A303 Amesbury to Berwick Down

TR010025

Volume 6

6.3 (6) Environmental Statement
Appendix 2.2 – Outline Environmental Management Plan (OEMP)
(TRACKED CHANGES)

APFP Regulation 5(2)(q)

Planning Act 2008

The Infrastructure Planning (Examination Procedure) Rules 2010

September 2019

Infrastructure Planning

Planning Act 2008

The Infrastructure Planning (Examination Procedure) Rules 2010

A303 Amesbury to Berwick Down

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Outline Environmental Management Plan (OEMP) (Tracked Changes)

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1 Introduction

1.1 Purpose of the report

1.1.1 This document is the Outline Environmental Management Plan (OEMP) for the A303 Amesbury to Berwick Down Scheme (the Scheme). Powers to construct, operate and maintain the Scheme are being sought by Highways England through an application for a Development Consent Order (DCO).

1.1.2 An Environmental Impact Assessment (EIA) has been undertaken for the Scheme and an Environmental Statement (ES) has been prepared in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (EIA Regulations). In accordance with the requirements of the EIA Regulations, the ES contains the assessment of the potential impacts on the environment that may be caused during construction, operation and maintenance of the Scheme and describes proposed mitigation measures.

1.1.3 The purpose of this OEMP is to:

a) Provide the equivalent of a Code of Construction Practice (CoCP), a suggested item for inclusion within the application for development consent (The Planning Inspectorate's Advice Note 6, Appendix 1). The scope of this OEMP is such that it includes all those measures that would be expected within such a CoCP.

b) Enable the Examining Authority and the Secretary of State to identify those mitigation measures proposed within the Scheme which are secured within this OEMP.

1.1.4 Measures within the OEMP include proposed design, construction and operational mitigation, which have been defined by the requirements which arise from the technical assessments presented in the ES, together with ongoing design development and stakeholder feedback. The technical assessments within the ES have taken account of the measures within the OEMP as 'embedded mitigation'. The mitigation measures incorporated in the indicative Scheme design for inclusion in the EIA are shown on the Environmental Masterplan (refer to ES Figure 2.5).

1.1.5 The ES and the assessments within it are based on the works proposed in the DCO works plans and engineering sections and the maximum area of land anticipated as likely to be required, taking into account the proposed limits of deviation (LoD) for the Scheme, and the flexibility of detailed design provided for in the DCO. All distances, directions, areas and lengths referred to in this document are approximate except where specific figures are given ~~with~~within the Record of Environmental Actions and Commitments (REAC) tables~~.~~ included in Section 3.

1.1.6 The construction of the Scheme shall be subject to measures and procedures defined within Construction Environmental Management Plans (CEMPs) prepared for the relevant phase of the scheme by the relevant contractor. ~~The CEMPs~~There may be multiple CEMPs for the Main Works as each works phase may have an individual CEMP. Each CEMP will be based on, and incorporate, the requirements of the OEMP relevant to that phase and the contractor's contractual scope so that

it is substantially in accordance with the relevant parts of this OEMP, as required by Requirement 4 of the DCO, and shall include the implementation of appropriate industry standard practice and control measures for environmental impacts arising during the relevant works. For the avoidance of doubt, the requirements of the OEMP, CEMPs and the DAMS (see paragraph 5.1.3 of the DAMS) apply to any such industry standard practice and control measures (including Method Statements) in the same way they apply to measures specified in the OEMP, CEMPs or DAMS.

1.1.7 The measures defined in the contractors' CEMPs will be applied by the contractors as stipulated in the relevant parts of the OEMP with the aim of controlling potential impacts upon the natural and historic environment, people and businesses.

1.1.8 All contractors will be required to comply with applicable environmental legislation together with any additional environmental controls imposed in the DCO. For this reason, the applicable statutory requirements are not stated within this OEMP.

1.1.9 The measures to be implemented in specific areas, such as soil handling and dust management, are set out in each discipline section of this OEMP within the ~~Record of Environmental Actions and Commitments (REAC)~~REAC tables included in Section 3.

1.1.10 For the purposes of the OEMP, the following definitions apply:

a) **The Secretary of State** is the Secretary of State for Transport. Unless otherwise stated within the OEMP, the Secretary of State will approve the ~~CEMP~~CEMPs and other management plans to be appended to the ~~CEMP~~CEMPs defined within this OEMP following their ~~approval~~acceptance by the Authority.

b) **The Authority** is Highways England. The Authority, in consultation with the relevant stakeholders as set out in this OEMP, will determine whether to accept the CEMPs, other management plans defined within this OEMP, detailed schemes required by the OEMP, and variations to these and other matters as stated within this OEMP, prior to, where relevant, their final approval by the body responsible for approving the relevant document as set out in the OEMP. The Authority and, in respect of those works for which Wiltshire Council will be the responsible body, Wiltshire Council, will approve the ~~HEMP.~~Handover Environmental Management Plan (HEMP).

c) A **contractor** means any contractor covered by this OEMP, namely any of the preliminary works contractors and the main works contractor.

d) The **main works contractor** is a contractor appointed by Highways England to deliver the main construction works (and shall also include any sub-contractors appointed by such main works contractor to carry out any part of the main construction works).

e) A **preliminary works contractor** is a contractor responsible for one or more elements of the preliminary works, which will be undertaken prior to the main construction works. ~~-~~These preliminary works are further defined within sections 1.2.~~9~~10 and 1.2.~~10. 11.~~

~~e)~~

f) The **maintenance authority** is a body tasked with the maintenance of the Scheme once the Scheme is operational. Post-construction this will initially be the main works contractor, but in the longer term this would be either Highways England or Wiltshire Council, dependant on the component of the Scheme.

g) The **adopting authority** is a body responsible for the operation of elements of the Scheme post-construction. This will be Highways England for the Strategic Road Network and Wiltshire Council for the local road network and Public Rights of Way.

~~g)~~h) The **members of HMAG** are Historic England and Wiltshire Council as statutory consultees and the National Trust and English Heritage as major landowners and heritage managers in the ~~WHS and references~~Stonehenge, Avebury and Associated Sites World Heritage Site (WHS). References to **consultation with the members of HMAG** within this OEMP means consultation with each of those organisations in accordance with the procedure set out at section 1.4. HMAG has been convened to advise Highways England on evaluation, assessment and mitigation on matters pertaining to the WHS. HMAG is further advised by a Scientific Committee of independent specialists and experts. Terms of Reference of both HMAG and the Scientific Committee are published on the Scientific Committee's website: http://www.a303scientificcommittee.org.uk/terms-of-reference.

~~h)~~i) **The Stakeholder Design Consultation Group (SDCG)** within this OEMP means a group to be established by the Authority that it will consult (i) in relation to the specific areas of the detailed design as it is being developed, as is described in section 4 of this document and (ii) where referred to within ~~table~~Table 3.2b. The SDCG will be administered by The Authority and membership comprises representatives of the following stakeholders:

a) English Heritage Trust;

~~b) Historic England;~~

b) Historic England (in addition to their role as a statutory consultee, as adviser to the State Party, and as the Government's adviser on the historic environment);

c) The National Trust; and

d) Wiltshire Council.

Once appointed, representatives of the Contractor will also attend.

1.1.11 The CEMP is a living document and so it is anticipated that, save for the Design Commitments, Principles and Vision (for which, see below), each CEMP will be revised as necessary during the construction phase by the contractor, in line with the principles of this OEMP~~, for approval~~ and ensuring the revisions would not give

rise to any materially new or materially worse adverse environmental effects in comparison with those reported in the Environmental Statement. Each revised CEMP will be approved by The Authority, in consultation with the relevant stakeholders as set out in this OEMP. However, as a minimum, the CEMP(s) for the main works will be revised annually to ensure ~~it is~~they are kept up to date.

1.1.12 Towards the end of the construction phase to which a CEMP relates, the main works contractor will prepare a final version of ~~the~~that CEMP for the operational and maintenance phase of the Scheme, in the form of a Handover Environmental Management Plan (HEMP), subject to The Authority approval, and, in the case of those areas that will be the responsibility of Wiltshire Council, Wiltshire Council approval, in consultation with the relevant stakeholders as set out in this OEMP. This will then be implemented by the maintenance authority responsible for the maintenance of the relevant part of the Scheme during the operational phase. Once the main works is complete, multiple phase specific HEMPs will be consolidated into a single HEMP.

1.1.13 This version of the OEMP includes updates and clarifications arising from ongoing engagement with stakeholders, in response to Interested Parties' representations and the Examining Authority's questions throughout the Examination. Consequently, this version of the OEMP supersedes the OEMPs originally submitted with the DCO application and ~~on 20 August 2019 [AS-085].~~at Deadline 8 [REP8-006]-

1.2 The Project and Evolution of the OEMP

Need for the Scheme

1.2.1 The Scheme forms part of a programme of improvements for upgrading the A303/A358 corridor, improving this vital connection between the South West and London and the South East and including the upgrade of remaining single carriageway sections on the route to dual carriageway. This investment is stated as a priority project in the National Infrastructure Plan and Government's commitment is confirmed in the Road Investment Strategy (2015-2020). Subject to achieving an approved DCO, preliminary works are planned to start in 2020 with the main construction works following in 2021, and the Scheme is due to open to traffic in 2026.

1.2.2 Objectives for the Scheme have been formulated both to address identified problems and to take advantage of the opportunities that new infrastructure would provide. The objectives are defined by the Department for Transport (DfT):

a) Transport - to create a high quality reliable route between the South East and the South West that meets the future needs of traffic;

b) Economic Growth - to enable growth in jobs and housing by providing a free flowing and reliable connection between the South East and the South West.

c) Cultural Heritage - to help conserve and enhance the World Heritage Site and to make it easier to reach and explore; and

d) Environment and Community - to improve biodiversity and provide a positive legacy for nearby communities.

Brief outline of the proposed works

1.2.3 The objectives would be achieved by providing a high quality, two-lane dual carriageway on the A303 trunk road between Amesbury and Berwick Down in Wiltshire. The Scheme would resolve traffic problems and, at the same time, protect and enhance the Stonehenge, Avebury and Associated Sites World Heritage Site (WHS). The Scheme would be approximately 8 miles (13km) long and comprise the following key components:

a) A northern bypass of Winterbourne Stoke with a viaduct over the River Till valley;

b) A new junction between the A303 and A360 to the west of and outside the WHS, replacing the existing Longbarrow roundabout;

c) A twin-bore tunnel approximately 2 miles (3.3km) long, past Stonehenge; and

d) A new junction between the A303 and A345 at the existing Countess roundabout.

1.2.4 Further details of the Scheme are given within Chapter 2 of the ES.

Evolution of the Design and OEMP

1.2.5 The development of the Scheme design has been, and will continue to be, based on the Design Vision described in Section 4.2. The Design Vision represents a holistic approach to design seeking to achieve the Scheme objectives while considering heritage, environmental, safety, social and economic impacts. Implicit in this approach have been the engineering and buildability requirements of the Scheme.

1.2.6 Specifically, in light of objective c) above – Cultural Heritage - the Scheme has been developed with due consideration of the aims and policies of the Stonehenge, Avebury and Associated Sites WHS Management Plan 2015. Going forward, the detailed design of the Scheme shall continue to give due consideration to the aims and plans of the WHS Management Plan.

1.2.7 During options identification and selection and the subsequent development of the DCO design, a Heritage Monitoring and Advisory Group (HMAG) was convened to advise Highways England. The HMAG comprises a number of historic environment professionals who have an ongoing statutory or formal advisory role on matters pertaining to the WHS. The Group comprises Historic England, Wiltshire Council (Archaeology Service), English Heritage and the National Trust and was tasked with providing independent heritage advice to Highways England on the project. HMAG members have been engaged throughout the development of the Scheme design, holding regular monthly meetings, inputting to design meetings and reviewing heritage documentation as appropriate.

1.2.8 Through this regular engagement, the members of HMAG have been a party to and contributed to the development of the Design Vision, Design Principles and Design Commitments that are presented within this OEMP.

a) ~~(a)~~ Design Principles have driven the development of the DCO Design and will continue to inform the detailed design pursuant to the Vision. The Design Principles are discussed in Chapter 4 and presented in Table 4.1;

b) ~~(b)~~ Design Commitments represent specific items that have already been discussed with HMAG (as appropriate) and are committed components of the Scheme and its construction. The Design Commitments are included in Table 3.2b with a D- precursor (e.g. D-CH1).

1.2.9 As the detailed design develops, if it becomes apparent to the Authority or the Contractor that in exceptional circumstances the Design Commitments need amendment, they will only be able to be amended if such amendment is agreed in writing by the Secretary of State, following consultation with the members of the SDCG and any other person that the Secretary of State considers appropriate having regard to the proposed amendment, and provided that the Secretary of State is satisfied that any amendment of the Design Commitments would not give rise to any materially new or materially worse adverse environmental effects in comparison with those reported in the Environmental Statement.

Preliminary works

1.2.10 The preliminary works are planned to start in 2020, in advance of the appointment of a main works contractor. To achieve this programme, it is necessary to cater for the preparation of CEMPs applying to these preliminary works in advance of the CEMP(s) for the main works, which will be prepared as part of the appointment of the main works contractor.

1.2.11 The preliminary works would consist of archaeological surveys and archaeological and ecological mitigation works, investigations for the purpose of assessing ground conditions, remedial work in respect of any contamination or other adverse ground conditions, erection of temporary means of enclosure, diversion and laying of underground apparatus, site clearance and the two sections of highways works noted in Table 1.1. All other works not listed here are considered as 'main works'.

Table 1.1: List of proposed preliminary highway works under the DCO

Preliminary works	Envisaged activities
Rollestone Crossroads highway improvement	The works are described in Work No.5 of Schedule 1 to the draft DCO, and shown on the Works Plans and the Engineering Section Drawings (Plan and Profiles), with the design shown illustratively on Sheet 13 of the General Arrangement Plans.
Minor highway works east of Solstice Park	The works are described in Work No. 1H (viii) - (xiv) and Work No. 7 of Schedule 1 to the draft DCO, and shown on the Works Plans and the Engineering Section Drawings (Plan and Profiles), with the design shown illustratively on Sheet 11 of the General Arrangement Plans.

1.2.12 For the avoidance of doubt, the controls set out in Table 3.2a of this OEMP relate to preliminary works carried out pursuant to the powers set out in the DCO, and so do not apply to any works carried out outwith the ambit of the Order (including those commenced prior to the making of the Order) using Highways England's pre-existing statutory powers.

Programme

1.2.13 The main construction works are currently planned to commence in 2021 with the Scheme due to open to traffic in 2026. The programme includes key target milestones, and those relevant to the OEMP are defined in Table 1.2.

Table 1.2: Key target milestones relevant to the OEMP[1]

Milestone	Target Date
Secretary of State DCO Decision	April 2020
DCO Judicial Review period ends	May 2020
Land entry dependent on the DCO	June/July 2020
Start of DCO preliminary works	June/July 2020
Start of main works	October 2021
Full Scheme open to traffic	2026

1.2.14 Whilst these target dates indicate sequential phasing, some phases may overlap both in space and in time, for example:

a) Preliminary works could still be being undertaken by a preliminary works contractor in some locations, whilst site establishment for the main works construction is being progressed by a main works contractor in other locations; and

b) it is possible that some parts of the Scheme, e.g. the Winterbourne Stoke bypass and Countess Flyover could already be operational whilst other elements, such as the tunnelled section, would still be under construction.

1.2.15 There are no implications for the implementation of the OEMP from these overlaps as each contractor would be working under the provisions of the CEMP for their own scope of work.

1.2.16 As the preliminary works are programmed to commence soon after the DCO is made (subject to access to land), the measures set out in this OEMP in relation to those works (Table 3.2a) are, in some cases, more detailed than those set out in Table 3.2b which relates to the main works. As such, the specific measures set out in that table will be required to be included in the ~~CEMP~~CEMPs for the preliminary works, unless otherwise approved by the Secretary of State, following acceptance by the Authority, in consultation with the relevant stakeholders as set out in this OEMP.

[1] Dates have been updated due to the initially programmed examination start date of February 2019 having changed.

1.3 Structure of this document

1.3.1 The remainder of this document is structured as follows:

a) Section 2: Roles and responsibilities. This section defines the roles which a contractor will identify within ~~the~~their CEMP, in order to deliver the environmental commitments.

b) Section 3: Record of Environmental Actions and Commitments (REAC) tables. This section identifies the environmental commitments to address the potential environmental effects of the preliminary works (Table 3.2a) and the main works, including the Design Commitments described above (Table 3.2b). As discussed above, the specific measures set out in Table 3.2a will form part of the ~~CEMP~~CEMPs for the preliminary works. ~~The~~Each CEMP developed by the contractor for the main works must be developed in accordance with the principles set out in Table 3.2b~~.~~ so that it is substantially in accordance with the OEMP as set out in Requirement 4 of the DCO.

c) Section 4: Development of Detailed Design. This section describes the Design Vision, identifies (in Table 4.1) key Design Principles which will inform the detailed design of the Scheme and outlines how the Authority will involve key stakeholders in the detailed design of certain key aspects of the Scheme.

1.3.2 This OEMP appends an Environmental Constraints Plan (Annex A.1), a visual aid showing the relationship between the CEMPs and other management plans (Annex A.2), including the Detailed Archaeological Mitigation Strategy (DAMS), and an Outline Soils Management Strategy (Annex A.3).

1.3.3 The DAMS makes provision for a number of further documents that are designed to ensure that all preliminary and main works will be carried out with protections that are appropriate to the sensitive area in which they take place. The DAMS includes an Outline Written Scheme of Investigation, developed in consultation with the members of the Heritage Monitoring and Advisory Group (HMAG[2]) for matters relating to the World Heritage Site, and with Historic England and Wiltshire Council Archaeological Services (WCAS) for matters outside the World Heritage Site, and will be a certified document in the DCO.

1.3.4 Furthermore, the DAMS requires the appropriate contractor to develop a Heritage Management Plan, method statements, and where appropriate, site specific written schemes of investigation.

1.3.5 The provisions of the CEMPs and the management plans required by this OEMP must be consistent and coordinated with the provisions of the DAMS and the documents required to be produced under it.

[2] Comprising of Historic England, the National Trust, Wiltshire Council Archaeology Service and English Heritage

1.4 Consultation Required by the REAC tables

1.4.1 For the consultation ~~and~~, approval and appeals process for Heritage Management Plans, Site Specific Written Schemes of Investigation and archaeological method statements required by Tables 3.2a and 3.2b of this OEMP, please see the relevant elements of section 8 of the DAMS.

1.4.2 For any other document or action, where consultation with any party is stated to be required by Tables 3.2a or 3.2b of this OEMP, the relevant person responsible for facilitating such consultation pursuant to this OEMP shall undertake the consultation with the parties as set out in the relevant provision, unless otherwise agreed in writing between The Authority and all of the Consultees (as that term is defined below).

1.4.3 The Contractor must submit the relevant document on which consultation is required pursuant to Table 3.2a or 3.2b (referred to in this section as "Consultation Material") to The Authority.

1.4.4 The Authority must provide the Consultation Material to the consultees ("Consultee(s)") specified in Table 3.2a or Table 3.2b as required to be consulted in relation to the relevant document ~~(to the single point of contact specified for that purpose by each Consultee)~~ for comment in respect of matters relevant to each Consultee's ~~functions~~roles and responsibilities, together with a named contact at the Authority and the Contractor with whom the Consultee may discuss the Consultation Material. The Authority shall provide prior notification of its intention to issue Consultation Material at least seven business days before doing so. Consultation Material shall be issued to the single point of contact specified for that purpose by each Consultee.

1.4.5 Each Consultee must within, in respect of the preliminary works, fifteen business days, and in respect of the main works, twenty business days, from receipt of the Consultation Material provide to The Authority one consolidated marked-up version of the Consultation Material and / or one document containing a table of comments.

1.4.6 If any Consultee fails to provide The Authority with comments before the end of the relevant period from receipt of the Consultation Material, that Consultee is deemed to have no comments.

1.4.7 Where Consultees' comments are received by The Authority within the time period specified above, The Authority will provide them to the Contractor and the Contractor must have regard to the comments. Where the Contractor considers it appropriate to do so, it shall address the comments within an amended document.

1.4.8 The Contractor must submit any amended document ("Revised Consultation Material") to The Authority, alongside a summary report setting out the consultation undertaken and the Contractor's response to the Consultees' comments (including an explanation for why any comments have not resulted in an amendment to the Consultation Material). At the same time, the Contractor must provide a copy of the Revised Consultation Material and the summary report to each Consultee, unless that Consultee has indicated in its response to the Consultation Material that its comments are sufficiently minor that it does not need to see the Revised Consultation Material.

1.4.9 The Consultees may comment on the Revised Consultation Material only in respect of how their previous comments have been addressed and any changes made to the draft previously commented upon by them.

1.4.10 Each Consultee must, within ten business days from receipt of the Revised Consultation Material, provide to The Authority one consolidated marked-up version of the Revised Consultation Material and / or one document containing a table of comments.

1.4.11 If any Consultee fails to provide the Authority with comments before the end of the relevant period from receipt of the Revised Consultation Material, that Consultee is deemed to have no further comments.

1.4.12 The Contractor must submit any further amended document to The Authority for its approval, alongside an update of the consultation summary report referred to above in respect of any further comments on the Revised Consultation Material.

1.4.13 At the same time, the Contractor must provide a copy of the updated document and updated consultation summary report to the Consultees.

1.4.14 If a document is not accepted by the Authority such that it requires update by the Contractor, the process set out in paragraphs 1.4.8 to 1.4.13 shall be repeated. This shall apply each time a document is not accepted by the Authority.

1.4.15 Where ultimate approval is required under the terms of the OEMP by the Secretary of State or Wiltshire Council the Authority must submit the updated document and updated consultation summary report to the relevant body.

1.4.16 If a document is not approved by the relevant body such that it requires update by the Contractor, the process set out in paragraphs 1.4.8 to 1.4.12 shall be repeated. This shall apply each time a document is not accepted by the relevant body.

1.4.17 Following final approval by the Authority, the Secretary of State or Wiltshire Council (as required under the OEMP) the final approved document and its associated consultation report must be copied to the relevant Consultees for that document.

2 Project team roles and responsibilities

Site roles and responsibilities

2.1.1 The project team roles, identified in Table 2.1, define the responsibilities associated with the roles for construction, including both the preliminary works and the main construction works, that the relevant contractor must establish and maintain. The responsibilities defined in the table include those relating directly to the development and implementation of the CEMPs and the wider environmental responsibilities. The preliminary works contractors and the main works contractor will be required to delegate responsibilities to onsite personnel within key areas of the site and compounds. The delegation of responsibility will be clearly identified within relevant documents and site files.

2.1.2 Individual names and contact details will need to be confirmed and inserted where applicable by The Authority and the contractor once appointed. The contractor shall establish a management structure that includes an organisational chart encompassing all staff responsible for delivery of environmental mitigation measures and shall include this chart within ~~the~~their CEMP. The chart will set out the respective roles and responsibilities with regard to the environment (refer to Table 3.2a, PW-G3 and Table 3.2b, MW-G19).

2.1.3 It is anticipated that prior to the commencement of each phase of the project, individuals would be identified to fulfil the relevant roles, and that as the CEMP is developed for each phase, and ultimately as the HEMP for each phase is produced, the roles and responsibilities would be further defined and clarified upon each iteration. For the preliminary works, it is unlikely that all roles shown in Table 2.1 would be relevant or justifiable and in preparing a CEMP/s for this work phase, a preliminary works contractor shall prepare a revised (reduced) version of the table, scoped in agreement with The Authority in consultation with the relevant stakeholders as set out in this OEMP, to the extent of their contractual responsibilities.

Table 2.1: Roles and responsibilities during construction

Role	Responsibilities
The Authority	**CEMP responsibilities:** • ~~Approval~~Acceptance of document, related Management Plans defined within this OEMP and any detailed schemes required by this OEMP, subject where specified to ultimate approval by the Secretary of State or Wiltshire Council. • Complying with and contractually requiring and enforcing compliance by contractors with the CEMPs as secured by Requirement 4 of the DCO.
Archaeological Clerk of Works (ACoW) (The Authority)	**CEMP responsibilities:** • Review of relevant sections of the CEMP prepared by the contractor's Environmental Manager. • Responsible for monitoring all archaeological elements of the CEMP during construction. • ~~Reviews~~Review the contractor's Heritage Management Plans (HMP). • ~~Reviews~~Review the contractor's Soils Management Strategy. • Liaise with and provide guidance for contractors in relation to the requirements of the DAMS. **Overall responsibilities:** Monitoring the relevant contractor/s compliance with their contractual obligation to ensure that the Scheme complies with all archaeological and historic environment legislation and consents, including the DCO and the DAMS and those arising from the OEMP and CEMP throughout the relevant project phase. The ACoW will: • Coordinate archaeological site works. • Facilitate access and monitoring arrangements with members of HMAG, as set out in the DAMS. • Monitor compliance by the contractor/s with their HMPs. • Give Tool Box Talks, where required, to inform all site personnel of the archaeological and historic environment constraints on site, the protection measures that are required and their obligations under this OEMP and generally to ensure that these are put in place and complied with. • Monitor the contractor's compliance with their obligations to ensure that the CEMP, the contractor's HMPs and any requirements of the DAMS are carried out. • Monitor fieldwork at all stages to ensure consistency of approach between archaeological contractors. • Monitor the contractor/s' compliance with their obligations to ensure that protection measures are in place and maintained appropriately throughout the construction period in compliance with the contractor's HMPs, the DAMS and relevant SSWSIs.

Role	Responsibilities
	• Provide monitoring feedback to heritage stakeholders during site meetings, including compliance/non-compliance issues and how these are being resolved with respect to the DAMS. •
Project Manager[3] (PM) (all contractors)	**CEMP responsibilities:** • Review the CEMP (and any revisions), prepared by the Environment Manager (EM), for the relevant phase of works. • Ensure that all controls specified within the CEMP are implemented by employees and sub-contractors. **Overall environmental responsibilities:** Responsible for the delivery of the relevant phase of the scheme. Has overall responsibility for the environmental performance of the relevant phase and all staff. The PM will be required to: • Provide information on contract requirements to the EM following contract award and prior to start of works on site. • Ensure environmental and waste requirements are included on requisitions and in subcontracts and orders. • Ensure that all required consents/licences are in place in line with the relevant project phase. • Log and monitor incidents and non-compliances. Report incidents and non-compliances to The Authority at the earliest possible opportunity. • Ensure that The Authority is informed of all environmental complaints. • Provide an initial point of contact for members of the public/local community who have queries regarding the works. • Ensure employees and sub-contractors receive Induction Training (including environmental) and tool box talks, as appropriate. • Verify actions resulting from non-compliances and observations raised during audits are completed by the deadlines set. • Undertake inspections alongside the EM to ensure that the environmental controls as set out within the CEMP are in place and working effectively. • Ensure all records are retained and readily available on site.

3 'Project Manager' is here defined as the senior individual (not organisation) performing the senior leadership role for the applicable phase of the project, preliminary works, main works or operation / maintenance as relevant. During 'main works construction', this role might be the 'Construction Manager'.

Role	Responsibilities
Environment Manager (EM) **(all contractors)**	**CEMP responsibilities:** • Prepare the CEMP relevant to the phase of the project, based on the OEMP. • Undertake site inspections to monitor compliance with the environmental licences/consents for the works and the measures within the CEMP. • Prepare any changes to the CEMP in consultation with the contractor's PM. • Maintaining and updating the CEMP on an ongoing basis as required during the relevant project phase. • Manage the delivery of the various management plans defined within the appendices of this OEMP, using appropriate technical expertise as required. • Manage the delivery of the monitoring required under the CEMP, alongside relevant specialists, and reporting to relevant stakeholders at a frequency to be defined in the CEMP. • If required by the Authority, report on how the effects of multiple CEMPs do not combine to produce any materially new or materially worse adverse environmental effects on sensitive heritage assets to those reported in the ES. • Liaise with the ACoW to ensure compliance with the DAMS. **Overall responsibilities:** Responsible for ensuring that the Scheme complies with all environmental legislation, consents, objectives, targets and other environmental commitments, including those arising from the OEMP and CEMP throughout the relevant project phase. The EM will be required to: • Provide toolbox talks and environmental inductions to all staff involved in the relevant phase of the Scheme. • Deal with queries and correspondence on environmental issues. • Approve ~~by way of sign off~~, without prejudice to the approvals required under Tables 3.2a and 3.2b, , that the environmental elements of the Scheme have been created and maintained in accordance with the OEMP and CEMPs to the appropriate standard. • Implement follow-up corrective actions to ensure compliance with UK regulations and legislation. • Keep record of all activities on site, environmental problems identified, transgressions and remedial actions noted and a schedule of all tasks undertaken. • Provide appropriate professional and practical advice to contractors, consultants and project team members associated with environmental and ecological issues and where appropriate resolve issues in a practical and efficient way. **Preliminary works contractor responsibilities:** For the preliminary works contractors, the responsibilities of the ECoW, Landscape Specialist and CRM set out below may be undertaken by the EM as appropriate.

Role	Responsibilities
Ecological Clerk of Works (ECoW) **(main works contractor and preliminary works contractor only where not covered by Environment Manager as noted above)**	**CEMP responsibilities:** • Review of relevant sections of the CEMP. • Responsible for ensuring that all ecological elements of the CEMP are complied with during construction. • ~~If required by the Authority, report on how~~Ensure that the effects of multiple CEMPs do not combine to produce ~~any materially new or materially worse~~ adverse ~~environmental~~ effects on biodiversity. • Preparing the Landscape and Ecology Management Plan ~~((~~(LEMP) (refer to PW-LAN3 and MW-LAN1) together with the Landscape Specialist. • Liaise with the ACoW to ensure compliance with the DAMS. **Overall responsibilities:** Responsible for ensuring that the Scheme complies with all ecological legislation and consents, including the DCO and those arising from the OEMP and CEMP throughout the relevant project phase. The ECoW will be required to: • Ensure compliance with DCO Requirement 6. • Undertake watching briefs during site clearance activities, to ensure that any unanticipated discoveries of notable flora and fauna are appropriately dealt with. • Approve ~~by way of sign off~~, without prejudice to the approvals required under Tables 3.2a and 3.2b, that the ecological elements of the Scheme have been created and maintained in accordance with the OEMP and CEMP to the appropriate standard. • Monitor works during construction at sensitive sites, including but not limited to, Parsonage Down National Nature Reserve (NNR), the River Till Site of Special Scientific Interest (SSSI) and the River Avon Special Area of Conservation (SAC) and the Salisbury Plain SAC and Special Protection Area (SPA). • Monitor and provide guidance in respect of the LEMP during the creation of these habitats. • Give Tool Box Talks, where required, to inform all site personnel of the ecological constraints on site.

