would remain non-significant as per the 2018 LVIA.	Minor beneficial The LA107 definition for minor beneficial remains applicable.	Slight beneficial For these beneficial effects at year 1 the extent and perception of the change would be localised and therefore would not alter the wider character of the LCA. Therefore, the effect would remain non-significant as per the 2018 LVIA.

Landscape Receptor	Sensitivity	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
		On balance, the proposed scheme is considered to enable a sense of place to be restored and the characteristics of the LCA to be maintained. Operation Year 15 (summer) At Year 15, the extensive areas of re-graded land would be fully integrated by the establishment of the chalk grassland. Tree planting around Longbarrow Junction would have matured, reducing the perception of highway infrastructure from parts of the surrounding landscape. Hedgerows alongside the road, combined with false cuttings would visibly and audibly reduce the impact of vehicles at the A360 tie-ins. The proposed scheme would respond positively to a number of published management objectives for the LCA, including maintaining open dramatic views across the chalk downland towards landscape features such as Stonehenge, replanting hedgerows, and conserving tranquillity. The impact of the proposed scheme is considered to remain as per the year 1 assessment						
LCA D4 Boscombe Down Chalk Downland	High The sensitivity is assessed as remaining high due to designated areas across the LCA, distinctive features and a strong sense of place, with a limited ability to accommodate change.	Construction (Winter) During construction, the very small scale or the activity at the eastern part of the proposed scheme boundary would not result in a noticeable change to the character area. Operation Year 1 (winter) There would be no noticeable change to the character area in operation. Operation Year 15 (summer) There would be no noticeable change to the character area at year 15, reflecting the year 1 assessment.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect, which as per the 2018 LVIA is not significant.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect, which as per the 2018 LVIA is not significant.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect, which as per the 2018 LVIA is not significant.
Cranborne Chase and West Wiltshire Downs AONB Landscape Character Areas from the Cranborne Chase and West Wiltshire Downs AONB Integrated Landscape Character Assessment (2003)								
LCA 5A Wylye River Valley	High As the receptor is within the AONB, the sensitivity would remain high.	The proposed scheme would not directly or indirectly impact this LCA at either the construction or operational phases. The magnitude of landscape impact will be no change.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect, which as per the 2018 LVIA is not significant.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect, which as per the 2018 LVIA is not significant.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect, which as per the 2018 LVIA is not significant.
Local Landscape Character Areas defined by Field Work								
LCA 01 North Berwick Down	High The sensitivity is assessed as remaining high due to designated areas across the LCA, distinctive features and a strong sense of place, with a limited ability to accommodate change.	Construction (winter) During construction, there would be direct impacts on the LCA as a result of localised changes to landform via deep cutting, topsoil storage locations, temporary construction vehicles on the haul roads, construction of a green bridge over the new A303 between Scotland Lodge Farm and Parsonage Down. The construction activity would be located within the south of the LCA in close proximity to the existing A303, thereby physically consolidating the impact to a part of the character area which is already influenced by the	Moderate adverse The LA107 definition for moderate adverse is assessed as remaining applicable.	Moderate adverse LA104 allows for professional opinion to consider whether the effect is moderate	Minor adverse The LA107 definition for minor adverse is assessed as remaining applicable.	Slight adverse LA104 allows for professional opinion to consider whether the effect is slight	Negligible Adverse The LA107 definition for negligible adverse is assessed as remaining applicable.	Slight adverse LA104 allows for professional opinion to consider whether the effect is slight

Landscape Receptor	Sensitivity	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
		existing A303 and reducing the impact to the tranquillity across the remainder of the LCA. The key features of Yarnbury Camp and Parsonage Down NNR would not be directly impacted upon by the construction activity as it is not physically located within these areas; however it would be perceived from within the character area, in addition to construction activity to the east of the character area, across the River Till Valley and Foredown. The construction activity would therefore result in slight damage to the character area. Operation Year 1 (winter) At Year 1, the design of the earthworks and re-profiled contouring would aid in sympathetically integrating the new A303 into the existing rolling landform across the character area, such that there would not be a loss of the rolling landform. The new chalk grassland across the 1m bunds adjacent to the new A303, green bridge no.1, and parts of the land to the east and south of Parsonage Down NNR would be largely bare chalk at this stage, representing a slight loss to the agricultural field coverage. The extent of highways infrastructure would be increased up to the tie-in with the existing A303. Therefore a new dual carriageway would be introduced through a very small part of the LCA, localised to the southern part of the LCA, which is already influenced by the existing A303. The key characteristics of the LCA, including its strong sense of openness and exposure would not be adversely impacted as the new A303 would be principally in cutting. There would also be new recreational opportunities within the LCA through the NMU routes and connections to Winterbourne Stoke via green bridge no.1 and the land east of Parsonage Down NNR. The impact is therefore a balanced between the introduction of the dual carriageway, which in itself is sympathetically integrated into the character area and the change in land use, with the new recreational opportunities and the new extent of chalk grassland, albeit which has not fully established. The proposed scheme is therefore assessed as resulting in a slight damage to the character area. Operation Year 15 (summer) At Year 15, the chalk grassland would have established, further softening the impact of the earthworks and reinforcing local characteristics across the character area, including physically extending the character of the NNR southwards towards the new A303 and Scotland Lodge Farm, as well as southwards from the access lane to Cherry Lodge Farm. Whilst the new A303 would remain, the integration of the proposed scheme into the landscape through the establishment of the chalk grassland and new woodland planting would reduce the impact of the new A303, such that the character of the area would be maintained and enable the sense of place to be retained.		adverse or large adverse. Professional judgement considers that the effect would remain moderate, which remains significant, as per the 2018 LVIA.		adverse or moderate adverse. Professional judgement considers that due to the localised extent of the Scheme within LCA 01 the effect would remain slight adverse, as per the 2018 LVIA and not significant.		adverse or moderate adverse. Professional judgement considers that due to the localised extent of the Scheme within LCA 01 the effect would remain slight adverse, as per the 2018 LVIA and not significant.
LCA 02 Parsonage Down Dry Valley	Medium As the LCA is covered by a local landscape designation and there is some sense of place and	Construction (winter) During construction, there would be direct impacts on the LCA as a result of the realignment of the B3083, construction of the new highway and earthworks, and tunnel spoil deposition at Parsonage Down.	Major adverse The LA107 definition for major adverse is assessed as	Large adverse LA104 allows for professional opinion to consider	Moderate adverse The LA107 definition for moderate	Moderate adverse LA104 retains a moderate	Minor adverse The LA107 definition for minor	Slight adverse The LA104 methodology would retain

Landscape Receptor	Sensitivity	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
	the ability to accommodate some change, the sensitivity is assessed as remaining medium.	The construction would require a substantial embankment formation as it crosses the southern part of the LCA. There would be further re-grading operations across the eastern part of the character area as the existing topsoil is removed to enable chalk tunnel spoil to be deposited across the land east of Parsonage Down. Chalk tunnel spoil would arrive via the haul road and be deposited from dump trucks before being re-graded to follow existing contours. The existing B3083 would be re-aligned to cross the eastern edge of the character area. The false cuttings would be continued along each side of the highway, graded into the landform to avoid the appearance of bunds. Tranquillity would be substantially reduced within the eastern part of the character area as the spoil deposition is undertaken. The construction activity would therefore result in large scale damage to the character area. Operation Year 1 (winter) At Year 1, the new earthworks would be largely bare chalk whilst grass seed establishes. There would be young hedgerow planting alongside the realigned B3083, also incorporating belts of trees. There would also be woodland planting between existing woodland at Scotland Lodge Farm and the new A303. As the deposition of the chalk arisings would have been sympathetically integrated within the existing rolling landform across the eastern part of the character area, the perceived changes to the landform would be reduced; similarly the drainage infiltration area would be integrated into the low lying dry valley floor. The new fencing across the dry valley floor would reflect the scale of existing fencing in the character area, however slightly be at variance to the open pattern of the landscape. Tranquillity would be noticeably impacted within the dry valley as a result of the new A303 and that vehicles would be visually and audible perceived. Perception of vehicles on the realigned B3083 is considered to reflect the existing perception of vehicles on this road. The impact to the character area is therefore a balance between the beneficial change in land use from largely intensive agriculture to new chalk grassland, albeit not established and the introduction of the new A303 and reduction in tranquillity, resulting in uncharacteristic noticeable features. Operation Year 15 (summer) At Year 15, tree planting would have matured along the B3083 and north of Scotland Lodge Farm creating a sense of enclosure, and reducing the scale of the new highway infrastructure. The chalk grassland would have established, reinforcing local character and improving the opportunities for biodiversity compared to the intensive agricultural land use. The pattern of the rolling landform and dry valley would continue to be retained through the settled state of the new earthworks. These beneficial changes are balanced with the continued presence of the new A303, and change to the tranquillity, as vehicles would remain visible and audible, being on embankment at the southern part of the character area, such that the impact of the proposed scheme is assessed as a slight loss to the existing character of LCA 02.	remaining applicable.	whether the effect is moderate adverse or large adverse. Professional judgement considers that the effect would remain large adverse and significant, as per the 2018 LVIA.	adverse is assessed as remaining applicable	adverse effect which is significant.	adverse is assessed as remaining applicable	the slight adverse effect which like the 2018 LVIA is not significant.

Landscape Receptor	Sensitivity	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
LCA 03 South Berwick Down	High The sensitivity is assessed as remaining high due to the distinctive features and a strong sense of place, with a limited ability to accommodate change.	Construction (winter) During construction, the proposed scheme would have a minimal direct impact on this LCA, with the construction footprint along the alignment of the existing A303 where the proposed scheme ties in to the existing highway. The impact of construction activity would therefore be so small such that there would be no noticeable loss or alteration to the character area. Operational Phases At Year 1 and Year 15 of operation, there would be no noticeable change to the characteristics of the LCA as the proposed scheme would reflect the character of the existing A303, forming the northern edge of the character area. The magnitude of landscape impact is therefore assessed as no change during the operational phases.	Negligible adverse The LA107 definition for negligible adverse is assessed as remaining applicable.	Slight adverse LA104 retains the slight adverse effect, which as per the 2018 LVIA is not significant.	Negligible beneficial The LA107 definition for negligible beneficial is assessed as remaining applicable.	Slight beneficial LA104 retains a slight beneficial effect, which as per the 2018 LVIA is not significant.	Negligible beneficial The LA107 definition for Negligible Beneficial is assessed as remaining applicable.	Slight beneficial LA104 retains a slight beneficial effect, which as per the 2018 LVIA is not significant.
LCA 04 Upper Till Valley Slopes	Medium With LA107 and the judgement given to the ability of the landscape receptor to accommodate change, the sensitivity would increase to High.	Construction (winter) During construction, there would be direct impacts on the LCA as a result of the construction of the Till viaduct abutments and approaches, operation of a haul road, spoil storage in the east of the Till valley, and earthworks associated with the new highway. There would be notable earthworks operations along the alignment of the proposed scheme, as sections of cutting and embankment are formed and graded into the existing landform. The topsoil storage location and contractor compound, including fencing and lighting, in the west of the Till valley, alongside the B3083, would also partially disrupt the gently rolling landform and open character of this part of the valley sides. The impact to the local character area would therefore be noticeable. Operation Year 1 (winter) In operation, there would be an increase in highway infrastructure, and associated features including MS 4 signage on the eastern approach to the River Till viaduct. The grading of the earthworks, including false cuttings would aid in integrating the new A303 into the landform of the valley sides as far as possible. The new earthworks would be largely bare chalk before prior to the establishment of the agricultural crop, or chalk grassland seeding. Tree planting would around the Till viaduct abutments would be small in height at this stage. There would be a slight reduction in tranquillity at a local level, although tranquillity is already adversely impacted at a local level by traffic along the existing A303. Drainage infiltration areas would be integrated into the landform; although their associated fencing would not quite fit the open character or rolling landform. The proposed scheme would represent additional new noticeable features within the southern part of the character area. Operation Year 15 (summer) At Year 15, the planting around the abutments would have matured to soften and further integrate the approach embankments to the viaduct and land returned to agriculture or seeded as new chalk grassland would have established. The scale and perception of the highway infrastructure would be therefore reduced, such that the proposed scheme would represent a slight loss of characteristic features.	Major adverse The LA107 definition for major adverse is assessed as remaining applicable.	Large adverse LA104 allows for professional opinion to consider whether the effect is large adverse or very large adverse. Professional judgement considers that the effect would remain large adverse, which remains significant, as per the 2018 LVIA.	Moderate adverse The LA107 definition for moderate adverse is assessed as remaining applicable.	Moderate adverse LA104 allows for professional opinion to consider whether the effect is moderate adverse or large adverse. Professional judgement considers that the effect would remain moderate adverse, which remains significant, as per the 2018 LVIA.	Minor adverse The LA107 definition for minor adverse is assessed as remaining applicable.	Slight adverse LA104 allows for professional opinion to consider whether the effect is slight adverse or moderate adverse. Professional judgement considers that the effect would remain slight adverse, due to the changes in landform and land use remaining localised physical changes within the character area and that the establishment of the proposed planting would reduce the

Landscape Receptor	Sensitivity	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
								perception of the Scheme. which remains not significant, as per the 2018 LVIA.
LCA 05 Upper Till Floodplains and Meadows	High The sensitivity is assessed as remaining high due to the distinctive features and a strong sense of place, with a limited ability to accommodate change.	Construction (winter) During construction, there would be noticeable disruption to the distinctive landscape pattern of the floodplain, as well as a notable reduction in the tranquillity resulting from construction of the River Till viaduct, and a temporary haul road. The haul road would be on embankment and the temporary crossing to the River Till would be via a temporary bridge (e.g. Bailey bridge). Both would disrupt the pattern of the flat landform within the valley floor with several individual river side trees being removed. The tranquillity in the southern part of the character area would be disturbed by the construction activity, in combination with the vehicles on the existing A303. The construction phase would therefore be at considerable variance to the exiting character and a partial loss to the existing character. Operation Year 1 (winter) At Year 1 of operation, land returned to existing use, following removal of the haul road would have been seeded but would not yet have established. The Till viaduct would represent an uncharacteristic feature within the Till valley, introducing new massing, The elevated design and supporting piers, would limit any direct physical impact to the valley floor and therefore retain the landscape pattern. The split-deck design of the bridge would allow light to reach the valley floor, and there would be new planting within the existing hedgerow adjacent to byway WST04. There would be a reduction in tranquillity within the character area due to the repositioning of the A303 from crossing the River Till within Winterbourne Stoke, to crossing the floodplain via an elevated viaduct. This change is balanced with an increase in tranquillity along the alignment of the existing A303 at the southern edge of the character area, as well as the retained use of recreational routes and the open character of the valley, via the permeability beneath the viaduct. The proposed scheme would therefore represent a noticeable feature within the character area. Operation Year 15 (summer) At Year 15, the new planting within the hedgerow would have established to strengthen the characteristic vegetation patterns, with the split deck structure of the viaduct retaining the vegetation on the valley floor through letting light onto the ground. The continued presence of the River Till Viaduct would however retain the impact as per year 1 of operation.	Major Adverse The LA107 definition for major adverse is assessed as remaining applicable.	Very Large adverse LA104 allows for professional opinion to consider whether the effect is large adverse or very large adverse. Professional judgement considers that the effect would remain very large adverse, which remains significant, as per the 2018 LVIA.	Moderate adverse The LA107 definition for moderate adverse is assessed as remaining applicable.	Large adverse LA104 allows for professional opinion to consider whether the effect is large adverse or very large adverse. Professional judgement considers that the effect would remain large adverse, which remains significant, as per the 2018 LVIA.	Moderate adverse The LA107 definition for moderate adverse is assessed as remaining applicable.	Large adverse LA104 allows for professional opinion to consider whether the effect is large adverse or very large adverse. Professional judgement considers that the effect would remain large adverse, which remains significant, as per the 2018 LVIA.
LCA 06 Lower Till Valley Slopes	High The sensitivity is assessed as remaining high due to the distinctive features and a strong sense of place, with a	Neither the construction activity, nor the Scheme would be located directly within the character area. There would be the perception of the construction activity and similarly the perception of the reduction in vehicles following the implementation of the Scheme.	Minor adverse The LA107 definition for minor adverse is assessed as	Slight adverse LA104 retains the slight adverse effect, which as per	Minor beneficial The LA107 definition for minor beneficial is	Slight beneficial LA104 retains the slight	Minor beneficial The LA107 definition for minor beneficial is	Slight beneficial LA104 retains the slight

Landscape Receptor	Sensitivity	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
	limited ability to accommodate change.		remaining applicable.	the 2018 LVIA is not significant LA104 allows for professional opinion to consider whether the effect is slight or moderate adverse. Professional judgement considers that the effect would remain slight adverse, as there is no physical change to the landscape features of the LCA and therefore its perception of the Scheme. This therefore remains significant, as per the 2018 LVIA.	assessed as remaining applicable.	beneficial effect, which as per the 2018 LVIA is not significant LA104 allows for professional opinion to consider whether the effect is slight or moderate adverse. Professional judgement considers that the effect would remain slight adverse, as there is no physical change to the landscape features of the LCA and therefore its perception of the Scheme. This therefore remains significant, as per the 2018 LVIA.	assessed as remaining applicable.	beneficial effect, which as per the 2018 LVIA is not significant LA104 allows for professional opinion to consider whether the effect is slight or moderate adverse. Professional judgement considers that the effect would remain slight adverse, as there is no physical change to the landscape features of the LCA and therefore its perception of the Scheme. This therefore remains significant, as per the 2018 LVIA.
LCA 07 Lower Till Floodplains and Meadows	High The sensitivity is assessed as remaining high due to the distinctive features and a strong sense of place, with a limited ability to accommodate change.	Neither the construction nor operational phases of the proposed scheme are directly located within the LCA; nor would they be perceived due to the intervening landform and vegetation. The construction and operational phases would therefore not result in any loss to the character area.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect, which as per the 2018 LVIA is not significant.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect, which as per the 2018 LVIA is not significant.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect, which as per the 2018 LVIA is not significant.
LCA 08 Wylye Valley Sides	High The sensitivity is assessed as remaining high due to the distinctive	Neither the construction nor operational phases of the proposed scheme are directly located within the LCA; nor would they be perceived due to the intervening landform and vegetation. The construction and operational phases would therefore not result in any loss to the character area.	No change The LA107 definition for no change is	Neutral LA104 retains a neutral effect, which as per	No change The LA107 definition for no change is	Neutral LA104 retains a neutral effect,	No change The LA107 definition for no change is	Neutral LA104 retains a neutral effect,

Landscape Receptor	Sensitivity	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
	features and a strong sense of place, with a limited ability to accommodate change.		assessed as remaining applicable.	the 2018 LVIA is not significant.	assessed as remaining applicable.	which as per the 2018 LVIA is not significant.	assessed as remaining applicable.	which as per the 2018 LVIA is not significant.
LCA 09 Lesser Cursus and the Packway Ridges	High As the receptor covers the WHS at the local scale, the sensitivity would increase to very high.	Construction (winter) During construction, there would be direct impacts on the LCA as a result of construction of the new Rollestone Junction. Construction activity would be small scale and at an existing road junction, which already defines the character to this part of the open and exposed characteristics of the LCA. The construction phase would therefore result in a barely noticeable loss to the existing character of the area, but one where the construction activity does not quite fit the character of the landscape Operation Year 1 (summer) At Year 1, the junction upgrades would be complete and whilst altering the linear form of the A360, it would reflect the character of an existing junction in this part of the character area. There would be areas of bare chalk within the new junction where chalk grassland would not yet be established. The proposed scheme would however maintain the character of the area. Operation Year 15 (summer) At Year 15, the chalk grassland within the junction would have established, thereby integrating the proposed scheme further. The overall scale of the change in the landscape would remain very small and reflective of the existing character.	Moderate adverse The LA107 definition for moderate adverse is assessed as remaining applicable.	Moderate adverse LA104 allows for professional opinion to consider whether the effect is large adverse or very large adverse. Professional judgement considers that the effect would be large adverse, which remains significant, as per the 2018 LVIA.	Minor adverse The LA107 definition for minor adverse is assessed as remaining applicable.	Slight adverse LA104 allows for professional opinion to consider whether the effect is moderate adverse or large adverse. Professional judgement considers that the effect would be moderate adverse, which is a new significant adverse effect	Negligible adverse The LA107 definition for negligible adverse is assessed as remaining applicable.	Slight adverse LA104 allows for professional opinion to consider whether the effect is moderate adverse or large adverse. Professional judgement considers that the effect would be moderate adverse, which is a new significant adverse effect.
LCA 10 Winterbourne Stoke Dry Valleys	Medium As the receptor covers a very small part of the WHS at the local level and the sensitivity would increase to high.	Construction (winter) During construction, there would be direct impacts within the very southern part of the LCA as a result of the tunnel construction compound, and construction of the new highway, green bridge, drainage infiltration areas, and earthworks. The tunnel construction compound would include a slurry treatment plant; spoil storage, tunnel segment production plant 20m in height, and tunnel segment storage area. The compound would be enclosed by security fencing and would include floodlights to allow 24 hour operations. The location of the compound within the dry valley landform and southern part of the LCA reduces its prominence and perception from across the remainder of the LCA, and as such no landscaped bunds are proposed around the facility. There would be substantial earthworks along the alignment of the proposed scheme temporary closure or diversion of byway WST06B and localised loss of trees and hedgerows from the field boundaries. The construction impact would therefore result in partial loss to the existing character area Operation Year 1 (winter) At Year 1, the false cuttings would sympathetically incorporate the new A303 into the landform of the dry valley. The earthworks would be largely bare chalk before being returned to agriculture. Green bridge no.2 would cross the highway, retaining existing recreational access along byway	Moderate adverse The LA107 definition for moderate adverse is assessed as remaining applicable.	Moderate adverse LA104 allows for professional opinion to consider whether the effect is moderate adverse or large adverse. Professional judgement considers that the effect would remain moderate adverse, which remains significant, as per the 2018 LVIA.	Minor adverse The LA107 definition for minor adverse is assessed as remaining applicable.	Slight adverse LA104 allows for professional opinion to consider whether the effect is moderate adverse or slight adverse. Professional judgement considers that the effect would remain slight adverse, because it is the very small	Minor adverse The LA107 definition for minor adverse is assessed as remaining applicable.	Slight adverse LA104 allows for professional opinion to consider whether the effect is moderate adverse or slight adverse. Professional judgement considers that the effect would remain slight adverse, because it is the very small