Role	Responsibilities
Landscape Specialist (main works contractor and preliminary works contractor only where not covered by Environment Manager as noted above)	**CEMP responsibilities:** • Review of relevant sections of the CEMP, when prepared by the EM. • Responsible for ensuring that landscape elements of the CEMP are complied with during construction. • Prepare the LEMP (Refer to PW-LAN3 and MW-LAN1) together with the ECoW and the ACoW. **Overall responsibilities:** • ~~Monitors~~Monitor and ~~provides~~provide guidance in respect of the LEMP during the creation of these habitats. • ~~Approve by way of sign off~~Approve, without prejudice to the approvals required under Tables 3.2a and 3.2b, that the landscape elements of the Scheme have been created and maintained in accordance with the OEMP and CEMP to the appropriate standard.
Arboricultural Specialist (main works contractor)	**CEMP responsibilities:** • Review of relevant sections of the CEMP, when prepared by the EM. • Responsible for ensuring that the elements of the CEMP related to tree works are complied with during construction. • Prepare the Arboricultural Mitigation Strategy for the main works. • Liaise with the ACoW to ensure compliance with the DAMS. **Overall responsibilities:** • ~~Monitors~~Monitor and ~~provides~~provide guidance in respect of the LEMP during the creation of these habitats, with specific reference to tree establishment. • ~~Approves, by way of sign off, that the area~~Approve, without prejudice to the approvals required under Tables 3.2a and 3.2b, that the areas of tree and scrub planting have been established and maintained in accordance with the OEMP and CEMP to the appropriate standard.

Traffic Control Officer (main works contractor)	**CEMP responsibilities:** • Review of relevant traffic sections of the CEMP. • Prepare a Traffic Management Plan (TMP) including a Construction Workforce Travel Plan, a Site Access Plan, construction traffic routeing details and a Site Travel Plan) and submit this for approval by the Secretary of State pursuant to DCO Schedule 2, Requirement 9, in consultation with Wiltshire Council. • Liaise with the ACoW to ensure compliance with the DAMS. **Overall responsibilities:** The Traffic Control Officer will ensure compliance with the contractor's TMP in accordance with DCO Schedule 2, Requirement 9 (2). Additional responsibilities will include: • Manage and implement traffic management measures identified within the TMP (see MW-TRA2). • Ensure contractors and supply chain are aware of the routes and measures approved as part of the plans outlined within items MW-TRA2 – MW-TRA5 and monitor compliance with those routes and plans. • Ensure compliance with all relevant health and safety directives in liaison with the main works contractor's Health and Safety Manager, relating to operations and live traffic. • Manage the layout and signing of site access and egress points for all construction sites and compounds. • Arrange for site inspections at regular intervals, equipment attended to and maintained, and in the case of accidents or incidents having replacement signs, cones, bollards and lights and the like erected without delay. • Maintain a log of all complaints received in relation to traffic during Scheme construction. • Organise regular progress meetings to include Wiltshire Council, Wiltshire Police, other emergency services, the Ministry of Defence and English Heritage. • Attend the Solstice Operational Planning meetings with English Heritage.

Site Materials and Waste Manager (main works contractor)	**CEMP responsibilities:** • Review of relevant sections of the CEMP, when prepared by the EM. • Responsible for ensuring that all materials and waste elements of the CEMP are complied with during construction. • Prepare the Site Waste Management Plan (SWMP). • Responsible for ensuring that a Materials Management Plan (MMP) is prepared. • Liaise with the ACoW to ensure compliance with the DAMS. **Overall responsibilities:** • Responsible for implementing the SWMP and MMP throughout the construction of the Scheme and to ensure that waste is disposed of economically and safely in line with the SWMP.
Community Relations Manager (CRM) (main works contractor)	**CEMP responsibilities:** • Review of relevant sections of the CEMP. **Overall responsibilities:** Communications with the public, non-agricultural landowners, stakeholders and other interested parties, outreach and education, where appropriate. The role will include the following responsibilities: • Respond to any concerns or complaints raised by the public in relation to the works. • Liaise with the PM and EM on community and stakeholder concerns relating to the works and act as the main interface with the community and other stakeholders, alongside any The Authority presence that is required; • Maintain a log of complaints relating to the environment. • Ensure that the PM and the EM are informed of any complaints relating to the environment. • Keep the public informed of project progress and any construction activities that may cause inconvenience to local communities. • Engage with local schools and colleges to inform pupils and students about the Scheme, advise on careers within the construction industry and point out the dangers of trespassing on construction sites. • Ensure that the needs of groups with protected characteristics as identified within the Equality Act 2010 are considered during the construction process.

Agricultural Liaison Officer (ALO) (all contractors)	**CEMP responsibilities:** • Review and action relevant sections of the CEMP which apply to agricultural businesses likely to be affected by the Scheme. • Liaise with the ACoW to ensure compliance with the DAMS. **Overall responsibilities:** Communications with landowners and occupiers running agricultural businesses likely to be affected by the Scheme (owner/occupiers) and their agents. The role will include the following responsibilities: • Liaise with owner/occupiers regarding: i. measures to be implemented to maintain livestock water supplies which may be affected due to construction works; ii. fencing requirements both during and post-construction; and iii. locations of potential carcass burial sites. • Coordinate water supply statements (see MW-COM6), land drainage surveys and share pre- and post-construction land drainage schemes with owner/occupiers in advance in finalisation for their consideration; • Liaise with landowners prior to any proposed discharges to existing drains if any such discharge is necessary; • Coordinate the provision of a detailed pre-construction condition survey to include soil surveys of owner/occupiers' land; • Provide preconstruction survey information to landowners including company name, survey type and equipment to be used ~~and~~, an estimate of how long the surveys are expected to take and where surveys are to take place on land outside of the Order limits, an explanation of why such land is required; • Advise the contractor on risks relating to the translocation of soil diseases and ensuring appropriate protective provisions are implemented; • Ensure that owner/occupiers are consulted in respect of requirements relating to field entrances and accesses across the Works and land-locked or severed land parcels; • Liaise with affected landowners/occupiers about activities which may affect their land/business prior to public release of information about those activities; • Liaise with the affected landowners/occupiers regarding balancing pond locations; • Liaise with the affected landowners/occupiers regarding gate design where agricultural access is required; • Liaise with private water abstractors should any pollution incidents occur which may impact on private water supplies;

	• Arrange quarterly meetings with agent representatives of owner/occupiers; • Undertake pre-construction and day-to-day discussions with affected owner/occupiers to minimise disruption, where possible, to existing farming regimes and timings of activities; • Undertake site inspections during construction to monitor working practices and compliance of the contractor/s with their obligations to owner/occupiers under this OEMP; • Liaise on reinstatement measures following completion of the works; • Liaise with affected landowners regarding the location of accesses and grazing infrastructure where calcareous grassland management is required; and • Liaise with the SDCG with respect to fencing and gating. **Appointment, experience and timeframes:** • The ALO must be appointed by the main works contractor prior to the commencement of the main works. There may be more than one ALO if required. • The ALO will be contactable by all landowners and occupiers through a direct phone number during day time working hours defined by the contractor. During out of hours times, contact will be made through the Highways England helpline, who will provide a suitable contact to deal with any issues. • The ALO will have relevant experience of working with landowners and agricultural businesses and will have knowledge of the compulsory acquisition process (if required) and working on a linear infrastructure project. • Post-construction the ALO will remain in place for up to one year to manage remediation issues. • After that year the main works contractor shall ensure that ongoing contact details are provided in order for landowners and occupiers to seek consent, if required, in respect of activities controlled by restrictive covenants imposed on land pursuant to the DCO for the lifetime of the project or to highlight any defects. Information in relation to the process of management of restrictive covenants shall be issued to landowners and occupiers upon any change in the person/s responsible for the process on behalf of The Authority. •

All Site Staff (all contractors)	**CEMP responsibilities:** • Ensure all environmental policies, procedures and rules as set out in the CEMP are adhered to. • Organise work to be carried out to the required standard with the aim of minimum risk to the environment. All site personnel to receive instructions on their responsibilities to ensure correct environmental practice in line with the CEMP. **Overall responsibilities:** To receive general environmental awareness training and undertake work in accordance with all works Method Statements and Tool Box Talks. Only trained personnel are to manage particular tasks such as refuelling plant and equipment, managing the stores, water quality monitoring and supervising the segregation and collection of waste. The responsibilities of all staff on site throughout the construction of the works will include the following: • All staff are to be appropriately trained to carry out their respective tasks. • Adhere to legislation and where appropriate codes of practice and guidance notes relevant to their work.

3 Record of Environmental Actions and Commitments (REAC)

3.1 Introduction

3.1.1 The REAC, contained in Tables 3.2a and 3.2b identifies the environmental commitments proposed to address the potential environmental effects of the preliminary works and the main works.

3.1.2 The REAC tables will be updated and included ~~in the~~in the CEMP by a contractor when the contractor prepares the CEMP relevant to their scope of works and then as required as the Scheme progresses. Each CEMP will be prepared in accordance with the principles of ~~the original OEMP~~this OEMP so that it is substantially in accordance with the OEMP as required by Requirement 4 of the DCO and will require acceptance from The Authority and ultimately approval by the Secretary of State, following consultation with the relevant stakeholders as set out in this OEMP (see Section 1.4 above).

3.1.3 The extant version of the CEMP at the end of each main works construction phase will be developed by the contractor into a HEMP relevant to that construction phase (see Table 3.2b MW-G11). Once all construction phases are complete a consolidated HEMP will be produced, which will then be the main document containing essential environmental information passed to The Authority, Wiltshire Council (in respect of those parts of the Scheme for which it will become responsible) and to the maintenance authority responsible for the future maintenance of the relevant part of the Scheme once it is operational.

3.2 Guide to the REAC tables

3.2.1 The tables do not define general legislative requirements. It is assumed that in addition to compliance with the measures in this table, all activities will comply with applicable legislation.

3.2.2 All references to consultation of consultees in the OEMP are limited to matters relevant to the functions of the respective consultees, having regard to their ~~statutory~~specific roles and responsibilities. Specifically, with regard to the historic environment, the following organisations have additional responsibilities as statutory consultees:

a) Historic England (in addition to their role as a statutory consultee, as adviser to the State Party, and as the Government's adviser on the historic environment); and

b) Wiltshire Council (in addition to their role as statutory consultee for the historic environment, being the local planning authority).

3.2.3 Table 3.1 provides a summary of the scope of each column within the REAC tables.

Table 3.1: Explanatory guide to REAC table columns

Column	Explanation
Reference (Ref.).	A unique identifier defined within these REAC tables to enable simple reference to individual measures. Each unique identifier is made up of a combination of the below descriptors: • PW = Preliminary Works • MW = Main Works • D = design commitment with the following topic areas: • G = general provisions • AIR = air quality • CH = cultural heritage • LAN = landscape and visual • BIO = biodiversity • NOI = noise and vibration • GEO = geology and soils • WAT = water environment • MAT - materials • COM = people and communities • TRA – traffic management
Source Reference (Source Ref.)	An identifier which is directly relevant to the action or commitment, for example a source such as a mitigation reference in the ES. Where no Source Reference is given, the measure is normally one which is relevant across a range of technical areas and is a broader control measure (e.g. Working Hours).
Action / commitment *(including specific location and any monitoring required)*	The action that is required is defined. The location for the action is Scheme wide, unless otherwise stated. Any monitoring that is required in relation to the action is defined.
Reporting criteria	The criteria which define the successful implementation of the action, such as a document approval which confirms the action has been undertaken
Responsible person(s)	The person or body responsible for delivery of the action; this will often be the contractor

3.2.4 In order to provide for future flexibility and unless otherwise stated, the REAC tables do not typically define how the action is to be implemented or achieved, and do not consider the risk management of individual items, unless these elements are implicit within the action.

3.2.5 The references to guidance documents within the REAC tables are not intended to be exhaustive and in preparing the CEMP(s) and related topic specific plans, the contractor shall have due regard to any relevant technical guidance in individual subject areas and draw upon and reference these as appropriate.

3.2.6 The REAC tables are presented in two parts and defined further in the sub-sections that follow:

a) Table 3.2a - preliminary works

b) Table 3.2b - main works

Table 3.2a - preliminary works

3.2.7 This table includes those actions to be incorporated into the preliminary works for the Scheme by the relevant 'preliminary works contractor'.

3.2.8 The preliminary works are likely to be undertaken by a number of 'preliminary works contractors', including but not limited to contractors for utilities, ground investigation, roads, archaeology and ecology. Within Table 3.2a, the term 'preliminary works contractor' does not denote a single entity. Where individual actions are relevant to a limited number of the preliminary works contractors, this is denoted as appropriate. The terms preliminary works contractor (ecology), preliminary works contractor (archaeology), preliminary works contractor (utilities), preliminary works contractor (roads) and preliminary works contractor (ground investigation) are used to denote likely owners of actions, though these will be defined further by contractual requirements.

3.2.9 In preparing ~~a~~ CEMP(s) for the extent of their works and contractual extent, each preliminary works contractor should review ~~the~~ Table 3.2a in its entirety and justify ~~the~~each CEMP as consistent with the principles of, and substantially in accordance with, the OEMP to the satisfaction of The Authority. Where actions are modified or excluded, this should be justified as consistent with the principles of, and substantially in accordance with, the OEMP to the satisfaction of The Authority. Each CEMP requires the acceptance of The Authority and ultimately the approval by the Secretary of State (save for Heritage Management Plans, Site Specific Written Schemes of Investigation and archaeological Method Statements, which are approved by Wiltshire Council), in consultation with the relevant stakeholders as set out in this OEMP.

Table 3.2b - main works

3.2.10 Table 3.2b includes those actions to be incorporated into the main works for the Scheme and where relevant the operation and maintenance of the Scheme by the 'main works contractor' or the 'maintenance authority'.

3.2.11 In preparing ~~a~~any CEMP for the main works, the main works contractor or the maintenance authority shall update the full REAC table for main works (Table 3.2b). Where actions are modified, this should be justified as consistent with the principles of and substantially in accordance with the OEMP to the satisfaction of The Authority. Each CEMP requires the acceptance of The Authority and ultimately the approval by the Secretary of State (save for Heritage Management Plans, Site Specific Written Schemes of Investigation and archaeological Method Statements, which are approved by Wiltshire Council), in consultation with the relevant stakeholders as set out in this OEMP.

3.3 Record of Environmental Actions and Commitments (REAC)

Table 3.2: REAC contents

Table ~~3.~~3.2a: REAC tables for the preliminary works[4]

Ref	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
GENERAL PROVISIONS				
PW-G1	n/a	**CEMP preparation:** The preliminary works contractor (all) shall prepare a CEMP for their works, as applicable to the scope of their contract, and receive the ~~approval~~acceptance of The Authority and ultimately the approval of the Secretary of State, prior to the commencement of the contractor's works. If there is only one preliminary works contractor for all of the preliminary works a CEMP shall be prepared for each work package of the preliminary works prior to the commencement of that phase. In preparing the CEMP or material updates to it, the preliminary works contractor (all) shall consult with Wiltshire Council, the Environment Agency, Historic England, National Trust, Natural England and English Heritage on those aspects of the CEMP that are relevant to their ~~functions~~roles and responsibilities where relevant as set out for the relevant 'PW'' item below. The preliminary works contractor (all) shall ensure that any revisions to the CEMP would not give rise to any materially new or materially worse adverse environmental effects in comparison with those reported in the Environmental Statement.	Acceptance by The Authority and approval by the Secretary of State of the CEMP (save for HMPs, SSWSIs and archaeological method statements). The Authority approval of any material update to CEMP. Consultation with Wiltshire Council, the Environment Agency, Historic England, National Trust, Natural England and English Heritage on preparation of the CEMP or material updates to it in respect of matters relevant to their ~~functions, where relevant~~roles and responsibilities, as set out for the relevant 'PW-' item below. Each Heritage Management Plan, ~~SSWSIs~~SSWSI and archaeological method statement shall be prepared in	Preliminary works contractor (all) (preparation) The Authority (publication)

[4] The measures are applicable to the works defined as preliminary works in Table 1.1 and will be delivered by a number of individual 'preliminary works contractors'.

Ref	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
			consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and approved by Wiltshire Council (in consultation with Historic England) prior to the part of the preliminary works to which it relates commencing.	
PW-G2	n/a	**Single point of contact:** The preliminary works contractor (all) shall identify a person within their CEMP who will be the single point of contact for the regulatory authorities. The preliminary works contractor shall provide the regulatory authorities and the members of HMAG with relevant contact details prior to the commencement of construction and document this in the CEMP.	Acceptance by The Authority and approval by the Secretary of State of the CEMP.	Preliminary works contractor (all)
PW-G3	n/a	**Management structure:** The preliminary works contractor (all) shall establish a management structure that includes an organisational chart encompassing all staff responsible for delivery of environmental mitigation measures and shall include this chart within their CEMP. The chart will set out the respective roles and responsibilities with regard to the environment. The organisational chart (and any update thereafter) will be supplied to the members of HMAG.	Acceptance by The Authority and approval by the Secretary of State of the CEMP.	Preliminary works contractor (all)
PW-G4	n/a	**Core working hours:** The preliminary works contractor (all) shall adhere to the following core working hours, except in case of emergency or in respect of 'additional working hours' (see below). 07:30 – 18:00 Monday to Friday 07:30 – 13:00 Saturday To maximise productivity, a period of up to one hour before and up to one hour after normal working hours may be used for start-up and close down of activities. This will include, but not be limited to, deliveries, movement to place of work, unloading, maintenance and general preparation works. These periods will not be considered an extension of core working hours. Except in the case of an emergency, for any work required to be undertaken outside of core hours (not including repairs or maintenance), an application will be made to Wiltshire Council prior to undertaking the works under Section 61 of the Control of Pollution Act 1974. Any variations to core hours and/or additional hours required would be agreed with Wiltshire Council. *Additional working hours* The preliminary works contractor is able to undertake work within the existing highway boundary during	n/a	Preliminary works contractor (all)

Ref	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
		night time, Saturday afternoon, Sunday and/or bank holiday working for reasons of safety or operational necessity and this may involve consecutive nights' work over weekends and may on occasion involve longer durations. Activities outside core working hours that could give rise to disturbance will be kept to a reasonably practicable minimum. Repairs or maintenance of construction equipment that is required to be carried out outside of core working hours will normally be carried out on Saturday afternoons or Sundays between 09:00 and 17:00. In the case of work required in response to an emergency or which if not completed would be unsafe or harmful to the works, staff, public or local environment, Wiltshire Council will be informed as soon as reasonably practicable of the reasons for, and likely duration of, the works. This information will also be made available to the Scheme helpline and could include incidents such as where pouring concrete takes longer than planned due to equipment failure or where unexpectedly poor ground conditions, encountered whilst excavating, require immediate stabilisation.		
PW-G5	n/a	**Method Statements~~:~~ (other than archaeological method statements under PW-CH7):** The preliminary works contractor (all) shall set out the procedures to address health and wellbeing, safety, traffic management, site security and environmental issues in method statements prepared as part of their works. The method statements shall define any specific environmental control measures, to be implemented to meet the requirements of their CEMP. The preliminary works contractor (all) shall submit the method statements and risk assessments to, and obtain approval from, The Authority before commencing the works.	The Authority approval of the method statements.	Preliminary works contractor (all)
PW-G6	ES Chapter 7, Section 7.8 ES Chapter 8, Section 8.8	**Site lighting:** The preliminary works contractor (all) shall define within the CEMP the proposed approach to site lighting around construction compounds and elsewhere along the route alignment, giving consideration to the WHS context and other environmental constraints and shall consult with the members of HMAG on the approach to site lighting in relation to matters within or affecting the WHS. Lighting shall be at the minimum luminosity necessary and use low energy consumption fittings and should avoid light spillage. Lighting shall also be designed, positioned and directed so as not to unnecessarily intrude on adjacent buildings, sensitive heritage receptors~~,~~ (e.g. scheduled monuments; non-designated assets or asset groups that contribute to the OUV of the WHS; listed buildings; registered parks and gardens), ecological receptors, structures used by protected species and other land uses to prevent unnecessary disturbance, interference with local residents, or passing motorists on nearby roads.	The Acceptance by The Authority and approval by the Secretary of State of the CEMP.	Preliminary works contractor (all)

AIR QUALITY				
PW-AIR1	ES Chapter 13, Section 13.9	**Best Practicable Means:** The preliminary works contractor (all) shall manage dust, air pollution and exhaust ~~emission~~emissions during the construction works in accordance with Best Practicable Means (BPM). Specific measures shall be based upon industry best practice, including the measures listed in the Institute of Air Quality Management's (IAQM) Guidance on the Assessment of Dust from Demolition and Construction. These measures will be set out in more detail in the CEMP and could include: a) Undertake periodic on-site inspections, where receptors are nearby, to monitor dust, record inspection results, and make the log available to the Wiltshire Council, The Authority etc. when asked. b) Remove materials that have the potential to produce dust from site as soon as possible, unless being re-used on site c) Cover, seed or fence stockpiles to prevent wind whipping. d) Impose and signpost a maximum-speed-limit of 15mph on surfaced and 10mph on un-surfaced haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided). e) All construction plant would use fuel equivalent to ultra-low sulphur diesel (ULSD) where possible.	Implementation of BPM.	Preliminary works contractor (all)
CULTURAL HERITAGE				
PW-CH1	ES Chapter 6, Section 6.8	**Heritage Management Plan (HMP):** The preliminary works contractor (archaeology) shall produce a HMP based on the DAMS, indicating how the historic environment (relevant to the scope of works) is to be protected in a consistent and integrated manner, coordinated with all other relevant environmental topics. The HMP shall address: a) all temporary and permanent works, which may include, as relevant, boundary fencing, vegetation clearance, ground investigations, demolition, utility diversions, reinstatement works, access routes ~~and~~, works compounds and hoarding. b) potential impacts on heritage assets both inside and outside the World Heritage Site (WHS) from activities which may include, as relevant, ground vibration, light pollution, dust, ground movement / subsidence, dewatering, and the impact on buried archaeological remains of ~~adverse ground conditions caused by extreme weather events~~construction activities (rutting, compaction of soft ground etc.) c) issues of security for vulnerable sites / areas of archaeological interest outside the normal working hours, and at weekends. d) procedures for the protection of unexpected archaeological discoveries. e) sites for preservation in-situ (including protective fencing) and sites for preservation by record. The preliminary works contractor (ecology, utilities, roads and ground investigation) shall identify within their CEMP how works are to be carried out in accordance with the Heritage Management Plan.	The HMP shall be prepared in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and approved by Wiltshire Council (in consultation with Historic England) prior to the part of the preliminary works to which it relates commencing.	Preliminary works contractor (archaeology)
PW-CH2	DCO Requirement 5 ES Chapter 6,	**Works in accordance with the Detailed Archaeological Mitigation Strategy:** The preliminary works contractors (all) shall undertake the works, at all times, in accordance with the DAMS and DCO Requirement 5.	Works undertaken in accordance with the DAMS and Requirement 5.	Preliminary works contractor (all)

	Section 6.8			
PW-CH3	ES Chapter 6, Section 6.8	**Site Specific Written Schemes of Investigation:** For sites or areas requiring archaeological investigation under the DAMS or as required by items PW-CH4 and PW-CH5 below the preliminary works contractor (archaeology) shall prepare a Site Specific Written Scheme of Investigation (SSWSI) that describes the mitigation measures to be carried out.	Production of SSWSIs in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and approval by Wiltshire Council (in consultation with Historic England) prior to the part of the preliminary works to which it relates commencing.	Preliminary works contractor (archaeology)
PW-CH4	ES Chapter 6, Section 6.8	**Fencing of heritage assets:** The preliminary works contractor (archaeology) shall ensure all heritage assets identified in the DAMS for protective fencing are securely fenced prior to the start of the preliminary works (in conjunction with other mitigation measures). The preliminary works contractor (archaeology) shall consult with the members of the HMAG (for works ~~inside~~within or affecting the WHS) and ~~WCAS~~Wiltshire Council (for works outside of the WHS) and Historic England (for works outside of the WHS) to determine the type of fencing to be used. The contractor shall separately prepare a Method Statement in accordance with the DAMS for all fencing works which will include details of appropriate archaeological mitigation measures (detailed mitigation requirements shall be set out in a SSWSI).	Consultation with members of HMAG (for works ~~inside~~within or affecting the WHS) and ~~WCAS~~Wiltshire Council and Historic England~~.~~ (for works outside of the WHS) to determine the type of fencing to be used. Consultation on Method Statements / SSWSIs with Wiltshire Council and Historic England and, for sites within the WHS, HMAG, and approval from Wiltshire Council (in consultation with Historic England) prior to the part of the preliminary works to which it relates commencing.	Preliminary works contractor (archaeology)
PW-CH5	ES Chapter 6, Section 6.8	**Limiting landtake:** At the western portal approach road and the eastern portal approach road the preliminary works contractor (archaeology) shall limit the amount of land take for the preliminary archaeology works to the extent of the proposed cutting(s) and any associated infrastructure (sites 24 and 28 – refer to the DAMS and its associated figures).	Production of SSWSIs in consultation with Wiltshire Council and Historic England and, for sites within the WHS, HMAG and	Preliminary works contractor (archaeology)

		The preliminary works contractor (archaeology), or a contractor under their direction shall install, at the start of the preliminary works, temporary barrier fencing that demarcates the amount of land take at Sites 24 and 28. The preliminary works contractor (archaeology) shall produce a SSWSI for sites 24 and 28 including the identification and installation of appropriate fencing.	approval by Wiltshire Council (in consultation with Historic England) prior to the part of the preliminary works to which it relates commencing.	
PW-CH6		**Phasing of preliminary works:** The preliminary works contractor (archaeology) shall ensure that any relevant site-specific ecological mitigation works are sufficiently advanced in relation to the species / habitats present (refer to items PW-BIO2 – PW-BIO9) prior to the commencement of the relevant archaeological works.	Liaison with the preliminary works contractor (ecology).	Preliminary works contractor (archaeology)
PW-CH7		**Archaeological Method Statements:** The preliminary works contractor (archaeology) shall prepare ~~archaeological~~Archaeological Method Statements in respect of works that may affect potentially sensitive archaeological remains following consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, prior to the start of the work. The Archaeological Method Statements will address, in compliance with the provisions of the DAMS and the approved HMP measures including: a) how the preliminary works contractor (archaeology) intends to preserve in situ sensitive archaeological remains and prevent deformation of topsoil / subsoil horizons (including no-dig solutions); b) measures for monitoring continued protection of in situ archaeological remains; and c) where appropriate, how the measures would be reversed following the end of construction, e.g. at compound locations, the ground and the surface returned to its original shape and condition.	Consultation on Archaeological Method Statements / SSWSIs with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and approval from Wiltshire Council (in consultation with Historic England) prior to the part of the preliminary works to which it relates commencing.	Preliminary works contractor (archaeology)
LANDSCAPE AND VISUAL				
PW-LAN1	ES Chapter 7, Section 7.8	**Retained vegetation:** Where trees are to be retained within or immediately adjacent to the order limits, the preliminary works contractor (all) shall adopt the default position that the root protection area (RPA) and canopy spread will form an effective Construction Exclusion Zone, secured with robust fencing where no access will be permitted. Works within the root protection area of trees will be avoided wherever practicable. However, where some works within the RPA cannot be avoided, e.g. for access or stockpiling, the contractor shall use cellular confinement systems to minimise/avoid compaction to the ground. Protection will still be required to avoid physical damage to the tree, i.e. trunk, branches or crown. In addition, if works are deemed essential within the RPA the length of time of the impact shall be limited. *Nile Clumps* Prior to preliminary works commencing in the vicinity of the Nile Clumps, the preliminary works contractor (ecology) shall install protective fencing around the Nile Clumps (located within the scheme boundary Tree Preservation Order No. 275). The fencing requirements shall be developed in consultation with Wiltshire Council. The fencing shall remain in-situ until all works within the vicinity of the Nile Clumps are complete.	Consultation with the members of HMAG and approval from The Authority prior to any fencing being installed within or affecting the WHS. Consultation with Wiltshire Council on the fencing requirements to the Nile Clumps	Preliminary works contractor (all) Preliminary works contractor (ecology) – fencing of the Nile Clumps

PW-LAN2	DCO Requirement 8	**Works in accordance with approved landscaping scheme:** The preliminary works contractor (roads) will undertake landscaping works in accordance with the approved landscaping scheme produced in conformance with Requirement 8 of the DCO.	Works undertaken in accordance with Requirement 8.	Preliminary works contractor (roads)
PW-LAN3	Stakeholder consultation	The preliminary works contractor (roads) shall break out the road surface of the redundant Allington Track.	n/a	Preliminary works contractor (roads)
BIODIVERSITY				
PW-BIO1	ES Chapter 8, Section 8.8	**Biosecurity:** The preliminary works contractor (all) shall be cognisant of the findings of any pre-works invasive non-native species (INNS) floral survey and any ongoing management measures. Should INNS be present within works areas, the preliminary works contractor (all) shall produce an appropriate INNS Management Plan which includes Method Statements addressing how identified species are to be effectively managed and ensure legal compliance. Should an INNS Management Plan be required, Natural England shall be consulted during the development of the plan and the plan shall be appended to the CEMP for acceptance by the Authority and ultimately approval by the Secretary of State. The preliminary works contractor (all) shall implement measures to promote biosecurity and ensure legal compliance with regards to INNS and diseases to avoid and minimise the risk of spread as a consequence of the Scheme. This will include, Tool Box Talks, exclusion zones and method statements on suitable working practices, which will include but not be limited to the cleaning of equipment (including boots) and vehicles on and off site and between sites, vegetation clearance methods (such as treatments / timings) and the segregation of vegetation arisings, including suitable disposal methods.	Implementation of the identified actions. Production of the INNS Management Plan(s) (if required) in consultation with Natural England for acceptance by The Authority and approval by the Secretary of State.	Preliminary works contractor (all)
PW-BIO2	ES Chapter 8, Section 8.8	**Great crested newts (GCN):** All clearance works within 500m of the known breeding population of GCN will be undertaken under specialist supervision following a method statement, which may include seasonal constraints and exclusion zones for specific activities. This method statement will include any maintenance measures required on works areas within 500m of a known breeding pond to deter GCN from entering areas where they would be at risk from subsequent works. As the working methods will avoid impact on GCN, it is not considered necessary to undertake monitoring surveys, however as stated above, this may be revised following the pre-construction update surveys if a licence becomes necessary later. **Location:** GCN breeding pond is outside order limits within the River Till valley, south of Foredown Farm; relevant fields within order limits are north of the new alignment adjacent to chainages 4400m to 4800m.	Implementation of the identified actions. Completion / return of working permits or other relevant approvals.	Preliminary works contractor (all)
PW-BIO3	ES Chapter 8, Section 8.8	**Reptiles:** Clearance activities within areas of habitat considered suitable for reptiles (of any species) should be undertaken in a phased manner to encourage reptiles to move from the working area into adjacent suitable habitat. All works should be undertaken under a method statement, which may include seasonal constraints (depending on the habitat present within the working areas). Should hibernacula features be identified within the working area, these should be removed by hand prior to the hibernation season (which is	Implementation of the identified actions. Completion / return of working permits or other relevant approvals.	Preliminary works contractor (all)

		temperature dependant, but ranges from October to February). Works should only commence within these areas on receipt of suitable permits or other relevant approvals. Following the habitat clearance, all areas shall be maintained in an unfavourable state to discourage reptiles from entering the working area.		
PW-BIO4	ES Chapter 8, Section 8.8	**Breeding birds (excluding Schedule 1):** Where practicable, the preliminary works contractor (all) shall undertake vegetation clearance (if required), between October and February inclusive, which is outside of the bird nesting season. If clearance is not possible outside of the bird nesting season, then suitable nesting habitat to be removed shall be checked for nesting birds by the preliminary works contractor (ecology) or an appropriate specialist, immediately prior to its removal. Where active bird nests are present, no works to or in the vicinity (5m) of the bird nests will be undertaken until any young are no longer considered to be dependent on the nest.	Implementation of the identified actions. Completion / return of working permits or other relevant approvals.	Preliminary works contractor (all)
PW-BI05	ES Chapter 8, Section 8.8	**Schedule 1 / Annex 1 breeding birds**: In addition to PW-BIO4, if works are carried out at a time or location that has the potential to disturb Schedule 1 / Annex 1 breeding birds then all works shall be undertaken under a method statement, whereby depending on the species present and the works to be undertaken, specialist supervision may be required. The actions required of the preliminary works contractor (ecology), should a Schedule 1 / Annex 1 species be discovered within an area to be disturbed, are those general measures as set out above for breeding birds, with the added requirement that any Schedule 1 / Annex 1 species or its dependent young must not be disturbed while at or building a nest. A suitable exclusion zone and the inclusion of suitable protective measures (such as visual or noise screens) may be used. Suitable requirements will be determined on a case by case basis. Great Bustard shall be treated as if they are Schedule 1 breeding birds for the purposes of this item PW-BIO5. **Stone curlews:** Due to the sensitivity of stone curlews to human disturbance (they can be disturbed by human activities within 500m of a nest site), it will be necessary (where practical) to deter stone curlew from nesting within, or in proximity of the Scheme, prior to the commencement of works. Deterrent measures include (but are not limited to) the following: a) maintaining areas of dense crops and grass until it is necessary to access the working area. This would deter stone curlew from attempting to nest; b) Installation of visual deterrents, to be confirmed on a site by site basis. c) planting areas of temporary bare ground with a quick growing crop or quick growing wild flower or game cover seed mix. Even with the use of these deterrent measures, there may still be a risk of stone curlews nesting within the Scheme boundary (or within 500m). In the event that nesting stone curlews are found located within the Scheme boundary or within 500m, then liaison with Natural England and the RSPB will be undertaken. This will aim to identify and agree the specific and appropriate measures to be undertaken in order to avoid disturbance of the nesting pair.	Implementation of the identified actions. Monitoring and reporting arrangements developed by the ECoW in consultation with Natural England, RSPB, or the Great Bustard Group (as appropriate), and approved by The Authority.	Preliminary works contractor (ecology)

		Replacement Plot The preliminary works contractor (ecology) shall create a replacement nesting plot for stone curlew prior to the commencement of the works removing the stone curlew plot near Parsonage Down. **Monitoring:** An appropriate specialist shall undertake monitoring of stone curlews at the retained breeding plots within 500m of the Scheme boundary (where public access is available / can be arranged) and at the newly created nesting plot, associated with the mitigation defined in the ES (Chapter 8). Where monitoring is undertaken for other purposes appropriate data will be used without duplication of survey. **Great bustards:** Great bustards are considered to be sensitive to human disturbance. A precautionary approach has been adopted, whereby in the event that nesting great bustards are found located within the Scheme boundary or within 500m of works, then liaison with the Great Bustard Group will be undertaken. This will aim to identify and agree the specific and appropriate measures to be undertaken in order to avoid disturbance of the nest.		
PW-BIO6	ES Chapter 8, Section 8.8	**Badgers:** The preliminary works contractor (ecology) or The Authority shall apply for a Scheme-wide Natural England badger sett closure licence. The preliminary works contractor (ecology) or The Authority will be responsible for updating / amending the licence as required. The licence will include provision for the destruction of setts within the works area (where required) and will include a detailed method statement setting out the measures to be implemented. Such method statement to be produced in consultation with the members of HMAG. The preliminary works contractor (ecology) or The Authority will be named under the licence when appointed and will be responsible for undertaking any badger sett closures in accordance with the method statement of the Natural England badger sett closure licence. Works within the Order limits within 50m of any retained badger sett will fall under the provisions of the method statement. Depending on the timings and activity of such works, an appropriate specialist may need to be present or seasonal restrictions may be required and would be defined under the conditions of the licence. Monitoring surveys will be carried out at any retained setts and to identify any recently dug badger setts that may be affected by ongoing or planned works. Where necessary further sett closures or other mitigation measures will be carried out in accordance with the method statement and licence.	Natural England licence return.	Preliminary works contractor (ecology) or the Authority
PW-BIO7	ES Chapter 8, Section 8.8	**Bat roosts:** Should a pre-works survey of trees identify a tree containing a bat roost which requires removal, the preliminary works contractor (ecology) or The Authority shall apply for a Natural England EPS licence prior to the commencement of the removal works. The preliminary works contractor (ecology) or the Authority shall be named under the licence and shall be responsible for ensuring that all works detailed within the licence are carried out in accordance with the method statements. Where bat roosts are being retained within the Scheme boundaries, the following methods should be	Application and return of Natural England EPS licence (if necessary).	Preliminary works contractor (ecology) or the Authority

		incorporated: a) consideration given to seasonal use of roost in defining working methods; b) exclusion zones to be established and maintained; c) any works within 20m of a confirmed roost shall be carried out under the supervision of an appropriate specialist; and d) measures shall be applied to maintain dark conditions within 20m of identified roosts, including measures to avoid light spill from construction lighting. Works involving felling or maintenance on trees with potential for bat roosts will follow best ~~practise~~practice methods to protect bats and their roosts. This shall include the following: a) All trees within the Order Limits and within 20m of any works area will be inspected by a Natural England ~~licenced~~licensed bat ecologist from the ground and categorised for their potential for bat roosts, in accordance with the current best practice; b) Trees which have low suitability can be section felled; c) Trees which are moderate or high suitability will be re-inspected by a Natural England bat licensed ecologist, in line with current best practice guidance, and further surveys may be required; d) Any confirmed roosts will require a Natural England EPS licence to be obtained prior to felling. At the ES stage there are no roosts expected to be lost and hence no need to apply for an EPS licence, however, this will be updated following the pre-construction surveys; e) Works affecting bat roosts shall only commence on receipt of suitable method statements, licences, permits or other relevant approvals. **Locations**: To be updated following pre-construction surveys.		
PW-BIO8	ES Chapter 8, Section 8.8	**Otters:** Where an otter resting place is present or suspected, a suitably qualified ecologist will prepare a method statement for the works to avoid disturbance of otters and ensure that works are legally compliant. Where required, a Natural England EPS licence will be obtained. At the ES stage it is not expected that a EPS licence will be required. Works should only commence within these areas on receipt of suitable permits or other relevant approvals. **Locations:** River Till chainages 4000m to 4100m; River Avon ~~viaduct~~crossing, chainages 12200m to 12300m	Application and return of Natural England EPS licence (if necessary).	Preliminary works contractor (ecology) or the Authority
PW-BIO9	ES Chapter 8, Section 8.8	**Water voles:** Should water voles be present within the working area of the Scheme, the preliminary works contractor (ecology) will apply for suitable licences from Natural England in order to facilitate the works. **Locations:** River Till chainages 4000m to 4100m; River Avon ~~viaduct~~crossing, chainages 12200m to 12300m	Return of protected species licences from Natural England (if required).	Preliminary works contractor (ecology) or the Authority
PW-BIO10	ES Chapter 8, Section 8.8	**Other notable species:** Other notable species are present within the Scheme boundaries including brown hare (*Lepus europaeus*), hedgehog (*Erinaceus europaeus*), polecat (*Mustela putorius*), harvest mouse (*Micromys minutus*) and water shrew (*Neomys fodiens*). The preliminary works contractor (all) shall follow best practice to avoid harm for these species during the preliminary works. This should include covering and	Implementation of the identified actions.	Preliminary works contractor (all)

		fencing off all open holes at the end of each day to prevent any access from wildlife, or by providing ramps to allow any wildlife to escape. Ramps should be suitable for all sizes of local wildlife. Further mitigation details should be incorporated into a method statement as required.		
PW-BIO11	n/a	**Phasing of preliminary works:** The preliminary works contractor (archaeology, utilities, roads, ground investigation) shall ensure that any relevant site-specific ecological mitigation works, e.g. badger sett closures, habitat clearance - refer to items PW-BIO2 – PW-BIO9) are sufficiently advanced in relation to the species / habitats present prior to the commencement of the relevant preliminary works.	Implementation of the identified actions.	Preliminary works contractor (archaeology, utilities, roads, ground investigation)
NOISE AND VIBRATION				
PW–NOI1	ES, Chapter 9, Section 9.8	**Best Practicable Means:** The preliminary works contractor (all) shall minimise noise and vibration during the Preliminary Works by employing Best Practicable Means (BPM), as defined under Section 72 of the Control of Pollution Act (CoPA) 1974 and Section 79 of the Environmental Protection Act 1990, at all times. BPM shall consider the recommendations of BS 5228: Code of practice for noise and vibration control on construction and open sites parts 1 and 2 and BS 7385: Evaluation and measurement for vibration in buildings. Guide to damage levels from groundborne vibration. The preliminary works contractor shall detail the application of BPM within the Noise and Vibration Management Plan. BPM should be included in the following order: a) control of noise and vibration at source - such as use of low noise equipment, the provision of acoustic enclosures and the use of less intrusive alarms and the screening of equipment; b) should the application of BPM at source not prove effective and noise exposure exceeds the relevant trigger level (as defined in BS 5228-1, Table E.2), the preliminary works contractor may offer: i. noise insulation; or if that is not successful ii. temporary re-housing.	Implementation of BPM.	Preliminary works contractor (all)
PW–NOI2	ES, Chapter 9, Section 9.8	**Section 61 Consents**: Except in the case of an emergency, for any work required to be undertaken outside of core hours (not including repairs or maintenance), the relevant preliminary works contractor (all) shall make an application to Wiltshire Council prior to undertaking the works under Section 61 of the Control of Pollution Act 1974. In the event that works for which a Section 61 consent has been applied for have to be rescheduled or modified, e.g. method or working hours, for reasons not envisaged at the time of the Section 61 consent submission, the contractor shall apply for a dispensation or variation from Wiltshire Council, in advance of the start of those works.	Agreement of Section 61s with Wiltshire Council (if required).	Preliminary works contractor (all)
PW–NOI3	ES, Chapter 9, Section 9.8	**Noise and Vibration Management Plan:** The preliminary works contractor (utilities, roads, ground investigation) shall prepare a noise and vibration management plan, detailing the management and monitoring processes to be introduced across all construction sites and compounds. This plan shall be appended to the CEMP and consulted upon with	Acceptance by The Authority and approval by the Secretary of State of the Noise and Vibration Management	Preliminary works contractor (utilities, roads and ground investigation)

		Wiltshire Council. The plan shall include, but not be limited to, the following: a) integration of noise control measures into the preparation of all method statements for the works; b) details and locations of all site hoardings, screens or bunds that will provide acoustic screening during construction; c) procedures for the installation of noise insulation (if deemed to be required – refer to PW-NOI6) or provision of temporary re-housing (if deemed required – refer to PW-NOI6) and to ensure such measures are in place as early as reasonably practicable; d) noise and vibration monitoring protocols including monitoring locations, stages during construction at which monitoring will be undertaken, and methods of publishing the results; e) details of inspection and maintenance schedules to be undertaken; f) processes to ensure ongoing compliance with all controls and consent for the works; and g) process for implementing corrective actions that may be required to avoid or address a potential non-compliance. The preliminary works shall be undertaken in accordance with the Noise and Vibration Management Plan.	Plan. Consultation with Wiltshire Council ~~and~~, Historic England and National Trust in respect of matters relevant to their ~~functions~~roles and responsibilities.	
PW–NOI4	ES, Chapter 9, Section 9.8	**Vibration:** The preliminary works contractor (utilities, roads and ground investigation) shall take into account the following guidance when establishing criteria, controls and working methods for vibration management: a) BS 5228 – 2 Code of practice for noise and vibration control on construction and open sites; b) ISO 4866: 2010 Mechanical vibration and shock. Vibration of fixed structures. Guidelines for the measurement of vibrations and evaluation of their effects on structures; and c) BS 7385 - 2 Evaluation and measurement for vibration in buildings – Part 2: Guide to damage levels from groundborne vibration *Protection of building occupants from disturbance* No start-up or shut down of vibratory plant e.g. rollers or compactors, within 50m of receptors. The preliminary works contractor (utilities, roads and ground investigation) shall refer to BS 5228-2 for guidance levels in terms of Peak Particle Velocity (PPV). If predicted vibration levels exceed 1mms^{-1} component PPV at occupied residential buildings based on the prediction methodology in BS 5228-2, Wiltshire Council and those potentially affected will be notified as soon as practicably possible in advance of the works. The notification will describe the nature and duration of the works and any associated proposals for vibration monitoring in the event that it is required. *Protection of buildings from damage* (For works to scheduled monuments and non-designated archaeological assets, the provisions under 'Protection of Sensitive Cultural Assets' shall apply). The preliminary works contractor (utilities, roads and ground investigation) shall use BPM to control vibration levels so that the PPV, as measured in accordance with BS 7385-2 Evaluation and measurement for vibration in buildings – Part 2: Guide to damage levels from groundborne vibration, are generally not exceeded. The preliminary works contractor (utilities, roads and ground investigation) shall carry out a scoping vibration appraisal to determine whether the trigger level of 6 mms^{-1} (Table 9.6, Chapter 9 of the ES) is likely to be exceeded. Activities requiring an appraisal may include tunnelling, vibratory compaction, impact or vibratory piling and other driven processes.	Completion of appropriate assessments, identification of buildings / properties at risk / cultural heritage assets and consultation of actions with relevant parties (including Wiltshire Council, Historic England and the members of HMAG) as applicable.	Preliminary works contractor (utilities, roads and ground investigation)

		The preliminary works contractor (utilities, roads and ground investigation) shall notify and consult Wiltshire Council regarding any works predicted to generate a PPV above 6mms^{-1}. Where it is determined that there is no reasonable or practicable means to reduce predicted or measured vibration then the contractor shall: a) agree and consult with Wiltshire Council regarding monitoring for vibration and strain induced in buildings during the works; b) consult occupiers of properties about: i. the surveys to be carried out and any consequent actions; and ii. any additional reasonable and practicable mitigation to be provided for occupants; and c) carry out a condition survey before and after the relevant works. The preliminary works contractor (utilities, roads and ground investigation) shall identify any buildings that may be unusually vulnerable to vibration, that are located within 50m of any activities that may give rise to significant vibration. Where the predicted vibration at the foundations of such buildings exceeds 3mms^{-1} PPV then the contractor shall undertake an initial structural survey of the building. Based on the survey, the level of vibration above which condition surveys and continuous vibration monitoring are required will be confirmed with the building owner and Wiltshire Council. *Protection of Sensitive Cultural Assets, ~~excluding buildings~~* The preliminary works contractor (utilities, roads and ground investigation) shall identify, following the identification of screening criteria in consultation with Historic England, Wiltshire Council and the members of HMAG, any potentially vibration sensitive cultural heritage assets (including barrows) based on the sensitivity of the assets and proximity to preliminary works. Should assets be identified, actions to control or mitigate impacts (including monitoring) shall be agreed between the preliminary works contractor (utilities, roads and ground), the operator of the equipment and The Authority as appropriate, in consultation with Historic England, Wiltshire Council and the members of HMAG.		
PW-NOI5	ES, Chapter 9, Section 9.8	**Monitoring of noise and vibration:** The preliminary works contractor (utilities, roads and ground investigation) shall undertake and report noise and vibration monitoring, as is necessary, to ensure and demonstrate compliance with all noise and vibration commitments, and the requirements of the approval for their works. The preliminary works contractor (utilities, roads and ground investigation) shall undertake regular onsite observation monitoring and checks/audits to ensure that BPM is being employed at all times (refer to PW-NOI4). The site reviews will be logged and any remedial actions recorded. Such checks will include: a) compliance with hours of working; b) presence of mitigation measures e.g. engines doors closed, airlines not leaking, and site hording in place: c) number and type of plant; d) compliance with agreed working methods; and e) compliance with any specific requirements of the Noise and Vibration Management Plan (refer to PW-NOI3). The monitoring and compliance assurance process shall be set out in the noise and vibration	Inclusion of monitoring proposal with the Noise and Vibration Management Plan. Adhering to the specified monitoring regime throughout the construction period	Preliminary works contractor (utilities, roads and ground investigation)

		management plan, as part of the CEMP, including proposals for monitoring locations. Proposals for any monitoring locations will be set out in the Noise and Vibration Monitoring Plan (refer to PW-NOI3).		
PW-NOI6	n/a	**Noise insulation and temporary re-housing:** The preliminary works contractor (utilities, roads and ground investigation) shall offer noise insulation or temporary re-housing to qualifying parties when: a) noise levels are predicted or measured by the preliminary works contractor (utilities, roads and ground investigation) to exceed the relevant trigger level (as defined in BS 5228-1, Table E.2) for at least 10 days out of any period of fifteen consecutive days or alternatively 40 days in any six month period at affected properties; b) the property complies with all other requirements of the Noise Insulation Regulations 1975 (as amended); c) the property is lawfully occupied as a permanent dwelling; and d) noise insulation does not already exist that is of an equivalent standard to that which would be allowed for under the Noise Insulation Regulations 1975 (as amended). The preliminary works contractor (utilities, roads and ground investigation) shall consider all applications supported by evidence for noise insulation or temporary rehousing from occupiers who may have special circumstances. Special circumstances could include night workers, those working in home occupations, local businesses or buildings that provide community facilities requiring a particularly quiet environment and those with a medical condition which will be seriously aggravated by construction noise, and provide noise insulation or temporary re-housing where it is demonstrated that this is necessary. The preliminary works contractor (utilities, roads and ground investigation) shall inform Wiltshire Council and owners / occupiers should it be identified that noise insulation or temporary re-housing is required.	Implementation of the actions. Inform Wiltshire Council (if required).	Preliminary works contractor (utilities, roads and ground investigation)
GEOLOGY AND SOILS				
PW–GEO1	ES Chapter 10, section 10.8	**Ground investigation:** All GI works shall be undertaken in accordance with UK best practice, including BS 5930:2015 Code of Practice for ground investigations and BS 10175:2011 + A2:2017 Investigation of potentially contaminated sites Code of Practice. The assessment of contaminated land should be risk-based and in accordance with Contaminated Land Report 11 Model Procedures for the Management of Land Contamination (2004).	Completion of appropriate GI works and remediation measures, if applicable.	Preliminary works contractor (ground investigation)
PW–GEO2	ES Chapter 10, section 10.8 DCO Requirement 7	**Contaminated Land:** In the event that contaminated land, including groundwater, is found at any time, which was not previously identified in the ES, Requirement 7 of the DCO is applicable and the preliminary works contractor (all) shall follow those provisions. The preliminary works contractor (all) is to quantify the extent of the potential risk from the contamination and follow a risk-based approach in accordance with Contaminated Land Report 11, Model Procedures for the Management of Land Contamination (2004) and inform Wiltshire Council. Where significant risks from soil or groundwater contamination are identified, appropriate mitigation (remediation) to reduce to acceptable levels the potential short and long-term health and safety and environmental risks to sensitive receptors will be identified and implemented. Any required additional ground investigations will be undertaken in accordance with UK good practice, including BS 5930:2015 Code of Practice for ground investigations and BS 10175:2011 + A2:2017	Works undertaken in accordance with Requirement 7.	Preliminary works contractor (all)

		Investigation of Potentially Contaminated Sites Code of Practice.		
PW-GEO3	ES Chapter 10 Section 10.8.	**Soils Management Strategy:** The preliminary works contractor (utilities, roads, archaeology) shall produce a detailed Soils Management Strategy (SMS) based on the Outline SMS within Annex A.3. The SMS shall identify the nature and types of soil that will be affected and the methods that will be employed for stripping soil and the restoration of agricultural land (where restoration of agricultural land is required). The strategy shall be appended to the CEMP. The preliminary works contractor shall have regard to the guidance in Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (2009) when handling agricultural soils and in particular the land to be reprofiled for use as permanent chalk grassland. To form part of the Soils Management Strategy, the preliminary works contractor (utilities, roads, archaeology) shall develop a: a) Soils Handling Strategy, with reference to BS3882: 2015 Specification for Topsoil and the Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Site. This shall incorporate the soils handling measures outlined within the DAMS, identify locations where archaeological in-situ preservation is required and consider areas to be returned to agricultural use; and b) Soil Resources Plan, which will confirm the soil types, the most appropriate re-use for the different types of soils and proposed methods for handling, storing and replacing soils on-site, including bulk wet sieving, should it be required.	Acceptance by The Authority and approval by the Secretary of State of the SMS. Consultation with Wiltshire Council and The Environment Agency in respect of matters relevant to their ~~function~~roles and responsibilities and, for works ~~inside~~ within or affecting the WHS, the members of HMAG~~,~~.	Preliminary works contractor (utilities, roads, archaeology)
PW-GEO4	ES Chapter 10, Section 10.8.	**Construction on or adjacent to land affected by contamination** The preliminary works contractor (utilities, roads, archaeology) shall implement control measures for construction activities on or adjacent to the land identified as being affected by contamination. This will include the following, as appropriate: a) wheel wash facilities; b) redundant services near potentially contaminated areas will be either removed or cut off and sealed; c) material known or suspected to be contaminated will be stockpiled (depending on the source of the material and the nature of the contamination) and tested prior to reuse or disposal. Stockpiles will be placed on a low permeability liner, suitably protected from damage by earthmoving plant. Known or suspected contamination stockpile areas will be tested adequately prior to and after use to ensure that no cross-contamination has occurred; d) within areas of known or suspected contamination, measures will be introduced to ensure that buried services will be protected from the ingress of mobile and aggressive contaminants. In the case of drainage runs, the infiltration of surface water into the underlying contaminated ground will be prevented and clean or lined service corridors will be installed to provide a suitable barrier to	Implementation of the specified actions.	Preliminary works contractor (utilities, roads, archaeology)

		migrating ground gases adjacent to known/potential sources; e) materials used for the Scheme will be proven 'suitable for use' by adoption of acceptance criteria and will be deposited under either environmental permitting regulations or the Definition of Waste: Development Industry Code of Practice; f) construction activities will follow good practice guidelines to avoid contamination from leaks, spillages and inappropriate storage of materials on site. Appropriate control measures will be identified and implemented through the CEMP; and **g)** proposed work areas located within 50m of potential or known areas of land contamination, as identified in the Environmental Statement, shall be investigated using a risk based approach in accordance with Contaminated Land Report 11, Model Procedures for the Management of Land Contamination (2004) both in the pre-construction and construction phases including the production of a risk assessment in consultation with Wiltshire Council and the Environment Agency which must be provided to those parties as soon as reasonably possible after its completion. Where significant risks are identified, further assessment and/or appropriate mitigation (remediation) to reduce to acceptable levels the potential short and long-term health and safety and environmental risks to sensitive receptors will be identified in consultation with the Environment Agency and Wiltshire Council and implemented. Associated additional ground investigations will be undertaken in accordance with UK good practice, including BS 5930:2015 Code of Practice for ground investigations and BS 10175:2011 + A2:2017 Investigation of Potentially Contaminated Sites Code of Practice.		
WATER ENVIRONMENT				
PW–WAT1	ES Chapter 11, Section 11.8	**Pollution control:** The preliminary works contractor (all) shall develop and implement appropriate measures within the CEMP for their works to control the risk of pollution due to construction works, materials and extreme weather event, including change to flow, flood storage volume, water levels and quality. This will be completed having regard to industry guidance.	Acceptance by The Authority and approval by the Secretary of State of the CEMP.	Preliminary works contractor (all)
PW-WAT2	DCO Requirement 10	**Surface water drainage:** The preliminary works contractor (roads) shall ensure that the surface water drainage system reflects the mitigation measures identified within the ES and conforms with Requirement 10 of the DCO.	Works undertaken in accordance with Requirement 10.	Preliminary works contractor (roads)
PW-WAT3	Stakeholder engagement	**Site Drainage:** Water flows from sites will be limited during construction to existing runoff rates, unless otherwise agreed with Wiltshire Council and the Environment Agency in accordance with relevant legislation.	Agreement of runoff rates with Wiltshire Council and the Environment Agency (if required).	Preliminary works contractor (all)
PEOPLE AND COMMUNITIES				
PW–COM1	n/a	**Notification of works:** The preliminary works contractor (all) shall advise landowners, occupiers and agents, as appropriate, regarding the intended commencement of preliminary works, as relevant to their contract and programme, in areas of the site adjacent to agricultural holdings. The contractor shall liaise with landowners, occupiers and agents, as appropriate, and agree the programme of works and access routes to be used by both the construction traffic and, where relevant, agricultural machinery and/or livestock.	n/a	Preliminary works contractor (all)

PW-COM2	n/a	**Restoration of agricultural land and aftercare:** Where land is to be restored to agriculture following the preliminary works, the preliminary works contractor (utilities, roads, archaeology) shall liaise with the landowner / tenant, through the ALO, and set out the detail for restoration on each specific area of farmland. The land restoration will proceed with full consultation between the landowner/tenant and the preliminary works contractor including inspection of works where applicable and in accordance with requisite site health and safety procedures. *Preconstruction Soil Statements* The preliminary works contractor (utilities, roads, archaeology) shall produce and provide to landowners Preconstruction Soils Statements for areas of agricultural land within individual land holdings that will be temporarily occupied during the preliminary works. These shall provide a baseline schedule of soil condition against which the restoration of the soil will be assessed. The statements shall identify soils resource topsoil and subsoil unit plans and shall include, as a minimum, all pre-construction soil survey information obtained to inform the ES, the development of the Soils Management Strategy (refer to PW-GEO3) and the information gathered from the record of condition surveys (refer to item PW-COM3).	Effective communication with landowners / tenants and the production of the Preconstruction Soil Statements	Preliminary works contractor (utilities, roads, archaeology)
PW-COM3	n/a	**Record of Condition survey:** The preliminary works contractor (utilities, roads, archaeology) shall undertake a Record of Condition survey to include the following: a) Existing crop regimes; b) The position and condition of existing field boundaries; c) The condition of existing access arrangements; d) The location and type of existing private water supplies; e) The yield of crops; f) The quality of grazing land; and g) The existing weed burden. Photographs and section drawings shall be included in the Record of Condition and it shall be provided to the landowner and occupier alongside the Preconstruction Soils Statement (refer to item PW-COM2).	Undertake the Record of condition survey and provide details to The Authority and landowner / occupier.	Preliminary works contractor (utilities, roads, archaeology)
TRAFFIC MANAGEMENT				
PW–TRA1	n/a	**Traffic management measures:** The preliminary works contractor (all) shall implement appropriate traffic management measures during any relevant preliminary works, where these works could impact on any public roads and / or non-motorised user (NMU) paths. A notice period may be required prior to the implementation of certain temporary traffic management measures including the occupation or temporary closure of existing roads. Traffic management works will be required to comply with the provisions of the DCO and the Traffic Signs Manual: Chapter 8: Traffic Safety Measures and Signs for Road Works and Temporary Situations. Traffic signs will comply with the prevailing regulations as contained within the Traffic Signs Regulations and General Directions. The preliminary works contractor (all) shall ensure that the Streetworks team at Wiltshire Council is kept up to date with the programme of the relevant preliminary works and that the programme and phase by phase plans for traffic management are communicated to the team at least 14 days prior to the	Provision of appropriate traffic management measures.	Preliminary works contractor (all)

		commencement of the relevant works. The preliminary works contractor (all) shall consult with English Heritage and National Trust at the earliest opportunity after appointment with regard to temporary traffic management measures during the peak season (June, July, August) for the WHS.		