Landscape Receptor	Sensitivity	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
		WST06B, reducing any potential severance effect of the new A303. The new dual carriageway and extent of highway infrastructure would represent a slight loss of existing fields from the southern part of the character area and that the character area is now crossed by the new A303, as opposed to being bordered by it. However, in the scale of the character area, the impact is considered slight. Operation Year 15 (summer) At Year 15, chalk grassland would have established, further integrating the earthworks and new A303 with landform. The new planting adjacent to byway WST06B would have established, increasing the vegetated structure of the field boundary. Due to the continued presence of the new road, the impact of the scheme would retain a slight loss to the character area.				physical change to the landscape and the localised perception of the scheme, given the valley landform across the LCA. This is also balanced with the influence of the existing A303 and A360 already and that Longbarrow will be in cutting. Therefore, the effect remains not significant, as per the 2018 LVIA.		physical change to the landscape and the localised perception of the scheme, given the valley landform across the LCA. This is also balanced with the influence of the existing A303 and A360 already and that Longbarrow will be in cutting. Therefore, the effect remains not significant, as per the 2018 LVIA.
LCA 11 Oatlands Hill	Medium At the local scale, a small part of the LCA is within the WHS, which along with the remainder forming part of its setting would increase the sensitivity to high.	Construction (winter) During construction, there would be direct landscape impacts within the LCA as a result of the main construction compound west of the A360, as well as the Slurry Treatment Plant to the north of the existing A303. This compound would be enclosed with security fencing and would include discrete floodlights to allow 24 hour operations. There would be excavation as a result of the construction of the new Longbarrow Junction, and the re-alignment of the A360 on the southern approach to the new Longbarrow Junction. There would be substantial earthworks and engineering works in the construction of the new Longbarrow Junction, with the new A303 in cutting and the new roundabouts at-grade, and construction of green bridge no.3. There would also be impacts through the retained cut and construction of long bridge and the western portal at the western edge of the character area. Tranquillity would be reduced across the LCA and there would be a large scale disruption to landscape pattern. The impact during construction is therefore assessed as major adverse. Operation Year 1 (winter)	Major adverse The LA107 definition for major adverse is assessed as remaining applicable.	Large adverse LA104 allows for professional opinion to consider whether the effect is large adverse or very large adverse. Professional judgement considers that the effect would remain large adverse, which remains significant, as per the 2018 LVIA.	Moderate adverse The LA107 definition for moderate adverse is assessed as remaining applicable.	Moderate adverse LA104 allows for professional opinion to consider whether the effect is large adverse or moderate adverse. Professional judgement considers that the effect would remain moderate adverse, which remains	Minor adverse The LA107 definition for minor adverse is assessed as remaining applicable.	Slight adverse LA104 allows for professional opinion to consider whether the effect is moderate adverse or slight adverse. Professional judgement considers that the effect would remain slight adverse, due to the

Landscape Receptor	Sensitivity	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
		At Year 1, the scale of the new Longbarrow Junction and its associated highway infrastructure would be notably greater than the existing Longbarrow Roundabout. The earthworks around the junction and the A360 tie-in would be an apparent change to the landform, but graded to sympathetically to respect the landform. The two roundabouts would be partially in cutting to reduce the prominence of traffic and highway infrastructure from the surrounding landscape, but would still be perceived from elevated parts of the character area. New hedgerows along the A360 north and south would be low in height, similar to the woodland copses around the Longbarrow Junction. There would be notable new areas of chalk grassland created to reinforce local character, although much of these areas would be bare chalk. The new Longbarrow Junction would not require street lighting, and the removal of street lighting from the existing Longbarrow Roundabout is considered a beneficial change to the character area. Green bridge no.3 across Longbarrow Junction will reduce the scale of the cutting and the severance effect of the dual carriageway. New public rights of way will increase recreational opportunities through the area and broader access between Winterbourne Stoke and the WHS. This is balanced with increased highways signage within the character area. The magnitude of landscape impact is therefore assessed as partial loss of existing features. Operation Year 15 (summer) By year 15, the new hedgerow, woodland planting and chalk grassland would have established, aiding to reflect and enhance the existing landscape pattern, and reduce the scale of Longbarrow Junction and its associated signage. This is balanced with the continued presence of Longbarrow Junction and retained cutting across the character area. The impact is assessed as a slight loss of existing features.				significant, as per the 2018 LVIA.		change occurring in the lower lying parts of the LCA, where there is already the A303, rather than across the more elevated and representative landform of the hill. With Longbarrow in cutting the perception of the road would mirror that of Longbarrow roundabout, but with an improved vegetation structure and recreational connectivity. Therefore, the effect remains not significant, as per the 2018 LVIA.
LCA 12 Stapleford Down	High As a small part of the receptor is within the WHS and the remainder of the LCA covers a landscape with distinctive features, the sensitivity would remain high.	The Proposed Scheme would consist of the NMU routes.	Minor adverse The LA107 definition for minor adverse is assessed as remaining applicable.	Slight adverse LA104 allows for professional opinion to consider whether the effect is slight or moderate adverse. Professional judgement considers that the effect would remain as slight due to the localised and small scale	Minor beneficial The LA107 definition for minor beneficial is assessed as remaining applicable.	Slight beneficial LA104 retains a slight beneficial effect, which as per the 2018 LVIA is not significant.	Minor beneficial The LA107 definition for minor beneficial is assessed as remaining applicable.	Slight beneficial LA104 retains a slight beneficial effect, which as per the 2018 LVIA is not significant.

Landscape Receptor	Sensitivity	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
				nature of the construction. It therefore remains not significant as per the 2018 LVIA assessment.				
LCA 13 Larkhill Salisbury Plain Training Area	High As a small part of the receptor is within the WHS and the remainder of the LCA covers a landscape with distinctive features, the sensitivity would remain high.	The proposed scheme would not directly impact this LCA at either the construction or operational phases. The magnitude of landscape impact will be no change for these phases.	Negligible adverse The LA107 definition for negligible adverse is assessed as remaining applicable.	Slight adverse LA104 methodology would retain the slight adverse effect which like the 2018 LVIA is not significant.	No Change LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect, as per the 2018 LVIA, which is not significant.	No Change LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect, as per the 2018 LVIA, which is not significant.
LCA 14 Stonehenge and Normanton Ridges	High As the LCA is predominantly within the WHS, the sensitivity would increase to very high.	Construction (winter) The main construction activity would be localised to the south-west part of the character area, with the removal of the existing A303 extending across a wider part of the LCA, although requiring a much smaller amount of construction machinery. During construction, there would be direct landscape impacts within the LCA as a result of construction of the deep retained cut, re-alignment of the A360 on the approach to the new Longbarrow Junction, decommissioning of the Longbarrow Roundabout and the existing A303 and implementation of the long bridge and western portal. In addition to the construction equipment there would also be solid metal fencing adjacent to the excavation to prevent workers or vehicles accidents. The main construction compound outside to the west of the WHS and the upper parts of the Slurry Treatment Plan would also be perceived from within the LCA. The combination of the direct construction within the character area and the perception of that to the west of the A360 would result in an adverse impact on the character area. Operation Year 1 (winter) At Year 1, surface traffic within the LCA will have been removed to tunnel or deep cut, including below the long bridge, resulting in large scale improvement to the tranquillity and physical and visual connectivity of the landscape. The existing A303 would be opened as a greenway, removing the severance feature from the landscape and improving recreational access. The severance effect of the deep retained cut would be reduced by the provision of the long bridge. There would be notable new areas of chalk grassland created to reinforce local character, although in Year 1 much of these areas would be bare chalk.	Major adverse The LA107 definition for major adverse is assessed as remaining applicable.	Large adverse LA104 states that the effect is very large adverse which remains significant, as per the 2018 LVIA.	Major beneficial The LA107 definition for major beneficial is assessed as remaining applicable.	Large beneficial LA104 states that the effect is very large beneficial, which remains significant as per the 2018 LVIA.	Major beneficial The LA107 definition for major beneficial is assessed as remaining applicable.	Very Large Beneficial LA104 states that the effect is very large beneficial which remains significant, as per the 2018 LVIA.

Landscape Receptor	Sensitivity	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
		The landscape pattern at the western edge of the character would be improved by the removal of the existing A360 and reversion to recreational access. Similarly, the removal of the existing Longbarrow Roundabout would be a beneficial change including for removing a lighting source. The physical and perceived removal of vehicles from the existing A303 is therefore assessed as a noticeable improvement to the character area and one which would enhance the character of the landscape. Operation year 15 (summer) At Year 15, areas of chalk grassland would have established on the upper one third of the retained cut and along the new restricted byways and existing A303. This establishment would further integrate the scheme within the character area and enable large scale improvement, enabling the sense of place to enhanced.						
LCA 15 Springbottom and Woodford Dry Valleys	High As the LCA is within the WHS, the sensitivity would increase to very high.	Construction (winter) During construction, there would be direct landscape impacts within the LCA as a result of construction of the Western Portal and canopy, deep retained cut, and decommissioning of the existing A303 and reversion to a greenway. There would be excavation and construction activity in the vicinity of the Western Portal, although spoil would be removed via the retained cutting to the construction compounds to the west of the LCA. The combination of the direct construction within the character area and the perception of that to the within the WHS would result in a slight loss to the character area. Operation Year 1 (winter) At Year 1, surface traffic within the LCA would have been removed to tunnel or deep retained cut, improving the tranquillity and the physical and visual perception of the landscape. The deep retained cut would have an adverse impact on the surface landform; however this would be balanced by its limited footprint, and grassed upper sloping banks. The canopy over the Western Portal would reflect the existing landform within the character area. Fences and signage along the new A303 would be located within the cutting to maintain the open character of the landscape The existing A303 would be opened as a green restricted byway, removing the severance feature from the landscape and improving recreational access. There would be notable new areas of chalk grassland created to reinforce local character, although in Year 1 it is anticipated much of these areas would be bare chalk. On balance, the beneficial changes to the landscape are considered to outweigh the retained cutting. The proposed scheme would therefore result in a noticeable improvement in the landscape character and enable the sense of place to be enhanced. Operation Year 15 (summer) At Year 15, the areas of chalk grassland would be established along the upper sections of retained cut and along the new restricted byway (the existing A303), to further integrate the proposed scheme within the landscape and retain the enhancement to the landscape character.	Moderate Adverse The LA definition for moderate adverse is assessed as remaining applicable	Large Adverse LA104 allows for professional opinion to consider whether the effect is large or very large. Professional judgement considers that the effect would increase to very large adverse given the increased sensitivity of the receptor. This effect remains significant, as per the 2018 LVIA.	Moderate beneficial The LA107 definition for moderate beneficial is assessed as remaining applicable.	Large beneficial LA104 allows for professional opinion to consider whether the effect is large or very large. Professional judgement considers that the effect would remain large beneficial. This effect remains significant, as per the 2018 LVIA.	Major beneficial The LA107 definition for major beneficial is assessed as remaining applicable.	Large beneficial LA104 states that the effect is very large beneficial which remains significant, as per the 2018 LVIA.

Landscape Receptor	Sensitivity	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
LCA 16 Durrington Down Larkhill Dry Valley	Medium Whilst the LLCA is in the WHS, the extent of existing development is considered to reduce the susceptibility from very high sensitivity to high sensitivity.	The proposed scheme would not have a direct impact on this LCA at either the construction or operational phases. The magnitude of landscape impact will therefore be no change during these phases.	Negligible adverse The LA107 definition for negligible adverse is assessed as remaining applicable	Slight adverse The LA104 methodology would retain the slight adverse effect which like the 2018 LVIA is not significant.	Negligible beneficial The LA107 definition for negligible beneficial is assessed as remaining applicable.	Slight beneficial LA104 retains a slight beneficial effect, which as per the 2018 LVIA is not significant.	Negligible beneficial The LA107 definition for negligible beneficial is assessed as remaining applicable.	Slight beneficial LA104 retains a slight beneficial effect, which as per the 2018 LVIA is not significant.
LCA 17 Upper Stonehenge Dry Valley	High As the LCA is within the WHS, the sensitivity would increase to very high.	Construction Phase (winter) During construction, neither the tunnelling operations nor the new A303 dual carriageway would be readily apparent from within this LCA, due to the intervening landform The decommissioning of the existing A303 and construction of the new restricted byway would have direct landscape impacts on the LCA for a short period. The construction activity required for this decommissioning would be small scale and balanced with the removal of vehicles from the existing A303 to enable the construction work; the overall impact to the LCA would be barely noticeable. Operation Year 1 (winter) At Year 1, traffic along the A303 would have been removed to tunnel and the existing A303 converted to a green restricted byway. There would be an increase in tranquillity, and the landscape pattern would be improved through the removal of the severance caused by the existing A303, as well as simultaneously increasing recreational access. The physical and visual connectivity of the landscape would be improved and the proposed scheme would result in noticeable improvement. Operation Year 15 (summer) At Year 15, the bare chalk along the new restricted byway would have established as chalk grassland, reinforcing the landscape pattern and characteristic chalk grassland within the character area.	Negligible adverse The LA107 definition for negligible adverse is assessed as remaining applicable.	Slight adverse The LA104 methodology would retain the slight adverse effect which like the 2018 LVIA is not significant.	Major beneficial The LA107 definition for major beneficial is assessed as remaining applicable.	Large beneficial LA104 states that the effect is very large beneficial which remains significant, as per the 2018 LVIA.	Moderate beneficial The LA107 definition for moderate beneficial is assessed as remaining applicable.	Large beneficial LA104 states that the effect is very large beneficial which remains significant, as per the 2018 LVIA.
LCA 18 King Barrow and Coneybury Ridge	High As the LCA is within the WHS, the sensitivity would increase to very high.	Construction (winter) During construction, the decommissioning of the existing A303 and construction of the new greenway and downgrading of Stonehenge Road would have direct landscape impacts on the LCA although localised to the existing A303. The construction at the Western Portal and Eastern Portal would be perceived; however in combination with the small amount of construction activity required to implement the greenway and vehicles no longer using the exiting A303, would result in a slight change to the character area. Operation Year 1 (winter) At Year 1, traffic along the A303 would have been removed to tunnel and the existing A303 converted to a green restricted byway. There would be a noticeable increase in tranquillity, and reconnection of the landscape pattern via the removal of the severance feature, simultaneously increasing	Moderate Adverse The LA107 definition for moderate adverse is assessed as remaining applicable.	Moderate Adverse LA104 allows for professional opinion to consider whether the effect is large or very large. Professional judgement considers that the effect would increase to very large adverse given the increased	Major beneficial The LA107 definition for major beneficial is assessed as remaining applicable.	Large beneficial LA104 states that the effect is very large beneficial which remains significant, as per the 2018 LVIA	Major beneficial The LA107 definition for major beneficial is assessed as remaining applicable.	Large beneficial LA104 states that the effect is very large beneficial which remains significant, as per the 2018 LVIA

Landscape Receptor	Sensitivity	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
		recreational access within the LCA. The impact is assessed as a notable improvement to the character area. Operation Year 15 (summer) At Year 15, the bare chalk along the new restricted byway would have established as chalk grassland, further improving the landscape pattern pf the landscape and replicating the key characteristic chalk grassland. The proposed scheme would retain the noticeable improvement to the LCA.		sensitivity of the receptor. This effect remains significant, as per the 2018 LVIA.				
LCA 19 Durrington Down Ridges	High As the LCA is within the WHS, the sensitivity would increase to very high.	Construction (winter) During construction there would be no direct impacts on this LCA as neither the proposed scheme nor the construction activity is located within this LCA. There construction of the Eastern Portal would perceived, although this is in the context of existing pylons and audible road noise within the LCA, such that the overall change to tranquillity and the character of the area is assessed as barely noticeable. Operation Phases There would be no noticeable change to the character area during the operational phases, such that the proposed scheme would retain the character and sense of place of the landscape.	Minor adverse The LA107 definition for minor adverse is assessed as remaining applicable.	Slight adverse LA104 allows for professional opinion to consider whether the effect is large adverse or moderate. Professional judgement considers that the effect would be moderate which would be a new significant adverse effect.	Minor beneficial The LA107 definition for minor beneficial is assessed as remaining applicable.	Slight beneficial LA104 would change the beneficial effect to large or moderate. Professional judgement considers the effects would be moderate beneficial which is a new significant beneficial effect.	Minor beneficial The LA107 definition for minor beneficial is assessed as remaining applicable.	Slight beneficial LA104 would change the beneficial effect to large or moderate. Professional judgement considers the effects would be moderate beneficial which is a new significant beneficial effect.
LCA 20 Countess Farm Dry Valleys	High As the LCA is within the WHS, the sensitivity would increase to very high.	Construction (winter) During construction, there would be direct impacts on the LCA as a result of construction of the tunnel Eastern Portal, canopy, and A303 approach, including the new cutting. There would be noticeable excavation and construction activity in the vicinity of the Eastern Portal, although spoil would be removed outside of the character area to a construction compound north-east of Countess Services. Tranquillity in the LCA is already reduced by the existing A303, and therefore the construction activity is not expected to have a substantial additional adverse impact on tranquillity within the LCA. The groups of trees known as the 'Nile Clumps' would be retained and protected during the construction phase by tree protection fencing. Operation Year 1 (winter) At Year 1, the new A303 would reflect the character of the exiting A303. The Nile Clumps would remain however there would be localised reduction in the vegetation from the loss of vegetation adjacent to the existing A303. Sections of cutting within the new A303 would be predominantly bare chalk as grass seeding would not yet have established. The canopy above the Eastern Portal would be graded to match the existing contours, retaining the flowing landform. In the context of the existing A303 dual carriageway in the character area, the proposed scheme would result in a barely noticeable change. Operation Year 15 (summer)	Moderate Adverse The LA107 definition for moderate adverse is assessed as remaining applicable.	Moderate adverse LA104 allows for professional opinion to consider whether the effect is large adverse or very large adverse. Professional judgement considers that the effect would increase to large adverse given the increased sensitivity of the receptor. Whilst a different effect to that of the 2018 LVIA, it remains significant as	Minor adverse The LA107 definition for negligible adverse is assessed as remaining applicable.	Slight adverse LA104 allows for professional judgement to consider whether the effect is large adverse or moderate adverse. Professional judgement considers the effects would be moderate adverse which is a new significant adverse effect.	Negligible adverse The LA107 definition for negligible adverse is assessed as remaining applicable.	Slight adverse The LA104 methodology would retain the slight adverse effect which like the 2018 LVIA is not significant.

Landscape Receptor	Sensitivity	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
		At Year 15, areas of bare chalk would have established with chalk grassland, in combination with new planting adjacent to the new cutting, thereby maintaining the existing character.		per the 2018 LVIA.				
LCA 21 Avon Valley Slopes	Medium As the LCA is partly within the WHS at the local scale, the sensitivity would increase to high.	Construction (winter) During construction, there would be direct landscape impacts as a result of the construction compound and spoil storage area north-east of Countess Services within an existing field, and the construction of the new flyover within the footprint of Countess roundabout. Trees and vegetation within the central reservation of the existing A303 and Countess Roundabout would be removed to accommodate construction of the flyover. There would be further vegetation clearance to accommodate the widening of the slip roads and associated drainage basins, including within the WHS, to the south of Countess Farm. The construction of the new flyover would be within the footprint of the existing A303 corridor, and therefore any impacts on tranquillity are considered to be lessened. In the context of the exiting A303 remaining operational during the construction phase, the construction activity would be very localised within the character area, covering areas which are not as valued in landscape terms compared to Amesbury Abbey and the landscape to the south of the existing A303. The construction activity would therefore result in a barely noticeable damage to the character area through the loss of vegetation, construction activity and temporary loss of the field to the north-west of Countess Services. Operation Year 1 (winter) The new flyover would represent a larger scale structure than the existing roundabout, being approximately 7m in height above Countess Roundabout and with retaining walls extending to the tie-ins with the existing A303. The flyover would not introduce additional lighting and would remain wholly within the corridor of the existing A303, thereby reflecting the exiting land use. The new planting adjacent to flyover would be small in height, similar to the replacement planting around the drainage basins to the south of Countess Farm. The flyover would also provide new surface level pedestrian crossings, in place of the existing underpasses, which are considered to be beneficial for the pedestrian connectivity. The scale of the flyover would therefore be an additional new feature, but one which is not uncharacteristic of the existing highways context, such that it would maintain the character of the LCA. Operation Year 15 (summer) The new tree planting around the drainage basins would have established to reflect the existing vegetated character adjacent to the roundabout. The new planting within the central part of Countess Roundabout would also have established, reducing the scale of the new flyover and reinforcing the existing wooded enclosed character, as well as aiding in improving the scenic quality to this part of Amesbury and the sense of arrival to the town., There would therefore be noticeable loss or damage to the character area.	Moderate Adverse The LA107 definition for moderate adverse is assessed as remaining applicable.	Moderate Adverse LA104 allows for professional opinion to consider whether the effect is moderate adverse or large adverse. Professional judgement considers that the effect would remain moderate adverse and therefore, remains significant as per the 2018 LVIA.	Minor adverse The LA107 definition for minor adverse is assessed as remaining applicable.	Slight adverse LA104 allows for professional opinion to consider whether the effect is moderate adverse or slight adverse. Professional judgement considers that the effect would remain slight and therefore, not significant as per the 2018 LVIA.	Negligible adverse The LA107 definition for negligible adverse is assessed as remaining applicable.	Neutral LA104 retains a neutral effect, as per the 2018 LVIA, which is not significant.