Table 3.2b REAC tables for the main works

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
GENERAL PROVISIONS – EMS and CCS				
MW-G1	n/a	**BS EN 14001:** The main works contractor shall use an Environmental Management System (EMS) certified to BS EN ISO14001. The main works contractor's EMS will define appropriate control measures and monitoring systems to be employed during the planning and constructing of the works for all relevant topic areas. Where the lead main works contractor is a joint venture, the EMS will be certified to cover the activities of the joint venture. The main works contractor's EMS shall cover the activities of all their sub-contractors. The main works contractor will also be required to coordinate with other contractors and relevant parties that may affect their works. This will be documented in their EMS, as appropriate. As part of their EMS, the main works contractor shall commit to planning works in advance to ensure that, in so far as is reasonably practicable, measures to reduce environmental effects are integrated into the construction methods.	The Authority approval of the EMS. EMS certification to ISO140001, maintained for duration of construction.	Main works contractor
MW-G2	n/a	**Environmental Policy:** The main works contractor shall develop a Scheme specific environmental policy to be included as part of the EMS. This policy will be developed in line with The Authority's environmental policies and the scheme objectives and will set out how the main works contractor will: a) adhere to the requirements of environmental legislation during the works; b) commit to mitigating the impacts associated with the works; c) commit to good practice in environmental performance throughout the phase of works; and d) identify opportunities to improve the Schemes whole life performance in terms of environmental and social implications.	Production of the policy and approval by The Authority.	Main works contractor
MW-G3	n/a	**Monitoring of actions:** The main works contractor's EMS and CEMP(s) shall include procedures to monitor compliance with the Scheme's environmental actions and requirements (as set out in these REAC tables) together with provisions for any corrective actions required.	Inclusion of commitment in approved EMS and CEMP.	Main works contractor
MW-G4	n/a	**Considerate Constructors Scheme:** The main works contractor shall sign up to and adhere to the Considerate Constructors Scheme (CCS).	Certification to CCS standard.	Main works contractor

GENERAL PROVISIONS – CEMP AND RELATED PLANS, METHOD STATEMENTS				
MW-G5	n/a	**Preparation of a CEMP:** The main works contractor (all) shall prepare a CEMP for the relevant part of their works, as applicable to the scope of their contract. This shall be submitted to the Authority for acceptance, who will then submit it to the Secretary of State for ultimate approval prior to the relevant part commencing. In preparing the CEMP, Wiltshire Council, the Environment Agency, Historic England ~~and~~ , National Trust, Natural England and English Heritage shall be consulted on those aspects of the CEMP that are relevant to their ~~functions~~roles and responsibilities.	Acceptance by The Authority and approval by the Secretary of State of the CEMP Consultation with Wiltshire Council, the Environment Agency, Historic England, National Trust, Natural England and English Heritage on preparation of CEMP in respect of matters relevant to their ~~functions~~roles and responsibilities.	Main works contractor The Authority (publication)
MW-G6	n/a	**Revision of the CEMP:** Wiltshire Council, the Environment Agency, Historic England ~~and~~ , National Trust, Natural England and English Heritage shall be consulted on those aspects of the CEMP that are relevant to their ~~functions~~roles and responsibilities if the CEMP is to be materially updated or revised. The main works contractor shall ensure that any revisions to the CEMP would not give rise to any materially new or materially worse adverse environmental effects in comparison with those reported in the Environmental Statement.	The Authority approval of proposed revisions. Consultation with Wiltshire Council, the Environment Agency, Historic England, National Trust, Natural England and English Heritage on material revisions of the CEMP in respect of matters relevant to their ~~functions~~roles and responsibilities.	Main works contractor The Authority (publication)
MW-G7	n/a	**Management Plans:** The main works contractor shall prepare Management Plans for certain environmental topic areas as the detailed design is developed, to include ~~at least~~as many of the following plans, strategies and policies as are applicable to the part of the main works to which the CEMP relates: a) Site Waste Management Plan; b) Emergency Preparedness and Response Plan (to include a Pollution Incident Control Plan); c) Heritage Management Plan, SSWSIs and archaeological method statements; d) Ground Movement Monitoring Strategy; e) Landscape and Ecology Management Plan; f) Arboricultural Mitigation Strategy; g) Invasive Non-Native Species Management Plan (if required); h) Noise and Vibration Management Plan;	For all plans except the Heritage Management Plan, SSWSIs and archaeological method statements: Acceptance by The Authority and approval by the Secretary of State ~~.~~ prior to the part of the main works to which it relates commencing. Consultation with Wiltshire Council, the Environment Agency, Historic England,	Main works contractor

		i) Noise Insulation and Temporary Rehousing Policy; j) Soils Management Strategy; k) Water Management Plan (to include a Flood Risk Management Plan); l) Groundwater Management Plan; m) Materials Management Plan; and n) Traffic Management Plan (to include a Construction Workforce Travel Plan, a Site Access Plan, construction traffic routeing details and a Site Travel Plan). The main works CEMPs, when taken together, must be prepared so that they are substantially in accordance with all of the requirements of the OEMP, include all of the plans, policies, strategies and schemes above and do not contain any conflicting provisions. Nothing in this MW-G7 affects the requirement in Requirement 5 of the DCO that the authorised development must be carried out, operated and maintained in accordance with the DAMS. These plans shall be appended to the approved CEMP, however, the plans can be submitted and approved individually and no direct inter-dependency between these plans and the CEMP should be inferred in the approval process. These plans shall be ~~accepted~~approved by the Secretary of State prior to the relevant works commencing. Once approved, the main works shall be carried out in accordance with the approved plans, as updated from time to time. The main works contractor shall consult with Wiltshire Council, the Environment Agency, Historic England ~~and~~, Natural England, National Trust and English Heritage on those aspects of the plans that are relevant to their ~~functions~~roles and responsibilities, if the plans are materially updated. Some plans may require additional approvals as defined under the DCO Schedule 2: Requirements. The main works contractor shall monitor compliance with the approved plans, as updated from time to time. The main works contractor shall ensure that any revisions to the plans would not give rise to any materially new or materially worse adverse environmental effects in comparison with those reported in the Environmental Statement.	National Trust, Natural England and English Heritage on preparation of and material updates to plans in respect of matters relevant to their ~~functions~~roles and responsibilities as set out within the relevant OEMP item below. Each Heritage Management Plan, ~~SSWSIs~~SSWSI and archaeological method statements shall be prepared in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and approved by Wiltshire Council (in consultation with Historic England) prior to the part of the main works to which it relates commencing.	
MW-G8	n/a	**Method Statements~~:~~ (other than archaeological method statements under MW-CH5):** The main works contractor shall set out the procedures to address health and wellbeing, safety, site security and environmental issues in method statements prepared as part of the construction process. The method statements shall define any specific environmental control measures, to be implemented to meet the requirements of the CEMP and any relevant topic specific Management Plans, Method Statements and Strategies (refer to MW-G7) and will consider the cumulative effects of concurrent construction activities.	The Authority approval of the method statements	Main works contractor
MW-G9	n/a	**Piling Risk Assessments:** The contractor shall undertake environmental risk assessments if piling is proposed at the Countess Junction or in the River Till valley, which shall include consideration of the environmental constraints shown on the Environmental Constraints Plan (refer to Annex A.1 and items MW-BIO3, D-BIO2, D-NOI4 and MW-WAT7).	The Authority approval of the risk assessments.	Main works contractor

MW-G10	ES	**Unexploded Ordnance Risk Assessments:** The main works contractor shall carry out risk assessments for the possibility of unexploded ordnance being found within construction areas. The main works contractor shall prepare and implement an emergency response procedure to respond to the discovery of unexploded ordnance as part of the Emergency Preparedness and Response Plan (see also MW-G20). This will include notifications to Wiltshire Council, the emergency services and the affected landowner.	The Authority approval of the risk assessments Acceptance by The Authority and approval by the Secretary of State ~~approval~~ of the Emergency Preparedness and Response Plan.	Main works contractor
MW-G11	n/a	**Handover Environmental Management Plan (HEMP):** During the later stages of the construction phase of the Scheme (or separate construction phase, as relevant, e.g. the Winterbourne Stoke bypass) the main works contractor shall prepare a Handover Environmental Management Plan (HEMP) in consultation with the Environment Agency, Wiltshire Council, Natural England, Historic England, National Trust and English Heritage on matters related to their ~~functions~~roles and responsibilities and approved by The Authority, and, in the case of those aspects of the Scheme that are to be maintained by Wiltshire Council, by Wiltshire Council. The HEMP shall be based on the CEMP/s and the LEMP at the time and will provide the relevant information on existing and future environmental commitments and objectives that would need to be honoured and define on-going actions and risks that need to be managed. The HEMP will include as built information and other details in a form that can be utilised by the body responsible for long term management and maintenance so that body can prepare environmental management plans for the maintenance of the Scheme for the operational phase. The HEMP shall be completed prior to the handover of the phase of the Scheme concerned. The approved HEMP (a "phase HEMP") will then be implemented by the body responsible for the relevant part of the long-term management of the operational Scheme. That body shall consult with Wiltshire Council (if not the responsible body), the Environment Agency, Historic England, National Trust, Natural England and English Heritage on those aspects of the phase HEMP that are relevant to their ~~functions~~roles and responsibilities, if the phase HEMP is materially updated at any time. Once all construction phases are complete, the main works contractor shall produce a consolidated HEMP, which will then be the main document containing essential environmental information passed to The Authority, Wiltshire Council (in respect of the parts of the Scheme for which it is responsible) and the maintenance authority. The maintenance authority shall consult with Wiltshire Council (if not the maintenance authority), the Environment Agency, Historic England, National Trust, Natural England and English Heritage on those aspects of the consolidated HEMP that are relevant to their ~~functions~~roles and responsibilities, if the consolidated HEMP is materially updated at any time. Each phase HEMP and the consolidated HEMP shall identify heritage assets within land to be retained by the Authority or Wiltshire Council and, where relevant, any restriction or constraint on maintenance regimes and the exercise of other DCO powers necessary to ensure (i) the continued retention or preservation in situ of the assets that were previously identified in Heritage Management Plans and ~~archaeological~~Archaeological Method Statements and (ii) continued application of provisions of the DAMS required for the protection of heritage assets post-construction.	Consultation with the Environment Agency, Wiltshire Council, Natural England, National Trust, Historic England and English Heritage on matters related to their ~~functions~~roles and responsibilities. The Authority approval of the phase HEMPs and the consolidated HEMP and updates to them. Wiltshire Council approval of phase HEMPs and the relevant sections of the consolidated HEMP for those areas that are to be maintained by Wiltshire Council.	Main works contractor

GENERAL PROVISIONS – WORKING HOURS				
MW-G12	ES	**Core working hours:** The main works contractor shall adhere to the following core working hours, except in case of emergency or where site specific variations are defined (refer to MW-G13) or in respect of 'additional working hours' (refer to MW-G14). *Normal working hours (for all works excluding earthworks and tunnelling)* 07:00 – 19:00 Monday to Friday 07:00 – 13:00 Saturday *Earthworks* Summer (defined as British Summer Time (i.e. late March to late October): 07:00 – 22:00 Monday to Saturday with occasional working on Sundays and Bank Holidays Winter (defined as outside of British Summer Time (i.e. late October to late March): As normal working hours above. *Tunnelling* Tunnelling and directly associated activities (such as removal of excavated material, supply of materials (including segments) and maintenance of tunnelling equipment) may need to be carried out on a 24 hours 7 days/week basis. Where reasonably practicable, material will be stockpiled within the site boundary for removal during normal working hours. Excavated material treatment processes (e.g. slurry treatment) can also be on a 24 hours 7 days/week basis. To maximise productivity within the core hours, a period of up to one hour before and up to one hour after normal working hours may be used for start-up and close down of activities. This will include, but not be limited to, deliveries, movement to place of work, unloading, maintenance and general preparation works. These periods will not be considered an extension of core working hours. Except in the case of an emergency, for any work required to be undertaken outside of core hours (not including repairs or maintenance), an application will be made to Wiltshire Council prior to undertaking the works under Section 61 of the Control of Pollution Act 1974. Any variations to core hours and/or additional hours required shall be agreed in writing with Wiltshire Council and The Authority.	n/a	Main works contractor

MW-G13	n/a	**Site Specific Working hours:** The main works contractor shall adhere to reduced working hours at the specified locations: *Normal working hours* 07:30 – 18:00 Monday to Friday 07:30 – 13:00 Saturday **Location:** Chainage 3520 to Chainage 4180 and Chainage 11300 to Chainage 12400. As for MW-G12, a period of up to one hour before and up to one hour after normal working hours may be used for start-up and close down of activities. This will include, but not be limited to, deliveries, movement to place of work, unloading, maintenance and general preparation works. These periods will not be considered an extension of the site-specific working hours. An approach to seeking approval for any variations to site specific working hours will be included within the CEMP in consultation with Wiltshire Council.	n/a	Main works contractor
MW-G14	n/a	**Additional Working Hours:** The main works contractor is able to undertake work within the existing highway boundaries during night time, Saturday afternoon, Sunday and/or bank holiday working for reasons of safety or operational necessity and this may involve consecutive nights' work over weekends, and may on occasion involve longer durations. Activities outside core working hours that could give rise to disturbance will be kept to a reasonably practicable minimum. Repairs or maintenance of construction equipment that is required to be carried out outside of core working hours will normally be carried out on Saturday afternoons or Sundays between 09:00 and 17:00. In the case of work required in response to an emergency or which if not completed would be unsafe or harmful to the works, staff, public or local environment, Wiltshire Council will be informed as soon as reasonably practicable of the reasons for, and likely duration of, the works. This information will also be made available to The Authority helpline and could include incidents such as where pouring concrete takes longer than planned due to equipment failure or where unexpectedly poor ground conditions, encountered whilst excavating, require immediate stabilisation.	n/a	Main works contractor
MW-G15	n/a	**Abnormal Deliveries**: The main works contractor shall seek approval from Highways England (with respect to the Strategic Road Network) and from the appropriate local highway authority (all other roads) for delivery of abnormal loads or those that require a police escort if these are to be delivered outside core working hours.	Approval from The Authority and / or Wiltshire Council as relevant to the roads in question.	Main works contractor

MW-G16	n/a	**Suspension of works for solstices:** The surface works within the western section of the World Heritage Site (WHS) (location: chainage 6000 to chainage 7500), will be suspended during the summer solstice (for a period of up to 48 hours) and at the winter solstice (for a period of up to 48 hours), the timing of the suspension to be determined, based upon the precise timing of the solstices in that year and defined within the CEMP for each relevant year. This suspension would not apply to the tunnelling operation, tunnel related activities or transport of tunnel arisings from the tunnel boring machine to the arisings management area at Longbarrow.	Periods of suspension defined in the main works contractor's CEMP approved by the Secretary of State. Consultation with the members of HMAG for the proposed hours and acceptance by the Authority.	Main works contractor
GENERAL PROVISIONS – PERSONNEL AND TRAINING				
MW-G17	n/a	**Personnel:** The main works contractor shall appoint suitably qualified and experienced personnel to supervise the main construction works. These will include professionally qualified environmental management staff, with relevant experience in the environmental disciplines included in this OEMP. The roles (minimum requirements) are defined in Table 2.1 of this OEMP.	n/a	Main works contractor
MW-G18	n/a	**Training:** The main works contractor shall develop and deliver a programme of training on environmental and social issues relevant to the project. As part of the site induction and prior to commencing work on site, all staff will be made aware of their environmental and social obligations, roles and responsibilities and any site restrictions/requirements. The main works contractor shall be responsible for identifying the additional training needs of their personnel to enable appropriate training to be provided and engaging suitably qualified and experienced professionals for this purpose. Training will include site briefings and toolbox talks to equip relevant staff with the necessary level of knowledge on health, safety, community relations and environmental topics, and an ability to follow environmental control measures and to advise employees of changing circumstances as work progresses. The environmental scope should focus on the constraints relevant to any particular part of the works at that time and the relevant controls.	The Authority approval of training programme.	Main works contractor
MW-G19	n/a	**Management structure:** The main works contractor shall establish a management structure that includes an organisational chart encompassing all staff responsible for delivery of environmental mitigation measures and shall include this chart within the CEMP. The chart will set out the respective roles and responsibilities with regard to the environment and identify the nominated EM, the ECoW, the CRM and other relevant roles (see Table 2.1 for roles). In this structure, the main works contractor shall identify a person at each construction site who will be the single point of contact for the regulatory authorities and stakeholders in relation to concerns as to the construction of the Scheme. The main works contractor shall provide the regulatory authorities and the members of HMAG with relevant contact details prior to the commencement of construction and document this in the CEMP.	Acceptance by The Authority and approval by the Secretary of State of the CEMP.	Main works contractor

GENERAL PROVISIONS – EMERGENCY PREPAREDNESS AND INCIDENT RECORDS				
MW-G20	n/a	**Emergency Preparedness and Response Plan:** As part of the CEMP, the main works contractor shall develop an emergency preparedness and response plan to cover incidents on site, environmental hazards (flooding, heavy rain, high winds), and other risks that may occur on site. The plan will take into account any specific requirements determined by The Authority. The plan will include the following as a minimum: a) 24-hour contact details for all emergency response personnel and the emergency services; b) the location of the nearest hospitals and GP practices including directions from site; c) the procedures for the reporting of, and documenting of emergency incidents including a pollution incident control plan; d) the responsibilities of all staff during an emergency event; and e) the location of all hazardous materials located on site and within the site compounds. The emergency procedures will be produced in consultation with the emergency services and for works on the existing highway network will be produced in accordance with established industry procedures.	Acceptance by The Authority and approval by the Secretary of State of the CEMP, including the Emergency Preparedness and Response Plan. Consultation on the Emergency Preparedness and Response Plan with the emergency services, Wiltshire Council, National Trust and the Environment Agency.	Main works contractor
MW-G21	n/a	**Emergency Access:** The main works contractor shall ensure that the requirements of the relevant fire authority are followed for the provision of all site access points. The accesses may vary over time and shall also be suitable for use by ambulances.	Agreement with relevant fire authority.	Main works contractor
MW-G22	n/a	**Fire prevention and control:** The main works contractor shall ensure all construction sites and associated accommodation and welfare facilities have in place appropriate plans and management controls to prevent fires.	Agreement with relevant fire authority.	Main works contractor
MW-G23	n/a	**Extreme weather events:** The main works contractor shall so far as reasonably practicable ensure appropriate measures are implemented to ensure the resilience of the proposed mitigation of impacts during extreme weather events. The main works contractor shall ensure the CEMP identifies all measures deemed necessary and appropriate to manage extreme weather events and would specifically cover training of personnel and prevention and monitoring arrangements. Method statements should also consider extreme weather events where risks have been identified.	Acceptance by The Authority and approval by the Secretary of State of the CEMP.	Main works contractor
MW-G24	n/a	**Non-conformance and Incidents register:** As part of the CEMP, the main works contractor shall establish systems and procedures for responding to environmental incidents. As a minimum, two registers will be set up: a) a Non-Conformance & Corrective Action Register (which forms part of the main works contractor's Quality Procedures and is not exclusively for environmental issues); and b) an Environmental Incidents Register.	Acceptance by The Authority and approval by the Secretary of State of the CEMP.	Main works contractor

MW-G25	n/a	**Environmental documentation:** Copies of all environmental documentation relevant to the works will be filed on site and made available for internal inspection.	Implementation of the specified actions.	Main works contractor
GENERAL PROVISIONS – SITE MANAGEMENT				
MW-G26	n/a	**Construction site management:** The main works contractor shall use the approaches outlined within this OEMP for construction site management and define the approach to site management in the CEMP.	Acceptance by The Authority and approval by the Secretary of State of the CEMP.	Main works contractor
MW-G27	n/a	**Worksite security:** The main works contractor shall define within the CEMP the proposed approach to worksite security and trespass risk at each site and implement appropriate control measures in accordance with the approved CEMP.	Acceptance by The Authority and approval by the Secretary of State of the CEMP.	Main works contractor
MW-G28	ES Chapter 7, Table 7.5	**Construction compounds and hoardings:** *Location and design* The main works contractor shall follow the below measures in relation to construction compounds: a) the main, eastern and western compounds shall be located as shown in Figure 2.7 and referred to in paragraphs 2.4.12 - 2.4.15 of the Environmental Statement (ES); b) buffer zones shall be created between the compounds and existing retained vegetation through construction exclusion zones and suitable perimeter fencing; c) temporary earth bunds, created from excavated soil, shall be located around the perimeter of the compounds; d) all fences, bunds and buildings within compounds (excluding those associated ~~with~~within the slurry treatment, concrete batching plant and tunnel ~~compound~~production area, refer to item MW-CH4) shall be restricted to no more than 4m in height; and e) all buildings within compounds shall be in a suitable colour to aid in their integration within the landscape. ~~*Hoarding*~~ *Hoardings* The main works contractor shall define within the CEMP the proposed approach to hoardings for both permanent and temporary works as appropriate, in doing so giving consideration to the WHS context and other environmental constraints, including: a) Maintenance of adequate hoardings to an acceptable condition to prevent unwanted access to the construction compounds. b) Hoardings shall be in a suitable colour, to aid in ~~its~~the integration within the landscape, and kept free of graffiti or posters. c) Providing site information boards. d) Displaying notices on site boundaries to warn of hazards on site. e) Providing signage to indicate re-routed pedestrian/cycle paths.	Acceptance by The Authority and approval by the Secretary of State of the CEMP.	Main works contractor

		f) Retaning existing walls, fences, hedges and earth banks for the purpose of screening as far as reasonably practicable and ensure fencing and hoarding is located such that it does not damage sensitive heritage sites, sensitive habitats, trees or hedgerows. g) Hoarding and fencing visible from within the WHS should not contain advertising or promotional information. h) Fencing and hoarding shall be kept well maintained throughout construction. Where footways are required, the main works contractor shall provide footways of adequate width to facilitate pedestrian flows with signs provided to facilitate safe access around the site boundary and provide adequate lighting near hoardings to illuminate these footways. The main works contractor shall ensure that hoarding and fencing in areas at risk of flooding, most notably within the floodplains of the River Till and River Avon, will be permeable to floodwater, unless otherwise agreed with the Environment Agency, to ensure that the fluvial floodplain and areas liable to other sources of flooding continue to function effectively for storage and conveyance of floodwater.		
MW-G29	ES Chapter 7, Section 7.8 ES Chapter 8, Section 8.8	**Site lighting:** The main works contractor shall define within the CEMP the proposed approach to site lighting around construction compounds and elsewhere along the route alignment, giving consideration to the WHS context and other environmental constraints and shall consult with the members of HMAG on the approach to site lighting in relation to matters within the WHS. Lighting shall be at the minimum luminosity necessary and use low energy consumption fittings and should avoid light spillage. Lighting shall also be designed, positioned and directed so as not to unnecessarily intrude on sensitive heritage receptors~~,~~ (e.g. scheduled monuments; non-designated assets or asset groups that contribute to the OUV of the WHS; listed buildings; registered parks and gardens), adjacent buildings, ecological receptors, structures used by protected species and other land uses to prevent unnecessary disturbance, interference with local residents, or passing motorists on nearby roads. This provision will apply particularly to sites where night working will be required and in particular the tunnelling portal areas.	Acceptance by The Authority and Secretary of State approval of the CEMP.	Main works contractor
MW-G30	n/a	**Clearance and re-instatement of sites on completion:** The main works contractor shall ensure that on completion of construction works, plant, materials, equipment, temporary buildings and vehicles not required during subsequent activities are removed from the site and that land is restored to its former use or in accordance with the requirements of design as appropriate, and that temporary access points are removed or downgraded as appropriate.	Implementation of the specified actions.	Main works contractor

GENERAL PROVISIONS – COMMUNITY ENGAGEMENT, COORDINATION				
MW-G31	n/a	**Community Engagement:** The main works contractor shall take reasonable steps to engage with nearby residents, especially those who may be detrimentally affected by the Scheme. The main works contractor shall use the following materials to engage with residents and other stakeholders: a) Online – the main works contractor shall provide materials to update the Highways ~~England's~~England website. The ~~sites~~site shall be updated to reflect status of the Scheme, including the latest information on the progress of the construction works, areas affected by construction, mitigation in place to reduce adverse effects of construction, information regarding planned construction works, road closures and works recently completed and an enquiry procedure b) Newsletter – the main works contractor shall prepare a Scheme newsletter and issue it on a regular basis to provide information covering the whole project, the progress to date and the planned construction works. c) Works Notices – the main works contractor shall notify occupiers of nearby or affected properties, businesses, adjacent or affected parish councils and Wiltshire Council, at least two weeks in advance, of the nature and anticipated duration of planned construction works that may affect them. Information included in the notifications will include, as appropriate: i. The location of the planned works; ii. The activities to be carried out; iii. The duration of the planned works and the periods within which works will be undertaken (i.e. whether during normal working hours, during the evening or overnight); iv. The anticipated effects of the planned works; and v. The measures to be implemented in line with the CEMP to mitigate the impact of the planned works. d) For tunnel boring, the main works contractor shall distribute information to affected properties and landowners prior to the commencement of activities, giving notice along the route of the tunnel drive, along with details of the first point of contact for any queries. e) The main works contractor shall establish lines of communication with appropriate personnel at the English Heritage Stonehenge Visitor Centre through the Head of Historic Properties (Stonehenge) and the National Trust to ensure they are kept updated at all times regarding works that could impact staff and visitors. *Liaison with the MoD* The main works contractor shall consult with the MoD ~~to ensure that~~on the ~~construction (including the use of plant)~~following matters in accordance with Circular 01/2003 and ~~detailed design of~~ the relevant Safeguarding Maps in respect of the ~~drainage for the Scheme do not lead to interference with the~~ safe operation of Boscombe Down Airfield~~.~~: a) Site compound layouts, locations (with six figure grid references) and elevations, including storage proposals for materials, equipment and cabins; b) Plant locations (with six figure grid references), types, elevations and durations at each location;	The Authority approval of the approach. Consultation with the MoD.	Main works contractor

		and c) Detailed design of construction and operational drainage (including lagoons and planting around them) for the Scheme.		
MW-G32	n/a	**Coordination**: The main works contractor shall co-ordinate activities outside of any individual (sub-) contractor's site boundaries, so far as is reasonably practicable, notably in respect of: a) community liaison: communicating upcoming activity to affected communities and responding to questions/concerns raised, using the role of Community ~~Liaison Officer~~Relations Manager (see Table 2.1) and other support staff as relevant; b) emergency response: maintaining communication with emergency services and ensuring that emergency response plans do not conflict; c) traffic management: working collaboratively with the aim of avoiding potential conflict in arrangements and supporting the traffic authority with its duties under the provisions of Traffic Management Act 2004 s 16; d) access to site: communication and collaboration in respect of arrangements for site access and abnormal loads with highway authorities and emergency services; e) construction workforce: monitoring the impact of the workforce on the community in its travel to and from work; f) other construction projects: maintaining communication between the works on the Scheme and those of other construction projects in the vicinity; and g) members of HMAG: communicating upcoming activity to the members of HMAG, responding to questions/concerns raised regarding the protection of the WHS. **Environmental Interface management between adjacent construction areas:** The main works contractor shall put in place measures to manage any issues which are relevant to adjacent construction areas, including the boundaries between areas under the control of different (sub-) contractors or where reasonably practicable other third-party contractors.	The Authority approval of the approach.	Main works contractor
AIR QUALITY AND CLIMATE CHANGE				
MW-AIR1	ES Chapter 5, Section 5.8	**Best Practicable Means:** The main works contractor shall manage dust, air pollution and exhaust emission during the construction works in accordance with Best Practicable Means (BPM), examples of which are set out in Appendix 5.4 of the ES. Specific measures shall be based upon industry good practice, including the measures listed in the Institute of Air Quality Management's (IAQM) Guidance on the Assessment of Dust from Demolition and Construction. These measures will be set out in more detail in the CEMP and could include: a) Undertake periodic on-site inspections, where receptors are nearby, to monitor dust, record inspection results, and make the log available to the local authority etc. when asked. b) Remove materials that have the potential to produce dust from site as soon as possible, unless being re-used on site	Implementation of BPM.	Main works contractor

		c) Cover, seed or fence stockpiles to prevent wind whipping. d) Impose and signpost a maximum-speed-limit of 15mph on surfaced and 10mph on un-surfaced haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided). e) All construction plant would use fuel equivalent to ultra-low sulphur diesel (ULSD) where possible.		
MW-AIR2	ES Chapter 5, Section 5.8	**Good practice measures at high-risk sites:** All high-risk site works close to sensitive receptors are to employ further standard good practice mitigation measures and site-specific mitigation measures where necessary (examples of which are set out in Appendix 5.4 of the ES), which may include: a) Display the name and contact details of person(s) accountable for air quality and dust issues on the construction site boundaries. This may be the Environment Manager/ engineer or the Project Manager. b) Record any exceptional incidents that cause dust and/ or air emissions, either onsite or offsite, and the action taken to resolve the situation in the log book. c) Plan site layout so that machinery and dust causing activities are located away from receptors, as far as reasonably practicable. d) Maintain and inspect on-site haul routes for integrity and operate a programme of routine maintenance and where necessary carry out repairs to the surface as soon as reasonably practicable. e) The details of the further standard mitigation will be outlined in the CEMP produced by the contractor.	Implementation of BPM.	Main works contractor
MW-AIR3	ES Chapter 5, Section 5.8	**Tunnel Ventilation Strategy:** The main works contractor shall develop a Tunnel Ventilation Strategy~~, which will include an appropriate ventilation system~~ to ensure protection of the workforce during construction~~ of the tunnel.~~ .	The Authority approval of the Tunnel Ventilation Strategy.	Main works contractor
MW-AIR4	ES Chapter 5, Section 5.8	**Construction Air Quality Monitoring:** The main works contractor shall establish a baseline prior to construction at specific sections of the Scheme. This will be determined, where specifically required (i.e. locations of higher risk works closer to sensitive receptors, such as at Countess Roundabout) The duration of baseline monitoring, locations and techniques to be used are to be consulted upon with Wiltshire Council. However, it is anticipated based on the baseline environment (i.e. low ambient particulate concentrations) that monitoring is likely to focus on dust deposition/soiling with a minimum period of 3 months data collection. The main works contractor shall ensure inspections and monitoring are carried out to assess the effectiveness of measures to prevent dust and air pollutant emissions during works. Monitoring approaches during the construction phase will be consulted upon with Wiltshire Council, including locations and techniques. Monitoring will be continued until the site is deemed to be low risk (i.e. higher risk activities have ceased). The approach to the reporting of air quality monitoring information is to be discussed with Wiltshire	Establishment of air quality baseline prior to construction. Implementation of the specified actions. Consultation with Wiltshire Council on the approach to reporting air quality monitoring information.	Main works contractor

		Council.		
MW-AIR5	ES Chapter 5, Section 5.8	**Climate change mitigation:** The main works contractor shall implement measures to reduce emissions during the construction of the Scheme, for example through specification of ultra-low sulphur diesel and the management and minimisation of energy use.	Implementation of the measures.	Main works contractor
D-AIR1	Stakeholder engagement	The tunnel operational ventilation shall be designed based on industry best practice.	Implementation of the measures.	Main works contractor
CULTURAL HERITAGE				
MW-CH1	DCO Requirement 5 ES Chapter 6, Section 6.8	**Heritage Management Plan:** The main works contractor shall develop a Scheme-wide Heritage Management Plan (HMP), based upon the DAMS, in accordance with DCO Requirement 5, indicating how the historic environment is to be protected in a consistent and integrated manner, coordinated with all other relevant environmental topics. The HMP shall address: a) all temporary and permanent works, including boundary and protective fencing, vegetation clearance, ground investigations, demolition, utility diversions, reinstatement works, access routes / haul roads and works compounds. b) potential impacts on heritage assets both inside and outside the WHS from activities such as ground vibration, light pollution, dust, ground movement / subsidence, dewatering, and the impact on buried archaeological remains of construction activities (rutting, compaction of soft ground etc.) c) archaeological mitigation measures to be deployed for the installation of the proposed Tunnel Movement Monitoring Stations (Site 26 - refer to the DAMS). d) issues of security for vulnerable sites / areas of archaeological interest outside the normal working hours, and at weekends. e) measures to avoid light spillage outside of the main compound area. f) procedures for the protection of unexpected archaeological discoveries. g) sites for preservation in-situ (including protective fencing) and sites for preservation by record. The main works contractor shall identify within its ~~CEMPs~~CEMP(s) how works are to be carried out in accordance with the HMP.	The HMP shall be prepared in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and approved by Wiltshire Council (in consultation with Historic England) prior to the part of the main works to which it relates commencing.	Main works contractor
MW-CH2	n/a	**Working in accordance with the Detailed Archaeological Mitigation Strategy:** The main works contractor shall undertake the works, at all times, in accordance with the Detailed Archaeological Mitigation Strategy.	Compliance with the Detailed Archaeological Mitigation Strategy.	Main works contractor
MW-CH3	ES Chapter 6, Section 6,8	**Fencing in the WHS and in the WHS setting:** The main works contractor shall consult with the members of HMAG to determine the type of construction boundary fencing to be used within the WHS or within the setting of WHS. The type of fencing will be sympathetic to the setting of the WHS. The main works contractor shall prepare a Method Statement for the installation of fencing (refer to MW-CH5). Any associated archaeological mitigation requirements in accordance with the Detailed Archaeological Mitigation Strategy shall be set out in a SSWSI.	Consultation with the members of HMAG and approval from The Authority on the type fencing within or affecting the WHS and WHS setting prior to the part of the main works to which it relates	Main works contractor

			commencing. Method Statements for fencing developed in consultation with Wiltshire Council and Historic England and, for fencing within or affecting the WHS, HMAG, and approved by Wiltshire Council (in consultation with Historic England) prior to the part of the main works to which it relates commencing.	
MW-CH4	ES Chapter 6, Section 6,8	**Location of slurry treatment plant and batching plant:** The slurry treatment plant ~~and tunnel,~~ batching plant and tunnel production area at Longbarrow shall be located to the west of the existing tall hedgerow (being retained – approximate chainage 5275 and shown on ES Figure 2.7 [APP-061]).	Adherence to compound layout requirements and building height restrictions.	Main works contractor
MW-CH5	n/a	**Archaeological Method Statements:** The main works contractor (archaeology) shall prepare ~~archaeological~~Archaeological Method Statements in respect of works that may affect potentially sensitive archaeological remains prior to the start of the work. The Archaeological Method Statements will address, in compliance with the provisions of the DAMS and the approved HMP measures including: a) how the main works contractor intends to preserve in situ sensitive archaeological remains and prevent deformation of topsoil / subsoil horizons (including no-dig solutions); b) measures for monitoring continued protection of in situ archaeological remains; and c) where appropriate, how the measures would be reversed following the end of construction, e.g. at compound locations, the ground and the surface returned to its original shape and condition. Areas to be addressed in the Archaeological Method Statements include: a) All access routes, haul roads and traffic diversions. b) Compound locations. c) Cycle-ways between the realigned A360 north to the Stonehenge Visitor Centre and from the realigned A360 south to Druid's Lodge. d) East Parsonage Down. e) Profiling on the Winterbourne Stoke bypass. f) Profiling at Longbarrow roundabout.	Archaeological Method Statements developed in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and approved by Wiltshire Council (in consultation with Historic England) prior to the part of the main works to which it relates commencing.	Main works contractor

MW-CH6	n/a	**Utilities corridors during main works**: Should any (post-preliminary works) service / utility corridors require excavation, the main works contractor shall avoid significant archaeological remains wherever possible and implement appropriate archaeological mitigation measures in accordance with the DAMS. The main works contractor shall prepare a SSWSI where service utility corridors cross archaeologically sensitive areas.	SSWSIs prepared in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and approved by Wiltshire Council (in consultation with Historic England) prior to the part of the main works to which it relates commencing.	Main works contractor
MW-CH7	n/a	**Monitoring of heritage assets:** The main works contractor shall undertake an appropriate level of monitoring of all heritage assets (designated and non-designated) within and close to the Scheme boundary during the construction programme.	Monitoring arrangements prepared in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG, and approved by The Authority prior to the part of the main works to which it relates commencing.	Main works contractor
MW-CH8	Detailed Archaeological Mitigation Strategy	**Ground Movement Monitoring Strategy:** The main works contractor shall develop a Ground Movement Monitoring Strategy, to be prepared in consultation with Wiltshire Council, Historic England and the members of HMAG and to be accepted by the Authority and ultimately approved the Secretary of State. The strategy will identify heritage assets that are at risk from ground vibration from the tunnel (following the establishment of screening criteria in consultation with the members of HMAG), or from ground surface movement caused by settlement and describe the monitoring proposed to be carried out. As part of this strategy, the contractor shall establish a series of trigger levels informed by the maximum settlement that could occur without having an adverse effect on archaeological features, develop contingencies and identify measures and responsibility for remedial actions arising from the monitoring to ensure the protection of assets. The Strategy shall be developed in accordance with best practice including British Tunnelling Society: Monitoring Underground Construction, A best practice guide; and ITAtech Guidelines on Monitoring Frequencies in Urban Tunnelling: ITAtech Report No.3-V2 May 2015.	Consultation with Wiltshire Council, Historic England and the members of HMAG and acceptance by The Authority and approval by the Secretary of State as appended to the CEMP prior to tunnelling works commencing.	Main works contractor

MW-CH9	Stakeholder engagement	**Site Specific Written Schemes of Investigation (SSWSI):** For sites or areas requiring archaeological investigation under the DAMS (excluding those sites or areas for which a SSWSI has already been produced as part of the preliminary works) the main works contractor shall prepare a SSWSI that describes the mitigation measures to be carried out.	Production of SSWSIs in consultation with Wiltshire Council and Historic England and, for sites within the WHS, HMAG, and approval by Wiltshire Council (in consultation with Historic England) prior to the part of the main works to which it relates.	Main works contractor
D-CH1	ES Chapter 6	Visual screening earth bunds of a minimum 2 metres high above the finished road level running both sides of Green Bridge Three.	n/a	Main works contractor
D-CH2	ES Chapter 6	Break out the road surface of the redundant A303 within the WHS, except to the extent it is required to create a new Public Right of Way and/or Private Means of Access.	n/a	Main works contractor
D-CH3	ES Chapter 6	Break out the road surface of the redundant A360 including Longbarrow Roundabout except to the extent it is required to create a new Public Right of Way and/or Private means of Access.	n/a	Main works contractor
D-CH4	ES Chapter 6	Green Bridge Four shall be 148m – 149.9m wide. The restricted byway shall be constructed to be suitable for use by any vehicle or tractor trailer combinations with a gross vehicle weight of a maximum of 44 tonnes, in accordance with Road Vehicle (Construction and Use) Regulations 1986 (as amended).	n/a	Main works contractor
D-CH5	ES Chapter 6	The new A303 within the WHS western approach shall be in cutting to a minimum 7m depth with retaining walls. The front face of the retaining walls shall have a backwards incline from vertical away from the road of no shallower than 1 horizontal unit to every 10 vertical units. The top approximately 2.5m by depth of each side of the cutting shall be formed of grassed slopes at approximately 1 in 2	n/a	Main works contractor
D-CH6	ES Chapter 6	A cut and cover tunnel extending westwards from the bored tunnel to at least chainage 7+200m.	n/a	Main works contractor
D-CH7	ES Chapter 6	A cut and cover tunnel length extending eastwards from the bored tunnel to at least chainage 10+485m.	n/a	Main works contractor
D-CH8	ES Chapter 6	At the western end of the Scheme within the WHS no signs shall be set higher than the existing ground level on the lower of the adjacent sides of the cutting and the signs shall not be lit.	n/a	Main works contractor
D-CH9	ES Chapter 6	Tunnel portal lighting will be designed to minimise light spill outside of the portals' footprint, including design of lighting at the minimum luminosity that is necessary and safe.	n/a	Main works contractor
D-CH10	ES Chapter 6	Lighting under Green Bridge Four will only occur between dawn and dusk, be able to be varied, and will be designed to minimise light spill outside of the bridge footprint.	n/a	Main works contractor

D-CH11	ES Chapter 6	No permanent road lighting of the Scheme during operation except under Green Bridge Four, at Countess Roundabout and within the tunnel.	n/a	Main works contractor
D-CH12	ES Chapter 6	Existing lighting units at Countess Roundabout shall be replaced to minimise light spill.	n/a	Main works contractor
D-CH13	ES Chapter 6	No tunnel ventilation shafts within the WHS.	n/a	Main works contractor
D-CH14	ES Chapter 6	Provision of fencing and surfacing within the WHS shall be developed in consultation the National Trust, Historic England, English Heritage Trust and Wiltshire Council and approved by The Authority.	Consultation with the National Trust, Historic England, English Heritage Trust and Wiltshire Council and The Authority approval of fencing and surfacing details within or affecting the WHS.	Main works contractor
D-CH15	ES Chapter 6	Private Means of Access (PMA) within the WHS, east of Stonehenge Road (PMA ref. no. 27 as shown on the Rights of Way and Access Plans and Schedule 3 of the Draft DCO), shall have a grassed surface to maintain landscape connectivity.	Works undertaken in accordance with Requirement 8.	Main works contractor
D-CH16	Stakeholder engagement	The opening height of the portal entrances to the tunnel shall be no more than that required to satisfy the requirements of Design Standards TD 27 (DMRB 6.1) and BD 78 (DMRB 2.9).	n/a	Main works contractor
D-CH17	Stakeholder engagement	The central support wall of the tunnel canopy structures at each end of the tunnel shall be set back from the leading edge of the structure.	n/a	Main works contractor
D-CH18	Stakeholder engagement	No portal type gantries shall be used in any part of the Scheme.	n/a	Main works contractor
D-CH19	Stakeholder engagement	Wherever the topography requires a variation in retaining wall height, there shall be no steps in the wall height and top of the wall shall follow a smooth alignment.	n/a	Main works contractor
D-CH20	Stakeholder Engagement	There will be no external lighting on the cutting retaining walls, or the external facades of the tunnel control buildings and tunnel portals within the WHS during routine operation of the Scheme.	n/a	Main works contractor
D-CH21	Stakeholder engagement	Looking from above, the tops of the cutting retaining walls shall be set parallel to the adjacent carriageway alignment.	n/a	Main works contractor

D-CH22	Stakeholder engagement	The tunnel buildings shall be underground so that only the front façades of the tunnel buildings shall be visible.	n/a	Main works contractor
D-CH23	Stakeholder engagement	On Green Bridge Four, the finished ground level shall replicate the existing ground levels, subject to the limits of deviation.	Works undertaken in accordance with Requirement 8.	Main works contractor
D-CH24	Stakeholder engagement	Boundary fencing and gates in the WHS shall be visually recessive and have a low reflectivity finish. Within the WHS, all fencing above the top of the cuttings shall be post and wire with stock-proof netting, and be consistent with other fencing within the WHS. Within the WHS, gates shall be provided at appropriate points to facilitate access and all gates shall be timber, unless otherwise agreed with the SDCG and the Authority.	Consultation with the SDCG and the Authority approval on fencing within the WHS prior to relevant works commencing.	Main works contractor
D-CH25	Stakeholder engagement	The top of new highway boundary fencing within the western cutting shall be no higher than the ground level at the top of the cutting alongside which the fencing runs.	n/a	Main works contractor
D-CH26	Stakeholder engagement	Any bound or unbound surface on new PRoW within the WHS shall be a maximum of 3m in width. The surface on the PRoW in the WHS shall be suitably coloured at year one of operation to be visually recessive and sympathetically integrated within the WHS. Trial panels or areas shall be constructed early in the construction period and at least one year in advance of the surface being laid. Consultation with the SDCG on the proposed location, colour and materials of the bound and unbound surfaces of the PRoW in the WHS shall take into account the results of the trial panels or areas. PRoW/PMA in WHS shall not have raised edgings, surface markings, lighting, litter bins or other such street furniture. PRoWs within the WHS shall be suitably drained. The surface of PRoW shall be agreed with the adopting authority following consultation with the SDCG, where relevant.	Consultation with the members of SDCG and approval from The Authority on surfacing within the WHS prior to relevant works commencing.	Main works contractor
D-CH27	Stakeholder engagement	Any signage for the new PRoW/PMA in the WHS shall be of low reflectivity, in-keeping with the character of the WHS, and shall be designed and located in such a way as to ensure no adverse impacts on the OUV of the WHS.	Consultation with the members of SDCG and approval from The Authority on signage within the WHS prior to relevant works commencing.	Main works contractor
D-CH28	Stakeholder engagement	There shall be no new permanent raised earthworks within the WHS other than that required to cross the dry valley to North West of Vespasian's Camp and for the construction of the Countess Flyover. In both locations the detailed design will seek to minimise the extent (in width, length and height) of the fill.	n/a	Main works contractor

D-CH29	Stakeholder engagement	Traffic signals at Longbarrow junction shall have shrouds or louvres to direct the signals towards the intended user and minimise light spill.	n/a	Main works contractor
D-CH30	Stakeholder engagement	Road signs shall be designed and positioned for minimal impact when viewed from the WHS. The posts/settings on which road signs are mounted shall be of low reflectivity. The number of signs shall be the minimum required for the safe operation of the road.	Consultation with the members of SDCG and approval from The Authority on signage within or affecting the WHS prior to relevant works commencing.	Main works contractor
D-CH31	Stakeholder engagement	Construction haul routes within the WHS shall be within the footprint of the permanent works	n/a	Main works contractor
D-CH32	Stakeholder engagement	Construction of the bored section of the tunnel shall be undertaken using closed face tunnelling techniques. Cross passages shall be constructed using techniques that prevent/minimise entry of water into the tunnel whilst also preventing or minimising the impedance of groundwater flow around, above or below the tunnel.	n/a	Main works contractor
D-CH33	Stakeholder engagement	During development of the operational signage strategy for the Scheme, the main works contractor shall consult with English Heritage Trust, National Trust and Wiltshire Council and, where relevant, other parties with regard to tourism signage needs.	Consultation with English Heritage, National Trust and Wiltshire Council. The Authority approval of signage strategy prior to relevant works commencing.	Main works contractor
LANDSCAPE AND VISUAL				
MW-LAN1	n/a	**Landscape and Ecology Management Plan:** The main works contractor shall prepare a Scheme-wide Landscape and Ecology Management Plan (LEMP), developed in accordance with industry good practice.	Acceptance by The Authority and approval by the Secretary of State of the LEMP as appended to the CEMP. Consultation with Wiltshire Council, The Environment Agency, Natural England ~~and~~, Historic England and National Trust on matters relevant to their ~~functions~~roles and responsibilities	Main works contractor
MW-	DCO Requirement	**Works in accordance with approved landscaping scheme:**	Works undertaken in accordance with	Main works contractor

LAN2	8	The main works contractor shall ensure that landscaping works are carried out in accordance with the approved landscaping scheme produced in conformance with Requirement 8 of the DCO.	Requirement 8.	
MW-LAN3	n/a	**Arboricultural Mitigation Strategy:** The main works contractor shall prepare an Arboricultural Mitigation Strategy (AMS) to protect those trees retained within and immediately adjacent to the order limits. This shall consider the following standards: a) BS 3936-1: Nursery stock. Specification for trees and shrubs; b) BS 3936-4: Nursery stock. Specification for forest trees, poplars and willows; c) BS 3882: Specification for topsoil and requirements for use; d) BS 3998: Tree Work. Recommendations; e) BS 4428: Code of practice for general landscape operations (excluding hard surfaces) f) BS8545 Trees from nursery to independence in the landscape g) BS 5837: Trees in relation to design, demolition and construction; and h) BS 6031: Code of practice for earthworks. Alternatively, where a British Standard does not exist, works will follow industry good practice, e.g. Natural England's Advice on ensuring heterogeneity of habitats and the managing, restoring, and creating grassland and agreement will be sought from Wiltshire Council. The AMS shall also define: a) The root protection area (RPA) and Construction Exclusion Zones (CEZ) of trees to be retained within or immediately adjacent to the order limits and wherever practicable. b) The approach for working within RPAs, where this cannot reasonably be avoided ~~required~~. c) The approach to inspecting, maintaining and managing trees and scrub to be retained. d) The approach for felling where otherwise not identified in the ES.	Acceptance by The Authority and approval by the Secretary of State of the AMS as appended to the CEMP. Consultation with Wiltshire Council and National Trust. Agreement with Wiltshire Council where a British Standard does not exist	Main works contractor
MW-LAN4	n/a	**Planting and seeding:** No new trees shall be planted within the WHS except where required for ecological or visual mitigation (e.g. at Countess Roundabout/ Countess Farm complex), and providing the planting does not adversely impact on visual relationships between monuments conveying the attributes of OUV of the WHS, and such planting is appropriately archaeologically mitigated. In planning planting, seeding, wildflower seeding and other landscape works, the main works contractor shall consider the recommendations of the latest version of industry standards, including Natural England's Advice on managing, restoring and creating grassland. **Early planting:** The main works contractor shall implement planting / seeding as early as is reasonably practicable (and where there is no conflict with construction activities or other requirements of the Scheme including Stone Curlew mitigation), so as to be more established in advance of the operation of the Scheme. The main works contractor will consider where these measures can be implemented as described and programme them accordingly. **Maintenance:** The main works contractor shall undertake appropriate maintenance of planting and seeding works	Successful establishment of all planting and seeding areas.	Main works contractor

		and implementation of management measures, through the construction period as landscape works are completed. The main works contractor shall monitor the progress of these works throughout the construction period. Any failures of landscape planting and seeding will be managed via the specification and works requirements. This will ensure annual replanting and reseeding works are undertaken (as required) to achieve successful establishment of the landscape and ecology mitigation proposals at completion of the construction works and during the agreed defects liability period.		
MW-LAN5	Stakeholder Engagement	Earthworks shall be rounded at changes in grade and direction to provide a natural appearance and reflect the surrounding topography and landscape character.	n/a	Main works contractor
D-LAN1	ES Chapter 7, Appendix 7.7 and 7.8	Break out the road surface of the redundant A303 outside the WHS, except to the extent it is required to create a new Public Right of Way and/or Private Means of Access.	n/a	Main works contractor
D-LAN2	ES Chapter 7, Appendix 7.7 and 7.8	1.5m high environmental barrier along the southern edge of the River Till viaduct westbound bridge deck.	n/a	Main works contractor
D-LAN3	ES Chapter 7, Appendix 7.7 and 7.8	No direct impact on the Nile Clumps (protected under a Tree Protection Order). The main works contractor shall maintain the protective fencing installed during the preliminary works phase (refer to PW-LAN1) until all works are complete in the vicinity of the Nile Clumps.	n/a	Main works contractor
D-LAN4	Stakeholder engagement	Consultation with Wiltshire Council on the general external appearance and finishes of the River Till Viaduct, Green Bridges 1 to 3 and the B3083 underbridge.	Consultation with Wiltshire Council.	Main works contractor
D-LAN5	Stakeholder engagement	The non-motorised user crossing of (i) the realigned A360 and (ii) the new road classified as the C507 at the Longbarrow Junction southern roundabout shall be facilitated by a Pegasus Crossing.	n/a	Main works contractor
D-LAN6	Stakeholder engagement	Bat mitigation shrub planting to the west and southwest of the eastern portal shall be identified within the LEMP and designed with consideration to the OUV of the WHS and the intervisibility of monuments. Shrub species shall be chosen to minimise intrusion from roots to minimise damage to archaeological remains. Where possible, the shrubs shall be planted in areas already subject to archaeological mitigation or utilising areas of existing road embankment where there is minimal possibility of disturbing archaeological remains. The HEMP shall detail how the shrub planting will be maintained, controlled and managed to ensure that shrubs do not spread or grow excessively large / tall in order to sustain the OUV of the WHS.	Acceptance by The Authority and approval by the Secretary of State of the LEMP as appended to the CEMP.	Main works contractor

BIODIVERSITY				
MW-BIO1	OEMP Table 3.2(a)	**Protected and notable species:** The main works contractor shall be cognisant of the measures identified in Table 3.2a PW-BIO1 – PW-BIO12 and the results of pre-construction ecological surveys for the following: a) breeding birds (all species); b) bat; c) reptile; d) water vole; e) otter; f) badger; g) great crested newt; and h) other notable species. The main works contractor shall have responsibility to ensure that works for protected species undertaken during the preliminary works phase, and which are intended to be maintained throughout the main works phase, are appropriately managed. Where protection and measures have been identified which need to be managed, monitored and maintained throughout the main works construction period, the main works contractor shall adhere to these measures. This may include the maintenance of habitat in unsuitable condition for species and the maintenance and monitoring of exclusion zones and seasonal constraints. The main works contractor's ECoW (or appropriate specialist), shall undertake regular site surveys to determine whether any protected or notable species have recolonised sites checked / cleared during the preliminary works. Should such species be identified, appropriate measures to ensure their protection / prevention of recolonisation shall be adopted, this may include supervised site clearance, works under method statements or application for appropriate licences, as per the preliminary works.	No recorded injury or mortality of protected species.	Main works contractor
MW-BIO2	Environmental Masterplan (Figure 2.5, ES)	**Habitat creation:** The main works contractor shall establish the new habitats identified within the Environmental Masterplan (ES Figure 2.5) within the Order limits. These habitats shall be managed accordingly to ensure their establishment and ~~develop~~developed to achieve their target purpose(s), through to any handover of the Scheme.	Successful delivery of habitats.	Main works contractor
MW-BIO3	ES Chapter 8, Section 8.8	**River Till ecological mitigation:** *Temporary bridge* The main works contractor shall ensure that the temporary bridge over the River Till is raised a minimum of 1m above the valley floor with supports located outside of the river channel and at least 8m from the boundary of the River Till section of the River Avon SAC. The bridge shall be restricted to a maximum 6m width and shall not be in the same location for a period of more than two years. In the event that it was necessary to extend the use of the temporary bridge beyond two years, the condition of the vegetation would be assessed and there would be consultation with the Environment Agency and Natural England as to whether the bridge should be retained in place for the minimum additional time necessary, or re-positioned.	Agreement by The Authority of the temporary bridge design. Consultation with the Environment Agency and Natural if bridge is required beyond two years. Interim monitoring reports.	Main works contractor

		Vegetation The main works contractor shall re-establish any habitats lost as a result of temporary land-take in the River Till valley (chainage 3+800m to 4+300) following construction. Monitoring of vegetation during both the construction and operation phases shall be undertaken by the ECoW (or appropriate specialist), until such time as the habitat has been restored to the satisfaction of the Authority. *Piling* Non-impact piling shall be used for the construction of both the temporary bridge and the permanent viaduct to reduce the vibration and noise impacts on the aquatic ecology within the river. *Permanent foundation works* There shall be no permanent foundation works within 8m of the boundary of the River Till section of the River Avon SAC. *Otters* The main works contractor shall provide, where reasonably practicable and when water is flowing, allowance for the passage of otters along one or both banks of the River Till within the temporary works arrangements.		
MW-BIO4	ES Chapter 8, Section 8.8	**Lighting at important ecological sites:** The main works contractor shall, if site lighting is required in the River Till valley or at the existing River Avon Viaduct, adjacent to known bat roosts at Countess Junction, the Nile Clumps, and woodland areas, use directional lamps / hoods / cowls, to ensure that light-spill to the watercourses and their banks is minimised.	Implementation of the identified actions.	Main works contractor
MW-BIO5	n/a	**Biosecurity:** The main works contractor shall implement measures to promote biosecurity and ensure legal compliance with regards to floral INNS and diseases to avoid and minimise the risk of spread as a consequence of the Scheme. This will include, toolbox talks, exclusion zones, method statements on suitable working practices, which will include but not be limited to the cleaning of equipment (including boots) and vehicles on and off site and between sites, vegetation clearance methods (such as treatments / timings) and the segregation of vegetation arisings, including suitable disposal methods.	Implementation of the identified actions. No recorded spread of invasive species and high standards of biosecurity maintained.	Main works contractor
MW-BIO6	n/a	**Invasive species:** The main works contractor shall be cognisant of the findings of any pre-works INNS floral survey and any management measures undertaken by The Authority or the preliminary works contractor(s). Should INNS be present within works areas, the main works contractor shall produce an INNS Management Plan which adopts where appropriate any previously produced INNS Management Plans relevant to the Scheme and includes Method Statements addressing how identified species are to be effectively managed and ensure legal compliance. Should an INNS Management Plan be required, the main works contractor shall consult with Natural England during the development of the plan and the plan be appended to ~~-~~the CEMP for acceptance by The Authority and approval by the Secretary of State.	No recorded spread of invasive species. Production of the INNS Management Plan (if required) in consultation with Natural England and acceptance by The Authority and approval by the Secretary of State as appended to the CEMP.	Main works contractor

MW-BIO7	ES Chapter 8, Section 8.8	**Great crested newts (GCN):** All works within 500m of the known breeding population of GCN will be undertaken under a method statement approved by the Authority, following authorisation from the ECoW (or appropriate specialist). Works within this area will be seasonally constrained (where necessary, works may be undertaken, following approval from the ECoW). The area within the Scheme boundary will be maintained as unsuitable for great crested newts, with no plant or material being stored within this area (unless authorised by the ECoW). Currently it is not considered necessary to apply for an EPS licence, however this will be updated following the pre-construction surveys. At this point, no further great crested newt monitoring surveys are required, this will be dependent on the findings of the pre-construction checks. **Location:** Great crested newt breeding pond is outside order limits within the River Till valley, south of Foredown Farm; relevant fields within order limits are north of the new alignment adjacent to chainages 4400m to 4800m.	No recorded mortality to GCN.	Main works contractor
MW-BIO8	ES Chapter 8, Section 8.8	**Schedule 1 and Annex 1 breeding birds:** *Stone curlews* Following vegetation clearance the working area may provide suitable nesting habitat for stone curlews (open expanses of land lacking vegetation). Due to the sensitivity of stone curlews to human disturbance (they can be disturbed by human activities within 500m of a nest site), it may be necessary (where practical) to deter stone curlew from nesting within, or in proximity of the Scheme, prior to the commencement of works. Deterrent measures could include (but are not limited to) the following: a) maintaining areas of dense crops and grass until it is necessary to access the working area. b) Installation of visual deterrents, to be confirmed on a site by site basis; c) planting areas of temporary bare ground with a quick growing crop or quick growing wild flower seed mix or game cover crop to reduce line of sight. These measures should be employed prior to the breeding season (March to August) to deter prospecting pairs. Even with the use of these deterrent measures, there may still be a risk of stone curlews nesting within the Scheme boundary. In the event that nesting stone curlews are found located within the plots established as part of scheme, within the Scheme boundary, or are recorded within 500m of the works area (using binoculars from within the Order limits) then liaison with the Natural England and RSPB will be undertaken. This will aim to identify and agree the specific and appropriate measures and monitoring activities to be undertaken in order to avoid disturbance of the nesting pair. It may be necessary to install an exclusion area of up to 500m from the nest, depending on nesting location. This will be confirmed following confirmation from the ECoW. **Stone curlew monitoring**: An appropriate specialist~~,~~ shall undertake monitoring of stone curlews at the retained breeding plots within 500m of the Scheme (where public access is available / can be arranged) and at the newly created nesting plot, associated with the mitigation defined in the ES (Chapter 8).	Implementation of the identified actions. Monitoring and reporting arrangements developed by the ECoW in consultation with Natural England, RSPB, or the Great Bustard Group (as appropriate), and approved by The Authority.	Main works contractor

		Great bustards Great bustards are considered to be sensitive to human disturbance. A precautionary approach has been adopted, whereby in the event that nesting great bustards are found located within the Scheme boundary or within 500m of works, then liaison with the Great Bustard Group will be undertaken. This will aim to identify and agree the specific and appropriate measures to be undertaken in order to avoid disturbance of the nest.		
MW-BIO9	ES Chapter 8, Section 8.8	**Badgers:** All retained badger setts within the Scheme boundary will be subject to regular monitoring and appropriate action will be taken under the provisions of a licence to deter badgers from establishing new setts ~~in areas~~ or to close newly established setts in areas which will be disturbed by further works. Suitable working methods will be employed in order to reduce the risk of harm to badgers and disturbance of badgers within their setts (as per the preliminary works). Working methods should be produced in consultation with the members of HMAG.	Implementation of working methods and monitoring regime.	Main works contractor
MW-BIO10	ES Chapter 8, Section 8.8	**Bat monitoring:** The main works contractor's ECoW (or an appropriate specialist) shall undertake crossing point surveys as part of a monitoring programme at pre-defined locations (below). These crossing point surveys will commence at the start of construction and continue yearly throughout the construction phase. The landscape surveys shall continue through the construction phase. **Locations**: The crossing point surveys will be undertaken at the B3083 underbridge, Green Bridge number 2 and Byway 11. The landscape transect locations will be confirmed prior to the surveys along suitable PRoWs. The crossing point and landscape scale surveys will follow current good practice, and the 2018 and 2019 survey methodology defined in the ES.	Completion of surveys and subsequent interim reports of surveys.	Main works contractor
MW-BIO12	ES Chapter 8, Section 8.8	**Otter monitoring:** The ECoW (or an appropriate specialist) shall carry out monitoring of potential otter resting places to determine if they are in active use by otters. Currently only one otter resting place has been identified within 50m of the Scheme boundary to the south east of Countess Junction (refer to the ES). Where an otter resting place is present or suspected, a suitably qualified ecologist will prepare a method statement for the works to avoid disturbance of otters and ensure the works are legally compliant. Where required, a Natural England EPS licence will be obtained in order to facilitate the works. All works within proximity of suitable otter habitat will be undertaken under a strict method statement. **Locations:** River Till chainages 4000m to 4100m; River Avon ~~viaduct~~crossing, chainages 12200m to 12300m	Application and return of Natural England EPS licence (if necessary).	Main works contractor