Landscape Receptor	Sensitivity	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
LCA 22 Avon Valley Floodplain and Meadows	High As the LCA is partly within the WHS at the local scale and the LA107 susceptibility criteria would limit the ability of the receptor to accommodate change, the sensitivity would increase to very high.	Construction (winter) There would be localised direct impact as a result of vegetation clearance to construct a new utilities connection with the Ratfyn Substation and vegetation clearance adjacent to the existing A303 to enable the construction of the new flyover. Both of these operations would reduce the tranquillity of the area by introducing additional activity within the character area which is noted for its more settled state. However the perception of the construction of the flyover would be limited by the intervening landform and vegetation within the character area. The loss of vegetation would be a barely noticeable change to the character area. Operation Year 1 (winter) There would be planting alongside the River Avon and the A303 to replace vegetation removed during the construction phase, although at year 1 it would low in height. Countess Flyover would be perceived at close range, although in the context of the A303, which already impacts upon the character area. The proposed scheme would therefore represent a barely noticeable change to the character area. Operation Year 15 (summer) At Year 15, the new planting would have established to reflect the existing character, such that the proposed scheme would blend in with the exiting character.	Moderate Adverse The LA107 definition for moderate adverse is assessed as remaining applicable.	Moderate Adverse LA104 allows for professional opinion to consider whether the effect is large adverse or very large adverse. Professional judgement considers that the effect would increase to large adverse given the increased sensitivity of the receptor. Whilst a different effect to that of the 2018 LVIA, it remains significant as per the 2018 LVIA.	Moderate Adverse The LA107 definition for moderate adverse is assessed as remaining applicable.	Moderate Adverse LA104 allows for professional opinion to consider whether the effect is large adverse or very large adverse. Professional judgement considers that the effect would increase to large adverse given the increased sensitivity of the receptor. Whilst a different effect to that of the 2018 LVIA, it remains significant as per the 2018 LVIA.	Minor adverse The LA107 definition for minor adverse is assessed as remaining applicable.	Slight adverse LA104 allows for professional opinion to consider whether the effect is large adverse or moderate adverse. Professional judgement considers that the effect would be moderate, which is significant.
LCA 23 Amesbury Down	Medium The sensitivity would increase to high due to the susceptibility criteria of LA107.	Neither the construction nor operational phases of the proposed scheme are directly located within the LCA; nor would they be perceived due to the intervening landform and vegetation. The construction and operational phases would therefore not result in any loss to the character area.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect.
LCA 24 Nine Mile River	High The sensitivity would remain high.	Neither the construction nor operational phases of the proposed scheme are directly located within the LCA; nor would they be perceived due to the intervening landform and vegetation. The construction and operational phases would therefore not result in any loss to the character area.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect.
LCA 25 South Bulford Ridge	Medium As an area with road infrastructure and settlement, the sensitivity would remain medium.	Construction (Winter) The construction activity would be localised to the byway BULF12 and the associated closure of this route. The works associated with this closure would be very small in scale and in the context of the existing infrastructure within the character area, would not result in any noticeable loss.	Minor adverse The LA107 definition for minor adverse is	Slight adverse LA104 retains a slight adverse effect, which as	Negligible adverse The LA107 definition for	Neutral Professional judgement considers the effect to be	Negligible adverse The LA107 definition for	Neutral Professional judgement considers the effect to be

Landscape Receptor	Sensitivity	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
		Operation Year 1 (winter) There would be a technical reduction in the recreational opportunity within the character area through the closure of byway BULF12; however overall the proposed scheme would not result in any damage to the character area. Operation Year 15 (summer) Due to the retained closure of the byway BULF12 the impact of the proposed scheme would remain as per year 1.	assessed as remaining applicable.	per the 2018 LVIA is not significant.	negligible adverse is assessed as remaining applicable.	neutral, reflecting that of the ES.	negligible adverse is assessed as remaining applicable.	neutral, reflecting that of the ES.
LCA 26 Solstice Park Dry Valley	Low The sensitivity would decrease to negligible given the contemporary large scale development.	Construction (Winter) The construction activity would be localised to the new link between Amesbury Road and Equinox Drive at the eastern edge of the character area. The works associated with this closure would be very small in scale and in the context of the existing infrastructure within the character area, would not result in any noticeable loss. Operation Year 1 (Winter) There would be new recreational opportunity within the character area due to the new linkages, however overall the proposed scheme would not result in any damage to the character area. Any perception of the new signage on the existing A303 would be perceived in the context of the existing road.	Negligible adverse The LA107 definition for negligible adverse is assessed as remaining applicable.	Slight adverse LA104 would result in a neutral effect, which like the 2018 LVIA is not significant.	Negligible beneficial The LA107 definition for negligible beneficial is assessed as remaining applicable.	Neutral LA104 retains a neutral effect.	Negligible beneficial The LA107 definition for negligible beneficial is assessed as remaining applicable.	Neutral LA104 retains a neutral effect.
LCA 27 Earls Farm Downs	Medium The sensitivity would remain medium.	Construction (winter) During construction, there would be direct impacts on the LCA as a result of the construction of additional signage and MS4, localised stopping up of byways and slip roads, and the creation of a new byway link between the Allington Track byway and Amesbury Road byway. Construction of these elements would be in the context of the existing A303 dual carriageway and be very small in scale, as well as located along the alignment of an existing track. The impact of the construction phase would therefore result in a barely noticeable change to the character area. Operation Year 1 (winter) At Year 1 and Year 15, the new signage and MS4 would be perceived in the context of the existing A303 dual carriageway which includes highways signs. The byway link along the alignment of the existing byway would reflect the existing landscape pattern. In operation the proposed scheme would therefore result in no noticeable alteration to the character area.	Minor adverse The LA107 definition for minor adverse is assessed as remaining applicable.	Slight adverse LA104 states a slight adverse effect due to the presence of the existing A303 and therefore not significant.	Negligible beneficial The LA107 definition for negligible beneficial is assessed as remaining applicable.	Neutral LA104 allows for a neutral or slight effect. Professional judgement retains a neutral effect.	Minor beneficial The LA107 definition for minor beneficial is assessed as remaining applicable.	Slight beneficial LA104 states a slight beneficial effect due to establishing planting and therefore not significant.
LCA 28 Beacon Hill	High The sensitivity would remain high.	Construction (winter) There would be a small and very localised direct impact as a result of the works to close byway AMES12/BULF12 and removal of vegetation. The perceived construction of signage and MS4 signs on the existing A303 would be within the context of the existing road and its influence on the character area. Overall the construction activity would represent a barely noticeable loss to the character area. Operation Year 1 (winter) There would be a technical reduction in recreational opportunity, from the closure of byway AMES12/BULF12 and the new chalk grassland would not have fully established. Perception of the new signage and MS4 on the existing A303 would be in the context of existing signage on the A303. Overall there would be no damage to the character area. Operation Year 15 (summer)	Minor adverse The LA107 definition for minor adverse is assessed as remaining applicable.	Slight adverse LA104 allows for a slight or moderate effect. Professional judgement retains a slight adverse effect, which is not significant. This is due to no physical change to the LCA and the distance from the	Negligible adverse The LA107 definition for negligible adverse is assessed as remaining applicable.	Neutral LA104 results in a slight adverse effect, which like the 2018 LVIA is not significant.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect.

Landscape Receptor	Sensitivity	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
		The new chalk grassland would have established which is considered to be beneficial for the introduction of a rare land cover type. Overall, there would be no change to the character area.		Scheme reducing the perception of the potential effect.				
LCA 29 Boscombe Down Airfield	Low The sensitivity would decrease to negligible given the land use.	Neither the construction nor operational phases of the proposed scheme are directly located within the LCA; nor would they be perceived due to the intervening landform and vegetation. The construction and operational phases would therefore not result in any loss to the character area.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect.
TCA 1: Shrewton	Medium The sensitivity would remain medium.	Neither the construction nor operational phases of the proposed scheme are directly located within the LCA; nor would they be perceived due to the intervening landform and vegetation. The construction and operational phases would therefore not result in any loss to the character area.	Negligible adverse The LA107 definition for negligible adverse is assessed as remaining applicable.	Neutral LA104 allows for a slight adverse of neutral effect. Professional judgement considers that the effect would remain neutral, due to no physical change to the TCA and no perception.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect.
TCA 2: Winterbourne Stoke	Medium The sensitivity would remain medium.	Construction (winter) There would be construction activity to the west of the village and across the Till valley to the north of the village. This construction activity would be perceived from within the village and results in a slight loss to the existing character. The potential impact is reduced by the fact the existing A303 would remain operational during the construction phase, and this has already impacted on the village. Operation Year 1 (winter) The existing A303 would be downgraded to a local road (speed limits between 30 or 40mph) and would experience lower volumes of vehicles. The severance effect between the north and south of the village would be largely removed as a result of the downgrading of the existing A303, and tranquillity would be greatly improved within the village. In operation the proposed scheme would result in a noticeable improvement in the character of the village. Operation Year 15 (summer) With the continued downgrade of the existing A303 the beneficial impacts would remain as per year 1 of operation.	Moderate adverse The LA107 definition for moderate adverse is assessed as remaining applicable.	Moderate adverse LA104 retains a moderate adverse effect which is significant.	Moderate beneficial The LA107 definition for moderate beneficial is assessed as remaining applicable.	Moderate beneficial LA104 retains a moderate beneficial effect which is significant.	Major beneficial The LA107 definition for major beneficial is assessed as remaining applicable.	Moderate beneficial LA104 allows for a moderate or large effect. Professional judgement retains a moderate beneficial effect which is significant.
TCA 3: Berwick St James	High The sensitivity would remain high.	Neither the construction nor operational phases of the proposed scheme are directly located within the LCA; nor would they be perceived due to the intervening landform and vegetation. The construction and operational phases would therefore not result in any loss to the character area.	No change The LA107 definition for no change is assessed as	Neutral LA104 retains a neutral effect.	No change The LA107 definition for no change is assessed as	Neutral LA104 retains a neutral effect.	No change The LA107 definition for no change is assessed as	Neutral LA104 retains a neutral effect.

Landscape Receptor	Sensitivity	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
			remaining applicable.		remaining applicable.		remaining applicable.	
TCA 4: Stapleford	Medium The sensitivity would remain medium.	Neither the construction nor operational phases of the proposed scheme are directly located within the LCA; nor would they be perceived due to the intervening landform and vegetation. The construction and operational phases would therefore not result in any loss to the character area.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect.
TCA 5: Larkhill	Low The sensitivity would remain low.	Neither the construction nor operational phases of the proposed scheme are directly located within the LCA; nor would they be perceived due to the intervening landform and vegetation. The construction and operational phases would therefore not result in any loss to the character area.	Negligible adverse The LA107 definition for negligible adverse is assessed as remaining applicable.	Slight adverse LA104 allows for a slight or neutral effect. Professional judgement retains a slight adverse effect, which is not significant.	Negligible beneficial The LA107 definition for negligible beneficial is assessed as remaining applicable.	Slight beneficial LA104 states the effect to be either neutral or slight beneficial, neither of which would be significant. Professional judgement considers the slight beneficial effect would remain.	Negligible beneficial The LA107 definition for negligible beneficial is assessed as remaining applicable.	Slight beneficial LA104 states the effect to be either neutral or slight beneficial, neither of which would be significant Professional judgement considers the slight beneficial effect would remain.
TCA 6: Durrington	Low The sensitivity would remain low.	Neither the construction nor operational phases of the proposed scheme are directly located within the LCA; nor would they be perceived due to the intervening landform and vegetation. The construction and operational phases would therefore not result in any loss to the character area.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect.
TCA 7: Bulford and Bulford Camp	Low The sensitivity would remain low.	Neither the construction nor operational phases of the proposed scheme are directly located within the LCA; nor would they be perceived due to the intervening landform and vegetation. The construction and operational phases would therefore not result in any loss to the character area.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect.
TCA 8: : Amesbury	Low The sensitivity would remain low.	The proposed scheme would not have a discernible direct or indirect impact on this LCA at either the construction or operational phases. The magnitude of landscape impact will be no change. The landscape effect would be neutral.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect.	No change The LA107 definition for no change is assessed as remaining applicable.	Neutral LA104 retains a neutral effect.

Appendix 4.2 Re-assessment of Visual Effects

Summary

The following table is reproduced from the 2018 LVIA and sets out the predicted visual effects during the construction, year 1 and year 15 phases.

A re-assessment of the visual effects has been undertaken following the publication of LA107 Landscape and Visual Effects, 2020 (LA107) and LA104 Environmental Assessment and Monitoring, 2020 (LA 104). LA107 replaced Interim Advice Note 135/10, which along with the Guidelines for Landscape and Visual Impact Assessment, Third Edition, formed the 2018 LVIA assessment methodology.

This re-assessment is set out in red text below, to highlight similarities or changes from the 2018 LVIA. The re-assessment covers the receptor sensitivity, magnitude of impact and significance of effect. There is no change to the Scheme design from that presented and assessed in the DCO. Where there is a difference in sensitivity, magnitude or effects from that predicted in the 2018 LVIA, the relevant cell is highlighted in yellow.

LA107 table 3.41 assesses visual sensitivity based upon a five point scale, ranging between negligible and very high. The classification of moderate sensitivity is interchangeable with the term medium sensitivity.

LA107 table 3.43 assesses visual magnitude of impact on a five point scale between major and no change.

LA104 table 3.8.1 sets out a matrix for the significance of visual effects, through the combination of receptor sensitivity and magnitude of impact. Professional judgement is also used in determining the significance of effect where LA104 includes a decision to be made from two significance categories, e.g. large or very large.

Table 1 Schedule of Visual Effects

VR	Receptor Representative View (RV) / Photomontage (P)	Sensitivity (Refer to Appendix 7.6)	Approx. Distance from Scheme (km)	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
01	Recreational users of Byway BSJA4 to the east of Yarnbury Castle RV 1	High As the receptor is looking across areas of chalk grassland which are considered rare, the sensitivity is assessed as remaining high. The distance from the WHS is assessed as lowering the sensitivity from very high.	0.95	**Construction (winter)** The construction of the NMU routes from byway B5J44 and the dual carriageway to byway B5JA3 would be visible at close range. This construction activity would be seen in the context of vehicles on the existing A303, which would remain open during the construction phase. The depositing of the excavated chalk across the upper parts of East Parsonage Down, as well as the upper parts of cranes being used in the construction of the Green bridge one and the River Till Viaduct would also be visible, due to the elevated position of the receptor and the open character of the intervening agricultural fields. Construction to the north of Scotland Lodge Farm, associated with excavation for Winterbourne Stoke cutting west would be screened by the intervening landform. The excavation of the scheme around Longbarrow Junction, the main contractor's compound and STP would be barely visible due to the distance from the receptor. The remainder of the construction activity within the WHS would be screened by the Winterbourne Stoke Clump woodland. Construction activity would form a notable feature within the view, as well as being visible to varying degrees for the duration of the construction phase. This is balanced with views remaining across the wider landscape to the north and north-east of the receptor being unaffected, reducing the dominance of the construction activity and reducing its potential impact. **Operation Year 1 (winter)**	Moderate The LA107 definition for moderate remains applicable.	Moderate adverse The L104 matrix allows professional judgement to decide between a moderate or large adverse effect. Given the distance and the extent of panoramic views from the receptor, the moderate adverse effect is assessed as remaining applicable and as per the 2018 LVIA retains a significant effect.	Minor The LA107 definition for moderate remains applicable.	Slight adverse The L104 matrix allows professional judgement to decide between a moderate or sight effect. For the justification set out in the commentary the effect is assessed as remaining slight adverse, which as per the 2018 LVIA is not significant.	Minor The LA107 definition for moderate remains applicable.	Slight beneficial The L104 matrix allows professional judgement to decide between a moderate or slight effect. For the justification set out in the commentary the effect is assessed as remaining slight beneficial, which as per the 2018 LVIA is not significant.

VR	Receptor Representative View (RV) / Photomontage (P)	Sensitivity (Refer to Appendix 7.6)	Approx. Distance from Scheme (km)	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
				At year 1 of operation, vehicles on the new section of dual carriageway in the foreground of the view would reflect the context of existing views of vehicles on the A303, albeit with additional signage consolidated around the emergency refuge area. Green bridge one would aid in screening views along the Winterbourne Stoke cutting and present a visual connection across the new dual carriageway. The change to the surface ground levels across East Parsonage Down would not alter the composition of the view, as the completed earthworks would reflect the existing valley landform, although the white tone of the chalk would be perceptible, although seen in the context of a wider field pattern. Longbarrow Junction would be barely perceptible, due to the distance, from the receptor. The likely impact is again balanced by the panoramic extent of the view and that the Scheme is located across a smaller part of this field of view. **Operation Year 15 (summer)** By year 15 the chalk grassland across East Parsonage Down would have established to visually integrate with the vegetation coverage across Parsonage Down NNR in the foreground of the view and extend the scenic quality of the chalk grassland across the view. Similarly there would be new chalk grassland visible adjacent to the A303 in the foreground of the view, visually softening the highway boundary. These changes are balanced with views of the new A303, seen in the context of the existing road network.						
02	Recreational Users of Byway STAP5 RV 2	High As the receptor is within the AONB the sensitivity would remain high to reflect the views from and of designated landscapes of national importance.	2	**Construction (winter)** The intervening landform and vegetation would screen the deposition of excavated chalk across East Parsonage Down. The very upper parts of the STP would be visible; however at this distance it would form a barely noticeable feature. **Operation Year 1 (winter)** The intervening landform and vegetation would screen East Parsonage Down, as well as the remainder of the Scheme. There would be a perceptible reduction in vehicular movement due to the realignment of vehicles to the north of Scotland Lodge, rather than across Berwick Down. **Operation Year 15 (winter)** As per the year 1 assessment, the effect of the Scheme would remain as per year 1.	Negligible The LA107 definition for negligible remains applicable.	Slight adverse LA104 would retain the slight adverse effect, such that the effect would remain not significant as per the 2018 LVIA.	Minor The LA107 definition for minor remains applicable.	Slight beneficial LA104 enables professional judgement to decide between a moderate or slight effect. Professional judgement considers the effect would be slight beneficial, as per that predicted in the 2018 LVIA.	Minor The LA107 definition for minor remains applicable.	Slight beneficial LA104 enables professional judgement to decide between a moderate or slight effect. Professional judgement considers the effect would be slight beneficial, as per that predicted in the 2018 LVIA.
03	Recreational users of Byway BSJA3 north-west of Berwick St James RV 3	High As the view extends across the setting of the AONB the sensitivity is assessed as	1	**Construction (winter)** The intervening landform and vegetation would screen the construction activity across East Parsonage Down. **Operation Year 1 (winter)** The intervening landform and vegetation would screen land at East Parsonage Down; however there would be a reduction in views of vehicles due to the new A303 carriageway.	No Change The LA107 definition for no change remains applicable.	Neutral LA104 would retain the neutral effect, such that the effect would remain not significant as	Minor The LA107 definition for minor remains applicable.	Slight beneficial LA104 enables professional judgement to decide between a	Minor The LA107 definition for minor remains applicable.	Slight beneficial LA104 enables professional judgement to decide between a

VR	Receptor Representative View (RV) / Photomontage (P)	Sensitivity (Refer to Appendix 7.6)	Approx. Distance from Scheme (km)	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
		remaining high.		**Operation Year 15 (summer)** As per the year 1 assessment, there would be a reduction in vehicles from within the view.		per the 2018 LVIA.		slight or moderate effect. Professional judgement considers the effect would remain slight beneficial, which is not significant as per the 2018 LVIA.		slight or moderate effect. Professional judgement considers the effect would remain slight beneficial, which is not significant as per the 2018 LVIA.
04	Recreational users of Parsonage Down National Nature Reserve RV 4	High As the receptor is looking across areas of chalk grassland which are considered rare, the sensitivity is assessed as remaining high. The distance from the WHS is assessed as lowering the sensitivity from very high.	0.51	**Construction (winter)** There would be open and close range views of the re-profiling and deposition of chalk across the fields across East Parsonage Down, as well as the excavation for drainage area one and either of the pipeline options. The formation of the embankment to the north of Scotland Lodge Farm, as well as the construction of the realigned B3083 north and topsoil storage would be visible, due to the elevated position of the receptor, along with the construction of the B3083 underbridge and implementation of the signage and variable message signs. Part of the haul road from the main construction compound would be visible, as it crossed from Winterbourne Stoke Hill and the River Till valley via the temporary bridge to the south of the construction of the River Till viaduct. The upper part of the STP would also be visible, although at distance from the receptor. While the construction activity would be seen in the context of part of the existing A303 and buildings in the northern part of Winterbourne Stoke, it would be focal point of the view. **Operation Year 1 (winter)** There would be close range views of the completed earthworks across East Parsonage Down and the bare chalk across the area. With the pipeline diversion being underground, it would evidently not be visible and the perception of the dry valley landform would remain due to the re-profiling. There would be open views of the River Till cutting west, along with views of vehicles, which would be at closer range than existing vehicles crossing Oatlands Hill. Views would extend along the length of the new A303 as it rises across Winterbourne Stoke Hill. Views of the realigned B3083 north would reflect existing views of this road, although the signage on the new A303, above the B3083 underbridge would be notable new feature within the view. **Operation Year 15 (summer)** The chalk grassland in the foreground of the view would have established, representing a higher scenic quality in immediate proximity to the receptor in comparison to the existing intensively farmed fields. The woodland to the north of Scotland Lodge Farm would screen views of vehicles on the embankment. The establishment of the new tree planting adjacent to the realigned B3083 north would aid in softening views of the River Till cutting west and the lower parts of the variable message sign.	Major The LA107 definition for major remains applicable.	Very Large adverse LA104 enables professional judgement to decide between a large or very large effect. Professional judgement considers the effect would remain very large adverse, which is significant as per the 2018 LVIA.	Moderate The LA107 definition for moderate remains applicable.	Moderate adverse LA104 enables professional judgement to decide between a moderate or large effect. Professional judgement considers the effect would remain very moderate adverse, which is significant as per the 2018 LVIA.	Minor The LA107 definition for minor remains applicable.	Slight adverse LA104 enables professional judgement to decide between a slight or moderate effect. Professional judgement considers the effect would remain slight adverse, which is not significant as per the 2018 LVIA.

VR	Receptor Representative View (RV) / Photomontage (P)	Sensitivity (Refer to Appendix 7.6)	Approx. Distance from Scheme (km)	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
04A	Residents in Cherry Lodge	Medium As the view is from a less populated residential area the sensitivity would remain medium (moderate as termed by LA107)	0.95	**Construction (winter)** The excavation for the pipeline and the re-profiling and deposition of the chalk arisings would be in close proximity to the receptor although views are likely to be partially softened by the proximity of existing mature trees and therefore the overall balance of features within the view would not alter. **Operation Year 1 (winter)** In operation the white chalk across the fields would be perceptible, although largely softened by the proximity of mature trees. The pipeline would not be visible, being below ground. Any views towards the new A303 on embankment to the north of Winterbourne Stoke would be very oblique, due to the east/west orientation of the receptor. **Operation Year 15 (summer)** With the existing mature trees in leaf, the Scheme would be screened, effectively representing no change to the existing view.	Moderate The LA107 definition for moderate remains applicable.	Moderate adverse LA104 retains a moderate effect, which is significant as per the 2018 LVIA.	Minor The LA107 definition for minor remains applicable.	Slight adverse LA104 retains a slight adverse effect, which is not significant as per the 2018 LVIA.	No Change The LA107 definition for no change remains applicable.	Neutral LA104 retains a neutral effect, which is not significant as per the 2018 LVIA.
04B	Community Groups in the Cherry Lodge Grounds	Medium As the view is representative of outdoor workers the sensitivity would remain medium (moderate as termed by LA107)	0.95	**Construction (winter)** The excavation for the pipeline and the re-profiling and deposition of the chalk arisings would be in close proximity to the receptor along with oblique views of the formation of the embankment across the B3083. Whilst views are likely to be partially softened by the proximity of existing mature trees, the construction activity would be a focal point of the view. **Operation Year 1 (winter)** In operation the chalk across the fields would be perceptible, although partially softened by the proximity of mature trees. The pipeline would not be visible, being below ground. Any views towards the new A303 on embankment to the north of Winterbourne Stoke would be oblique, due to the east/west orientation of the receptor. **Operation Year 15 (summer)** With the existing mature trees in leaf, and the new woodland adjacent to the embankments the vehicles would be screened. There would be close range views of the established chalk grassland representing an improved scenic quality at close range to the receptor.	Major The LA107 definition for major remains applicable.	Large adverse LA104 enables professional judgement to decide between a moderate or large effect. Professional judgement considers the effect would remain large adverse, which is significant as per the 2018 LVIA.	Moderate The LA107 definition for moderate remains applicable.	Moderate adverse LA104 retains a moderate adverse effect, which is significant as per the 2018 LVIA.	Minor The LA107 definition for minor remains applicable.	Slight beneficial LA104 retains a slight beneficial effect, which is not significant as per the 2018 LVIA.
04C	Motorists on Cherry Lodge Lane	Low Cherry Lodge Lane forms the access road to farm and business premises within Cherry Lodge. The road is therefore not assessed as a scenic road and the sensitivity remains low.	0.75	**Construction (winter)** There would be elevated and open views of the excavation for the pipeline, formation of the embankment to the north of Scotland Lodge Farm, as well as close range views of the re-profiling and chalk deposition across East Parsonage Down. Views would also include the construction of the B3083 realignment north, topsoil storage adjacent to the B3083 and the upper parts of cranes associated with the construction of the River Till viaduct. The construction activity would therefore be a focal point of the view. **Operation Year 1 (winter)** The completed earthworks would be would be visible due to the white chalk, contrasting with the existing agricultural fields; however the perception of the valley landform would remain. The pipeline would not be visible, as it would be underground. The 17m high embankment and vehicles on the new A303 would be visible, whilst views of vehicles on the realigned B3083 would reflect the composition of existing views. The signage on the new A303, in proximity to the B3083 underbridge would be visible, being on embankment and 2.4m in height. The Scheme would therefore form a notable change to the view.	Major The LA107 definition for major remains applicable.	Moderate adverse LA104 retains a moderate adverse effect, which as per the 2018 LVIA is significant.	Moderate The LA107 definition for moderate remains applicable.	Slight adverse LA104 would retain the slight adverse effect.	Moderate The LA107 definition for moderate remains applicable	Slight adverse LA104 would retain the slight adverse effect.

VR	Receptor Representative View (RV) / Photomontage (P)	Sensitivity (Refer to Appendix 7.6)	Approx. Distance from Scheme (km)	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
				Operation Year 15 (summer) The establishment of the chalk grassland in the foreground of the view would represent an improved scenic quality compared to the existing agricultural fields. The new A303 and associated vehicles would be screened by the woodland, although the embankment would remain visible, being elevated above the receptor. The embankments to the east of the realigned B3083 north would be softened by the establishment of the new tree planting adjacent to this road, although views of vehicles and signage would remain. The Scheme would remain a noticeable feature within the view.						
05	Motorists on the B3083 RV 5 P Figure 7.51 and 7.52	Low The B3083 is not considered to form a scenic route and is instead the main road between Shrewton and the existing A303. The sensitivity therefore remains low.	0.36	**Construction (winter)** There would be elevated and open views of the formation of the embankment to the north of Scotland Lodge Farm, as well as close range views of the re-profiling and chalk deposition across East Parsonage Down and pipeline diversion. Views would also include the construction of the B3083 realignment, excavation for the water pipeline, topsoil storage adjacent to the B3083 and the implementation of Green bridge one. The construction activity would therefore be a focal point of the view. **Operation Year 1 (winter) – [Figure 7.51]** The re-profiled land across East Parsonage Down would be integrated within existing views due to the sympathetic grading to reflect the existing landform pattern. The white tone of the chalk within the field would be visible, contrasting with the existing agricultural fields. The 17m embankment and vehicles on the new A303 would be visible. The B3083 underbridge would be seen below the height of the false cutting. The signage on the new A303, in proximity to the B3083 underbridge would be visible; being in an elevated position on embankment. The Scheme would therefore form a notable change to the view. **Operation Year 15 (summer) – [Figure 7.52]** The establishment of the chalk grassland in the foreground of the view would represent an improved scenic quality compared to the existing agricultural fields. The establishment of the woodland to the north of Scotland Lodge Farm would further soften and visually integrate part of the embankment and screen views of vehicles. The embankments to the east of the realigned B3083 north would be softened by the establishment of the new tree planting adjacent to the B3083. The Scheme would remain a noticeable feature within the view.	Major The LA107 definition for major remains applicable.	Moderate adverse LA104 enables professional judgement to decide between a slight or moderate effect. Professional judgement considers the effect would remain moderate adverse, which is significant as per the 2018 LVIA.	Major The LA107 definition for major remains applicable.	Moderate adverse LA104 enables professional judgement to decide between a slight or moderate effect. Professional judgement considers the effect would remain moderate adverse, which is significant as per the 2018 LVIA.	Moderate The LA107 definition for moderate remains applicable.	Slight adverse LA104 enables professional judgement to decide between a slight or moderate effect. Professional judgement considers the effect would remain slight adverse, which is not significant as per the 2018 LVIA.
06	Recreational users of PRoW (footpath) WSTO4 across High Down RV 6	High As recreational users with views across designated landscapes the sensitivity is assessed as remaining high. The distance from	0.8	**Construction (winter)** Due to the elevated position of the receptor, the excavation for Longbarrow Junction west across Fore Down would be visible, along with vehicles on the haul routes and excavation for the water pipeline. The re-profiling of landform to the north of Hill Farm and the construction and installation of Green Bridge two and the excavation for Green Bridge two cutting would also be visible, along with the STP. The construction activity would be a focal point of the view, although views would remain across Fore Down and the River Till valley to the north of the receptor, such that the construction activity would be consolidated in relation to the extent of the wider view, and seen within	Major The LA107 definition for major remains applicable.	Large Adverse LA104 enables professional judgement to decide between a large or very large effect. Professional judgement considers the effect would remain large	Moderate The LA107 definition for major remains applicable.	Moderate adverse LA104 enables professional judgement to decide between a moderate or large effect. Professional judgement	Minor The LA107 definition for minor remains applicable.	Slight adverse LA104 enables professional judgement to decide between a slight or moderate effect. Professional judgement

VR	Receptor Representative View (RV) / Photomontage (P)	Sensitivity (Refer to Appendix 7.6)	Approx. Distance from Scheme (km)	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
		the WHS reduces the sensitivity from very high.		the context of views of the existing A303 which would remain in operation during the construction phase. **Operation Year 1 (winter)** The completed earthworks would be visible to the north of Hill Farm, albeit reflecting the overall pattern of rising landform to the north of the River Till. Green Bridge two and its completed earthworks would also be visible, being positioned higher in the landscape than the current landform, although seen in the context of Hill Farm cottages. The bunds along the A303 carriageway would aid in screening the lower parts of vehicles and the signage to the west of Green Bridge two, which is 5.9metres above the road. Longbarrow Junction and the River Till viaduct would be screened by the intervening ridgelines. The water pipeline would not be visible, being underground. The Scheme would therefore be a noticeable feature. **Operation Year 15 (summer)** The completed earthworks would be integrated within the landscape due to the establishment of the planting and the hedgerows adjacent to the Green Bridge two. In combination with the bunds views of vehicles would be further softened, such that the Scheme would be perceptible but not alter the overall balance of panoramic views from the receptor.		adverse, which is significant as per the 2018 LVIA.		considers the effect would remain moderate adverse, which is significant as per the 2018 LVIA.		considers the effect would remain slight adverse, which is not significant as per the 2018 LVIA.
06A	Residents at the southern edge of Shrewton/ Rollestone	Medium As the receptor represents a less populated part of Shrewton the sensitivity would remain medium (moderate).	1.7	The intervening vegetation and undulating landform across the River Till valley sides would screen views of the construction activity and operation of the Scheme to effectively represent a no change.	No Change The LA107 definition for no change remains applicable.	Neutral LA104 retains the neutral effect which is not significant.	No Change The LA107 definition for no change remains applicable.	Neutral LA104 retains the neutral effect which is not significant.	No Change The LA107 definition for no change remains applicable.	Neutral LA104 retains the neutral effect which is not significant.
06B	Motorists on the A360	Low As quick transient views from fast moving vehicles, the sensitivity would reduce to **negligible.**	1.7	The roadside hedgerows would screen views of the construction activity and operation of the Scheme to effectively represent a no change.	No Change The LA107 definition for no change remains applicable.	Neutral LA104 retains the neutral effect which is not significant.	No Change The LA107 definition for no change remains applicable.	Neutral LA104 retains the neutral effect which is not significant.	No Change The LA107 definition for no change remains applicable.	Neutral LA104 retains the neutral effect which is not significant.
07	Recreational users of Byway WSTO4 as it crosses the River Till RV 7	High As recreational users with views across designated landscapes the sensitivity is assessed as remaining high.	0.45	**Construction (winter)** The formation of the River Till embankments east and the excavation for the Longbarrow cutting west and associated earthworks would be visible, along with construction vehicles on the haul routes and the upper part of the STP. The upper parts of cranes constructing the River Till viaduct and for the implementation of Green Bridge two would also be visible, along with the excavation for the water pipeline. Due to the proximity of the construction activity and that it would be situated in an elevated position in relation to the receptor; the project would form a focal point of the view. **Operation Year 1 (winter)**	Major The LA107 definition for major remains applicable.	Large adverse LA104 enables professional judgement to decide between a large or very large effect. Professional judgement considers the effect would remain large	Moderate The LA107 definition for major remains applicable.	Moderate adverse LA104 enables professional judgement to decide between a moderate or large effect. Professional judgement	Minor The LA107 definition for minor remains applicable.	Slight adverse LA104 enables professional judgement to decide between a slight or moderate effect. Professional judgement

VR	Receptor Representative View (RV) / Photomontage (P)	Sensitivity (Refer to Appendix 7.6)	Approx. Distance from Scheme (km)	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
				The completed earthworks would be visible, although reflecting the existing rising landform across the valley side towards Hill Farm. The bunds would aid in screening vehicles, and the water pipeline would not be visible. Green Bridge two would be visible, due to its elevated position in the landscape. The new alignment would be in closer proximity to the receptor than the existing A303 and therefore a noticeable feature. **Operation Year 15 (summer)** With the establishment of the new planting on the River Till embankment west and around Green bridge two in combination with the settling of the completed earthworks, views of the Scheme would be softened, such that it would be perceptible but not alter the overall balance of views.		adverse, which is significant as per the 2018 LVIA.		considers the effect would remain moderate adverse, which is significant as per the 2018 LVIA.		considers the effect would remain slight adverse, which is not significant as per the 2018 LVIA.
07A	Foredown Barn	Medium As the receptor constitutes outdoor workers, the sensitivity would remain medium (moderate).	0.6	**Construction (winter)** There would be views of the upper parts of cranes implementing the green bridge two, as well as and the formation of the River Till viaduct embankment west and Longbarrow cutting west. Views of the construction activity at the River Till would be largely filtered by the existing woodland within the foreground of the view. **Operation Year 1 (winter)** The River Till viaduct embankment west would be visible, although seen as part of the valley side landform which already extends from the valley side towards the River Till. The upper part of Green bridge two would also be visible, representing a perceptible feature in the view. **Operation Year 15 (summer)** With the existing vegetation in leaf views towards the River Till would be screened. The settled character of the completed earthworks would integrate the River Till embankment west, along with the planting softening views of the completed earthworks. The hedgerows adjacent to Green Bridge two would also soften views of the structure.	Major The LA107 definition for major remains applicable.	Large adverse LA104 enables professional judgement to decide between a moderate or large effect. Professional judgement considers the effect would remain large adverse, which is significant as per the 2018 LVIA.	Moderate The LA107 definition for moderate remains applicable.	Moderate adverse LA104 retains a moderate adverse effect, which is significant as per the 2018 LVIA.	Minor The LA107 definition for minor remains applicable.	Slight adverse LA104 retains a slight adverse effect, which is not significant as per the 2018 LVIA.
07B	Recreational users of Byway WST 04	High As recreational users with views across designated landscapes the sensitivity is assessed as remaining high.	0.1	**Construction (winter)** The formation of the River Till embankments west and east; excavation of the River Till cutting east; implementation of the viaduct with construction vehicles on the haul routes and excavation for the utilities would be visible. This construction activity would be dominant and a discordant feature within the view. **Operation Year 1 (winter)** Due to the receptor being at close range to the Scheme the scale and mass of the River Till viaduct would be a dominant feature within the view, in combination with the unsettled character of the embankments and the loss of vegetation within the valley floor, as well as the signage and variable message sign on the River Till embankment west. The raised parapet on the viaduct would aid in reducing views of vehicles. **Operation Year 15 (summer)** With the establishment of the planting on the River Till viaduct embankments west and east and the settled form of the completed earthworks, there would be softening of views to the re-profiled embankment and screening to the signage and variable message signs. However, due to the continued presence of the viaduct, it would remain a noticeable feature in the view.	Major The LA107 definition for major remains applicable.	Very large adverse LA104 enables professional judgement to decide between a large or very large effect. Professional judgement considers the effect would remain very large adverse, which is significant as per the 2018 LVIA.	Major The LA107 definition for major remains applicable.	Large adverse LA104 enables professional judgement to decide between a large or very large effect. Professional judgement considers the effect would remain large adverse, which is significant as per the 2018 LVIA.	Moderate The LA107 definition for moderate remains applicable.	Moderate adverse LA104 enables professional judgement to decide between a moderate or large effect. Professional judgement considers the effect would remain moderate adverse, which is significant as per the 2018 LVIA.

VR	Receptor Representative View (RV) / Photomontage (P)	Sensitivity (Refer to Appendix 7.6)	Approx. Distance from Scheme (km)	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
08	Residents (nos. 1-4) on the eastern side of Winterbourne Stoke and to the south of the existing River Till crossing RV 8 P Figure 7.53 and 7.54	High LA107 would reduce the sensitivity to **medium** (moderate) as the receptor is representative a less populated residential areas.	0.35	**Construction (winter)** There would be open views of temporary bridge crossing across the River Till, construction vehicles, and the formation of the River Till viaduct embankments west and east, drainage area three and the implementation of the River Till viaduct, involving cranes and tall lifting equipment. The construction activity would visible beyond vehicles on the existing A303, which would remain in operation during the construction phase. Views of the construction activity would therefore form a dominant feature within the view. **Operation Year 1 (winter) – [Figure 7.53]** With the A303 realigned to the north of the receptor, there would be a noticeable reduction in the number of vehicles within foreground views, which is considered beneficial. The River Till viaduct would be visible in the middle ground of the view, 10m above the valley floor. The River Till embankments east and west would also be visible, which would in part reflect the existing pattern of valley landform. The vehicles on the viaduct would be visible, although the raised parapet would screen the lower parts and headlights. The variable message sign would also be visible. However views would remain along the valley floor, beneath the River Till viaduct. The impact to the view is therefore a balance between the improvement from the reduction in vehicles in close range views, balanced with views of the massing and scale of River Till viaduct and vehicles in an elevated position. **Operation Year 15 (summer) – [Figure 7.54]** There would be some softening of views of the central part of the viaduct due to the existing trees adjacent to the River Till and on the opposite side of the exiting A303 being in leaf. The establishment of the planting on the River Till viaduct embankments would further soften and integrate the earthworks as well as views of vehicles and signage on the approach to the viaduct. These changes would continue to be balanced by the notable improvement from the reduced number of vehicles on the former A303, in close range views.	Major The LA107 definition for major remains applicable.	Large adverse LA104 enables professional judgement to decide between a moderate or large effect. Professional judgement considers the effect would remain large adverse, which is significant as per the 2018 LVIA.	Moderate The LA107 definition for moderate remains applicable.	Moderate adverse LA104 retains the moderate adverse effect as per the 2018 LVIA, which is significant.	Minor The LA107 definition for minor remains applicable.	Slight adverse LA104 retains the slight adverse effect, as per the 2018 LVIA, which is not significant.
08A	Foredown House	High LA107 would reduce the sensitivity to **medium** (moderate) as the receptor is representative a less populated residential areas.	0.2	**Construction (winter)** There would be close range views of the excavation of River Till cutting west and formation of the River Till embankment west. There would also be views of the construction of the B3083 underbridge, and 17m embankment to the north of Scotland Lodge, along with the deposition of excavated material across part of East Parsonage Down. The construction activity would therefore represent the dominant feature or focal point of the view. **Operation Year 1 (winter)** There would be close range views of the River Till cutting west and the completed earthworks, although the false cutting would aid in softening views of cars along the realigned A303. Views of the realigned B3083 north would reflect existing views of this road. There would also be views of the River Till viaduct and vehicles to the north-east of the receptor, in contrast to existing views of the valley. The white tone of the chalk across East Parsonage Down would also be visible, with the Scheme representing a focal point of the view. **Operation Year 15 (summer)**	Major The LA107 definition for major remains applicable.	Very large adverse LA104 enables professional judgement to decide between a moderate or large effect. Professional judgement considers the effect would be large adverse, which is significant as per the 2018 LVIA.	Major The LA107 definition for major remains applicable.	Large adverse LA104 enables professional judgement to decide between a moderate or large effect. Professional judgement considers the effect would remain large adverse, which is significant as per the 2018 LVIA.	Minor The LA107 definition for minor remains applicable.	Slight adverse LA104 retains the slight adverse effect, which is not significant, as per the 2018 LVIA.

VR	Receptor Representative View (RV) / Photomontage (P)	Sensitivity (Refer to Appendix 7.6)	Approx. Distance from Scheme (km)	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
				Views towards the River Till viaduct and the River Till viaduct embankment west would be largely screened by the existing garden trees being in leaf. The completed earthworks across East Parsonage Down and the A303 alignment would be integrated into the landscape by the establishment of the planting. Views of the embankment to the north of Scotland Lodge Farm would also be softened by the establishment of the woodland. However, the Scheme would remain a noticeable feature within the landscape.						
08B	High Down View Residents, including no.1 at the corner of the existing A303 and the B3083, Winterbourne Stoke	High LA107 would reduce the sensitivity to **medium** (moderate) as the receptor is representative of a less populated residential areas. .	0.4	**Construction (winter)** The excavation for the River Till cutting west, the realignment of the B3083 north and the deposition of excavated material and land re-profiling across East Parsonage Down would also be visible from upper floor rear windows. The upper parts of cranes constructing the River Till viaduct would also be visible, seen above Foredown House. The construction activity would therefore be a focal point of the view. **Operation Year 1 (winter)** There would be views of the completed earthworks, higher sided vehicles, and the upper parts of signage and the white tone of the chalk across the upper part of East Parsonage Down. The realigned B3083 north would also be visible, however this is considered to reflect existing views of this road. The Scheme would therefore be noticeable in contrast to the exiting agricultural fields. **Operation Year 15 (summer)** With the establishment of the planting and the more settled character of the completed earthworks, along with in leaf, the River Till cutting west would be softened. Chalk grassland across East Parsonage Down would improve the scenic quality within the view. The combination of these features would therefore reduce the impact of the Scheme compared to year 1.	Major The LA107 definition for major remains applicable.	Large adverse LA104 enables professional judgement to decide between a moderate or large effect. Professional judgement considers the effect would remain large adverse, which is significant as per the 2018 LVIA.	Moderate The LA107 definition for moderate remains applicable.	Moderate adverse LA104 would retain the moderate adverse effect, which is significant as per the 2018 LVIA.	Minor The LA107 definition for minor remains applicable.	Slight adverse LA104 retains the slight adverse effect, which is not significant, as per the 2018 LVIA.
08C	Scotland Lodge including the grounds of the property	High LA107 would reduce the sensitivity to **medium** (moderate) as the receptor is representative of both outdoor workers and less populated residential areas.	0.45	**Construction (winter)** Whilst views from the property would be largely screened, there would be close range views from the wooded areas on the northern boundary of the property, which are used for outdoor activity. The construction phase would therefore represent a dominant feature within the view. **Operation Year 1 (winter)** The embankment, Green Bridge one and the bare chalk across East Parsonage Down would be visible, although the perception of the valley landform would remain. **Operation Year 15 (winter)** The woodland would have established to screen views of the embankment and Green Bridge one, although views across East Parsonage Down would be truncated.	Major The LA107 definition for major remains applicable.	Large adverse LA104 enables professional judgement to decide between a moderate or large effect. Professional judgement considers the effect would remain large adverse, which is significant as per the 2018 LVIA.	Major The LA107 definition for major remains applicable.	Large adverse LA104 enables professional judgement to decide between a moderate or large effect. Professional judgement considers the effect would remain large adverse, which is significant as per the 2018 LVIA.	Negligible The LA107 definition for negligible remains applicable.	Slight adverse LA104 enables professional judgement to decide between a neutral or slight effect. Professional judgement considers the effect would remain slight adverse, which is not significant as per the 2018 LVIA.
08D	Residents to the south of the A303 in Winterbourne Stoke including the Manor House	Medium LA107 would retain the medium (moderate) sensitivity, as	0.48	**Construction (winter)** The excavation of the River Till embankment west and the realignment of the B3083 south would be visible to the north of the from upper floor windows. The deposition of excavated chalk across the upper parts of	Moderate The LA107 definition for moderate	Moderate adverse LA104 would retain the moderate adverse effect,	Minor The LA107 definition for minor	Slight adverse LA104 retains the slight adverse effect, which is not significant, as	Minor The LA107 definition for minor remains applicable.	Slight beneficial LA104 retains the slight beneficial effect, which is

VR	Receptor Representative View (RV) / Photomontage (P)	Sensitivity (Refer to Appendix 7.6)	Approx. Distance from Scheme (km)	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
		the receptor is representative of a less populated residential area.		East Parsonage Down would also be visible. The construction activity would represent noticeable feature within the view. **Operation Year 1 (winter)** There would be a noticeable change to views to the north of the receptor, from the reduction of vehicles on the former A303. The white tone of the chalk across the upper part of East Parsonage Down would be visible along with the completed earthworks along the River Till embankment west. Views of the realigned B3083 are however considered to reflect existing views of this road. The impact of the Scheme is therefore a balance between the reduction in views of vehicles, to the north of the receptor, with the introduction of the realigned A303 and unsettled character of the earthworks. **Operation Year 15 (summer)** With the existing vegetation and planting adjacent to the realigned B3083 in leaf and the chalk grassland established across East Parsonage Down, the Scheme would be further integrated into landscape. There would also be the continued beneficial change from the reduction in vehicles at close range to the north of the receptor, on the former A303.	remains applicable.	which is significant.	remains applicable.	per the 2018 LVIA.		not significant, as per the 2018 LVIA.
09	Recreational users on PRoW (footpath WST011) RV 9	High As recreational users with views across designated landscapes the sensitivity is assessed as remaining high.	0.57	**Construction (winter)** There would be open views of the formation of River Till viaduct embankment west. There would also be views of the deposition of excavated chalk across East Parsonage Down and the formation of the 17metre high embankment to the north of the Scotland Lodge. The construction activity would be a focal point of the view, due to its proximity to the receptor, although views across the wider landscape would remain. **Operation Year 1 (winter)** Due to the elevated position of the receptor there would be views of the River Till viaduct, and vehicles crossing the valley, representing a readily apparent change to the view compared to the baseline, as the existing A303 is not as readily visible. The white chalk across East Parsonage Down would also be a noticeable feature, while the overall pattern of the valley landform would remain, due to the sympathetic re-grading of the terrain. **Operation Year 15 (summer)** The planting on the River Till viaduct embankments would have established, aiding in softening views of a small part of the River Till viaduct. Similarly the chalk grassland would have established across East Parsonage Down, such that this would be integrated into the landscape and represent an improved scenic quality. The River Till viaduct and the alignment of the A303 across the foreground of the view would remain perceptible, but this is balanced by the features and elements across the wider extent of the view remaining and a general softening of the Scheme.	Major The LA107 definition for major remains applicable.	Large adverse LA104 enables professional judgement to decide between a large or very large effect. Professional judgement considers the effect would remain large adverse, which is significant as per the 2018 LVIA.	Moderate The LA107 definition for moderate remains applicable.	Moderate adverse LA104 enables professional judgement to decide between a moderate or large effect. Professional judgement considers the effect would remain moderate adverse, which is significant as per the 2018 LVIA.	Minor The LA107 definition for minor remains applicable.	Slight adverse LA104 enables professional judgement to decide between a slight or moderate effect. Professional judgement considers the effect would remain slight adverse, as per the narrative in the commentary, which is not significant as per the 2018 LVIA.
10	Recreational users on Byway WST06A, south of Hill Farm Cottages RV 10 P Figure 7.55 and 7.56	High As recreational users with views across designated landscapes the sensitivity	0.52	**Construction (winter)** The excavation of Longbarrow Junction and the main construction compound would be visible, as well as the implementation of Green bridge three, seen in the context of the exiting A303. There would be channelled views of the upper part of the STP, seen in the context of Hill Farm cottages. The upper parts of cranes would also be visible in the background of the view, associated with the construction of the long bridge.	Major The LA107 definition for major remains applicable.	Large adverse LA104 enables professional judgement to decide between a large or very large effect. Professional	Moderate The LA107 definition for moderate remains applicable.	Moderate adverse LA104 enables professional judgement to decide between a	Minor The LA107 definition for moderate remains applicable.	Slight adverse LA104 enables professional judgement to decide between a slight or