MW-BIO13	ES Chapter 8, Section 8.8	**Botanical monitoring:** Details of vegetation monitoring, to be undertaken during the construction phase, to inform future habitat creation, shall be developed by the main works contractor in consultation with Natural England. The ECoW (or an appropriate specialist) will undertake a programme of botanical monitoring to assess the development of a mosaic of early-successional calcareous grassland and associated biodiversity within the Scheme. Results of monitoring from the preliminary works period will be used to inform habitat creation and subsequent management. Management action informed by monitoring may include, but is not restricted to, increase or decrease in the frequency, extent or duration of grazing or mowing, control of scrub, specific habitat management to create or maintain conditions for characteristic species of chalk grassland or other habitats.	Consultation with Natural England. Successful establishment of the landscape and ecology requirements outlined within the LEMP.	Main works contractor
MW-BIO14	ES Chapter 8, Section 8.8	**Hedgerows:** The main works contractor shall seek to retain hedgerows throughout the Scheme where practicable. Should the removal of hedgerows (which are not identified as to be retained within the Environmental Masterplan) be required, the main works contractor shall seek approval from the Authority prior to the removal of the hedgerow. The main works contractor shall manage all retained hedges within the site boundary. Upon completion of the works, the main works contractor shall reinstate all removed hedgerows in-line with the requirements of the OLEMP.	The Authority approval of hedgerow removals.	Main works contractor
D-BIO1	ES Chapter 8, Section 8.8.	**River Till Viaduct:** The River Till viaduct is to comprise a twin deck viaduct structure with a minimum 7m open gap between the bridge decks. The locations of the piers and foundations shall be a minimum of 8m outside of the boundary of the River Till section of the River Avon SAC.	Adherence to identified design and construction constraints. Consultation with Wiltshire Council (see D-LAN4).	Main works contractor
D-BIO2	Statement of Common Ground	**Piling at River Avon:** There shall be no piling works within 8m of the boundary of the River Avon SAC.	Adherence to the identified construction methods and constraints.	Main works contractor
D-BIO3	Statement of Common Ground	**Green Bridges:** Green bridges shall be designed and delivered having regard to the guidance in the report: Natural England (2015), Commissioned Report NECR181, Green Bridges, Literature Review.	Green bridges designed in line with guidance.	Main works contractor
D-BIO4	n/a	**Stone curlew breeding plots** If for the purposes of Requirement [12] of the DCO one or more of the additional stone curlew breeding plots is to be provided within the Order limits, it must be provided in accordance with the stone curlew plot specification and provided and maintained subject to a regime of management measures substantially in accordance with those contained in the stone curlew breeding plot specification. The terms “additional stone curlew breeding plots” and “the stone curlew breeding plot specification” have the same meaning as in Requirement [12] of the DCO.	Requirement 12	Main works contractor

NOISE AND VIBRATION				
MW-NOI1	ES, Chapter 9, Section 9.8	**Best Practicable Means for noise:** The main works contractor shall minimise noise and vibration from the construction of the Scheme by employing Best Practicable Means (BPM), as defined under Section 72 of the Control of Pollution Act (CoPA) 1974 and Section 79 of the Environmental Protection Act 1990, at all times. BPM shall consider the recommendations of BS 5228: Code of practice for noise and vibration control on construction and open sites parts 1 and 2 and BS 7385: Evaluation and measurement for vibration in buildings. Guide to damage levels from ground borne vibration. The main works contractor shall detail the application of BPM within the Noise and Vibration Management Plan (see MW-NOI3) BPM should be included in the following order: a) control of noise and vibration at source - such as use of low noise equipment, the provision of acoustic enclosures and the use of less intrusive alarms and the screening of equipment; b) should the application of BPM at source not prove effective and noise exposure exceeds the relevant trigger level (as defined in BS 5228-1, Table E.2), the main works contractor may offer: i. noise insulation; or if that is not successful ii. temporary re-housing.	Implementation of BPM.	Main works contractor
MW-NOI2	n/a	**Section 61 Consents:** Except in the case of an emergency, for any work required to be undertaken outside of the core hours set out in item MW-G12 (not including repairs or maintenance), the main works contractor shall make an application to Wiltshire Council prior to undertaking the works under Section 61 of the Control of Pollution Act 1974. In the event that works for which a Section 61 consent has been applied for have to be rescheduled or modified, e.g. method or working hours, for reasons not envisaged at the time of the Section 61 consent submission, the main works contractor shall apply for a dispensation or variation from Wiltshire Council, in advance of the start of those works.	Agreement of Section 61s with Wiltshire Council.	Main works contractor
MW-NOI3	ES, Chapter 9, Section 9.8	**Noise and vibration management plan:** The main works contractor shall prepare a noise and vibration management plan detailing the management and monitoring processes to be introduced across all construction sites and compounds. The plan shall include, but not be limited to, the following: a) integration of noise control measures into the preparation of all method statements for the works; b) details and locations of all site hoardings, screens or bunds that will provide acoustic screening during construction; c) procedures for the installation of noise insulation (if deemed to be required) or provision of temporary re-housing and to ensure such measures are in place as early as reasonably practicable; d) noise and vibration monitoring protocols including monitoring locations (see MW-NOI6), stages during construction at which monitoring will be undertaken, and methods of publishing the results; e) details of inspection and maintenance schedules to be undertaken;	Acceptance by The Authority and approval by the Secretary of State of the Noise and Vibration Management Plan as appended to the CEMP. Consultation with Wiltshire Council ~~and~~, Historic England and National Trust in respect of matters relevant to their ~~functions~~roles and responsibilities.	Main works contractor

		f) processes to ensure ongoing compliance with all controls and consent for the works; and g) process for implementing corrective actions that may be required to avoid or address a potential non-compliance.		
MW-NOI4	n/a	**Noise insulation and temporary re-housing:** The main works contractor shall have a Noise Insulation and Temporary Rehousing Policy, developed in consultation with Wiltshire Council, for the Scheme. The policy will set out all roles, responsibilities and actions required in respect of these measures. Notwithstanding the measures set out in this OEMP and any agreements with Wiltshire Council, noise insulation or temporary re-housing will be offered to qualifying parties when: a) noise levels are predicted or measured by the main works contractor to exceed the relevant trigger level (as defined in BS 5228-1, Table E.2) for at least 10 days out of any period of fifteen consecutive days or alternatively 40 days in any six month period at affected properties; b) the property complies with all other requirements of the Noise Insulation Regulations 1975 (as amended); c) the property is lawfully occupied as a permanent dwelling; and d) noise insulation does not already exist that is of an equivalent standard to that which would be allowed for under the Noise Insulation Regulations 1975 (as amended). The main works contractor shall consider all applications supported by evidence for noise insulation or temporary rehousing from occupiers who may have special circumstances. Special circumstances could include night workers, those working in home occupations, local businesses or buildings that provide community facilities requiring a particularly quiet environment and those with a medical condition which will be seriously aggravated by construction noise, and provide noise insulation or temporary re-housing where it is demonstrated that this is necessary.	Consultation with Wiltshire Council and the implementation of, and adherence to, the policy.	Main works contractor
MW-NOI5	ES, Chapter 9, Section 9.8	**Vibration** The main works contractor shall take into account the following guidance when establishing criteria, controls and working methods for vibration management: a) BS 5228 – 2 Code of practice for noise and vibration control on construction and open sites; b) ISO 4866: 2010 Mechanical vibration and shock. Vibration of fixed structures. Guidelines for the measurement of vibrations and evaluation of their effects on structures; and c) BS 7385 - 2 Evaluation and measurement for vibration in buildings – Part 2: Guide to damage levels from groundborne vibration. *Protection of building occupants from disturbance* No start-up or shut down of vibratory plant e.g. rollers or compactors, within 50m of receptors. The main works contractor shall refer to BS 5228-2 for guidance levels in terms of Peak Particle Velocity (PPV). If predicted vibration levels exceed 1mms^{-1} component PPV at occupied residential buildings based on the prediction methodology in BS 5228-2, Wiltshire Council and those potentially affected will be notified as soon as practicably possible in advance of the works. The notification will describe the nature and duration of the works and any associated proposals for vibration monitoring in the event that it is required. *Protection of buildings from damage* (For works to scheduled monuments and non-designated archaeological assets, the provisions under	Completion of appropriate assessments, identification of buildings / properties / cultural heritage assets at risk and consultation on actions with Wiltshire Council and Historic England in respect of matters relevant to their function and, inside the WHS, with the members of HMAG.	Main works contractor

		'Protection of Sensitive Cultural Assets' shall apply). The main works contractor shall use BPM to control vibration levels so that the PPV, as measured in accordance with BS 7385-2 Evaluation and measurement for vibration in buildings – Part 2: Guide to damage levels from groundborne vibration, are generally not exceeded. The main works contractor shall carry out a scoping vibration appraisal to determine whether the trigger level of 6 mms^{-1} (Table 9.6, Chapter 9 of the ES) is likely to be exceeded. Activities requiring an appraisal could include tunneling, vibratory compaction, impact or vibratory piling and other driven processes. The main works contractor shall notify and consult Wiltshire Council regarding any works predicted to generate a PPV above 6mms^{-1}. Where it is determined that there is no reasonable or practicable means to reduce predicted or measured vibration then the main works contractor shall: a) agree and consult with Wiltshire Council regarding monitoring for vibration and strain induced in the building during the works; b) consult occupiers of properties about: i. the surveys to be carried out and any consequent actions; and ii. any additional reasonable and practicable mitigation to be provided for occupants; and c) carry out a condition survey before and after the relevant works. The main works contractor shall identify any buildings that may be unusually vulnerable to vibration, that are located within 50m of any activities that may give rise to significant vibration. Where the predicted vibration at the foundations of such buildings exceeds 3mms^{-1} PPV then the main works contractor shall undertake an initial structural survey of the building. Based on the survey, the level of vibration above which condition surveys and continuous vibration monitoring are required will be confirmed with the building owner and Wiltshire Council. *Stonehenge Cottages* The main works contractor shall undertake condition surveys on Stonehenge Cottages pre- and post-tunnelling operations. Should it be identified that damage has occurred to the Cottages as a consequence of the works, appropriate remedial works shall be undertaken in consultation with the parties holding an interest in the land in question. Temporary re-housing would be offered to residents / occupants at Stonehenge Cottages if the monitoring of vibration levels at the Cottages on the approach of the TBM under MW-NOI6 indicates that PPV levels exceeding 1mms^{-1} are likely to occur continuously for a period of 48hrs or more during each tunnel bore and providing the property is lawfully occupied as a permanent dwelling. The vibration monitoring requirements are set out in MW-NOI6. *Protection of Sensitive Cultural Assets~~, excluding buildings~~* The main works contractor shall identify, following the identification of screening criteria in consultation with Historic England, Wiltshire Council and the members of HMAG, any potentially vibration sensitive cultural heritage assets, including the Stonehenge Monument and barrows, based on the sensitivity of the assets and proximity to tunnelling works, in consultation with Wiltshire Council, Historic England and the members of HMAG. Should assets be identified, actions to control or mitigate impacts (including monitoring) shall be agreed between the main works contractor, the operator of the equipment and The Authority as appropriate, in consultation with Historic England, Wiltshire Council and the members of HMAG and with regard to any relevant standards including BS 7385-2: 1993, BS ISO 4866:2010, and BS 5228: 2009+A1: 2014. Any works or exercise of powers under the DCO must comply with the provisions of the DAMS requiring archaeological mitigation, as per paragraph 5.1.3 of the DAMS.		

MW-NOI6	ES, Chapter 9, Section 9.8	**Monitoring of noise and vibration:** The main works contractor shall undertake and report noise and vibration monitoring as is necessary to ensure and demonstrate compliance with all noise and vibration commitments and the requirements of the Noise and Vibration Management Plan (MW-NOI3). The main works contractor shall undertake regular onsite observation monitoring and checks/audits to ensure that BPM is being employed at all times. The site reviews will be logged and any remedial actions recorded. Such checks will include: a) compliance with hours of working; b) presence of mitigation measures e.g. engines doors closed, airlines not leaking, and site ~~hording~~hoarding in place: c) number and type of plant; d) compliance with agreed working methods; and e) compliance with any specific requirements of the Noise and Vibration Management Plan. Proposals for all monitoring locations will be set out in the Noise and Vibration Management Plan. *Stonehenge Monument* Vibration monitoring will be undertaken at the Stonehenge Monument, when the TBM is within 250m of the monument, the details of which will be determined in consultation with the English Heritage Trust and set out in the Noise and Vibration Management Plan. *Stonehenge Cottages* Vibration monitoring will be undertaken at Stonehenge Cottages when the TBM is within 250m of the cottages. Residents/ occupants of the cottages will be offered temporary re-housing if the conditions of MW-NOI5 are met. *Stonehenge Visitor Centre* Vibration monitoring will be undertaken at the Stonehenge Visitor Centre during the construction period, the details of which will be determined in consultation with the English Heritage Trust and set out in the Noise and Vibration Management Plan.	Inclusion of monitoring proposal with the Noise and Vibration Management Plan. Adhering to the specified monitoring regime throughout the construction period.	Main works contractor
D-NOI1	ES Chapter 9, Appendix 9.8	The Contractor shall provide a thin surfacing solution on the mainline of the new A303 and its associated slip roads.	n/a	Main works contractor
D-NOI2	ES Chapter 9, Appendix 9.8	1.8m high absorptive noise barriers along both the north and south edges of the Countess Junction Flyover which conform with the current harmonised Specifications Standard BS EN 14388 (2005) and meet the A3 (DLα 8 to 11 dB) and B3 (DLR>24 dB) standards for sound absorption and airborne sound insulation as specified in BS EN 1793 part 1 and 2 (1998), or equivalent future standards approved by the Authority.	n/a	Main works contractor
D-NOI3	Statement of Common Ground	The noise emitted from operational fixed plant located at the tunnel service buildings shall not exceed the existing background level by more than 0 dB(A) at the nearest residential receptors when assessed in accordance with BS 4142: 2014.	n/a	Main works contractor
D-NOI4	Response to Written Question	Piling at the Countess Junction shall be non-impact piling.	n/a	Main works contractor

D-NOI5	ES Chapter 9, Appendix 9.3	The surface finish of the retaining walls at the approaches to the tunnel portals and at Countess flyover (above the earthworks) shall be designed to reduce the reflection of noise.	n/a	Main works contractor
D-NOI6	ES Chapter 9, Appendix 9.3	Use of a noise absorbent finish to the walls/roof at the entrances/exits of the tunnel and Green Bridge Four.	n/a	Main works contractor
GEOLOGY AND SOILS				
MW-GEO1	ES Chapter 10 Section 10.8.	**Contamination Risks:** The main works contractor shall implement measures on site, in accordance with CIRIA C741 4th Edition Environmental Good Practice, to assess and control risks to human health and the environment resulting from the disturbance of contaminated land, e.g. construction workers, site visitors, nearby residents and environmental receptors such as controlled waters.	Acceptance by The Authority and approval by the Secretary of State of the CEMP. The Authority approval of the Method Statements (including measures to protect construction workers), and implementation of the specified actions.	Main works contractor
MW-GEO2	ES Chapter 10, section 10.8.	**Contaminated land:** In the event that contaminated land, including groundwater, is found at any time, which was not previously identified in the ES, Requirement 7 of the DCO is applicable and the main works contractor shall follow those provisions. The main works contractor is to quantify the extent of the potential risk from the contamination and follow a risk-based approach in accordance with Contaminated Land Report 11, Model Procedures for the Management of Land Contamination (2004) and inform Wiltshire Council. Where significant risks from soil or groundwater contamination are identified, appropriate mitigation (remediation) to reduce to acceptable levels the potential short and long-term health and safety and environmental risks to sensitive receptors will be identified and implemented. Any required additional ground investigations will be undertaken in accordance with UK good practice, including BS 5930:2015 Code of Practice for ground investigations and BS 10175:2011 + A2:2017 Investigation of Potentially Contaminated Sites Code of Practice.	Completion of appropriate GI works and remediation measures.	Main works contractor
MW-GEO3	ES Chapter 10 Section 10.8.	**Soils Management Strategy:** The main works contractor shall produce a detailed Soils Management Strategy (SMS) based on the outline SMS within Annex A.3. The SMS shall identify the nature and types of soil that will be affected and the methods that will be employed for stripping soil and the restoration of agricultural land (where the restoration of agricultural land is required) and be consistent with the DAMS and any Heritage Management Plan, Archaeological Method Statement or SSWSI. The detailed SMS shall be appended to the CEMP. The main works contractor shall have regard to the guidance in Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (2009) when handling agricultural soils and in particular the land to be reprofiled for use as permanent chalk grassland.	Acceptance by The Authority and approval by the Secretary of State approval of the SMS as appended to the CEMP. Consultation with Wiltshire Council, Historic England and the Environment Agency in respect of matters relevant to their ~~functions~~roles and	Main works contractor

			responsibilities and, for works inside or affecting the WHS, the members of HMAG.	
MW-GEO5	ES Chapter 10 Section 10.8.	**Naturally occurring radiation of materials:** During the tunnelling operation, the main works contractor shall ensure that monitoring of naturally occurring radiation is undertaken (see monitoring section). Appropriate limits shall be identified within the CEMP above which construction personnel cannot work.	Acceptance by The Authority and approval by the Secretary of State of the CEMP. Provision of appropriate ventilation and monitoring for confined space working.	Main works contractor
MW-GEO6	ES Chapter 10, section 10.8.	**Hazardous substances:** The contractor shall control all potentially contaminative materials in accordance with the Control of Substances Hazardous to Health (COSHH) Regulations. All potentially contaminative materials will be properly isolated and bunded. Bunds and trays will be regularly checked and maintained. All surface water or other contaminated water, which accumulates in the bund, will be removed by manually controlled positive lift pumps and not by means of a gravity drain. This water will be discharged in an off-site public sewer in consultation with the relevant water companies.	Agreement with water companies for the disposal of contaminated water.	Main works contractor
MW-GEO7	ES Chapter 10, section 10.8.	**Excavated materials management:** To form part of the Soils Management Strategy, the main works contractor shall develop a: a) Soils Handling Strategy, with reference to BS3882: 2015 Specification for Topsoil and the Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Site. This shall incorporate the soils handling measures outlined within the DAMS, identify locations where archaeological in-situ preservation is required and consider areas to be returned to agricultural use; and b) Soil Resources Plan, which will confirm the soil types, the most appropriate re-use for the different types of soils and proposed methods for handling, storing and replacing soils on-site, including bulk wet-sieving should it be required. The main works contractor shall assess excavated soils for any potential risks posed to health and the environment from the reuse of such soils as engineering fill. This will include mitigation of the effects on soils and the spread of contamination to ensure that those soils identified as contaminated are not mixed with uncontaminated soil. All excavated materials proposed for re-use will be required to meet risk-based acceptability criteria. The main works contractor shall ensure soils will be protected from accidental contamination during storage and transit. The main works contractor shall endeavour to return topsoil stripped during the construction of the Scheme as close to its source of origin as possible during restoration. Soils should be reused as soon as is practicable and stored in such a way as to minimise structural damage (so far as reasonably practicable). Additionally, the creation of bare areas of permanently exposed soil that would be vulnerable to erosion processes will be avoided. Topsoil may need to be removed during construction in order to prevent permanent burial beneath other earthworks. Such soils will be stockpiled and re-used, subject to acceptability, in the general earthworks such as landscaping and bunds.	Acceptance by The Authority and approval by the Secretary of State of the SMS as appended to the CEMP. Consultation with Wiltshire Council, The Environment Agency and Historic England in respect of matters relevant to their ~~functions~~roles and responsibilities and, for works inside the WHS, the members of HMAG.	Main works contractor

		The re-use of excavated materials, including tunnel arisings and material excavated for highway cuttings, shall be governed by a Materials Management Plan (refer to MW-MAT2) developed by the main works contractor in accordance with the CL:AIRE Definition of Waste: Development Industry Code of Practice. Should off-site disposal in relation to excavated soil be required, the material will be characterised to determine firstly whether it is Hazardous or Non-Hazardous waste in accordance with the Environment Agency's Technical Guidance WM3. The appropriate disposal facility will, where required, be determined through Waste Acceptance Criteria (WAC) analysis, as required.		
MW-GEO8	ES Chapter 10, Section 10.8.	**Construction on or adjacent to land affected by contamination** The main works contractor shall implement control measures for construction activities on or adjacent to the land identified as being affected by contamination. This will include the following, as appropriate: a) wheel wash facilities; b) redundant services near potentially contaminated areas will be either removed or cut off and sealed; c) material known or suspected to be contaminated will be stockpiled (depending on the source of the material and the nature of the contamination) and tested prior to reuse or disposal. Stockpiles will be placed on a low permeability liner, suitably protected from damage by earthmoving plant. Known or suspected contamination stockpile areas will be tested adequately prior to and after use to ensure that no cross-contamination has occurred; d) prior to reuse of site-won materials, pre-classification testing of soils will be undertaken; e) imported fill materials will be required to meet soil and leachate acceptance criteria derived in the detailed design stage; f) piled foundations and ground improvement works located within 50m of potential or known areas of land contamination or with potential to impact Source Protections Zones will require a site-specific environmental risk assessment, and will be identified within the relevant management plans. The main works contractor will adhere to appropriate guidance, including the Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination: Guidance on Pollution Prevention; g) within areas of known or suspected contamination, measures will be introduced to ensure that buried services will be protected from the ingress of mobile and aggressive contaminants. In the case of drainage runs, the infiltration of surface water into the underlying contaminated ground will be prevented and clean or lined service corridors will be installed to provide a suitable barrier to migrating ground gases adjacent to known/potential sources; h) materials used for the Scheme will be proven 'suitable for use' by adoption of acceptance criteria and will be deposited under either environmental permitting regulations or the Definition of Waste: Development Industry Code of Practice; i) construction activities will follow good practice guidelines to avoid contamination from leaks, spillages and inappropriate storage of materials on site. Appropriate control measures will be identified and implemented through the CEMP; and j) proposed work areas located within 50m of potential or known areas of land contamination, as identified in the Environmental Statement, shall be investigated using a risk based approach in accordance with Contaminated Land Report 11, Model Procedures for the Management of Land Contamination (2004) both in the pre-construction and construction phases, including the production of a risk assessment produced in consultation with Wiltshire Council and the	Implementation of the specified actions.	Main works contractor

		Environment Agency which must be provided to those parties as soon as reasonably possible after its completion. Where ~~significant~~unacceptable risks are identified, further assessment and/or appropriate mitigation (remediation) to reduce to acceptable levels the potential short and long-term health and safety and environmental risks to sensitive receptors will be identified in consultation with the Environment Agency and Wiltshire Council and implemented. Associated additional ground investigations will be undertaken in accordance with UK good practice, including BS 5930:2015 Code of Practice for ground investigations and BS 10175:2011 + A2:2017 Investigation of Potentially Contaminated Sites Code of Practice.		
MW-GEO10	ES Chapter 10, section 10.8.	**Underground gas monitoring:** The main works contractor will prepare and implement a gas monitoring procedure, as appropriate, based on the potential for presence of underground gases. Gas monitoring will be undertaken in accordance with BS8576:2013 Guidance on investigations for ground gas. The main works contractor will undertake monitoring of the atmosphere within excavations for concentrations of oxygen, carbon dioxide, methane and hydrogen sulphide to assess the development of any potentially explosive and / or asphyxiant conditions. In addition, the main works contractor will implement a programme of radon monitoring (potentially generated from the Phosphatic Chalk) during tunnel boring.	Implementation of the specified actions.	Main works contractor
WATER ENVIRONMENT				
MW-WAT1	ES Chapter 11, Section 11.8	The main works contractor shall undertake the works and implement working methods to protect surface water and groundwater from pollution and other adverse impacts, including change to flow, flood storage volume, water levels and quality. This will be completed having regard to industry guidance.	Implementation of the identified actions.	Main works contractor
MW-WAT2	ES Chapter 11, Section 11.8.	**Water Management Plan (WMP):** The main works contractor shall produce a WMP to include identification of watercourses and aquifers and taking into account the guidance contained within the relevant information on pollution prevention provided by the Environment Agency, the Guidance for Pollution Prevention (GPPs) available on the NetRegs website and other Construction Industry Research and Information Association (CIRIA) documents. Specific receptors in the water environment will be listed in the plan. Where appropriate, integrated aquatic ecology and water quality plans shall be developed as part of the Water Management Plan. The Emergency Preparedness and Response Plan and Pollution Incident Control Plan, detailed in MW-G20 and MW-WAT4 respectively, will include effects on water resources. Environment Agency guidance on pollution incident response planning will be reflected in the emergency plan. The main works contractor shall consult with the Environment Agency, National Trust (on matters relevant to its role and responsibilities) and Wiltshire Council during the development of the WMP.	Acceptance by The Authority and approval by the Secretary of State of the Water Management Plan as appended to the CEMP. Consultation with the Environment Agency, National Trust (on matters relevant to its role and responsibilities) and Wiltshire Council	Main works contractor
MW-WAT3	ES Chapter 11, Section 11.8	**Site drainage:** The main works contractor shall utilise sustainable methods for construction waste water discharges, including site drainage, surface runoff, and dewatering discharges. This includes discharge to ~~water courses~~watercourses subject to water quality and rate of discharges and scour assessments in accordance with the provisions of the DCO. For discharges to mains foul or combined sewers relevant permissions will be obtained from the statutory undertaker. Discharge to watercourses will, insofar as not dealt with in the DCO, only be permitted where permits or other relevant approval has been	Granting of any permits / consents (if required outside of the DCO). Adherence to the most current standards. Agreement with Wiltshire Council and the	Main works contractor

		obtained. Sufficient time will be made for the Environment Agency to issue permits in accordance with relevant legislation and for applications pursuant to Wiltshire Council's protective provisions in the DCO. The main works contractor shall ensure that site drainage meets the effluent and flood risk standards required by the sewerage undertaker ~~and,~~ the Environment Agency and Wiltshire Council, as appropriate, in accordance with the relevant permit, and will provide and maintain holding or settling tanks, separators and other measures as may be required to meet those standards. The main works contractor shall ensure that access is provided to the undertaker and Environment Agency so that samples of discharge can be obtained and analysed, and the flows verified as required. The main works contractor shall incorporate the following measures during the construction works: a) all temporary land-take will include adequate areas of land set aside for robust control measures, for example sustainable drainage control; b) any discharge to sewers and controlled waters will be required to be in accordance with the DCO provisions, having regard to the relevant licensing body's requirements; c) water flows from sites will be limited during construction to existing runoff rates, unless otherwise agreed with Wiltshire Council and the Environment Agency in accordance with relevant legislation; and d) the relevant sections of BS 6031: Code of Practice for Earthworks for the general control of site drainage will be followed.	Environment Agency in respect of variations to current run off rates.	
MW-WAT4	ES Chapter 11, section 11.8.8	**Spill response:** The main works contractor shall include spill response procedures in the Emergency Preparedness and Response Plan (refer to MW-G20). This will include a Pollution Incident Control Plan, as part of the Emergency Preparedness and Response Plan, which recognises the risk of pollution from construction activities and presents pro-active management practices to ensure that any pollution incident that may occur, such as a diesel spillage, is minimised, controlled, reported to relevant parties and remediated. The plan will define the criteria for implementing the relevant measures. Environment Agency guidance on pollution incident response planning will be reflected in the emergency plan. These procedures shall include the provision of appropriate incident response equipment, e.g. spill kits, will be available next to particularly sensitive activities or areas of a site (such as fuel storage areas). In the preparation of local pollution incident response measures, the main works contractor shall consult with relevant organisations, including, but not limited to, statutory bodies and other relevant parties, such as the Health and Safety Executive (HSE) (Construction), the Fire Authority, the Ambulance Service, the Environment Agency, Natural England, utilities companies and Wiltshire Council (emergency planning and pollution control ~~functions).~~roles and responsibilities). Reference should also be made to the Environment Agency's Pollution Prevention Guidelines 21 (Incident Response Planning) and Construction Industry Research and Information Association's (CIRIA's) Environmental good practice – site guide.	Acceptance by The Authority and approval by the Secretary of State of the Pollution Incident Control Plan as appended to the CEMP. Consultation with the identified relevant organisations.	Main works contractor