VR	Receptor Representative View (RV) / Photomontage (P)	Sensitivity (Refer to Appendix 7.6)	Approx. Distance from Scheme (km)	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
		is assessed as remaining high. The distance from the WHS reduces the sensitivity from very high.		**Operation Year 1 (winter) – Figure 7.55** The link to Winterbourne Stoke and Green bridge three would be visible, along with signage and upper parts of the completed earthworks along the Longbarrow cutting; however Green Bridge no.3 would aid in softening the impact of cutting by visually linking the landscape above the carriageway. Longbarrow Junction would ultimately be readily apparent within the view due it scale in relation to the narrower width of the existing A303. **Operation Year 15 (summer) – Figure 7.56** The tree planting to the west of Longbarrow Junction would have established to aid in softening views of the Junction and associated signage. The completed earthworks would also have softened and further integrated within the landscape.		judgement considers the effect would remain large adverse, which is significant as per the 2018 LVIA.		moderate or large effect. Professional judgement considers the effect would remain moderate adverse, which is significant as per the 2018 LVIA.		moderate effect. Professional judgement considers the effect would remain slight adverse, as per the narrative in the commentary, which is not significant as per the 2018 LVIA.
10A	Hill Farm Cottages nos.1 – 4 RV 10	High LA107 would reduce the sensitivity to **medium** (moderate) as the receptor is representative of less populated areas.	0.52	**Construction (winter)** Due to the elevated position of the receptor the excavation of the Longbarrow cutting west, implementation of Green Bridge two, along with the excavation for Longbarrow Junction, the construction compounds, and part of the Slurry Treatment Plant and topsoil storage, would be visible at close range. The construction activity would therefore be a focal point of the view. **Operation Year 1 (winter)** The realigned A303 would be situated below the receptor, with the cutting and bunds aiding in further reducing views of vehicles in relation to the receptor. Longbarrow Junction would also be visible along with signage and traffic lights. Green bridge three would soften the impact of this crossing visually linking the landscape either side of the A303 alignment. The Scheme would be a noticeable feature in comparison to the existing A303. **Operation Year 15 (summer)** The tree planting to the west of Longbarrow Junction would have established to soften views of the Junction and associated signage and traffic lights. The establishment of the completed earthworks would also have further integrated the Scheme within the landscape, along with the hedgerows along the top of the bunds. The Scheme would remain a perceptible feature due to being of a larger scale than the existing A303.	Major The LA107 definition for major remains applicable.	Very Large adverse LA104 enables professional judgement to decide between a moderate or large effect. Professional judgement considers the effect would be large adverse, which is significant as per the 2018 LVIA.	Moderate The LA107 definition for moderate remains applicable.	Moderate adverse LA104 retains the moderate adverse effect, which is significant, as per the 2018 LVIA.	Minor The LA107 definition for minor remains applicable.	Slight adverse LA104 retains the slight adverse effect, which is not significant, as per the 2018 LVIA.
10B	Recreational users on Restricted Byway BSJA9	High As recreational users with views of the WHS, the sensitivity would increase to **very high.**	0.85	**Construction (winter)** Due to the elevated position of the receptor, there would be views of the removal of Longbarrow roundabout, the excavation for the cutting approach to the western portal part as well as the cranes and tall machinery associated with the construction of the long bridge and the Western Portal. The excavation and construction of the realigned A360 south would also be visible from the eastern part of the byway. The combination of this construction activity would result in it being a focal point of the view. The intervening rising landform across Oatlands Hill would screen views of the STP and main contractor compound. **Operation Year 1 (winter)** Views of the realigned A360 south would reflect existing views of the A360, albeit in slightly closer proximity to the receptor. The removal of Longbarrow Roundabout and its lighting columns and the reduced visibility of vehicles as a result of the A303 being in cutting, below the	Moderate The LA107 definition for moderate remains applicable.	Moderate adverse LA104 enables professional judgement to decide between a large or very large effect. Professional judgement considers the effect would be large adverse, which is significant as	Moderate The LA107 definition for moderate remains applicable.	Moderate beneficial LA104 enables professional judgement to decide between a large or very large effect. Professional judgement considers the effect would be large beneficial,	Major The LA107 definition for major remains applicable.	Moderate beneficial LA104 enables professional judgement to decide between a large or very large effect. Professional judgement considers the effect would be large beneficial,

VR	Receptor Representative View (RV) / Photomontage (P)	Sensitivity (Refer to Appendix 7.6)	Approx. Distance from Scheme (km)	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
				long bridge and in tunnel, is considered to be beneficial to the view, and a readily apparent change to the view. **Operation Year 15 (summer)** At year 15 the chalk grassland would have established adjacent to the cutting approach to the western portal and adjacent to the long bridge, such that completed earthworks would be fully integrated into the landscape.		per the 2018 LVIA.		which is significant as per the 2018 LVIA.		which is significant as per the 2018 LVIA.
11	Motorists on the A360 adjacent to Restricted Byway BSJA9 RV 11	Low As the receptor is on a main road, the sensitivity remains low.	0.97	**Construction (winter)** There would be close range views of the construction of the NMU footpaths along the western edge of the WHS as well as the excavation and implementation of the electrical cable. The majority of the main construction activity would be screened by the intervening rising rolling landform across Oatlands Hill and the roadside hedgerows adjacent to the western side of the A360. The machinery and excavation for the cutting approach to the western portal along with the implementation of the western portal and upper parts of the construction fencing adjacent to these areas would be visible across the ridgeline. **Operation Year 1 (winter)** The re-aligned A360 south and Longbarrow Junction would not be visible due to the intervening landform across the lower part of Oatlands Hill, nor would the underground electrical cable. The new chalk grassland in placed of the former A360 would not have established, being mainly bare chalk, although the removal of the existing A360 would be notable. The reduction in vehicles from across the western part of the WHS would be a notable improvement to the view. **Operation Year 15 (summer)** At year 15 the chalk grassland would have established adjacent to the receptor and to the north of the receptor, along the alignment of the former A360. The beneficial change from the removal of vehicles would remain.	Major The LA107 definition for major remains applicable.	Moderate adverse LA104 enables professional judgement to decide between a slight or moderate effect. Professional judgement considers the effect would be moderate adverse, which is significant as per the 2018 LVIA.	Moderate The LA107 definition for moderate remains applicable.	Slight beneficial LA104 retains the slight beneficial effect, which is not significant, as per the 2018 LVIA.	Major The LA107 definition for major remains applicable.	Moderate beneficial LA104 retains the moderate beneficial effect, which is significant, as per the 2018 LVIA.
12	Tourists and Visitors at the Stonehenge Visitor Centre RV 12	High As the receptor is in the WHS, the sensitivity would increase to **very high.**	2.8 (closest visible point)	**Construction (winter)** The construction activity in the western part of the WHS, at Longbarrow Roundabout and associated with the realigned A360 north would be screened by the intervening rising landform. The upper part of the STP would be visible, extending above the Fore Down ridgeline, along with the excavation and haul routes for Longbarrow cutting west. The formation of the 17 metre embankments to the north of the Scotland Lodge Farm and the construction of the dual carriageway, as well as the deposition of excavated material across the southern part of East Parsonage Down would also be visible, in the background of the view. Whilst the construction activity would be noticeable across the middle and background parts of the view, it would be seen in the context of vehicles on the existing A303, which already cross this part of the landscape; such the impact is reduced from major. **Operation Year 1 (winter)** There would be views of vehicles to the north of Scotland Lodge Farm on the embankment, as well as the white tone of the chalk across the lower parts of East Parsonage Down in the background of the view. Whilst perceptible, the composition of the view would remain largely as per the existing baseline with close range views of vehicles on the A360 and an agricultural landscape extending across rolling landform. Views	Moderate The LA107 definition for moderate remains applicable.	Moderate adverse LA104 enables professional judgement to decide between large or very large effect. Professional judgement considers the effect would be large adverse, which is significant as per the 2018 LVIA.	Minor The LA107 definition for minor remains applicable.	Slight adverse LA104 enables professional judgement to decide between moderate or large effect. Professional judgement considers the effect would be **moderate** adverse, which is a new **significant** adverse effect.	Negligible The LA107 definition for negligible remains applicable.	Slight adverse LA104 retains the slight adverse effect, which is not significant, as per the 2018 LVIA.

VR	Receptor Representative View (RV) / Photomontage (P)	Sensitivity (Refer to Appendix 7.6)	Approx. Distance from Scheme (km)	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
				of high load vehicles of the diversion scenario are considered to reflect existing views of vehicles. **Operation Year 15 (summer)** With the establishment of the chalk grassland across East Parsonage Down and woodland, views of the dual carriageway would be softened, representing a very small change to the composition of the view. Views of high load vehicles of the diversion scenario are considered to reflect existing views of vehicles.						
13	Tourists, visitors and recreational users in WHS at the World Heritage Site interpretation panel RV 13 P Figure 7.57 and 7.58	High As the receptor is in the WHS, the sensitivity would increase to **very high.**	1 (towards Longbarrow Junction)	**Construction (winter)** There would be close range views of the downgrading of the existing A360 and construction of the realigned A360 north, as well as the main construction compound, and upper parts of the STP. The excavation and re-profiling for longbarrow cutting west would also be visible along with the upper parts of cranes constructing the River Till viaduct and deposition of excavated material across East Parsonage Down. **Operation Year 1 (winter) – Figure 7.57** There would be a beneficial change to the composition of the view by vehicles on the A360 being positioned further from the receptor, on the realigned A360 north, as well as the removal of lighting columns at the existing Longbarrow Roundabout. Vehicles and the upper parts of signage and traffic lights at the Longbarrow Junction roundabouts would be visible, with the combined features representing additional highways infrastructure within the view. The white tone of the chalk across the completed earthworks, including East Parsonage Down would be also visible along with the section of, albeit in the background of the view. Views of high load vehicles of the diversion scenario are considered to reflect existing views of vehicles. The impact is therefore a balance between the beneficial change from vehicles and the A303 being positioned further from the receptor with an increase in the actual extent of highways infrastructure being visible and altering the field pattern. **Operation Year 15 (summer) – Figure 7.58** The establishment of the tree planting around Longbarrow Junction would soften views of vehicles and signage and further integrate this part of the Scheme within the landscape. In combination with the establishment and integration of the chalk grassland in the background of the view at East Parsonage Down, and the settled character of the completed earthworks, the impact to the view would be beneficial due to vehicles being further from the receptor. Views of high load vehicles of the diversion scenario are considered to reflect existing views of vehicles.	Major The LA107 definition for major remains applicable.	Very large adverse LA104 retains the very large adverse effect, which is significant, as per the 2018 LVIA.	Moderate The LA107 definition for moderate remains applicable.	Moderate adverse LA104 enables professional judgement to decide between a large or very large effect. Professional judgement considers the effect would be large adverse, which is significant like the 2018 LVIA.	Minor The LA107 definition for minor remains applicable.	Slight adverse LA104 enables professional judgement to decide between moderate or large effect. Professional judgement considers the effect would be **moderate** adverse which is a new **significant** adverse effect.
14	Tourists, visitors and recreational receptors at the Winterbourne Stoke Group within the WHS RV 14 P Figure 7.59 to 7.60	High As the receptor is in the WHS, the sensitivity would increase to **very high.**	0.35	**Construction (winter)** Due to the close proximity of the receptor, the solid fencing bordering the excavation of the cutting approach to the western portal would be visible, with the upper parts of cranes and tall lifting equipment constructing the long bridge and the Western Portal.. This activity would be seen in the context of the existing A303 which would remain operational during the construction phase, until vehicles are re-directed through the tunnel, at which stage the breaking out of the existing A303 would also be visible. The effect is reduced from very large adverse as views would remain of the wider landscape beyond the construction activity. **Operation Year 1 (winter) – Figure 7.59**	Major The LA107 definition for major remains applicable.	Large adverse LA104 states a very large adverse effect, which is significant, as per the 2018 LVIA.	Moderate The LA107 definition for moderate remains applicable.	Moderate beneficial LA104 enables professional judgement to decide between a large or very large effect. Professional judgement	Major The LA107 definition for major remains applicable.	Large beneficial LA104 states a very large beneficial effect, which is significant, as per the 2018 LVIA.

VR	Receptor Representative View (RV) / Photomontage (P)	Sensitivity (Refer to Appendix 7.6)	Approx. Distance from Scheme (km)	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
				With vehicles in the cutting approach to the western portal and the tunnel, there would be an immediate improvement to the view. The completed earthworks would be noticeable due to the white chalk along with the fencing adjacent to the cutting approach would be visible. **Operation Year 15 (summer) – Figure 7.60** Overall the view would remain similar to that at year 1 due to the removal of vehicles. The chalk grassland would have established either side of the cutting approach to the western portal and the long bridge, to aid in visually integrating the completed earthworks within the landscape.				considers the effect would be large beneficial, which is significant like the 2018 LVIA.		
15	Recreational users on Byway WCLA1 south-east of The Diamond RV 15	High As the receptor is in the WHS, the sensitivity would increase to **very high.**	0.95	**Construction (winter)** The excavation for the cutting approach to the Western Portal would be visible, along with the solid temporary construction fencing and tall lifting equipment and cranes constructing the long bridge. This activity would be seen in the context of the existing A303 which would remain operational during the construction phase, until vehicles are re-directed through the tunnel, at which stage the breaking out of the existing A303 would also be visible. Whist the construction activity would visible, it would be localised within the overall extent of the view, which reduces the effect. **Operation Year 1 (winter)** With vehicles no longer on the existing A303 there would be an immediate improvement to the view. The chalk grassland would not have established resulting in a noticeable white tone across the completed earthworks. **Operation Year 15 (summer)** The view would remain similar to that at year 1 due to the removal of vehicles. The new chalk grassland would have established either side of the retained cut to aid in visually integrating the completed earthworks further within the landscape.	Major The LA107 definition for major remains applicable.	Large adverse LA104 states a very large adverse effect, which is significant, as per the 2018 LVIA.	Moderate The LA107 definition for moderate remains applicable.	Moderate beneficial LA104 enables professional judgement to decide between a large or very large effect. Professional judgement considers the effect would be large beneficial, which is significant like the 2018 LVIA.	Major The LA107 definition for major remains applicable.	Large beneficial LA104 states a very large beneficial effect, which is significant, as per the 2018 LVIA.
16	Recreational users on permissive open access land close to Normanton Gorse RV 16	High As the receptor is in the WHS, the sensitivity would increase to **very high.**	0.38	**Construction (winter)** The excavation for the cutting approach to the western portal and the tall lifting equipment and cranes to construct the western tunnel portal and long bridge, along with the excavation for the realigned A360 south would be visible. This activity would be seen in the context of vehicles on the existing A303 and A360. The construction of Longbarrow Junction, contractor compounds and the STP would be screened by the Winterbourne Stoke Clump woodland. **Operation Year 1 (winter)** Views of vehicles on the realigned A360 south would reflect existing views of vehicles on the A360. The removal of vehicles from within the WHS via the tunnel and long bridge would be an immediate beneficial change to the view. This is balanced with views of the concrete walls of the cutting approach to the western portal which would represent an uncharacteristic feature in the context of the agricultural landscape. The completed earthworks adjacent to the cutting approach would also not have fully integrated due to the chalk grassland not having established. The impact of the Scheme is therefore a balance between the beneficial and adverse changes. **Operation Year 15 (summer)** With the establishment of the chalk grassland the completed earthworks would be integrated within the landscape and would soften views of the cutting approach to the western portal.	Major The LA107 definition for major remains applicable.	Large adverse LA104 states a very large adverse effect, which is significant, as per the 2018 LVIA.	Moderate The LA107 definition for moderate remains applicable.	Moderate beneficial LA104 enables professional judgement to decide between a large or very large effect. Professional judgement considers the effect would be large beneficial, which is significant like the 2018 LVIA.	Major The LA107 definition for major remains applicable.	Large Beneficial LA104 states a very large beneficial effect, which is significant, as per the 2018 LVIA.

VR	Receptor Representative View (RV) / Photomontage (P)	Sensitivity (Refer to Appendix 7.6)	Approx. Distance from Scheme (km)	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
17	View south-west from Byway AMES12 close to the north side of the existing A303 RV 17	High As the receptor is in the WHS, the sensitivity would increase to **very high.**	1.2	**Construction (winter)** The main part of the construction phase would not be visible in relation to views east from Byway AMES12, due to the intervening rising landform and woodland at Normanton Gorse and the Winterbourne Stoke Clump Group; however the upper parts of cranes above this vegetation would be visible. The breaking up the surface of the existing A303 and associated fencing to the construction area would also be visible. **Operation Year 1 (winter)** With the existing A303 no longer in operation, there would be a major immediate improvement change through the reduction of vehicles from the view. The reversion of the existing A303 to a greenway is also considered to be beneficial by reducing the extent of hard surfacing within the view. **Operation Year 15 (summer)** The composition of the view would remain similar to that at year 1, albeit with the establishment of the chalk grassland such that the completed earthworks would be fully integrated within the view.	Moderate The LA107 definition for moderate remains applicable.	Moderate adverse LA104 enables professional judgement to decide between a large or very large effect. Professional judgement considers the effect would be large adverse, which is significant like the 2018 LVIA.	Major The LA107 definition for major remains applicable.	Large beneficial LA104 states a very large beneficial effect, which is significant, as per the 2018 LVIA.	Major The LA107 definition for major remains applicable.	Large beneficial LA104 states a very large beneficial effect, which is significant, as per the 2018 LVIA.
18	View north-east from Byway AMES11 at Normanton Down RV 18	High As the receptor is in the WHS, the sensitivity would increase to **very high.**	1.2	**Construction (winter)** The main part of the construction phase would not be visible due to the Normanton Group woodland and King Barrow Ridge. There would be views of the breaking up the surface and associated fencing to the construction area along the existing A303. **Operation Year 1 (winter)** With the existing A303 no longer in operation, there would be an immediate major change through the removal of vehicles from the composition of the view. **Operation Year 15 (summer)** The composition of the view would remain similar to that at year 1 overall, with the establishment of the chalk grassland fully integrating the greenway along the former A303.	Minor The LA107 definition for minor remains applicable.	Slight adverse LA104 enables professional judgement to decide between a moderate or large effect. Professional judgement considers the effect would be **moderate** adverse, which is a new **significant** adverse effect.	Major The LA107 definition for major remains applicable.	Large beneficial LA104 states a very large beneficial effect, which is significant, as per the 2018 LVIA.	Major The LA107 definition for major remains applicable.	Large beneficial LA104 states a very large beneficial effect, which is significant, as per the 2018 LVIA.
19	Visitors, tourists and recreational users at the WHS interpretation panel viewpoint located to the south of the Stones RV 19 P Figure 7.61 and 7.62	High As the receptor is in the WHS, the sensitivity would increase to **very high.**	1.4	**Construction (winter)** The main part of the construction phase would not be visible in relation to views east from the Stones, as the western tunnel portal would be behind the viewer and King Barrow Ridge would screen views of the Eastern Portal. The construction activity which would be visible once the existing A303 was not longer in use would be the breaking up the surface and associated fencing to the construction area, balanced with the A303 no longer being used by vehicles. **Operation Year 1 (winter) – Figure 7.61** With the existing A303 no longer in operation, there would be an immediate change through the removal of vehicles from the composition of the view. The reduction in the extent of hard surfacing from the A303 and reversion to a greenway is also considered to be beneficial although the chalk grassland would not have established. **Operation Year 15 (summer) – Figure 7.62**	Minor The LA107 definition for minor remains applicable.	Slight adverse LA104 enables professional judgement to decide between a moderate or large effect. Professional judgement considers the effect would be **moderate** adverse, which is a new **significant** adverse effect.	Major The LA107 definition for major remains applicable.	Large beneficial LA104 states a very large beneficial effect, which is significant, as per the 2018 LVIA.	Major The LA107 definition for major remains applicable.	Large beneficial LA104 states a very large beneficial effect, which is significant, as per the 2018 LVIA.

VR	Receptor Representative View (RV) / Photomontage (P)	Sensitivity (Refer to Appendix 7.6)	Approx. Distance from Scheme (km)	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
				The composition of the view would remain similar to that at year one, albeit with the establishment of the chalk grassland along the greenway completed earthworks would be fully integrated within the landscape.						
20	Visitors, tourists and recreational users at the WHS interpretation panel located on Byway AMES12 adjacent to the Cursus RV 20	High As the receptor is in the WHS, the sensitivity would increase to **very high.**	2	**Construction (winter)** The majority of the construction activity would not be visible, being screened by the ridgelines to the west and King Barrow Ridge to the east, such that the main focal point of the view, Stonehenge Bottom, would remain. The construction activity which would be visible once the existing A303 was no longer in use would be the breaking up of the surface and associated fencing to the construction area of the existing A303. **Operation Year 1 (winter)** With the existing A303 no longer in operation, there would be an immediate improved to the view through the removal of vehicles from the landscape. **Operation Year 15 (summer)** The composition of the view would remain similar to that at year 1 due to the open character of the intervening fields. The establishment of the chalk grassland along the greenway would fully integrate the Scheme within the landscape.	Minor The LA107 definition for minor remains applicable.	Slight adverse LA104 enables professional judgement to decide between a moderate or large effect. Professional judgement considers the effect would be **moderate** adverse, which is a new **significant** adverse effect.	Major The LA107 definition for major remains applicable.	Large beneficial LA104 states a very large beneficial effect, which is significant, as per the 2018 LVIA.	Major The LA107 definition for major remains applicable.	Large beneficial LA104 states a very large beneficial effect, which is significant, as per the 2018 LVIA.
21	Visitor, tourists and recreational users on the footpath alongside the existing A303, between King Barrow Ridge and Stonehenge Bottom RV 21	High As the receptor is in the WHS, the sensitivity would increase to **very high.**	2.4	**Construction Phase (winter)** There would be close range views of the breaking up of the existing A303, once vehicles had been diverted into the tunnel. Views of this activity would be below the receptor and would not alter the overall composition of the view, which would remain of The Stones. In addition, the reduction of vehicles on the existing A303 for this part of the construction activity to be undertaken is also considered to be beneficial to the view. **Operation Year 1 (winter)** With the existing A303 no longer in operation, there would be an immediate beneficial change through the removal of vehicles from the composition of the view and reduction of road surfacing in close range. The bare chalk would be noticeable adjacent to the greenway, as the chalk grassland would not have established. **Operation Year 15 (summer)** The establishment of the chalk grassland would integrate the greenway within the landscape and visually improve the scenic quality of the view.	Minor The LA107 definition for minor remains applicable.	Slight adverse LA104 enables professional judgement to decide between a moderate or large effect. Professional judgement considers the effect would be **moderate** adverse, which is a new **significant** adverse effect.	Moderate The LA107 definition for moderate remains applicable.	Large beneficial LA104 enables professional judgement to decide between a large or very large effect. Professional judgement considers the effect would be large beneficial, like the 2018 LVIA and a significant effect.	Major The LA107 definition for major remains applicable.	Large beneficial LA104 states a very large beneficial effect, which is significant, as per the 2018 LVIA.
22	Visitors, tourists and recreational users at the interpretation panel viewpoint located at the eastern end of The Cursus RV 22	High As the receptor is in the WHS, the sensitivity would increase to **very high.**	3.2	**Construction Phase (winter)** The construction activity would include views of tall equipment associated with the long bridge and at the western portal.. The intervening landform and vegetation would screen views of the construction at the Eastern Portal. The breaking up of the existing A303, once vehicles had been diverted into the tunnel would also be visible, along with the fencing to demarcate the construction area. **Operation Year 1 (winter)**	Moderate The LA107 definition for moderate remains applicable.	Moderate adverse LA104 enables professional judgement to decide between a large or very large effect. Professional judgement considers the	Moderate The LA107 definition for moderate remains applicable.	Large beneficial LA104 enables professional judgement to decide between a large or very large effect. Professional	Major The LA107 definition for major remains applicable.	Large beneficial LA104 states a very large beneficial effect, which is significant, as per the 2018 LVIA.

VR	Receptor Representative View (RV) / Photomontage (P)	Sensitivity (Refer to Appendix 7.6)	Approx. Distance from Scheme (km)	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
				With the existing A303 no longer in operation, there would be an immediate change through the removal of vehicles from the composition of the view and reduction of road surfacing at close range, although the completed earthworks would not have fully integrated. **Operation Year 15 (summer)** The composition of the view would remain similar to that at year 1 due to the removal of vehicles from the existing A303. The establishment of the chalk grassland would integrate the completed earthworks within the view.		effect would be large adverse, which like the 2018 LVIA is a significant effect.		judgement considers the effect would be large beneficial, like the 2018 LVIA and a significant effect.		
23	Visitors, tourists, recreational users at the WHS interpretation panel viewpoint where the Avenue crosses King Barrow Ridge RV 23 P Figure 7.63 and 7.64	High As the receptor is in the WHS, the sensitivity would increase to **very high.**	2.8	**Construction Phase (winter)** The construction of the Western Portal and cutting approach to the western portal at the western edge of the WHS would be visible in the background of the view, due to the elevated position of the receptor. The construction activity would include views of tall equipment and solid fencing. The breaking up of the existing A303, once vehicles had been diverted into the tunnel would also be visible, along with the fencing to demarcate the construction area. Views of this part of the construction activity would be below the receptor. **Operation Year 1 (winter) – Figure 7.63** With the existing A303 no longer in operation, there would be an immediate change through the removal of traffic from the composition of the view. The upper part of the cutting approach to the western portal would be visible, between the long bridge and the western portal; however it would represent a very small part of the view. **Operation Year 15 (summer) – Figure 7.64** The composition of the view would remain similar to that at year 1 due to the open character of the intervening fields.	Moderate The LA107 definition for moderate remains applicable.	Moderate adverse LA104 enables professional judgement to decide between a large or very large effect. Professional judgement considers the effect would be large adverse, which like the 2018 LVIA is a significant effect.	Moderate The LA107 definition for moderate remains applicable.	Large beneficial LA104 enables professional judgement to decide between a large or very large effect. Professional judgement considers the effect would be large beneficial, like the 2018 LVIA and a significant effect.	Major The LA107 definition for major remains applicable.	Large beneficial LA104 states a very large beneficial effect, which is significant, as per the 2018 LVIA.
24	Recreational users on the permissive path across Coneybury Hill tumulus RV 24	High As the receptor is in the WHS, the sensitivity would increase to **very high.**	2.6	**Construction Phase (winter)** The main construction activity of the Western Portal and cutting approach to the western portal would be screened by Luxenborough wood, although the upper part of cranes would be visible. The breaking up of the existing A303, once vehicles had been diverted into the tunnel would also be visible, along with the fencing to demarcate the construction area. **Operation Year 1 (winter)** With the existing A303 no longer in operation, there would be a notable change through the removal of vehicles from the view. **Operation Year 15 (summer)** The composition of the view would remain similar to that at year 1 due to the open character of the intervening fields, with the main change being the establishment of the chalk grassland along the greenway, which would have integrated the completed earthworks.	Minor The LA107 definition for minor remains applicable.	Slight adverse LA104 enables professional judgement to decide between a moderate or large effect. Professional judgement considers the effect would be **moderate** adverse, which is a new **significant** adverse effect.	Moderate The LA107 definition for moderate remains applicable.	Large beneficial LA104 enables professional judgement to decide between a large or very large effect. Professional judgement considers the effect would be large beneficial, like the 2018 LVIA and a significant effect.	Major The LA107 definition for major remains applicable.	Large beneficial LA104 states a very large beneficial effect, which is significant, as per the 2018 LVIA.
25	Recreational users on Bridleway AMES39 and residential properties at Strangways	High As the receptor is in the WHS, the	1	**Construction Phase (winter)** The tall equipment at the Eastern Portal and the upper parts of the solid fencing would be visible along with the excavation for the approach to	Moderate The LA107 definition for moderate	Moderate adverse LA104 enables professional	Minor The LA107 definition for minor	Slight beneficial LA104 enables	No change The LA107 definition for no change	Neutral LA104 retains a neutral effect, which is

VR	Receptor Representative View (RV) / Photomontage (P)	Sensitivity (Refer to Appendix 7.6)	Approx. Distance from Scheme (km)	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
	RV 25	sensitivity would increase to **very high.**		the eastern portal. The tall equipment would be seen in the context of pylons and vehicles on the existing A303 and be a noticeable feature. **Operation Year 1 (winter)** In operation the new A303 would be slightly lower than the existing A303 by between 0.7metres and 5.59metres, such that views of vehicles would be reduced. **Operation Year 15 (summer)** With the existing vegetation in leaf the composition of the view would remain similar to the existing view.	remains applicable.	judgement to decide between a large or very large effect. Professional judgement considers the effect would be large adverse, which is a significant effect, like the 2018 LVIA.	remains applicable.	professional judgement to decide between a moderate or large effect. Professional judgement considers the effect would be **moderate** beneficial, which is a new **significant** adverse effect.	remains applicable.	not significant, as per the 2018 LVIA.
26	Tourists, visitors and recreational users on Bridleway AMES9A RV 26 P Figure 7.65 and 7.66	High As the receptor is in the WHS, the sensitivity would increase to **very high.**	0.55	**Construction Phase (winter)** The tall equipment at the Eastern Portal and the upper parts of the solid fencing would be visible along with the excavation for the approach to the eastern portal and utilities. The tall equipment would be seen in the context of pylons and vehicles on the existing A303 and be a noticeable feature. **Operation Year 1 (winter) – Figure 7.65** In operation the new A303 alignment would generally be in cutting with vehicles and signage screened by the intervening landform, despite the new A303 being in closer proximity to the receptor. However, as the new A303 crosses the dry valley on the approach to the Eastern Portal there would be open views of vehicles. **Operation Year 15 (summer) – Figure 7.66** With the establishment of the new planting and the existing vegetation in leaf views of vehicles would be screened, reflecting the existing view.	Moderate The LA107 definition for moderate remains applicable.	Moderate adverse LA104 enables professional judgement to decide between a large or very large effect. Professional judgement considers the effect would be large adverse, which is a significant effect, like the 2018 LVIA.	Moderate The LA107 definition for moderate remains applicable.	Moderate adverse LA104 enables professional judgement to decide between a large or very large effect. Professional judgement considers the effect would be large adverse, which is a significant effect, like the 2018 LVIA	No change The LA107 definition for no change remains applicable.	Neutral LA104 retains a neutral effect, which is not significant, as per the 2018 LVIA.
27	Residents adjacent to Stonehenge Road RV 27	High The sensitivity would remain high as a balance between a low density residential area and views of part of the WHS.	0.5	**Construction Phase (winter)** The tall equipment at the Eastern Portal would be seen in the context of pylons and would be a perceptible feature. **Operation Year 1 (winter)** In operation the existing vegetation on the southern side of the existing A303 would be retained, with the new A303 alignment further to the north of the receptor and beyond retained existing vegetation, thereby providing additional softening of views of higher sided vehicles. **Operation Year 15 (summer)** With the existing vegetation in leaf, the composition of the view would reflect the existing view.	Minor The LA107 definition for minor remains applicable.	Slight adverse LA104 retains a slight adverse effect.	Negligible The LA107 definition for negligible remains applicable.	Slight beneficial LA104 retains a slight beneficial effect.	No Change The LA107 definition for no change remains applicable.	Neutral LA104 retains a neutral effect, which is not significant, as per the 2018 LVIA.
28	Visitors, tourists and recreational users at the WHS interpretation panel viewpoint in open access land approximately 100m	High As the receptor is in the WHS, the sensitivity	1.2	**Construction Phase (winter)** The tall equipment at the Eastern Portal and the upper parts of the solid fencing would be visible along with the excavation for the new A303 alignment. The tall equipment would be seen in the context of pylons and vehicles on the existing A303 and be a noticeable feature.	Moderate The LA107 definition for moderate	Moderate adverse LA104 enables professional judgement to	Minor The LA107 definition for minor	Slight adverse LA104 enables professional judgement to	No Change The LA107 definition for no change	Neutral LA104 retains a neutral effect, which is not significant,

VR	Receptor Representative View (RV) / Photomontage (P)	Sensitivity (Refer to Appendix 7.6)	Approx. Distance from Scheme (km)	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
	west of Woodhenge monument RV 28	would increase to **very high.**		**Operation Year 1 (winter)** In operation the new A303 alignment would generally be lower than the existing A303, by between 1.1metres and 6metres, albeit slightly closer to the receptor and without the screening from existing vegetation. The cutting would screen lower parts of vehicles, whilst there would be views of taller signs (7.2m) and higher sided vehicles. **Operation Year 15 (summer)** With the establishment of the new planting and the existing vegetation in leaf the view would reflect the existing composition of the view.	remains applicable.	decide between a large or very large effect. Professional judgement considers the effect would be large adverse, which is a significant effect, like the 2018 LVIA	remains applicable.	decide between a moderate or large effect. Professional judgement considers the effect would be **moderate** adverse which is a new **significant** adverse effect.	remains applicable.	as per the 2018 LVIA.
29	Residents on the southern edge of Durrington RV 29	High As the receptor is part of a more densely populated area, the sensitivity would remain high.	2	**Construction Phase (winter)** The tall equipment at the Eastern Portal would be barely noticeable due to the distance and the oblique angle of the view. The construction of Countess Flyover would not be visible due to the intervening vegetation. Construction activity across the River Avon, associated with the Ratfyn substation would also be barely noticeable due to the distance. **Operation Year 1 (winter)** No part of the Scheme along the A303 would be visible. Views of the high load route or diversion scenario are considered to reflect the existing context of views of vehicles. **Operation Year 15 (summer)** No part of the propose scheme along the A303 would be visible. Views of the high load route or diversion scenario are considered to reflect the existing context of views of vehicles.	Negligible The LA107 definition for negligible remains applicable.	Slight adverse LA104 retains a slight adverse effect, which is not significant, as per the 2018 LVIA.	No Change The LA107 definition for no change remains applicable.	Neutral LA104 retains a neutral effect, which is not significant, as per the 2018 LVIA.	No Change The LA107 definition for no change remains applicable.	Neutral LA104 retains a neutral effect, which is not significant, as per the 2018 LVIA.
29A	Residential properties adjacent to Countess Road west nos. 61 to 145	High As there are views of the WHS at close range from the west elevation of the receptor, the sensitivity would increase to **very high.**	0.9	**Construction (winter)** There would be views of the upper parts of tall machinery and fencing at the Eastern Portal, as well as the excavation for the new A303 alignment to the north of the existing road, in closer proximity to the Nile Clumps. The construction activity would be viewed obliquely in relation to the main orientation of the receptor, where views are westwards across the WHS. The construction would therefore be perceptible, but not a readily apparent feature. **Operation Year 1 (winter)** The Eastern Portal would not be visible due to the intervening rising landform and vegetation. The realigned section of the A303 would be in cutting and therefore only a very small part of the Scheme would be visible. **Operation Year 15 (summer)** With the establishment of the planting adjacent to the A303, views would reflect the existing baseline.	Minor The LA107 definition for minor remains applicable.	Slight adverse LA104 enables professional judgement to decide between a moderate or large effect. Professional judgement considers the effect would be **moderate** adverse, which is a new **significant** adverse effect.	Negligible The LA107 definition for no negligible remains applicable.	Neutral LA104 results in a slight adverse effect, which remains not significant as per the 2018 LVIA.	No Change The LA107 definition for no change remains applicable.	Neutral LA104 retains a neutral effect, which is not significant, as per the 2018 LVIA.
29B	Residential properties adjacent to the A345 (Countess Road) west nos. 23 to 59 Including Tollgate Close)	High As there are views of the WHS at close range from the west elevation of the receptor, the sensitivity	0.4	**Construction (winter)** There would be views of the upper parts of tall machinery and fencing at the Eastern Portal, as well as the excavation for the new A303 alignment to the north of the existing road, in closer proximity to the Nile Clumps. The construction activity would be viewed obliquely in relation to the main orientation of the receptor, where views are westwards across the WHS. The construction would therefore be perceptible, but not a readily apparent feature.	Minor The LA107 definition for minor remains applicable.	Slight adverse LA104 enables professional judgement to decide between a moderate or large effect. Professional judgement	Negligible The LA107 definition for no negligible remains applicable.	Neutral LA104 results in a slight adverse effect, which remains not significant as per the 2018 LVIA.	No Change The LA107 definition for no change remains applicable.	Neutral LA104 retains a neutral effect, which is not significant, as per the 2018 LVIA.

VR	Receptor Representative View (RV) / Photomontage (P)	Sensitivity (Refer to Appendix 7.6)	Approx. Distance from Scheme (km)	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
		would increase to **very high.**		**Operation Year 1 (winter)** The Eastern Portal would not be visible due to the intervening rising landform and vegetation. The realigned section of the A303 would be in cutting and therefore only a very small part of the Scheme would be visible. **Operation Year 15 (summer)** With the establishment of the planting adjacent to the A303, views would reflect the existing baseline.		considers the effect would be **moderate** adverse, which is a new **significant** adverse effect.				
30	Motorists on the A345 (Countess Road) at the exit from Countess Services on the north side of Countess Roundabout RV 30 P Figure 7.67 and 7.68	Low As receptors on a main road, the sensitivity would remain low.	0.1	**Construction Phase (winter)** The implementation of the flyover would be visible, including the cranes and other tall lifting equipment, being located centrally within the existing Countess Roundabout and A303. The excavation for the new drainage works and utilities, including the tree removal on the north-west side of the roundabout would also be visible. Views of the construction activity would be at close range and seen in the context of the existing highways infrastructure, and a noticeable feature of the view. The dominant feature in the view for the motorist would be the road and other vehicles. **Operation Year 1 (winter) – Figure 7.67** In operation the flyover would be visible, being up to 7m above the existing roundabout, along with views of vehicles in an elevated position. The flyover would not truncate any longer distance views, due to the proximity of surrounding vegetation. The reduction of vegetation to the north-west of the roundabout would also be a noticeable loss to the view. **Operation Year 15 (summer) – Figure 7.68** The planting in the central part of the existing Countess Roundabout would have established and would partially soften views of the flyover; however the flyover would remain a noticeable feature.	Major The LA107 definition for major remains applicable.	Moderate adverse LA104 enables professional judgement to decide between a moderate or slight effect. Professional judgement considers the effect would be moderate adverse, which is significant like the 2018 LVIA.	Moderate The LA107 definition for moderate remains applicable.	Slight adverse LA104 retains the slight adverse effect, like the 2018 LVIA and which is not significant.	Moderate The LA107 definition for moderate remains applicable.	Slight adverse LA104 retains the slight adverse effect, like the 2018 LVIA and which is not significant.
30A	Countess Farm	High As the receptor has views of the WHS, their sensitivity would increase to very **high**	0.05	**Construction Phase (winter)** There would be close range views of the removal of existing vegetation to the south of the receptor, as well as the implementation of the flyover, utilities and drainage basins. The proximity of the construction phase, whilst seen in the context of existing vehicles on the A303 would represent a dominant feature within the view. **Operation Year 1 (winter)** There would be open views of the flyover retaining walls and acoustic barriers due to the removal of the vegetation, with the retaining walls extending approximately 7m above ground level. The concrete finish to these walls in combination with vehicles in a more elevated position in the view would represent a dominate feature within the view. **Operation Year 15 (summer)** The existing vegetation will soften views of the lower and central sections of the flyover retaining walls. Views would remain of the upper parts of the flyover and acoustic barriers, all of which would be in an elevated position in comparison with existing views of the A303 and vehicles and therefore readily apparent.	Major The LA107 definition for major remains applicable.	Large adverse LA104 results in a very large adverse effect, which like the 2018 LVIA is significant.	Major The LA107 definition for major remains applicable.	Large Adverse LA104 results in a very large adverse effect, which like the 2018 LVIA is significant.	Moderate The LA107 definition for moderate remains applicable.	Moderate adverse LA104 enables professional judgement to decide between a large or very large effect. Professional judgement considers the effect would be large adverse which is significant like the 2018 LVIA.
30B	Residential properties east of Countess Road	Medium As residents in a less populated area and without views	0.15	**Construction Phase (winter)** There would be angled views of the removal of vegetation adjacent to the existing A303, with more direct views of the contractor compound to the north-east of Countess Services. The Scheme would form a noticeable feature. **Operation Year 1 (winter)**	Moderate The LA107 definition for moderate remains applicable.	Moderate Adverse LA104 retains a moderate adverse effect	Negligible The LA107 definition for negligible	Slight adverse LA104 enables professional judgement to decide	No change The LA107 definition for no change remains applicable.	Neutral LA104 retains the neutral effect like the 2018 LVIA.

VR	Receptor Representative View (RV) / Photomontage (P)	Sensitivity (Refer to Appendix 7.6)	Approx. Distance from Scheme (km)	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
		of the WHS, the sensitivity would remain medium (moderate)		There would angled views of vehicles on the existing A303 due to the low height of the new planting, However, views across fields would remain, such that only a very small part of the project would be visible. **Operation Year 15 (summer)** The establishment of the planting would reflect the context of the existing view.		which is significant.	remains applicable.	between a neutral or slight effect. Professional judgement considers the effect would be slight adverse which like the 2018 LVIA and not significant.		This is not significant.
31	View north-west from the Lord's Walk footpath alongside the River Avon in the north of Amesbury RV 31	High As the receptor is representation of users on a recreational trail the sensitivity would remain high.	0.1	**Construction (winter)** There would be close range views of the removal of trees adjacent to the A303 to enable the construction of the flyover retaining gabions as well as views of the upper parts of cranes. These views would be in the context of existing filtered views of vehicles on the existing A303, which would remain in operation during the implementation of Countess Flyover. The intervening vegetation and landform would screen the remainder of the construction activity across the Scheme. The construction activity would therefore be dominant. **Operation Year 1 (winter)** There would be open views of vehicles on the A303 due to the localised removal of vegetation during the construction phase, as well as filtered views of higher sided vehicles on the flyover, representing a noticeable change to the view. The acoustic barriers would screen the lower parts of vehicles. **Operation Year 15 (summer)** With the establishment of the proposed planting and the existing vegetation in leaf, vehicles would be screened overall, with any views of the upper parts of vehicles reflecting the existing context of the view.	Major The LA107 definition for major remains applicable.	Large adverse LA104 enables professional judgement to decide between a large or very large effect. Professional judgement considers the effect would be large adverse which is significant like the 2018 LVIA.	Moderate The LA107 definition for moderate remains applicable.	Moderate adverse LA104 enables professional judgement to decide between a moderate or large effect. Professional judgement considers the effect would be moderate adverse which is significant like the 2018 LVIA.	Minor The LA107 definition for minor remains applicable.	Slight adverse LA104 enables professional judgement to decide between a slight or moderate effect. Professional judgement considers the effect would be slight adverse which is not significant like the 2018 LVIA.
31A	Residential properties adjacent to Lords Walk, Amesbury	Medium As residents in a dense residential area their sensitivity would increase to **high.**	0.15	**Construction (winter)** While the receptor is in an elevated position the intervening vegetation would largely screen the construction activity, such that the upper parts of cranes would form a barely noticeable feature. **Operation Year 1 (winter)** The intervening vegetation would screen views of the Scheme, representing no change to the view. **Operation Year 15 (summer)** With the existing vegetation in leaf there would be no change to the view.	Negligible The LA107 definition for negligible remains applicable.	Slight adverse LA104 enables professional judgement to decide between a slight or moderate effect. Professional judgement considers the effect would be slight adverse which is not significant like the 2018 LVIA.	No Change The LA107 definition for no change remains applicable.	Neutral LA104 retains the neutral effect.	No Change The LA107 definition for no change remains applicable.	Neutral LA104 retains the neutral effect.
31B	Bowles Hatches (Amesbury Abbey)	Medium As the receptor is within the	0.1	**Construction (winter)** There would be filtered views of the construction of the retaining walls of Countess Flyover, representing a noticeable change to the view, but one which would be seen in the context of existing vehicles on the A303.	Moderate The LA107 definition for moderate	Moderate adverse LA104 enables professional	Minor The LA107 definition for minor	Slight adverse LA104 enables professional	No Change The LA107 definition for no change	Neutral LA104 retains the neutral effect.