MW-WAT5	ES Chapter 11, section 11.8	**Pollution incident monitoring:** The contractor shall have in place effective arrangements to inform, investigate and provide reports on any potential or actual significant pollution incidents, including: a) a description of the pollution incident, including its location (and Ordnance Survey (OS) grid reference), the type and quantity of contaminant and the likely receptor(s); b) contributory causes; c) adverse effects; d) measures implemented to mitigate adverse effects; e) any recommendations to reduce the risk of similar incidents occurring; and f) informing affected landowners or occupiers of any significant pollution incident that has the potential to, or has affected their private boreholes directly following any such incident.	Acceptance by The Authority and approval by the Secretary of State of the CEMP.	Main works contractor
MW-WAT6	ES Chapter 11, Section 11.8	**Protection of watercourses:** The contractor shall incorporate protection measures for all discharges into or works in or adjacent to watercourses in accordance with requirements set out by the relevant authority (the Environment Agency for works affecting Main Rivers or Wiltshire Council as the Lead Local Flood Authority for works affecting ordinary watercourses) pursuant to their protective provisions within the DCO. The main works contractor shall adopt measures to prevent the deposition of contamination, silt or other material in any existing watercourse, lake, borehole, aquifer or catchment area, arising from work operations. The measures will accord with the principles set out in industry guidelines, including CIRIA's report C532: Control of water pollution from construction sites, and GPP 5: Works and maintenance on and near water. The main works contractor shall incorporate the following measures during the construction works: a) watercourses, including land and/or road drainage, within the construction sites will be maintained; b) protection measures, e.g. fencing, will be in place to protect existing water features from degradation and physical damage during construction; c) all areas with the potential to generate contaminated water will be bunded to prevent the release of contaminants; and d) no work in the channels of either the River Till or River Avon is planned, and measures will be taken with regard to works in the rivers' wider floodplains to limit the release of suspended sediment and solids into the water column.	Granting of any permits / consents (if required outside of the DCO) or approvals under the DCO protective provisions. Adherence to the most current standards.	Main works contractor
MW-WAT7	ES Chapter 11, Section 11.8	**Control of pollution to waterbodies:** The main works contractor shall ensure that protection measures to control the risk of pollution are included within the Water Management Plan; these will be consistent with the Environmental Permitting (England and Wales) Regulations 2016, including: a) Provision of maps showing the locations, together with address and contact details, of local emergency services facilities such as police stations, fire authorities, medical facilities and other relevant authorities. b) Ensure that site drainage plans and flood risk management plans are available on site and are kept up-to-date. c) Ensure that pollution shut- off valves are used in compounds with formal drainage.	Permit from Wiltshire Council where required (concrete batching plant). Acceptance by The Authority and approval by the Secretary of State of the Water Management Plan as	Main works contractor

		d) Ensure staff competence and awareness in implementing plans (including how sources are to be isolated, and contaminated materials removed) and using pollution response kit. e) Provision of contact details for the relevant authorities, such as the Environment Agency, and the persons responsible on the construction site and within the main works contractors' organisation for pollution incident response. f) Provision of contacts with a competent spill response company which can be contacted at short notice for an immediate response (where appropriate). The main works contractor shall consult with the relevant regulatory bodies regarding specific requirements in relation to establishing and operating the concrete batching plant(s). Wash water from any batching plants will not be discharged to the water environment without the approval of the relevant authority. The main works contractor shall ensure that the handling of contaminated excavated material, treatment processes required and the storage of excavated material does not affect the Chalk aquifer. Measures will be put into place to prevent contaminated run off reaching open ground. The main works contractor shall avoid using materials in the permanent or temporary works that could result in direct or indirect discharge of hazardous substances or non-hazardous pollutants to groundwater, as defined under the Groundwater (England and Wales) Regulations 2009. The main works contractor shall incorporate the following measures during the construction works: a) any containers of contaminating substances onsite will be leak-proof and kept in a safe and secure building or compound from which they cannot leak, spill or be open to vandalism. The containers will be protected by temporary impermeable bunds (or drip trays for small containers) with a capacity of 110% of the maximum stored volume. Areas for transfer of contaminating substances (including refuelling areas) will be similarly protected; b) any permanent oil storage tanks and temporary storage of 201 litres or more of oil in drums and mobile bowsers, and ancillary pipe work, valve, filters, sight gauges and equipment require secondary containment, e.g. bunding or drip trays, as defined in the Control of Pollution (Oil Storage) (England) Regulations 2001. Environment Agency guidance on oil storage regulations for business and preventing groundwater pollution from underground fuel storage tanks will be complied with; c) no oil will be stored within 10m of a watercourse or within a Source Protection Zone (SPZ) 1 (nominal minimum 50m provided around all licensed abstractions). Storage within an SPZ 2 (nominal minimum 250m distance) or beyond requires secondary containment, e.g. secondary bunding impermeable to water and oil, with no drainage valve fitted for draining of rainwater. The secondary containment must be sufficient to contain at least 110% of the maximum contents of an oil tank, mobile bowser or intermediate bulk container; d) above-ground pipework will be properly supported, and underground pipework will be protected from physical damage and have adequate leakage detection. All mechanical joints on oil pipes must be easy to inspect. Oil and hydrocarbon underground pipes will not extend into the groundwater saturated zone, unless approval is obtained from the Environment Agency and with risk acceptably mitigated; e) all refueling, oiling and greasing will take place above drip trays or on an impermeable surface (e.g. plant nappy) with sealed drainage or oil interceptor which provides protection to underground strata and watercourses, and away from drains as far as is reasonably practicable. Vehicles and plant will not be left unattended during refueling; f) only construction equipment and vehicles free of oil/fuel leaks which could cause material	appended to the CEMP. Consultation with the Environment Agency or Wiltshire Council (in so far as relevant to its ~~functions as lead local flood authority).~~ roles and responsibilities).	

		contamination will be permitted onsite. Drip trays will be placed below static mechanical plant; g) spillage kits will be stored at key locations on site (and defined within the Emergency Preparedness and Response Plan) and in particular at refueling areas. Spillage kits will also be kept with mobile bowsers and staff will be trained in their use; h) all wash down of vehicles (including wheel washing) and equipment will take place in designated areas, and wash water will be prevented from passing untreated into watercourses and groundwater; i) only biodegradable hydraulic oils will be used in equipment working in or over watercourses, and appropriate measures are to be taken to protect erodible earthwork surfaces; and j) non-displacement piling methods shall be used at green bridges 2 and 4 and Countess Flyover to minimise the creation of preferential pathways into the underlying Chalk groundwater body.		
MW-WAT8	ES Chapter 11, Section 11.8	**Dewatering and abstraction:** The main works contractor shall adopt construction techniques which minimise, so far as reasonably practicable, the need for and extent of dewatering and groundwater abstraction. The main works contractor shall be responsible for obtaining the necessary approvals and permits to enable ~~and~~any abstraction and discharge of pumped water in an approved manner.	Granting of any permits / consents (if required outside of the DCO).	Main works contractor
MW-WAT9	ES Chapter 11, Section 11.7	**Ground treatment:** The main works contractor shall seek approval from the Environment Agency, prior to use, for the materials used for ground treatment (such as grouting used at the tunnel portals and cross-passages). The main works contractor will maintain a list of the products authorised for use and undertake appropriate monitoring of groundwater quality. The main works contractor shall agree with the Environment Agency (in consultation with relevant parties) site-specific monitoring proposals for those sites where ground treatment will be used. This could include groundwater quality monitoring around ~~are as~~areas subject to ground treatment and visual inspection of adjacent watercourses, where relevant.	Approval of materials to be used from the Environment Agency.	Main works contractor
MW-WAT10	ES Chapter 11, section 11.7	**Groundwater Management Plan (GMP):** The main works contractor shall develop a Scheme-wide GMP, outlining how groundwater resources are to be protected in a consistent and integrated manner. The Plan shall address: a) Potential effects on groundwater (resources and quality) that fall outside other regulations such as the Environmental Permitting Regulations. b) An update to the Groundwater Risk Assessment for the final design and construction plan and which demonstrates that the final design and construction plan does not give rise to any materially new or materially worse adverse environmental effects in comparison with those reported in the ~~environmental statement~~Environmental Statement. c) The groundwater level and water quality monitoring~~/~~ / telemetry and reporting programme during construction and for a period of one year post road opening to traffic. d) Development of baseline groundwater conditions and derivation of trigger levels and action levels/mitigation/action plans for exceedances and accidents/incidents. e) The management of groundwater flood risk. f) In respect of all of the above matters, the Plan must specifically indicate how Blick Mead and	Acceptance by The Authority and approval by the Secretary of State of the GMP as appended to the CEMP. Consultation with the Environment Agency, Wiltshire Council, and Natural England with regard to elements of the GMP which may impact the River Avon SAC).	Main works contractor

		private water supplies are to be considered. During the development of the GMP, the main works contractor shall consult with the Environment Agency and Wiltshire Council with regard to the groundwater flood risk component and any heritage implications to Blick Mead and with Natural England with regard to elements of the GMP which may impact the River Avon SAC (which incorporates a section of the River Till).		
MW-WAT11	ES Chapter 11, section 11.7	**Management of impact on abstraction boreholes:** The main works contractor shall recognise the rights of existing abstractors and take measures to avoid or minimise, so far as reasonably practicable, loss or interruption of supply, or provide alternative supplies. The main works contractor will put in place appropriate monitoring and emergency measures to overcome the adverse impact if this occurs. The main works contractor shall recognise the rights of existing abstractors and consult them on measures to avoid or minimise loss or interruption of supply, or provision of alternative supplies. The Environmental Permitting (England and Wales) Regulations 2016, as amended, will apply as appropriate to any discharges of water that are required to ground and surface waters. The main works contractor shall, to limit and manage residual risk from groundwater pollution at abstraction points, apply the following precautionary actions, where applicable: a) where determined, and agreed with the owners/operators or other abstraction licence holders, targeted risk-based audits and checks of water quality monitoring will be undertaken at abstraction sources by the main works contractor. The period of monitoring will be appropriate to the timing and type of work undertaken, and will include a period of baseline monitoring. The need for intermediate monitoring holes and procedures for water and contaminant testing during construction and operation will be discussed with the owners/operators or other abstraction licence holders. b) the main works contractor will arrange any monitoring of water levels in areas where dewatering of the Chalk aquifer is required; and c) where the water quality monitoring shows an adverse impact on water quality as a result of the works, the main works contractor will contact the relevant abstractor (licence holder and operator) and the Environment Agency as soon as reasonably practicable. The main works contractor will put in place appropriate emergency measures to overcome the adverse impact where this has resulted from the construction works. These emergency measures may include the transfer of a potable water supply to another water source and informing the water users. Further monitoring and remediation will be arranged as appropriate. *Management of impact on Environment Agency monitoring borehole* The Environment Agency groundwater level monitoring borehole at Berwick Down lies within the DCO boundary close to the current A303 alignment at approximately NGR 405302, 140492. The main works contractor shall agree with the Environment Agency any works needed to retain the borehole for monitoring.	Consultation with abstractors / licence holders and the Environment Agency. Granting of any permits / consents (if required outside of the DCO). Groundwater monitoring and reporting in accordance with the Groundwater Management Plan.	Main works contractor

MW-WAT12	ES Chapter 11, section 11.8	**Flood Risk Management Plan:** The main works contractor shall prepare a Flood Risk Management Plan, as part of the Water Management Plan. The plan will summarise: a) any areas within the 1% AEP plus appropriate allowance for Climate Change~~,~~ (in consultation with the Environment Agency and Wiltshire Council), susceptible to groundwater flooding, and other flood risk sources, such as sewer flooding; b) any applications made, or likely to be made, pursuant to the Environment Agency's and Wiltshire Council's protective provisions in the DCO, where required in relation to flood defence, for temporary and permanent works and the status of the works; c) any specific requirements or conditions of the approval that will be obtained from the relevant consenting bodies; d) any flood risk management or mitigation measures implemented, or to be implemented, in support of temporary and permanent works proposals; and e) a statement on the cumulative flood risk impact of temporary and permanent works. The plan shall build on the assessment of flood risk and mitigation recommended within the Flood Risk Assessment and its annexes submitted as part of the DCO examination [REP3-008]. The plan shall be developed and implemented following consultation with the Environment Agency and Wiltshire Council ~~(~~.	Acceptance by The Authority and approval by the Secretary of State of the Flood Risk Management Plan as appended to the CEMP. Consultation with the Environment Agency and Wiltshire Council	Main works contractor
MW-WAT13	ES Chapter 11, section 11.8	**Flood Risk – general provisions:** The main works contractor shall, where reasonably practicable, minimise works within the 1% AEP plus appropriate allowance for Climate Change flood extent~~.~~ (in consultation with the Environment Agency and Wiltshire Council). Temporary compounds and haul routes will be located outside of the 1% AEP plus appropriate allowance for Climate Change flood extent or the 0.1% AEP flood extent, whichever is larger, and primary overland flow paths wherever reasonably practicable. The main works contractor shall be responsible for obtaining from the Environment Agency updated modelled water levels (1% AEP including climate change) as well as updated information on the required standard of protection of the flood defences. The main works contractor shall ensure that flood risk is managed safely throughout the construction and implementation period, and that all designs minimise built development within the 1% AEP plus appropriate allowance for Climate Change flood extent. If built development is necessary within the 1% AEP plus allowance for Climate Change flood extent, due to the cumulative flood risk effects the scheme may contribute to, through the displacement of flood water, the consequences of this displacement must be mitigated for as well as those which are discussed within the Flood Risk Assessment (FRA) submitted as part of the DCO examination (REP3-008) and include the provision of a safe refuge during a flood event. The main works contractor shall be responsible for providing and maintaining continuous flood defence provision, where relevant, for both permanent and temporary works, to the statutory flood defence level as detailed within the Flood Risk Management Plan produced in accordance with MW-WAT12. The main works contractor shall consider and implement appropriate measures to manage the potential risks of flooding from rivers, localised perched groundwater, overland surface water flows and sewer surcharging, in accordance with the Flood Risk Management Plan produced in accordance with MW-WAT12. This will include consideration of potential flow paths within the site and which could	Implementation of stated measures.	Main works contractor

		affect people and properties which could become active in the event of extreme rainfall and/or sewer surcharging, particularly during temporary works. Overland flow paths will be determined by site topography, therefore vulnerable operations and materials will be located within elevated parts of the site where reasonably practicable, away from potential flow paths. It will also ensure that designs will minimise built development within the 1% AEP plus allowance for Climate Change. If built development is necessary within the 1% AEP plus allowance for Climate Change flood extent, the consequences of the displacement of flood water must be compensated for. If this is not possible, other appropriate protection measures will be incorporated. The main works contractor shall assess potential build-up of groundwater on the upstream side of below ground structures, as this may lead to rise in groundwater levels and in severe occurrences of groundwater flooding and mitigate where appropriate. At the end of construction, where temporary support, such as sheet piling and secant piles, do not form part of the operational structure, pile walls where required will be removed, cut-down or piped through routes provided to prevent the potential build-up of groundwater.		
MW-WAT14	DCO Requirement 10	**Surface water drainage:** The main works contractor shall ensure that the surface water drainage system reflects the mitigation measures identified within the ES and conforms with Requirement 10 of the DCO. New ponds with permanent water shall be planted with reeds to ensure there are no visible areas of open water from the air in accordance with MoD discussions.	Works undertaken in accordance with Requirement 10.	Main works contractor
MW-WAT15	ES Chapter 11, Section 11.8	**Monitoring of water resources:** *General* The main works contractor shall carry out regular monitoring to identify: a) pollution risks that are unacceptably high; b) spillages and leakages; c) non-compliance with the CEMP/s; and d) suspected pollution incidences. The main works contractor shall provide monitoring details defined within the design, the scope of works and construction method submissions in consultation with the Environment Agency and Wiltshire Council (in relation to their responsibility for private water supplies). The Pollution Incident Control Plan will set out the measures to be implemented to address any adverse findings from the monitoring procedures during and following completion of construction works. *Groundwater* The main works contractor shall, where changes in groundwater levels are predicted to occur as a result of construction activity, which would be considered significant using the methodology defined in the groundwater management plan (refer to MW-WAT10), undertake additional site investigations. Water levels at selected observation piezometers will be monitored before, during and after any dewatering associated with the construction of the tunnel. Additional drainage will be provided as mitigation where necessary. Monitoring arrangements (including the sharing of data and, where relevant, the handover of assets in consultation with the Environment Agency and Wiltshire Council) will be in defined within the Groundwater Management Plan.	Development of the identified monitoring requirements as part of the Groundwater Management Plan.	Main works contractor

MATERIALS				
MW-MAT1	ES Chapter 12, Section 12.8	**Site Waste Management Plan (SWMP):** The main works contractor shall, in accordance with industry good practice and with consideration of IAN 183/14 (or any replacement for the IAN), develop and implement a SWMP to: a) identify and record the types, quantities and destination of waste arisings from the Scheme in the SWMP; b) report this information to The Authority on a periodic basis, and update the SWMP as appropriate; and c) define measures in the SWMP to minimise waste arisings from the Scheme and to recover waste materials in accordance with the principles of the waste hierarchy.	Acceptance by The Authority and approval by the Secretary of State of the SWMP as appended to the CEMP. Consultation with the Environment Agency	Main works contractor
MW-MAT2	ES Chapter 12, Section 12.8	**Materials Management Plan (MMP):** The main works contractor shall prepare a MMP in accordance with the CL:AIRE Definition of Waste: Code of Practice. The MMP shall incorporate an earthworks method statement covering the excavation, on-site movement, placement and compaction of excavated material.	Acceptance by The Authority and approval by the Secretary of State of the MMP, as appended to the CEMP. Consultation with the Environment Agency	Main works contractor
MW-MAT3	ES Chapter 12, Section 12.8	**Recovery target:** The main works contractor shall seek to achieve a recovery rate of 70% for construction and demolition waste (excluding excavated soil and stones).	Recovery of 70% of construction and demolition waste (excluding excavated soil and stones).	Main works contractor
MW-MAT4	ES Chapter 12, Section 12.8	**Secondary and recycled aggregates target:** The main works contractor shall seek to achieve a rate of 22% use of secondary and recycled aggregates, for those applications for which substitution of primary aggregates is technically and economically feasible.	22% use of use of secondary and recycled aggregates (where feasible)	Main works contractor
MW-MAT5	ES Chapter 12, Section 12.8	**Waste storage on site:** The main works contractor shall provide suitable containers for reception and temporary storage of waste on site, and shall arrange for waste to be periodically collected and transported to a suitably licensed facility for treatment or disposal. The main works contractor shall be responsible for obtaining any necessary permits or exemptions for on-site management of waste.	Provision of storage containers as described.	Main works contractor
MW-MAT6	ES Chapter 12, Section 12.8	**Waste Monitoring:** The main works contractor shall undertake regular audits and inspection of waste management activities to ensure compliance with the requirements of the approved SWMP, statutory controls and other Scheme policies and procedures relevant to the management of surplus excavated material and waste.	Implementation of the SWMP and monitoring requirements.	Main works contractor

PEOPLE AND COMMUNITIES				
MW-COM1	n/a	**Notification of works:** The main works contractor shall advise landowners, occupiers and agents, as appropriate, regarding the intended commencement of construction works in areas of the site adjacent to agricultural holdings. The main works contractor shall also liaise with landowners, occupiers and agents, as appropriate, regarding the provision of accommodation works and agree the programme of works and access routes to be used by both the construction traffic and, where relevant, agricultural machinery and/or livestock.	Liaison with landowners, occupiers and agents.	Main works contractor
MW-COM2	n/a	**Biosecurity (agriculture):** The main works contractor shall comply with the requirements of DEFRA and appropriate guidance to avoid, as far as possible, the spread of soil~~ ~~borne~~,~~ crop and animal diseases. The main works contractor will implement appropriate measures to control run-off to reduce any risks associated with disease transmission.	Implementation of appropriate measures.	Main works contractor
MW-COM3	n/a	**Liaison with landowners:** The main works contractor, through the Agricultural Liaison officer (ALO), shall liaise with landowners, occupiers and agents, as appropriate, to establish: a) measures to be implemented to maintain livestock water supplies which may be affected due to construction works; b) fencing requirements both during and post-construction; c) locations of potential carcass burial sites. *Balancing ponds* Where balancing ponds are required, the ALO shall liaise with affected landowners, occupiers and agents, as appropriate, regarding pond locations.	Implementation of appropriate measures.	Main works contractor
MW-COM4	n/a	**Restoration of agricultural land and aftercare:** Where land is to be restored to agriculture the main works contractor shall liaise with the landowner / tenant, through the ALO, and set out the detail for restoration on each specific area of farmland. The land restoration will proceed with full consultation between the landowner/tenant and the main works contractor including inspection of works where applicable and in accordance with requisite site health and safety procedures. *Preconstruction Soil Statements* The main works contractor shall produce Preconstruction Soils Statements for areas of agricultural land within individual land holdings that will be temporarily occupied during the construction of the Scheme. These shall provide a baseline schedule of soil condition against which the restoration of the soil will be assessed. The statements shall identify soils resource topsoil and subsoil unit plans and shall include, as a minimum, all pre-construction soil survey information obtained to inform the ES, the development of the Soils Management Strategy (refer to item MW-GEO3) and the information gathered from the record of condition surveys (refer to item MW-COM8).	Effective communication with landowners / tenants and the production of the Preconstruction Soil Statements	Main works contractor

MW-COM5	n/a	**Monitoring of agricultural land:** The main works contractor's ALO shall undertake further inspections of restored agricultural land with the landowner/tenant and Highways England's soils experts (and valuer, if required) to assess the progress of the restoration. These will be carried out with timing appropriate to any perceived issues or concerns. Concerns will be assessed by all parties and appropriate remedial actions or compensation agreed within the parameters of the compensation code and/or any previous agreements made at the time of acceptance of the initial restoration works and handover to the landowner/tenant.	Implementation of the specified actions.	Main works contractor
MW-COM6	Statement of Common Ground	**Private water supplies:** Where an existing private water supply to a farm is adversely and directly affected by the construction of the Scheme, the main works contractor shall, if requested by the farmer or landowner to do so, provide or procure or meet the reasonable cost of the provision of an alternative supply of water (the form and type of which shall be at the contractor's option). Where the supply is affected temporarily by the construction of the Scheme, then the alternative supply need only be supplied for the period during which it is affected. Where a request is made by the farmer or landowner for a permanent supply due to permanent severance of the existing supply caused by the construction of the Scheme, the main works contractor shall, where provision of an alternative means of supply can be demonstrated by the land owner/farmer to be reasonably required for his business, provide or procure or meet the reasonable cost of a permanent means of alternative supply of water (the form and type (either borehole or mains supply) shall be at the contractor's option). *Water Supply Statements* The main works contractor shall produce Water Supply Statements for landowners / occupiers who rely on private water supplies which could be affected by the Scheme. These shall identify how water supply is to be maintained in the unlikely event that existing supplies are adversely affected as a consequence of the works. The statements shall be produced and provided to landowners / occupiers and The Authority prior to works commencing and include, as a minimum: a) Details and locations of existing boreholes which supply the landowner / occupier; b) Recorded results from groundwater monitoring undertaken by the main works contractor (as part of the Groundwater Management Plan) that are relevant to those boreholes; c) How an emergency will be reported if water is contaminated; d) The procedure for getting water to a farm and how it will be distributed to animals and residential properties if water is affected on a temporary basis; and ~~e)~~ The procedure for getting a new supply of water whether from a borehole, mains supply or combination of both to a farm if the water from the boreholes is contaminated on a permanent basis. e)	Implementation of the specified actions. Provisions of the Water Supply Statement prior to works commencing	Main works contractor
MW-COM7	Statement of Common Ground	**Agricultural land drainage:** The main works contractor shall ensure that the existing land drainage system is not compromised as a result of construction. Land drainage systems will be maintained during construction and reinstated so far as reasonably practicable to a condition that is as effective as the previous condition on	Provision of the drainage survey results and any design to the Authority. Implementation of the	Main works contractor

		completion. The ALO will coordinate drainage surveys to establish the existing drainage position including any related farm drainage that may be affected by the Scheme and these will be marked where encountered. The ALO shall record the location, condition and characteristics (e.g. depth of installation, pipe type and diameter) of drains cut or disturbed by construction of the Scheme. Any field drainage affected by the Scheme shall be either reinstated or diverted to secondary channel if reasonably practicable. Landowners and occupiers shall be informed, through the ALO, of the design and timing of drainage works required during construction and following completion of the Works, including, where relevant, in relation to pipe layout, falls, dimensions and outfalls. Any temporary drainage to be installed shall maintain the integrity of the existing field drainage system during construction. Landowners and occupiers shall be provided with the opportunity to inspect land drainage works as they progress, subject to health and safety and construction considerations. Records of the existing and remedial drainage to be maintained with copies provided to the landowner and occupier following completion of the construction	specified actions.	
MW-COM8	Stakeholder consultation	**Record of Condition survey:** The main works contractor shall undertake a Record of Condition survey to include the following: a) Existing crop regimes; b) The position and condition of existing field boundaries; c) The condition of existing access arrangements; d) The location and type of existing private water supplies; e) The yield of crops; f) The quality of grazing land; and g) The existing weed burden. Photographs and section drawings shall be included in the Record of Condition and it shall be provided to the landowner and occupier alongside the Preconstruction Soils Statement (refer to item MW-COM4).	Undertake the Record of condition survey and provide details to The Authority and landowner / occupier.	Main works contractor
TRAFFIC MANAGEMENT				
MW-TRA1	n/a	**Traffic management measures (general):** The main works contractor shall implement traffic management measures during the construction of the Scheme on all public roads and non-motorised user (NMU) paths materially affected by the works. A notice period shall be required prior to the implementation of certain temporary traffic management measures including the occupation or temporary closure of existing roads, which shall follow consultation with Wiltshire Council. Temporary signs erected during the works will be consistent with the Traffic Signs Manual: Chapter 8. Traffic signs for roadworks and other temporary situations shall comply with the Traffic Signs Regulations and General Directions and will be located where they are clearly visible to road users and cause minimum disruption.	Provision of appropriate traffic management measures. Notice period for traffic management measures to be consulted upon with Wiltshire Council	Main works contractor
MW-	DCO Requirement	**Traffic Management Plan (TMP):**	Works undertaken in accordance with	Main works contractor

TRA2	9	The main works contractor shall prepare and implement a detailed TMP, developed with reference to the Traffic Management Act 2004 and New Roads and Street Works Act 1991 and in accordance with DCO Requirement 9. The main works contractor shall consult with the following agencies / organisations when developing the TMP: a) relevant roads authorities, including Highways England, Wiltshire Council, and the police force; b) Public transport operators; c) the organisers of any major or significant local events, and owners of significant local visitor attractions (including the National Trust and English Heritage Trust); and d) other relevant organisations regarding traffic management and control measures to be implemented to accommodate abnormal traffic. The TMP shall include: a) measures to provide for the safety of traffic, the public and construction staff during traffic management works and temporary traffic control measures; b) a programme of traffic management measures to be implemented and details of traffic management proposals for all stages of the works, on affected public roads; c) procedures to be followed for the temporary or permanent closure or diversion of roads, NMU routes or accesses, including demonstration to the relevant authorities that the construction work cannot be carried out safely without the road closure and agreed diversion routes; d) details of works affecting existing pedestrian, equestrian and cyclist routes, including whether the routes are used by one or more of these groups of road users; e) traffic management layouts, signing and apparatus to be implemented on all affected ~~all~~ local highways, including NMU routes; f) a plan identifying the roads to be used for all known principal construction materials to be delivered to the site; g) plan of the haul routes to be used; h) procedures for informing local communities of all traffic management schemes in advance of the works; i) measures to be implemented to reduce construction traffic impacts or impacts associated with over-parking by site construction workers on residential streets; j) the name and contact details of the main works contractor's Traffic Control Officer and information and advice for the public regarding ways to raise complaints or request information; k) a register of applications for consents associated with temporary traffic management measures; and l) an organogram identifying the named Traffic Control Officer and their lines of reporting.	Requirement 9. Acceptance by The Authority and approval by the Secretary of State of the TMP. Consultation with Wiltshire Council and Historic England having regard to their statutory roles and responsibilities, and where affecting NMUs within the WHS, the members of the SDCG. Consultation on the Construction Workforce Travel Plan, Site Access Plan and Site Travel Plan with the parties set out below in respect of the relevant OEMP measure.	
MW-TRA3	n/a	**Construction Workforce Travel Plan:** The main works contractor shall prepare a Construction Workforce Travel Plan (to be included within the TMP) in consultation with Wiltshire Council. The plan shall include: a) identification of a travel plan coordinator and a description of their responsibilities; b) key workforce traffic issues to consider for each compound/construction site or group of sites;	Acceptance by The Authority and approval by the Secretary of State of the Construction Workforce Travel Plan as part of the Traffic Management Plan.	Main works contractor

		c) site activities affecting the surrounding transport network including relevant context plans; d) anticipated workforce trip generation and how it may change during the construction process; e) travel mitigation measures that will be introduced to reduce the impact of construction workforce on the transport network; f) target to reduce individual car journeys by the construction workforce; g) methods for surveying workforce travel patterns; and h) the process for monitoring and reviewing the Construction Workforce Travel Plan.	Consultation with Wiltshire Council	
MW-TRA4	n/a	**Site Access Plan (SAP):** The main works contractor shall develop a SAP (to be included within the TMP) in consultation with Wiltshire Council, identifying site access and egress routes and points that may be used by the main works contractor and the mechanisms for how they can be varied. The main works contractor shall keep site access / egress points clear at all times and will design and construct site access / egress points to a suitable standard to enable the smooth access / egress of vehicles in a forward direction to limit disruption to road users due to use of the access points. The SAP shall identify proposals and the process for the removal of such access and egress routes when no longer required for the scheme works.	Acceptance by The Authority and approval by the Secretary of State of the Site Access Plan as part of the Traffic Management Plan. Consultation with Wiltshire Council~~.~~ and National Trust on matters relevant to its role and responsibilities.	Main works contractor
MW-TRA5	n/a	**Site Travel Plan (STP):** The main works contractor shall develop a STP (to be included within the TMP) in consultation with Wiltshire Council. The plan shall identify routes to site for materials and plant. Final agreed routes will be detailed within the TMP and all sub-contractors will be provided with copies throughout the duration of the works. Access routes for construction traffic shall be via special and trunk road network(s) and principal roads on the road network only. Should the use of unapproved roads / routes be deemed necessary, this shall be agreed with Wiltshire Council prior to their use. Once approved, use of local roads shall be for the minimum time necessary. Access along residential roads will generally be prohibited unless there are clear reasons for their use. Where residential roads are to be utilised, the residents shall be kept informed in advance of the timing of the works.	Acceptance by The Authority and approval by the Secretary of State of the Site Travel Plan as part of the Traffic Management Plan. Consultation with Wiltshire Council The Authority approval of local road use outside of special, trunk and principal roads (if required)	Main works contractor
MW-TRA6	n/a	**Traffic management measures:** Where deemed necessary, following consultation with Wiltshire Council and the emergency services, the main works contractor shall; a) provide speed detection cameras at temporary traffic management schemes and undertake road safety audits in accordance with DMRB; b) install CCTV cameras at agreed locations to monitor the traffic management schemes; and ~~c)~~ during construction on the line of the existing trunk road, operate a vehicle recovery system to minimise the impact of breakdowns or collisions on the flow of traffic. c)	Consultation with the relevant bodies and implementation of actions (if required).	Main works contractor

MW-TRA7	n/a	**Site haul routes:** The main works contractor shall provide haul routes through the works for use by construction vehicles. Site access points shall be positioned where possible to enable the use of haul routes to be maximised throughout the works, rather than using public roads. Traffic management measures will be provided by the main works contractor where the crossing of public roads is required, with a general presumption in favour of priority to the public highway user.	Provision of haul routes within the works.	Main works contractor
MW-TRA8	n/a	**Abnormal loads:** Where abnormal loads are required for the works the main works contractor shall inform the police, the highway authorities or bridge and structure owners, as appropriate. The procedures for the movement of abnormal loads will be set out in the TMP. Movement of abnormal loads is controlled by MW-G15.	Development of the TMP in consultation with the identified agencies and organisations.	Main works contractor
MW-TRA9	n/a	**Temporary roads / accesses:** Where the main works contractor proposes to provide a temporary or substitute road or access or the like, the width and standard of construction and any lighting and signage required shall be suitable for the traffic anticipated to use the route. Temporary or substitute road access shall be maintained by the main works contractor throughout the works to provide adequately for the traffic using the affected routes. The main works contractor will apply for any consents required for temporary traffic management schemes. Temporary roads shall be reinstated when their use in connection with the Scheme works has finished.	The provision of suitable temporary roads and application / granting of required consents.	Main works contractor
MW-TRA10	n/a	**Mitigation for traffic management measures:** Where the proposed traffic management measures may affect the flow of public transport vehicles and the location of public transport stops or shelters appropriate mitigation measures will be implemented, in consultation with the relevant public transport operators. This will take ~~in~~into account the needs of groups with protected characteristics as defined under the Equality Act 2010. Where separate routes used by pedestrians and other NMUs are affected, the main works contractor shall provide (and identify within the TMP) alternative appropriate and accessible routes within the traffic management scheme being implemented. Once agreed, the specific right of way affected will be scheduled with appropriate nomenclature and diversion routes suitably signposted throughout the works.	Provision of the specified actions.	Main works contractor
MW-TRA11	n/a	**Monitoring of traffic management measures, traffic flows, and public services:** The main works contractor shall outline a monitoring regime within the TMP, to include the below points: a) The main works contractor shall monitor traffic management schemes, traffic levels on roads, routes used to site and site accesses and public roads adjacent to access points to maintain their effectiveness and condition throughout the works and to provide for the safety of traffic, the public and construction staff during traffic management works. b) The main works contractor shall monitor public transport services with regards to journey times and reliability as well as location of public transport stops or shelters to determine the level of impact. The main works contractor will also liaise with bus service providers and Wiltshire Council	Application of an appropriate monitoring regime and implementation of remedial actions (if required).	Main works contractor

		to identify any changes in public transport passenger numbers because of service alterations. ~~c)~~ The main works contractor shall endeavour to assist the traffic authorities in relation to their network management duties insofar as the works affect traffic movement on the local roads, and provide information to the Authority and Wiltshire Council regarding any foreseen potential delays to traffic or public transport services due to construction works. ~~.~~ c)		
MW-TRA12	n/a	**Traffic Management during Tunnel Closures:** The main works contractor shall, prior to the handover of the works to The Authority, prepare, in consultation with Wiltshire Council and the Police, a Tunnel Closure Management Plan (TCMP) setting out, inter alia, the following; a) Procedures to be followed for the planned closure of a single bore, including use of temporary or part-time signing, and advance information proposals. b) Procedures to be followed for unplanned closures of a single or both tunnel bores, either during or outside a planned closure, with particular reference to: i. method of control of access to the eastbound or westbound or both merge slips at Longbarrow or Countess junctions respectively. ii. Signage to be employed at the start of, and on the approved diversion route. iii. Measures to be taken at a local/regional/sub national level to alert drivers of A303 delays. iv. Requirements to liaise with Wiltshire Council's Streetworks Team and the Police in relation to the operation of the procedures embodied in the TCMP and in relation to any future changes to the approved TCMP. v. The design (including protection from overspill lighting), set-up and operation ~~and~~of temporary (during tunnel closures) lighting arrangements of the eastbound / westbound lane crossover points in the vicinity of the Longbarrow and Countess junctions. The main works contractor and The Authority, as appropriate, shall comply with the approved TCMP.	Consultation with Wiltshire Council and the Police. The Authority approval of the TCMP	Main works contractor

4 Development of detailed design

4.1 Introduction

4.1.1 This section of the OEMP sets out the basis for the development of the detailed design of the Scheme:

a) Section 4.2 describes the Design Vision for the Scheme.

b) Section 4.3 and Table 4.1, identify key Design Principles which will inform the detailed design of the Scheme.

c) Section 4.4 addresses Design Commitments, which are included in Table 3.2b Record of Environmental Actions and Commitments for the main works.

d) Section 4.5 sets out how The Authority will involve key stakeholders in the detailed design of aspects of the Scheme.