VR	Receptor Representative View (RV) / Photomontage (P)	Sensitivity (Refer to Appendix 7.6)	Approx. Distance from Scheme (km)	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
		WHS, the sensitivity would increase to **very high.**		**Operation Year 1 (winter)** There would be views of the concrete walls of the flyover, approximately 3metres in height, as well as vehicles in a more elevated position than compared to existing views. These views would be filtered by the existing vegetation. **Operation Year 15 (summer)** With the existing vegetation in leaf the Scheme would be screened, reflecting no change to the existing view.	remains applicable.	judgement to decide between a large or very large effect. Professional judgement considers the effect would be large adverse which is significant like the 2018 LVIA.	remains applicable.	judgement to decide between a moderate or large effect. Professional judgement considers the effect would be **moderate** adverse, which is a new **significant** adverse effect.	remains applicable.	
32	View south-west from Bridleway AMES 6, between Ratfyn and Bulford RV 32	Medium The sensitivity would increase to high due to views of the WHS, although at distance, such that the sensitivity is reduced from **very high.**	1.2	**Construction (winter)** The intervening vegetation would screen the majority of the construction activity associated with the Countess Flyover; however the upper parts of cranes would be visible as well as works for the proposed electrical cable. The scale of the cranes in relation to the wider view which includes pylons, settlement patterns and large scale buildings in Amesbury would be a barely noticeable feature, as well as in relation to the eastern portal.. The construction between the Ratfyn substation and the contractor's compound would be visible across the valley floor. **Operation Year 1 (winter)** The intervening vegetation would soften views of the flyover and vehicles. The electrical cable would not be visible, being underground. **Operation Year 15 (summer)** With the existing vegetation in leaf, the Scheme would be screened.	Moderate The LA107 definition for moderate remains applicable.	Moderate adverse LA104 enables professional judgement to decide between a moderate or large effect. Professional judgement considers the effect would be moderate adverse which is significant like the 2018 LVIA.	Negligible The LA107 definition for negligible remains applicable.	Slight adverse LA104 retains the slight adverse effect which is not significant.	No Change The LA107 definition for no change remains applicable.	Neutral LA104 retains the neutral effect which is not significant.
32A	View south-west from Ratfyn Farm	Medium As the receptor is representative of a less populated area, the sensitivity remains medium (moderate).	1	**Construction (winter)** The removal of existing trees adjacent to the A303 would be visible, along with the construction of the reinforced embankments of Countess flyover and excavation for the electrical cable, although largely filtered by intervening vegetation. **Operation Year 1 (winter)** There would be views of vehicles on the A303 and the concrete retaining walls along due to the removal of vegetation, although largely filtered by existing vegetation. The electrical cable would not be visible, being underground. **Operation Year 15 (summer)** With the existing vegetation in leaf and the tree planting established, the view would reflect the existing composition of the view.	Minor The LA107 definition for minor remains applicable.	Slight adverse LA104 retains the slight adverse effect which is not significant.	Minor The LA107 definition for minor remains applicable.	Slight adverse LA104 retains the slight adverse effect which is not significant.	No change The LA107 definition for no change remains applicable.	Neutral LA104 retains the neutral effect which is not significant.
33	View from the Allington Track RV 33	Medium The sensitivity would remain medium.	0.6	**Construction (winter)** There would be close range views of the stopping up of part of the Amesbury Road and upgrade of the existing link between Allington Track and Amesbury Road. The scale of the construction activity would be in close proximity, but seen in the context of the existing A303 and localised to existing tracks and roads, such that it would not alter the overall balance of features within the view. **Operation Year 1 (winter)**	Negligible The LA107 definition for negligible remains applicable.	Slight adverse LA104 retains the slight adverse effect which is not significant.	Negligible The LA107 definition for negligible remains applicable.	Slight beneficial LA104 retains the slight beneficial effect which is not significant.	Negligible The LA107 definition for negligible remains applicable.	Slight beneficial LA104 retains the slight beneficial effect which is not significant.

VR	Receptor Representative View (RV) / Photomontage (P)	Sensitivity (Refer to Appendix 7.6)	Approx. Distance from Scheme (km)	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
				The closure of parts of these routes is considered to be a beneficial change for the receptor, but it would represent a very small change to the view. **Operation Year 15 (summer)** With the establishment of the chalk grassland the scenic quality would be higher than the existing tracks, albeit very localised, such that the change would cause a limited improvement to the view.						
34	View west from Beacon Hill RV 34	Medium The sensitivity would increase to **high** due to views of the WHS, but the distance would reduce the sensitivity from very high.	1	**Construction (winter)** The work to stop up the byway in the eastern part of the Scheme, along with cranes constructing the Countess Flyover would be visible, although seen in the context of existing vertical features within the view. There would also be glimpsed views of tall machinery at the Eastern Portal. Views of the remainder of the construction activity would not be discernible due to the distance. The scale of the construction activity in relation to the extent of the view would be a barely noticeable feature. **Operation Year 1 (winter)** Views of vehicles on the A303, as well as on the high load route or diversion scenario (as occurring) are considered to reflect existing views, such that it would reflect a no change to the existing view. **Operation Year 15 (summer)** At year 15 and with the existing vegetation in leaf, the view would reflect the existing baseline, and therefore no change to the view.	Negligible The LA107 definition for negligible remains applicable.	Slight adverse LA104 enables professional judgement to decide between a moderate or slight effect. Professional judgement considers the effect would remain slight adverse due to the distance from the Scheme and the extent of panoramic views from the receptor remaining.	No Change The LA107 definition for no change remains applicable.	Neutral LA104 retains the neutral effect which is not significant.	No Change The LA107 definition for no change remains applicable.	Neutral LA104 retains the neutral effect which is not significant.
35	View north-west from the permissive path adjacent to Fargo Plantation View to Rollestone RV 35	Medium As the view is across the WHS the sensitivity would increase to **very high.**	1.45	**Construction (winter)** The construction of Rollestone Junction would be visible due to the elevated position of the receptor and the open character of the intervening fields. The scale of the construction activity would be small, with localised excavation and no tall machinery. The construction activity would be seen in the context of the A360 and the Packway and consolidated to a small part of the view, such that it would be perceptible but not alter the overall balance of features within the view. **Operation Year 1 (winter)** Whilst discernible, views of Rollestone Junction would reflect existing views of the A360 and The Packway road networks, as would views of high load vehicles or the diversion scenario, such that it would reflect existing views. **Operation Year 15 (summer)** At year 15 the view would reflect the year 1 assessment, due to the open character of the intervening fields and elevated position of the receptor, Rollestone Junction would be discernible, but reflect existing views, including for the high load vehicle and diversion scenario.	Minor The LA107 definition for minor remains applicable.	Slight adverse LA104 enables professional judgement to decide between a moderate or large effect. Professional judgement considers the effect would be **moderate** adverse, which is a new **significant** adverse effect.	Negligible The LA107 definition for negligible remains applicable.	Neutral LA104 results in a slight adverse effect, which is not significant, like the 2018 LVIA.	Negligible The LA107 definition for negligible remains applicable.	Neutral LA104 results in a slight adverse effect, which is not significant, like the 2018 LVIA.
36	View south-east from residential property at Rollestone Junction RV 36	Medium As the view is from a low density residential area the sensitivity	0.05	**Construction (winter)** There would be close range views of the construction of Rollestone Junction and therefore a noticeable feature, although seen in the context of existing vehicles, thereby reducing the impact. **Operation Year 1 (winter)** The road network and junction would be slightly further from the receptor, which is considered to be beneficial, although, overall the	Moderate The LA107 definition for moderate remains applicable.	Moderate adverse LA104 retains a moderate adverse effect.	Minor The LA107 definition for minor remains applicable.	Slight beneficial LA104 retains a slight beneficial effect.	Minor The LA107 definition for minor remains applicable.	Slight beneficial LA104 retains a slight beneficial effect.

VR	Receptor Representative View (RV) / Photomontage (P)	Sensitivity (Refer to Appendix 7.6)	Approx. Distance from Scheme (km)	Commentary	Construction Magnitude (winter)	Construction Effect (winter)	Year 1 Magnitude (winter)	Year 1 Effect (winter)	Year 15 Magnitude (summer)	Year 15 Effect (summer)
		would remain medium.		balance of features would remain. This includes for any views of high load vehicles and the diversion scenario, as ultimately these reflect existing views of vehicles. **Operation Year 15 (summer)** Due to the open character of the landscape the assessment would reflect the year 1 findings.						

Appendix 7.1 Impact significance, using receptor sensitivity

The descriptions for significance (as outlined in Table 1) are in accordance with the DMRB Section LA104: Environmental assessment and monitoring[15].

Table 1. Significance categories and typical descriptions

Significance Category	Description
Very Large	Effects at this level are material in the decision-making process.
Large	Effects at this level are material in the decision-making process.
Moderate	Effects at this level can be considered to be material decision-making factors.
Slight	Effects at this level are not material in the decision-making process.
Neutral	No effects or those that are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error.

The approach to deriving impact significance from receptor value and magnitude of effects is in accordance with LA104. Where Table 2 includes two significance categories, evidence should be provided to support the reporting of a single significance category.

Table 2. Significance matrix

		Magnitude of impact (degree of change)				
		No change	**Negligible**	**Minor**	**Moderate**	**Major**
Environmental sensitivity (value)	**Very high**	Neutral	Slight	Moderate or large	Large or very large	Very large
	High	Neutral	Slight	Slight or moderate	Moderate or large	Large or very large
	Medium	Neutral	Neutral or slight	Slight	Moderate	Moderate or large
	Low	Neutral	Neutral or slight	Neutral or slight	Slight	Slight or moderate

[15] Highways England (2019) DMRB LA104 Environmental assessment and monitoring, July 2019.

	Negligible	Neutral	Neutral	Neutral	Neutral or slight	Slight

It is noted that significant effects typically comprise effects that remain within the moderate, large or very large categories once mitigation has been taken into account.

Table A10.3. Impact significance during construction using LA109/LA104 methodology

Receptor	Sensitivity of Receptor*	Magnitude of Impact**	Significance of Effect***	Magnitude of Impact**	Significance of Effect***	Magnitude of Impact**	Significance of Effect***	Magnitude of Impact**	Significance of Effect***
		ESSO oil pipeline (in study area)		**Military Land (within Scheme boundary)**		**Petrol filling stations (outside Scheme boundary, within study area)**		**Gas works (outside Scheme boundary, within study area)**	
Human Health (receptor as defined in ES)									
Residential (on-site)	Very high	NA	NA	NA	NA	NA	NA	NA	NA
Residential (off-site)	Very high	No change	Neutral	NA	NA	NA	NA	No change	Neutral
Commercial/ public open space (on-site)	Medium/ high	NA	NA	NA	NA	No change	Neutral	No change	Neutral
Commercial/ public open space (off-site)	Medium/ high	NA	NA	No change	Neutral	Minor adverse	Slight (as off-site receptors)	No change	Neutral
Controlled Water (receptor as defined in ES)									
Groundwater (Principal aquifer)	High	No change	Neutral	Minor adverse	Slight (WW1 land; if an ongoing risk, it would have been evident by now)	Minor adverse	Slight (as sites outside Scheme)	Minor adverse	Slight (as sites outside Scheme)

Receptor	Sensitivity of Receptor*	Magnitude of Impact**	Significance of Effect***	Magnitude of Impact**	Significance of Effect***	Magnitude of Impact**	Significance of Effect***	Magnitude of Impact**	Significance of Effect***
		ESSO oil pipeline (in study area)		**Military Land (within Scheme boundary)**		**Petrol filling stations (outside Scheme boundary, within study area)**		**Gas works (outside Scheme boundary, within study area)**	
Surface water (rivers)	Very high	No change	Neutral	NA	NA	No change	Neutral	No change	Neutral
Natural and built Environment (receptor as defined in ES, but receptor not referred to in LA109)									
Building structures and services (on-site and off-site)	Medium	No change	Neutral	NA	NA	No change	Neutral	Minor adverse	Slight
Environmental designation	High	No change	Neutral	NA	NA	No change	Neutral	Minor adverse	Slight (as sites outside Scheme)

* Defined in LA109
** From ES Appendix 10.2. When identified as being 'neutral' in the ES, this has been changed to 'no change' in accordance with LA109 terminology.
*** From Table A10.2

Table A10.4. Impact significance post-construction using LA109/LA104 methodology

Receptor	Sensitivity of Receptor*	Magnitude of Impact**	Significance of Effect***	Magnitude of Impact**	Significance of Effect***	Magnitude of Impact**	Significance of Effect***	Magnitude of Impact**	Significance of Effect***
		ESSO pipeline (in study area)		**Military Land (within Scheme boundary)**		**Petrol filling stations (outside Scheme boundary, within study area)**		**Gas works (outside Scheme boundary, within study area)**	
Human Health (receptor as defined in ES)									
Residential (on-site)	Very high	NA	NA	NA	NA	NA	NA	NA	NA
Residential (off-site)	Very high	No change	Neutral	NA	NA	NA	NA	No change	Neutral

Receptor	Sensitivity of Receptor*	Magnitude of Impact**	Significance of Effect***	Magnitude of Impact**	Significance of Effect***	Magnitude of Impact**	Significance of Effect***	Magnitude of Impact**	Significance of Effect***
		ESSO pipeline (in study area)		**Military Land (within Scheme boundary)**		**Petrol filling stations (outside Scheme boundary, within study area)**		**Gas works (outside Scheme boundary, within study area)**	
Commercial/ public open space (on-site)	Medium/ high	NA	NA	Minor beneficial	Slight (Military Land extends beyond Scheme boundary-no changes here post-construction)	No change	Neutral	No change	Neutral
Commercial/ public open space (off-site)	Medium/ high	NA	NA	No change	Neutral	No change	Neutral	No change	Neutral
Controlled Water (receptor as defined in ES)									
Groundwater (Principal aquifer)	High	No change	Neutral	Minor beneficial	Slight (Military Land extends beyond Scheme boundary-no changes here post-construction)	No change	Neutral	No change	Neutral
Surface water (rivers)	Very high	No change	Neutral	NA	NA	No change	Neutral	No change	Neutral
Natural and built Environment (receptor as defined in ES, but receptor not referred to in LA109)									
Building structures and services (on-site and off-site)	Medium	No change	Neutral	NA	NA	No change	Neutral	No change	Neutral

Receptor	Sensitivity of Receptor*	Magnitude of Impact**	Significance of Effect***	Magnitude of Impact**	Significance of Effect***	Magnitude of Impact**	Significance of Effect***	Magnitude of Impact**	Significance of Effect***
		ESSO pipeline (in study area)		**Military Land (within Scheme boundary)**		**Petrol filling stations (outside Scheme boundary, within study area)**		**Gas works (outside Scheme boundary, within study area)**	
Environmental designation	High	No change	Neutral	NA	NA	No change	Neutral	No change	Neutral

* From LA109
** From ES Appendix 10.2. When identified as being 'neutral' in the ES, this has been changed to 'no change' to be in accordance with LA109.
*** From Table A10.2

Appendix 8.1 Road Drainage and the Water Environment Competent Experts

Bernadine Maguire

Academic qualifications:

- BSc (1st Class Honours) Zoology.
- MSc (Distinction) Coastal & Marine Resource Management.
- Graduate Diploma (Distinction) River & Coastal Engineering.

Professional qualifications:

- Currently working towards achieving chartered status with Chartered Institute of Water and Environmental Management (CIWEM).

Experience:

- 9 years' experience working in a Local Authority leading on flood risk management work and implementing the Lead local Flood Authority role.
- 5 years' experience in Environmental Impact Assessment (water quality, flood risk and water resources).

Jane Sladen

Dr Jane Sladen is a Chartered Civil Engineer, Member of the Institution of Civil Engineers and Fellow of the Geological Society. She is hydrogeology team lead for the A303 Stonehenge and was responsible for assessing the effects of the scheme on the groundwater environment, its users and dependant ecosystems. Dr Sladen is currently a Technical Director and Practice Lead for Water Environment at AECOM with over 30 years of experience in hydrogeology, including groundwater resource assessment, impact assessment, groundwater quality evaluation and pollution, groundwater flooding and quarry, mine and construction site dewatering. She has undertaken hydrogeological impact assessments for major infrastructure projects including tunnels, highways, railways, quarries, mines and airports and has prepared Environmental Statements for major projects including Thames Tideway Tunnel and HS2 Phase One: London to Midlands . She has assessed construction and operational impacts, water supply resource availability and sustainability, and carried out due diligence, pre-feasibility and feasibility engineering design studies for infrastructure projects and has also been responsible for environmental monitoring, permitting, compliance reporting and stakeholder engagement.

Appendix 11.1 Cumulative Developments Long List

ID	Application reference	Applicant for 'other development' and brief description	Distance from project (metres)	Status	Within ZOI?	Progress to stage 2?	Overlap in temporal scope?	Scale and Nature of Development likely to have a significant effect?	Other factors	Progress to stage 3/4?
U1	19/11850/FUL	Erection of 3. dwellings, creation of access and associated works.	586	Approved with condtions	Yes	Yes	Future baseline	Unlikely		No
U2	19/04863/FUL	Erection of 19 affordable dwellings, creation of access, landscaping, parking and associated works.	1075	Appeal: Allowed with Conditions	Yes	Yes	Future baseline	Possible		Yes
U3	19/01736/FUL	Construction of B1(c), B2, B8 employment floor space (3,517 sqm) of 11 no. buildings with associated external areas, including access, landscaping, parking and associated facilities.	475	Approved with condtions (Conditions being discharged)	Yes	Yes	Future baseline	Possible		Yes
U5	18/10153/FUL	Change of use to fit out the ground floor rear and first floor as four self contained C3 Residential Units, the front of the ground floor will remain as A2 use	241	Approved with condtions	Yes	Yes	Future baseline	Unlikely		No
U6	18/10011/FUL	Pair of semi detached dwellings with associated parking (resubmission of 17/11996/FUL)	774	Approved with condtions	Yes	Yes	Future baseline	Unlikely		No
U7	20/00607/FUL	Demolition of existing garages and erection of a pair of semi-detached houses, parking and associated hard and soft landscaping	973	Approve with Conditions	Yes	Yes	Future baseline	Unlikely		No
U10	20/04397/OUT	"Outline application with three reserved matters for approval (siting, landscaping and means of access) for the erection of 15 houses (6 affordable (40%) and 9 market houses), new accesses (x2) onto Larkhill Road, parking for 48 cars, hard and soft landscaping (47 trees) and associated ecological works."	1172	Under Consultation	Yes	Yes	Possible	Possible	Previously included in the 2018 ES assessment under allocation A15 (A188), which included 15 houses.	No
U12	20/01538/FUL	Erection of 5 x 3-bedroom dwellings and associated hard and soft landscaping	1518	Approve with Conditions	Yes	Yes	Future baseline	Unlikely		No
U14	18/08824/FUL	Partial change of use of agricultural land to create a moving target rifle range with ancillary engineering works to facilitate the expansion of the existing shooting ground for game and clay shooting at Widdington Farm	9358	Approve with Conditions	Yes	Yes	Future baseline	Unlikely		No
U18	19/02439/REM	Reserved Matters planning application for residential development of 16 dwellings, including affordable housing, with associated car parking, access and landscaping.	4850	Approve with Conditions	Yes	Yes	Future baseline	Possible	Previously partially included in the 2018 ES assessment under allocation A6 (A67) and 17/00842/OUT which included 16 houses.	No
U19	20/03112/OUT	Outline application with some matters reserved for erection of 3 houses and associated parking (access and layout only).	6931	Approve with Conditions	Yes	Yes	Future baseline	Unlikely		No
U20	19/02482/FUL	Replan of permitted 28 dwellings in Parcels B & C to provide an additional 14 units, providing a total of 42 dwellings.	6814	Approve with Conditions	Yes	Yes	Future baseline	Possible	Previously included in the 2018 ES assessment under 13/00673/OUT. 14 more houses.	Yes
U21	19/01690/FUL	Detailed planning application for the erection of a retail convenience store (Class A1), retail units (Class A1 - A5, D1) and a nursery (Class D1), together with associated car and cycle parking, access, electricity substation, lighting, drainage, landscaping and associated infrastructure.	6852	Approve with Conditions	Yes	Yes	Baseline	Possible	Previously included in the 2018 ES assessment under 13/00673/OUT.	Yes
U22	19/01603/FUL	Erection of a 66 no. bedroom care home (Class C2) for the elderly with associated landscaping and access	6928	Approve with Conditions	Yes	Yes	Baseline	Possible	Previously included in the 2018 ES assessment under 13/00673/OUT.	Yes
U23	19/00537/FUL	Hybrid application - Outline planning consent for 65 dwellings with all details reserved, except access, full planning consent for 29 small business units (flexible use within Use Classes B1, B2 and B8), access, parking, landscaping and servicing.	7031	Approve with Conditions	Yes	Yes	Future baseline	Possible	Previously included in the 2018 ES assessment under 13/00673/OUT. 65 more houses, reduced employment land.	Yes
U24	20/06021/FUL	Conversion of Existing Building into Residential Accommodation Along with Internal and External Alterations	10294	Approve with Conditions	Yes	Yes	Future baseline	Unlikely		No

U25	20/06868/PNCO	Prior Notification for a Proposed Change of Use from Offices (Class B1(a)) to Dwellinghouses (Class C3) to form 60 Apartments	9807	Prior Approval Granted (Conditions Discharged 09/09/21)	Yes	Yes	Future baseline	Unlikely		No
U26	20/04209/FUL	Change of use from existing night club to 3No.dwellings (C3) and 1No. dwelling/HMO (C3/C4), including internal alterations and additional openings to elevations	10530	Approve with Conditions	Yes	Yes	Future baseline	Unlikely		No
U27	20/03195/FUL	Alterations and conversion of the first and second floors of the building to form six flats.	10242	Approve with Conditions (Condition Variation 17/08/21)	Yes	Yes	Future baseline	Unlikely		No
U29	19/10897/FUL	Conversion and extensions/alterations of vacant shops (Class A1 and A2) and an existing four bedroomed maisonette on upper floors to form 6 x one bed apartments.	10141	Approve with Conditions	Yes	Yes	Future baseline	Unlikely		No
U30	19/09067/FUL	Demolition of existing dwelling and construction of terrace of 3 dwellings with double garage/parking spaces (x6)	10570	Under Consultation	Yes	Yes	Possible	Unlikely		No
U31	19/09101/FUL	Demolition of existing workshops and replacement with 5 residential dwellings, associated parking and landscaping.	9554	Approve	Yes	Yes	Future baseline	Unlikely		No
U32	19/06041/FUL	Demolition of existing buildings (previously granted LBC) and construction of 2 apartments with undercroft parking with vehicular access from Pennyfarthing Street.	10435	Approve with Conditions (Construction started as of Sept 2020)	Yes	Yes	Baseline	Unlikely		No
U33	19/07427/FUL	Demolition of the existing building at 30-36 Fisherton Street, currently used as retail. Erection of new building for library, gym and 86 room hotel.	10179	Approve with Conditions (Construction started as of Sept 2020)	Yes	Yes	Baseline	Possible		Yes
U34	19/06176/FUL	Demolish the existing bungalow and the erection of 3 townhouses with a detached triple garage, associated parking and vehicular access (resubmission of 18/06402/FUL)	8817	Approve with Conditions	Yes	Yes	Future baseline	Unlikely		No
U35	19/05965/FUL	Phased comprehensive development to provide two Class C2 care facilities. Phase 1 - Demolition of the existing Stratford Court Class C2 care home and the erection of a new replacement C2 care facility with associated access and landscaping works. Phase 2 - Upgrade and refurbishment of the existing C2 Braemar Lodge care home with associated access and landscaping works.	8979	Approve with Conditions (Construction started as of Sept 2020)	Yes	Yes	Baseline	Possible		Yes
U36	19/01148/FUL	Demolition of existing disused house and demolition of existing covered reservoir and construction of five houses, and the conversion of the existing pumphouse to a pair of dwellings.	9114	Allowed with Conditions	Yes	Yes	Future baseline	Unlikely		No
U39	19/10043/FUL	Demolition of the existing salt store building from 1500, and construction of larger salt store of 2500 tonnes capacity. Extend existing 6no bay vehicle store to a 10 bay facility (additional bays to allow for deeper plan for snow plough attachments to vehicles). Welfare building to be extended to provide increased storage space accessed from vehicle bays.	5327	Approve with Conditions	Yes	Yes	Future baseline	Possible		No
U40	19/09327/FUL	Erection of 2no. new factory facilities and associated access road, parking, service yard and refuse storage areas, for Naish felts Ltd and Wallgate Washrooms Ltd.	5473	Approve with Conditions	Yes	Yes	Future baseline	Possible		Yes
U41	19/03243/FUL	Demolition of existing barns, with extant planning permission for residential use, and the erection of two detached dwellings, parking and associated hard and soft landscaping	6631	Approve with Conditions	Yes	Yes	Future baseline	Unlikely		No
U43	19/04100/FUL	Demolition of outbuildings and conversion and extension of outbuilding to create two residential dwellings, plus parking and landscaping. Replacement of the existing render and boarding on the main dwelling	2529	Approve with Conditions	Yes	Yes	Future baseline	Unlikely		No
U45	19/08939/FUL	Proposed three single storey accommodation blocks and associated external works includes demolition of 6 existing accommodation blocks	5682	Approve with Conditions	Yes	Yes	Future baseline	Unlikely		No
U48	18/08220/FUL	Demolish cottage and erect 2no. replacement cottages with 4no. parking spaces	3169	Approve with Conditions	Yes	Yes	Future baseline	Unlikely		No
U49	20/06186/FUL	The demolition of the existing service station and the construction of a new building containing new retail units and associated external works	1849	Approve with Conditions	Yes	Yes	Future baseline	Possible		Yes

U50	19/06612/FUL	Demolish existing bungalow and construct a terrace of three two storey houses. Alter crossover for vehicular access.	1742	Approve with Conditions	Yes	Yes	Future baseline	Unlikely		No
U51	20/00396/FUL	Proposed construction of a sewage pumping station, a rising main, gravity sewers and associated manholes	727	Approve with Conditions	Yes	Yes	Future baseline	Unlikely		No
U52	18/08303/FUL	Potable water booster pumping station required as part of a wider scheme to provide a new water supply main to the new Ministry of Defence (MOD) Service Family Accommodation (SFA) development and to provide resilience to the MODs existing water supply to the Bulford Garrison	20	Approve with Conditions	Yes	Yes	Baseline	Unlikely		No
U54	20/06551/FUL	Erect two buildings and an Instavolt EV charging facility for 4 cars with associated external areas, including access, landscaping and parking.	65	Approve with Conditions	Yes	Yes	Future baseline	Possible		Yes
U55	20/00607/FUL	Demolition of existing garages and erection of a pair of semi-detached houses, parking and associated hard and soft landscaping	973	Approve with Conditions	Yes	Yes	Future baseline	Unlikely		No
U56	19/01733/OUT	Outline consent for B1(c), B2 and B8 employment space (up to 12,755 sqm) including access, with matters design, scale, landscaping and layout reserved.	439	Approve with Conditions	Yes	Yes	Future baseline	Possible		Yes
U57	18/07937/FUL	Proposed distribution centre constructed over 2 Phases of construction for the receipt, temporary storage and re-distribution of a wide range of ambient, chilled and frozen products to Greggs high street stores.	88	Approve with Conditions Google Street View indicates completion	Yes	Yes	Baseline	Possible		Yes
U58	18/07944/FUL	Formation of 2 residential building plots, including all other associated works.	536	Approve with Conditions	Yes	Yes	Future baseline	Unlikely		No
U59	PL/2021/06631	Construction of fishing lake with associated landscaping and reprofiling of agricultural land.	514	Under consultation	Yes	Yes	Possible	Unlikely		No
U60	PL/2021/07379	Construction of 10 no. single storey accommodation blocks with associated external works following demolition of existing buildings	251	Under consultation	Yes	Yes	Possible	Unlikely		No
U63	21/01220/FUL	Erect a terrace of 3 x 3 bedroom dwellings with adjacent car parking and garage to Plot 1 with access road.	1334	Under consultation	Yes	Yes	Possible	Unlikely		No
U66	PL/2021/06554	Outline planning permission for up to 30no. dwellings, with all matters apart from access reserved for future consideration.	16704	Under consultation	No					
U68	20/09058/OUT	Outline application for the development of up to 39 residential dwellings, vehicular access from Old Hospital Road, public open space, ancillary works and associated infrastructure. All matters reserved except for access	16974	Under consultation	No					
U69	PL/2021/06594	Residential development comprising 106 dwellings including formation of vehicular access and footways, open space, drainage, landscaping and associated works.	10341	Under consultation	Yes	Yes	Possible	Possible	Previously included in the 2018 ES assessment under allocation A12 (A185). 6 more houses.	No
U70	20/11598/OUT	Erection of up to 135 dwellings, the laying out of a car park with up-to 50-spaces, access from Church Road, Green Infrastructure including landscaping and children's play, a sustainable urban drainage system and utility buildings (Outline application relating to access)	9798	Under consultation	No					
U71	20/11145/OUT	Outline application (all matters reserved except for access) for the subdivision of the residential plot and the erection of up 2 residential dwellings (Use Class C3).	8920	Under consultation	No					
U72	20/10103/FUL	Proposed two new semi detached dwellings and associated works to 1 Beechcroft Road.	10796	Approve with Conditions	No					
U73	20/09949/FUL	Additional 13 new dwellings in Parcel D (Phase 6), taking total dwelling numbers to 93 dwellings.	7094	Under consultation	Yes	Yes	Possible	Possible	Previously included in the 2018 ES assessment under 13/00673/OUT. 13 more houses.	Yes
U74	20/09123/FUL	3no. Proposed New Dwellings; extension to no.75 and amended access to no.79	5568	Approve with Conditions	No					
U75	20/11370/FUL	Demolition of existing buildings and the construction of 8 no. single storey accommodation blocks and associated external works	6033	Approve with Conditions	Yes	Yes	Future baseline	Unlikely		No
U78	PL/2021/03601	Phase 1 of the Salisbury River Park Scheme. The Scheme comprises the construction of flood defence embankments and walls, flood control measures, new bridges and culverts and river channel modifications, recreational space, habitat creation, improved fish passage, enhanced and new pedestrian and cycle routes and all associated works.	9737	Under consultation	Yes	Yes	Possible	Possible		Yes
U79	21/02252/FUL	Change of use of vacant shop and convert four storey single dwelling to create 4 bed residential units.	10145	Approve with Conditions	Yes	Yes	Future baseline	Unlikely		No

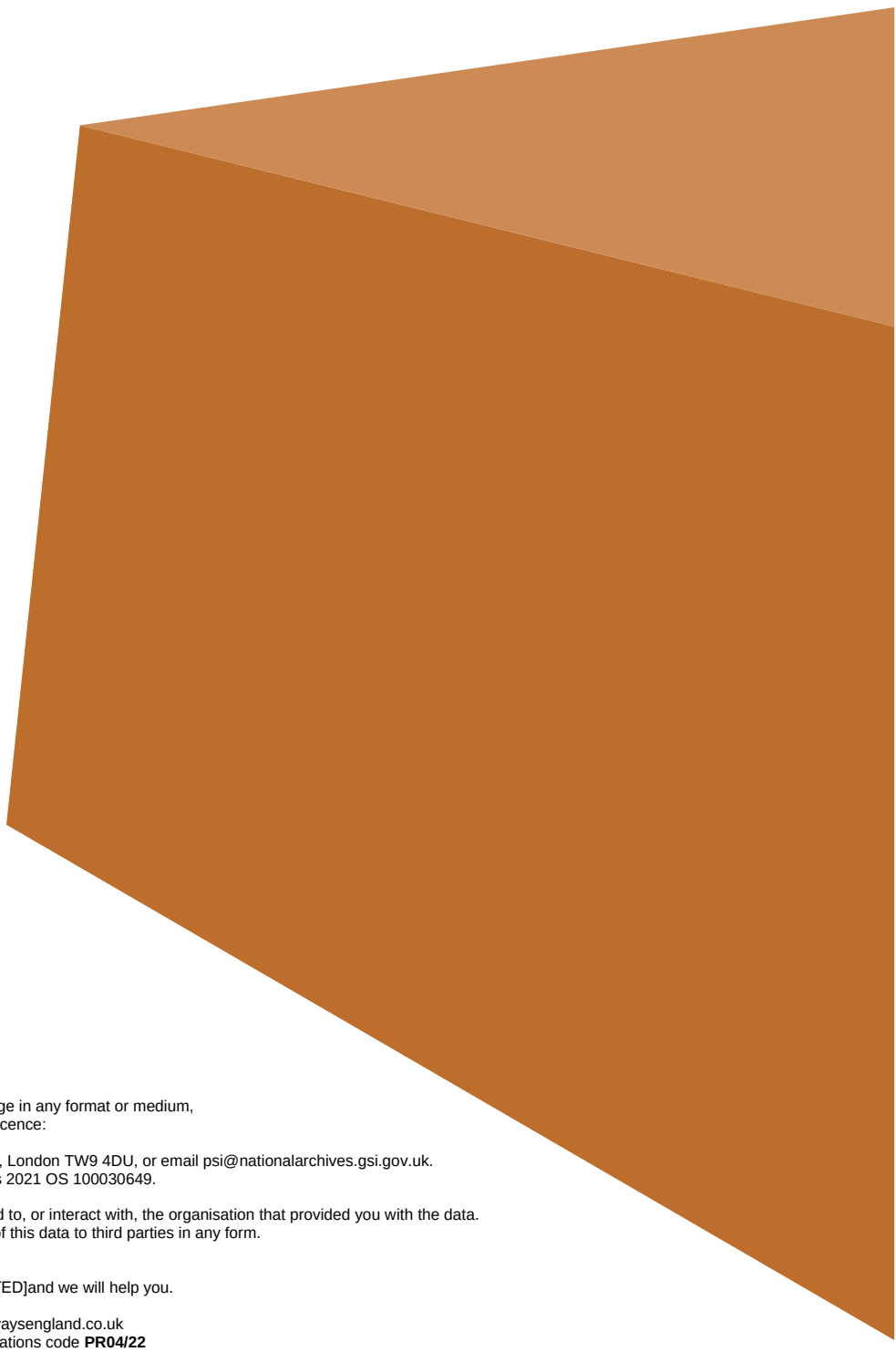
U80	20/11144/FUL	Retention and extension of an existing warehouse to create a 4 bedroom dwelling and the erection of a new 3 bedroom dwelling.	10231	Approve with Conditions	Yes	Yes	Future baseline	Unlikely		No
U81	20/10860/FUL	Proposed Extension of White Hart Hotel providing 26No. new hotel bedrooms, relocation of back of house facilities (namely: Staff Canteen, Storage, Staff Change, Historical Data Storage, Maintenance), construction of glazed link at ground floor, installation of new lift, infill of ground floor facade to St Johns Street.	10625	Under consultation	Yes	Yes	Possible	Possible		Yes
U82	20/08577/FUL	Proposal Application for Full Planning Permission for the redevelopment of the existing petrol filling station; including the demolition of the existing sales building, jet wash and forecourt including removal of the underground fuel tanks; and erection of new sales building, forecourt and canopy; provision of new underground tanks and associate pipe work; provision of electric vehicle charging hub and associated plant; provision of car parking and bin storage area; and associated works.	9276	Approve with Conditions	No					
U83	20/08690/FUL	Erection of new 1.5 storey building to create 2 x 1 bed apartments	10132	Approve with Conditions	Yes	Yes	Future baseline	Unlikely		No
U84	21/00879/FUL	Partial change of use from mixed commercial use including retail (1st floor of 'Fisherton Antiques Warehouse') and all of ground floor restaurant (Cactus Jacks) to create x 8 one- and two-bedroom market C3 flats. Change of use of the beer garden to private landscaped communal gardens. Erect bicycle/storage sheds for proposed flats and bin area. Minor alterations to principal ground floor elevation to Water Lane. External alterations to the rear. Retain 3 existing C3 flats unaltered with same accesses. Retain ground floor of no. 71 Fisherton St as a smaller Fisherton Antiques retail unit. Demolition of c. 280 m3 modern additions to rear of property. Retain but add railings to Cactus Jack's 9m shopfront and remove modern restaurant awnings (nos 26 - 27 Water Lane). Retain 16m Antiques Warehouse shopfront to Fisherton St.	10047	Under consultation	Yes	Yes	Possible	Unlikely		No
U85	20/00337/FUL	Erect 101 dwellings together with garages, car barns, and refuse/cycle stores. Lay out gardens and erect means of enclosure. Creation of new vehicular access to Odstock Road. Lay out internal roads, including drives and pavements. Provision of associated public open space, play areas and landscape planting.	12138	Under consultation	Yes	Yes	Possible	Possible	Previously included in the 2018 ES assessment under allocation A13. 1 more house.	No
U87	20/04568/FUL	Conversion of the existing Hardened Aircraft Shelter (HAS) 946 into a specialist high voltage test facility. New support infrastructure and buildings will be required for the operation of the facility; consisting of new HV supply and substation, new plant rooms and chiller compound, ancillary office (Building 2), new test building (Building 3) and new diagnostics building (Building 4).		Approve with Conditions	Yes	Yes	Future baseline	Unlikely		No

Appendix 11.2 Cumulative Developments Short List

Figure ID	Application reference	Location	Distance from project (metres)	Description	Assessment of cumulative effect with NSIP	Proposed mitigation applicable to NSIP including any apportionment	Residual cumulative effect	Timescale
U2	19/04863/FUL	Amesbury	1075	Erection of 19 affordable dwellings, creation of access, landscaping, parking and associated works.	The development is located approximately 1075m south of the Scheme within the built development of Amesbury. Due to the development's relatively small scale, location, distance from the Scheme, impacts are likely to be limited. No additional significant effects are anticipated.	No mitigation is proposed.	Not significant	Future baseline
U3	19/01736/FUL	Amesbury	475	Construction of B1(c), B2, B8 employment floor space (3,517 sqm) of 11 no. buildings with associated external areas, including access, landscaping, parking and associated facilities.	The development is located approximately 475m south of the Scheme within the Solstice Park business park. Due to the development's location, it has the potential to impact the receiving environment with the Scheme. However, given the development's location in a business park, no additional significant effects are anticipated.	No mitigation is proposed.	Not significant	Future baseline
U20	19/02482/FUL	LAVERSTOCK	6814	Replan of permitted 28 dwellings in Parcels B & C to provide an additional 14 units, providing a total of 42 dwellings.	This development was previously assessed under 13/00673/OUT in the 2018 ES as part of the future baseline. 13/00673/OUT comprises a large mixed use development of which 19/02482/FUL is an aspect. The 2018 ES considered 13/00673/OUT as part of the future baseline but did not identify any significant effects. 19/02482/FUL provides for 14 more dwellings than previously consented. However, given the scale of the increase and that the majority of the development has been previously accounted for under 13/00673/OUT in the 2018 ES, no additional significant effects are anticipated.	No mitigation is proposed.	Not significant	Future baseline
U21	19/01690/FUL	LAVERSTOCK	6852	Detailed planning application for the erection of a retail convenience store (Class A1), retail units (Class A1 - A5, D1) and a nursery (Class D1), together with associated car and cycle parking, access, electricity substation, lighting, drainage, landscaping and associated infrastructure.	This development was previously assessed under 13/00673/OUT in the 2018 ES as part of the future baseline. 13/00673/OUT comprises a large mixed use development of which 19/01690/FUL is an aspect. The 2018 ES considered 13/00673/OUT as part of the future baseline but did not identify any significant effects. Given that construction for 19/01690/FUL is complete and that it has been previously accounted for under 13/00673/OUT in the 2018 ES, no additional significant effects are anticipated.	No mitigation is proposed.	Not significant	Baseline
U22	19/01603/FUL	LAVERSTOCK	6928	Erection of a 66 no. bedroom care home (Class C2) for the elderly with associated landscaping and access	This development was previously assessed under 13/00673/OUT in the 2018 ES as part of the future baseline. 13/00673/OUT comprises a large mixed use development of which 19/01603/FUL is an aspect. The 2018 ES considered 13/00673/OUT as part of the future baseline but did not identify any significant effects. Given that construction for 19/01603/FUL is complete and that it has been previously accounted for under 13/00673/OUT in the 2018 ES, no additional significant effects are anticipated.	No mitigation is proposed.	Not significant	Baseline

U23	19/00537/FUL	LAVERSTOCK	7031	Hybrid application - Outline planning consent for 65 dwellings with all details reserved, except access, full planning consent for 29 small business units (flexible use within Use Classes B1, B2 and B8), access, parking, landscaping and servicing.	This development was previously assessed under 13/00673/OUT in the 2018 ES as part of the future baseline. 13/00673/OUT comprises a large mixed use development of which 19/02482/FUL is an aspect. The 2018 ES considered 13/00673/OUT as part of the future baseline but did not identify any significant effects. 19/00537/FUL provides for 65 more dwellings and reduction in the employment portion than previously consented. However, given the scale of the increase and that the majority of the development has been previously accounted for under 13/00673/OUT in the 2018 ES, no additional significant effects are anticipated.	No mitigation is proposed.	Not significant	Future baseline
U33	19/07427/FUL	Salisbury	10179	Demolition of the existing building at 30-36 Fisherton Street, currently used as retail. Erection of new building for library, gym and 86 room hotel.	The development is located approximately 10km south of the Scheme within the built development of Salisbury. Due to the development's distance from the Scheme impacts are likely to be limited to light increase in construction traffic along routes shared by the development and the Scheme and possible water quality impacts within the River Avon catchment. However, no additional significant effects are anticipated.	No mitigation is proposed.	Not significant	Baseline
U35	19/05965/FUL	Salisbury	8979	Phased comprehensive development to provide two Class C2 care facilities. Phase 1 - Demolition of the existing Stratford Court Class C2 care home and the erection of a new replacement C2 care facility with associated access and landscaping works. Phase 2 - Upgrade and refurbishment of the existing C2 Braemar Lodge care home with associated access and landscaping works.	The development is located approximately 9km south of the Scheme within the built development of Salisbury. Due to the development's distance from the Scheme impacts are likely to be limited to light increase in construction traffic along routes shared by the development and the Scheme and possible water quality impacts within the River Avon catchment. However, no additional significant effects are anticipated.	No mitigation is proposed.	Not significant	Baseline
U40	19/09327/FUL	Durnford	5473	Erection of 2no. new factory facilities and associated access road, parking, service yard and refuse storage areas, for Naish felts Ltd and Wallgate Washrooms Ltd.	The development is located approximately 5km south of the Scheme. Due to the development's distance from the Scheme impacts are likely to be limited to light increase in construction traffic along routes shared by the development and the Scheme and possible water quality impacts within the River Avon catchment. However, no additional significant effects are anticipated.	No mitigation is proposed.	Not significant	Future baseline
U49	20/06186/FUL	DURRINGTON	1849	The demolition of the existing service station and the construction of a new building containing new retail units and associated external works	The development is located approximately 1.8km north of the Scheme within the built development of Larkhill. Due to the scale of development and distance from the Scheme, impacts are likely to be limited. No additional significant effects are anticipated.	No mitigation is proposed.	Not significant	Future baseline
U54	20/06551/FUL	Amesbury	65	Erect two buildings and an Instavolt EV charging facility for 4 cars with associated external areas, including access, landscaping and parking.	The development is located within the Solstice Park business park approximately 65m south of the Scheme. Due to the development's location, it has the potential to impact the receiving environment with the Scheme. However, the location development in Solstice Park business park, its relatively small scale, and the nature of the Scheme works carried out in the vicinity of the development, mean that no additional significant effects are anticipated.	No mitigation is proposed.	Not significant	Future baseline

U56	19/01733/OUT	Amesbury	439	Outline consent for B1(c), B2 and B8 employment space (up to 12,755 sqm) including access, with matters design, scale, landscaping and layout reserved.	The development is located approximately 439m south of the Scheme within the Solstice Park business park. Due to the development's location, it has the potential to impact the receiving environment with the Scheme. However, given the development's location in a business park, no additional significant effects are anticipated.	No mitigation is proposed.	Not significant	Future baseline
U57	18/07937/FUL	Amesbury	88	Proposed distribution centre constructed over 2 Phases of construction for the receipt, temporary storage and re-distribution of a wide range of ambient, chilled and frozen products to Greggs high street stores.	The development is located within the Solstice Park business park and abuts the Scheme to the south. Due to the development's location, it has the potential to impact the receiving environment with the Scheme. However, given that the development is operational and its location in a business park, no additional significant effects are anticipated.	No mitigation is proposed.	Not significant	Baseline
U73	20/09949/FUL	Laverstock	7094	Additional 13 new dwellings in Parcel D (Phase 6), taking total dwelling numbers to 93 dwellings.	This development was previously assessed under 13/00673/OUT in the 2018 ES as part of the future baseline. 13/00673/OUT comprises a large mixed use development of which 20/09949/FUL is an aspect. The 2018 ES considered 13/00673/OUT as part of the future baseline but did not identify any significant effects. 20/09949/FUL provides for 13 more dwellings than previously consented. However, given the scale of the increase and that the majority of the development has been previously accounted for under 13/00673/OUT in the 2018 ES, no additional significant effects are anticipated.	No mitigation is proposed.	Not significant	Cumulative
U78	PL/2021/03601	Salisbury	9737	Phase 1 of the Salisbury River Park Scheme. The Scheme comprises the construction of flood defence embankments and walls, flood control measures, new bridges and culverts and river channel modifications, recreational space, habitat creation, improved fish passage, enhanced and new pedestrian and cycle routes and all associated works.	The development is located approximately 10km south of the Scheme within the built development of Salisbury. The development will implement landscape, biodiversity and amenity improvements integrated with flood risk management measures once operational. Due to the development's distance from the Scheme, any impacts are likely to be limited to light increase in construction traffic along routes shared by the development and the Scheme and possible water quality impacts within the River Avon catchment. However, no additional significant effects are anticipated.	No mitigation is proposed.	Not significant	Cumulative
U81	20/10860/FUL	Salisbury	10625	Proposed Extension of White Hart Hotel providing 26No. new hotel bedrooms, relocation of back of house facilities (namely: Staff Canteen, Storage, Staff Change, Historical Data Storage, Maintenance), construction of glazed link at ground floor, installation of new lift, infill of ground floor facade to St Johns Street.	The development is located approximately 10km south of the Scheme within the built development of Salisbury. Due to the development's distance from the Scheme, any impacts are likely to be limited to light increase in construction traffic along routes shared by the development and the Scheme and possible water quality impacts within the River Avon catchment. However, no additional significant effects are anticipated.	No mitigation is proposed.	Not significant	Cumulative



This document is also available on our website at [REDACTED]
For an accessible version of this publication please call [REDACTED]and we will help you.

If you have any enquiries about this publication email info@highwaysengland.co.uk
or call [REDACTED]*. Please quote the National Highways publications code **PR04/22**
National Highways creative job number **BRS17_0027**

*Calls to 03 numbers cost no more than a national rate call to an 01 or 02 number and must count towards any inclusive minutes in the same way as 01 and 02 calls.
These rules apply to calls from any type of line including mobile, BT, other fixed line or payphone. Calls may be recorded or monitored.
Printed on paper from well-managed forests and other controlled sources when issued directly by National Highways.
Registered office Bridge House, 1 Walnut Tree Close, Guildford GU1 4LZ
National Highways Limited registered in England and Wales number 09346363