4.1.2 The Authority recognises that key stakeholders have valuable experience, knowledge and perspectives and can make a valuable contribution to the development of the detailed design of the Scheme. In developing the Scheme through the pre-application process The Authority has already forged important working relationships with key stakeholders and established forums where the input of those stakeholders has been sought, for example the members of the Heritage Monitoring & Advisory Group[5] (HMAG), on the Scheme for which it seeks development consent (see paragraphs 1.2.5 ~~and~~to 1.2.~~6~~8 above). The Authority will continue to engage with key stakeholders through the development of the detailed design. This engagement process will continue, taking into account The Authority's ability to deliver the Scheme, once consent is granted.

4.1.3 There are three facets to The Authority's approach to the development of the Scheme's detailed design which have been, and will continue to be, guided by the overall Design Vision:

a) Commitments fixed in Design Commitments set out in REAC Table 3.2b within this OEMP;

b) Design Principles guiding the development of the detailed design of certain specified aspects of the Scheme; and

c) Design consultation on certain specified aspects of the Scheme that are fixed post the grant of consent but before the start of the relevant work through a process of stakeholder consultation on the detailed design.

[5] Wiltshire Council Archaeology Service, National Trust, Historic England, English Heritage

4.2 Design Vision

Highways England's Vision: The Road to Good Design

4.2.1 The Authority is required as part of their operating licence to have due regard to the principles of good design and has published the design guide 'The Road to Good Design'[6] outlining its key principles. The Authority's vision as set out in the design guide and which will inform the design going forward is:

> *"We aim to put people at the heart of our work by designing an inclusive, resilient and sustainable road network; appreciated for its usefulness but also its elegance, reflecting in its design the beauty of the natural, built and historic environment through which it passes, and enhancing it where possible."*

Purpose of the Vision

4.2.2 This Design Vision ('the Vision') covers the full extent of the Order limits, including the area within the Stonehenge, Avebury and Associated Sites World Heritage Site (WHS).

4.2.3 The Scheme provides a unique opportunity for the enhancement of an internationally recognised landscape and its visitor experience, as well as that of local communities.

4.2.4 The Scheme presents a 'once in a lifetime' opportunity to respond to the sensitivities and challenges of this landscape and demonstrate imaginative and exemplar design as part of a collaborative approach between the appointed contractor, stakeholders and The Authority.

4.2.5 The purpose of the Vision is to:

a) ensure a holistic approach to the design of the whole Scheme by setting out the overarching design vision;

b) guide the tender and detailed design stages of the Scheme;

c) provide an aspiration and driver for exemplary design from the appointed contractor;

d) provide a point of reference for the design review process;

e) demonstrate how the detailed design will take account of the criteria for good design as set out in the National Policy Statement for National Networks, to ensure it is sustainable infrastructure, sensitive to its place, efficient in the use of natural resources and energy used in their

[6] Highways England 'the road to good design', 2018, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/672822/Good_road_design_Jan_18.pdf

construction, matched by an appearance that demonstrates good aesthetics as far as possible.

f) The Vision distils the overarching aims which have informed the development of the design to date. They have formed the driver for the principles and commitments set out in this Outline Environmental Management Plan.

The Vision's Overall Aims

4.2.6 Applying to the whole of the Scheme, the Vision's overall aims are:

a) **Respecting and Responding to the Historic Landscape.** The detailed design should take full account of the character of the unique historic landscape in which it sits. This includes the OUV of the WHS, the inter-visibility between monuments, heritage assets and the relationship between the WHS, its immediate setting and wider landscape. The Scheme should show due consideration of the objectives of the WHS Management Plan, to ensure that visibility of the Scheme is minimised, the design is elegant and it impacts positively on the user experience within the WHS.

b) **Integration and Connectivity.** The detailed design should show careful and sensitive alignment of the proposed road in relation to cultural and ecological designations, landform, vegetation and features, so that the Scheme reflects the beauty of the natural, built and historic environment through which it passes. The earthworks design should reflect the rolling landform through its gradients and profiling, to reduce the visibility of the road. New structures should respond to the landform to maximise their concealment. The landscape and ecological design should maintain connectivity for existing habitats and re-establish landcover whilst giving due consideration to the aims and objectives of the WHS Management Plan.

c) **High quality and imaginative design.** The engineering and architectural design of the Scheme should create a clear design rationale sympathetic to its context using a co-ordinated palette of materials and finishes, with imaginative design features, e.g. green bridges and green infrastructure.

d) **Unity and elegance.** All structures and features should be considered holistically, to deliver a unified approach sympathetic to their scale, form and mass and identify opportunities that minimise their visual impact. This should include all highway furniture and hard landscape features. Where highways furniture and structures are visible, they should be elegant and sympathetic to their setting for both the road user and those within the wider landscape. Road signage should be designed for minimal visual impact, ensuring no unnecessary clutter, while ensuring the route is safe.

e) **User experience and safety.** The Scheme should improve the accessibility of the landscape to local communities, visitors and tourists through new recreational routes and crossings of the proposed road. The Scheme should aim to provide enjoyment and excitement for the road user, using materials and design features which engage with their sense of place and history of the landscape, whilst ensuring the road is easy to navigate through safe and secure infrastructure. The tunnel should enhance the driver experience and recognise the presence of the WHS.

f) **Sustainability and Resilience.** Where possible, materials should be locally sourced, reclaimed, recycled and have low carbon impact. All materials should be durable and age well across the lifecycle of the Scheme. Drainage run-off from the carriageway should be conveyed to infiltration ponds for treatment as part of a Sustainable Urban Drainage strategy. The Scheme should seek to remove or reduce where possible the environmental impact of traffic and highway infrastructure and be resilient to climate change.

4.2.7 The DCO design reflects the Vision for the Scheme through:

a) ***Respecting and Responding to the Historic Landscape*** - the tunnel, portals, retained cutting and Green Bridge Four remove and reduce the sight and sound of traffic pursuant to the WHS Management Plan, as well as respecting the setting of the WHS via the alignment of the route.

b) ***Integration and Connectivity*** - the grading out of embankments and the rounding off of cuttings ensure the Scheme's earthworks integrate within the open and rolling landscape. The new NMU routes, including green bridges and the conversion of the existing A303 to a restricted byway, improve public access across the Scheme.

c) ***High quality and imaginative design*** - the false cuttings/bunds reduce the visibility of vehicles; the re-use of excavated chalk enables new chalk grassland habitats to develop; the split deck of the River Till retains light to the valley floor; the retained cutting minimises land take within the WHS; the portal design incorporates grassed canopies to conceal them within the landscape; and the siting of Countess Flyover retains the Scheme within the highway boundary.

d) ***Unity and elegance*** - the siting of structures minimises their visibility in the landscape; the extensive use of chalk grassland enables a unified pattern of vegetation cover; and the minimising of highways furniture all contribute to one identity for the whole route.

e) ***User experience and safety*** - the Scheme provides for vehicle and non-motorised users, with the tunnel providing a new reference point on the journey, and the extended recreational routes providing new and improved access between communities and to and within the WHS.

f) ***Sustainability and Resilience*** - road design takes into account the potential effects of climate change, including Sustainable Urban Drainage Systems, and through the use of native plant species.

Design Vision for Scheme Sections

4.2.8 The Scheme has been divided into three sections, with each adopting a tailored vision and design response to the varying context in which it is set. The approach in the DCO design and in the principles and commitments set out in this OEMP in relation to all of the sections has been developed pursuant to the overall Vision for the Scheme.

Western section: Winterbourne Stoke bypass to Longbarrow Junction

4.2.9 The Vision for the western section is to:

a) ***Reflect the downland and River Till character.*** The Scheme should integrate earthworks by re-grading the landform sympathetically to the rolling downland and River Till valley sides to integrate the Scheme in the landform. The design for the River Till crossing (including the proposed environmental barrier) should provide an elegant and restrained structure which minimises its mass and visual presence.

b) ***Respect the setting of Winterbourne Stoke.*** The Scheme should minimise the visibility of traffic and highways furniture to the north of Winterbourne Stoke and from within Parsonage Down National Nature Reserve, and respect the open character of the River Till valley floor through earthworks, native planting and elegant design of structures.

c) ***Increase access across the landscape.*** The Scheme should enhance recreational opportunities across the western section and between the WHS via new routes.

d) ***Respond to the Parsonage Down National Nature Reserve Strategy.*** The Scheme should respond to the undulating landform and landcover of the Parsonage Down NNR.

e) ***Respect the Western Setting of the WHS.*** The Scheme should consider the design to the west of the WHS holistically with that within the WHS, to achieve a fully integrated design solution.

Central section: within the WHS

4.2.10 The Vision for the central section is to:

a) ***Sustain the OUV of the WHS.*** The Scheme should maximise the concealment of structures and features outside of the tunnel from the wider landscape through their siting in the landscape in relation to existing ground levels, choice of materials and colour tone of the finishes. New landscaping and earthworks should not seek to imitate the monuments within the WHS landscape. The dark skies environment

should be improved by avoiding road lighting wherever practicable and by the Scheme alignment having regard to Solstice alignments.

b) ***Due consideration of the objectives and policies of the WHS Management Plan.*** This should include reducing the dominance and negative impact of roads and traffic on the WHS, delivering non-motorised users (NMU) opportunities, the re-use of the existing A303 and connection to existing byways. The Scheme should acknowledge the potential for future access within the WHS and its wider landscape, e.g. the reconnection of the Avenue.

c) ***Deliver a high quality user experience.*** The Scheme design should include architectural detailing and a choice of materials to enhance the user experience and become a new point of reference while travelling along the A303, whilst being safe and easy to navigate.

Eastern section: Countess Junction to just beyond Solstice Park Junction

4.2.11 The Vision for the eastern section is to:

a) ***Improve linkages while minimising impacts.*** The Scheme should utilise the existing Countess Roundabout to limit landtake, while improving the connectivity of the local road network by separating it from the strategic network. This should include improvements to pedestrian access along the A345 and to the east of Solstice Park, whilst not affecting traffic flows on the A303 and minimising negative impacts on local residents. The design for the Countess flyover (including the proposed acoustic screen) and its associated landscaping should provide an elegant and restrained structure which minimises its mass and visual presence.

b) ***Respect the setting of the River Avon.*** The Scheme should avoid impacting on the setting of the River Avon by utilising the existing highway alignment and crossing over the River Avon, reducing the mass of the flyover, ensuring materials and colour tones are sympathetic to its location and maximising the opportunities for new planting.

c) ***Improve User Safety.*** The Scheme should enhance road safety and rationalise vehicle movement to improve the road network between Countess Roundabout and the east of Solstice Park, through alterations to slip roads and junctions in combination with changes to public rights of way for non-motorised users.

Design principles and commitments

4.2.12 The design principles and commitments discussed below, have all been guided by the Design Vision.

4.3 Design Principles

4.3.1 The Design Principles are set out in Table 4.1. These identify areas of the Scheme's detailed design where Design Principles have been settled, with the precise detail to be determined at the detailed design stage. The areas of the Scheme where this treatment is appropriate are areas where key stakeholders (the members of the SDCG) have an acknowledged concern.

4.3.2 Design Principles describe the common general overall goal or objective, pursuant to the Vision, but are not intended to prescribe the precise means of achieving it. These principles are accompanied, at Annex A.4, by illustrations which show how key elements of the Scheme could look, when designed in compliance with the Vision, design principles and commitments presented in this OEMP.

4.3.3 The Design Principles approach is also coupled with stakeholder consultation on the development of the detailed design, to give confidence of a robust process that would be followed through from DCO examination into detailed design and delivery.

4.4 Design Commitments

4.4.1 The OEMP contains a number of design commitments, indicated in the REAC Table 3.2b through a reference containing a “D” prefix.

4.4.2 As compliance with the OEMP is secured by paragraph 4 of Schedule 2 of the DCO, the ExA and stakeholders can have confidence that the measure will be delivered. There are, however, limitations to what can be secured through this technique. The commitment must be capable of being expressed with sufficient certainty. This is particularly difficult with commitments such as to provide "visually unobtrusive" fencing. For these more ephemeral issues a "design principles" approach is appropriate.

4.5 Design Consultation

4.5.1 This section of the OEMP sets out:

a) Who will be consulted;

b) What those bodies will be consulted on;

c) How they will be consulted;

d) When they will be consulted;

e) How the Applicant demonstrates its consideration of that consultation;

f) How disputes will be addressed; and

g) How the proceedings are recorded and made publicly available.

Who will be consulted

4.5.2 The Authority has established a Stakeholder Design Consultation Group (SDCG) that it will consult on in relation to the specific areas of the detailed design as it is being developed. The SDCG will be administered by The Authority and membership comprises representatives of the following stakeholders:

~~e)~~a) English Heritage Trust;

~~f)~~b)Historic England;

~~g)~~c) The National Trust; and

~~h)~~d) Wiltshire Council.

Once appointed, representatives of the Contractor would also attend.

What those bodies will be consulted on

4.5.3 The Authority, and its Contractor once appointed, will consult the SDCG on the external appearance of the following elements of the Scheme within and visible from the World Heritage Site:

a) The tunnel service buildings (Work No.1D(ii));

b) Portals structures (Work Nos. 1E(ii) and 1G(iii)) (including lighting), retaining walls (part of Work Nos. 1D(ii) and 1H(ii) and 1H(iii) and Green Bridge Four (Work No.1d(i));

c) Public rights of way (new and interactions with existing), including pedestrian, equestrian and- cycling and non-motorised user provision and wayfinding including surfacing, materials, benches, fencing and gating; and

d) all other gating, signage and fencing.

4.5.4 Outside of the World Heritage Site, The Authority, and its Contractor once appointed, will consult the SDCG on the external appearance of the following:

a) Signing and signalling at the new Longbarrow junction (Work No.1C(ii)); and

b) Flyover, signing and lighting at the Countess junction (Work No.1H(iv)).

4.5.5 Collectively, the aspects of the Scheme described in paragraphs 4.5.3 and 4.5.4 are referred to as the “Detailed Design” in this section of the OEMP.

How they will be consulted

4.5.6 The Authority anticipates that elements of the Detailed Design may progress at different stages to one another. For example, the restricted byway that will be created along the line of the existing A303 will not be constructed until after the completion and opening to traffic of the new A303. As a minimum the SDCG will

be consulted on each part of the Detailed Design prior to the commencement of construction of that part.

4.5.7 In addition, the SDCG will be consulted on the emerging Detailed Design during the process of its development. This will be secured through regular meetings of the SDCG.

4.5.8 Many elements of the Detailed Design do not need to be determined prior to commencement of the larger works of which they form part. For example, the materials for finishing the tunnel portals would not need to be consulted upon prior to the commencement of boring the tunnel. However, The Authority is required to consult on the materials for the external finishes to the tunnel portals prior to the installation of those finishes.

When they will be consulted

4.5.9 The SDCG would meet as required during the following stages of the Detailed Design development:

a) Prior to commencing the development of the Detailed Design;

b) During the development of the Detailed Design; and

c) On the Contractor's submitted Detailed Design, prior to the Applicant's acceptance of it.

Meetings will be monthly or ~~at greater intervals as~~as otherwise agreed.

How the Authority demonstrates its consideration of that consultation

4.5.10 The Authority, and/or its Contractor once appointed, will provide the SDCG with documentation sufficient to understand the relevant part of the Detailed Design, including plans, sections and details of materials and finishes ("Consultation Information").

4.5.11 The SDCG will receive the Consultation Information no less than 10 working days prior to the meeting of SDCG at which the Consultation Information will be considered.

4.5.12 The Authority is obliged to take into consideration the views expressed by the SDCG on the Detailed Design and will make the final decision on whether to implement them according to whether it is appropriate, reasonable and feasible to do so, taking into account considerations including but not limited to cost and engineering practicability.

How disputes will be addressed

4.5.13 The Authority envisages that disputes will be kept to an absolute minimum by the continued proactive engagement and collaborative working between the Authority and SDCG. In the exceptional event that it was not possible for the SDCG and The Authority to reach agreement on any specific aspect of the Detailed Design, any

party to the disagreement would escalate the matter to a sufficiently senior person, short of the Chief Executive or equivalent, within their parent organisation. If the matter in dispute is not resolved within 10 working days of being escalated, the matter in dispute is to be further escalated to each party's Chief Executive (or equivalent or Chief Engineer in the case of The Authority) with a view to resolving the disagreement. If the matter in dispute is not resolved within 5 working days of referral to Chief Executive level, paragraph 4.5.14 applies.

4.5.14 The Authority is the Strategic Highways Company with the responsibility for operating the strategic road network and responsible for delivering the Scheme. As such, it is appropriate that the final decision on detailed design remains its preserve, using its expertise and knowledge as to what would be appropriate and operationally feasible in the context of the Scheme.

4.5.15 Following a meeting of the SDCG that considers Consultation Information, the Authority and/or its Contractor will prepare a summary explaining how the Detailed Design responds to the views recorded in the minutes of that meeting, and, where the Detailed Design departs from those views, the reasons for that departure.

How the proceedings are recorded and made publicly available

4.5.16 The Authority, and/or its Contractor once appointed, will maintain on a publicly accessible website records comprising:

a) The Consultation Information;

b) The minutes of any meeting of the SDCG insofar as it relates to the Consultation Information;

c) The summary required by paragraph 4.5.15.

Elements to be adopted by the adopting authority

4.5.17 The design of the key elements of the scheme set out at 4.5.3 and 4.5.4 above to be adopted by authorities other than The Authority (the "adopting authority") shall, following the consultation process with the SDCG set out in this section 4.5, be agreed by the Authority with the adopting authority.

Table 4.1 Design development principles

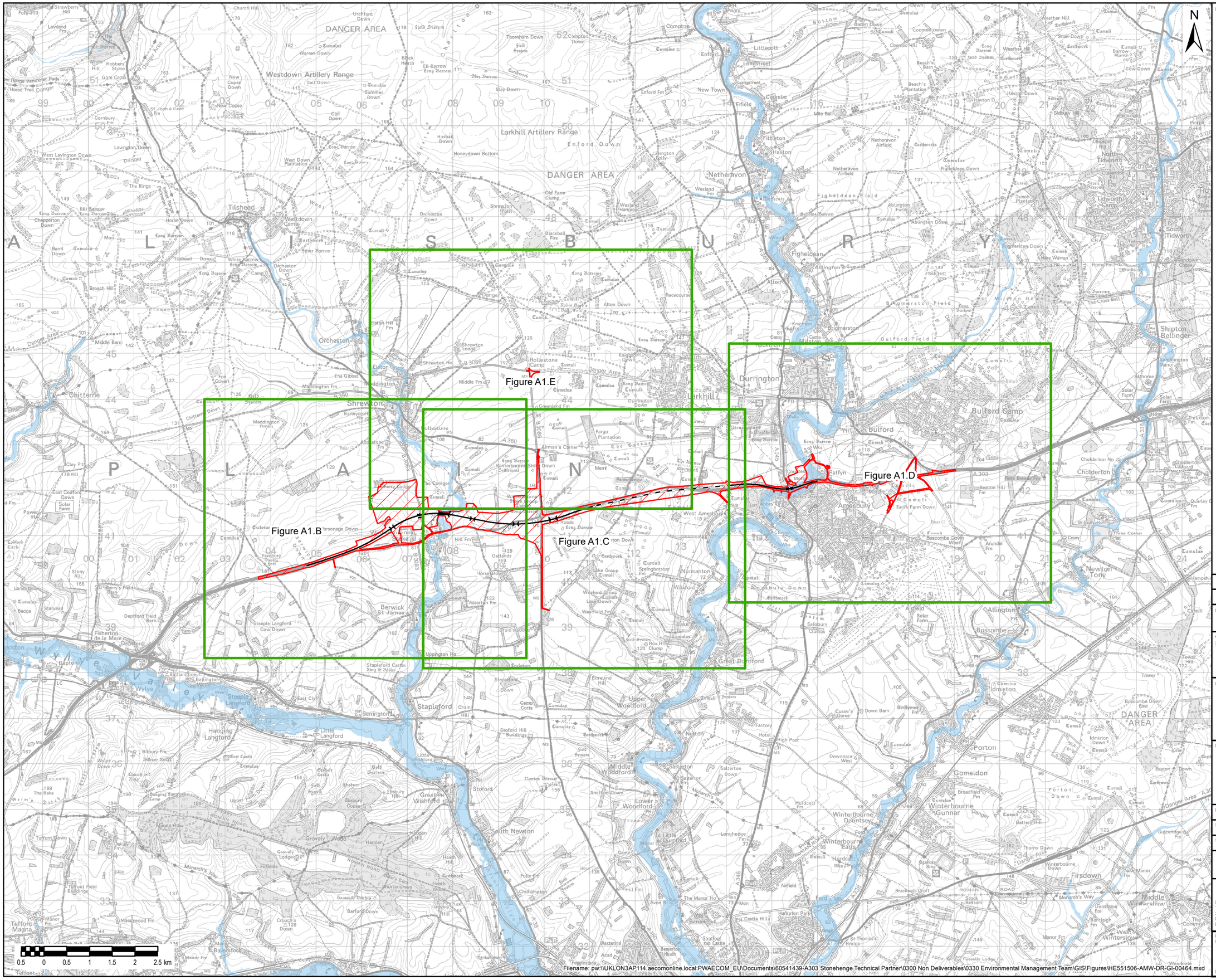
Ref.	Principle	Where applied	Responsible person(s)
General			
P-G01	The detailed design of all material elements, including landscaping, of the Scheme within the WHS ~~to~~will take due consideration of the aims and policies of the WHS Management Plan.	Scheme-wide	
P-G02	The Scheme ~~to~~will provide a high performing dual carriageway to improve safety on the A303 between Amesbury and Berwick Down by giving due consideration to Highways England's Road to Good Design document.	Scheme-wide	
P-G03	The design ~~to~~will consider resilience to climate change by incorporating future climate change allowances and using sustainable drainage solutions.	Scheme-wide	
P-G04	There ~~should~~will be a clear design rationale which respects and responds to the historic landscape. The Scheme ~~should~~will comprise high quality and imaginative design features which are elegant and impact positively on the user experience.	Scheme-wide	
P-G05	The design of the Scheme ~~to~~will be cognisant of public safety at the cuttings and portals within the WHS.	WHS	
P-G06	All temporary works will be designed and undertaken to minimise their visual impact.	Scheme-wide	
Signage and lighting			
P-SL01	Minimal signage in areas that are visible from the WHS.	Scheme-wide	
P-SL02	Road signs ~~to~~will be located to minimise and wherever possible avoid adverse impacts on the ~~setting~~significance of monuments in relation to their setting by ensuring views between monuments, particularly Neolithic and Bronze Age monuments, are not interrupted wherever practicably possible.	Scheme-wide	
P-SL03	The use of Road Restraint Systems ~~to~~will be minimised by providing passively safe supports to road signs	Scheme-wide	
P-SL04	Fence heights ~~to~~will generally be 1.2 metres high except when a different height is required to comply with the standard minimum for adjacent land use e.g. higher for equestrians.	Scheme-wide	
Tunnel portals, retaining walls and other structures			
P-PWS01	Any new infrastructure (and associated elements) ~~to~~will be designed to be sympathetic with the surrounding landscape character~~, which may include the integration of planting within areas immediately adjacent to that piece of infrastructure.~~ .	Scheme-wide	
P-PWS02	All external scheme components ~~to~~will use a common materials palette; applying to a range of colours, surface finishes and textures. The palette and form ~~to~~will reflect the surrounding landscape character and local materials. The design ~~should~~will create spaces which are natural in appearance. The final details ~~to~~will be developed in consultation with the SDCG and will be subject to onsite trial panels or constructions at locations to be agreed with The Authority following consultation with the SDCG. ~~.~~	Scheme-wide	
P-PWS03	The surface finish of the western cutting retaining walls (within the WHS) ~~to~~will reflect the character of the surrounding landscape, subject to conforming with the requirements of D-NOI5.	WHS	

P-PWS04	The Scheme within the WHS ~~to~~will be designed to enhance the driver experience and the quality of the design will recognise the presence of the World Heritage Site	WHS	
P-PWS05	The viaduct crossing of the River Till ~~to~~will be designed to retain the open character of the valley floor.	Scheme-wide	
P-PWS06	The landscape earthworks at the new Longbarrow junction to sympathetically integrate the junction within the existing rolling landform and surrounding landscape character.	Scheme-wide	
P-PWS07	The new flyover above Countess roundabout ~~to~~will make use of space reserved when the junction was originally constructed. The design ~~to~~will comprise two single-span bridges with earthworks embankments rather than an open viaduct along with adequate space for new planting (including on the acoustic screen, where practicable and safe to do so) to soften and screen the flyover, acoustic screen and vehicles.	Scheme-wide	
P-PWS08	Tunnel canopies will be designed to minimise the visibility of tunnel supports and buildings from within the WHS. The surface finish to the tunnel service buildings ~~to~~will be compatible with the adjacent walls to further aid this.	WHS	
PRoWs and PMAs			
P-PRoW1	Public Rights of Way (PRoW) and Private Means of Access (PMA) ~~to~~will have a surface that is appropriate to their use and location, developed in consultation with SDCG. Within the WHS, the surface and material finishes of PRoWs / PMAs ~~to~~will be visually recessive and sympathetic to the landscape character and ~~setting~~the significance of ~~the~~ monuments in relation to their setting and suitable to accommodate use by, as appropriate, agricultural and land management vehicles, carriages, equestrians, cyclists and pedestrians, including people with impaired mobility, wheelchair users and parents with buggies and children. Appropriately vegetated verges ~~to~~will be provided between the surfaced area and adjacent land boundaries.	Scheme-wide	
P-PRoW2	Timber posts and strained wire fences ~~to~~will be used to separate PRoWs/PMAs from adjacent private land in accordance with Highway Construction Details in the Manual of Contract Documents for Highway Works (MCHW) and Design Manual for Road and Bridges (DMRB). Where necessary for adjacent land use, appropriate stock-proof netting ~~to~~will be added to strained wire fences.	Scheme-wide	
P-PRoW3	~~No~~There will be no lighting on any PRoW/PMA within the Scheme.	Scheme-wide	

P-PRoW4	~~No~~**Crossing points and gates** There will be no new gates on byways open to all traffic. On restricted byways, full width gates with Kent Carriage Gaps ~~to~~will be used at access/egress locations and crossing points where access rights alter, based on details in BS5709, the Manual of Contract Documents for Highway Works - Highway Construction Details, and in accordance with the Design Manual for Roads and Bridges and the relevant elements of the 'Advice on Gate installation' and 'Advice on Vehicle Barriers' published by the British Horse Society. Gates ~~to~~will be sufficiently wide and appropriately placed to accommodate users with restricted mobility and authorised users as necessary, including agricultural vehicles and other agricultural machinery and appropriate locking measures ~~to~~will be employed to ensure that those entitled to exercise rights of vehicular access over restricted byways would be capable of doing so freely. All gates and barriers, where required as limitations on the free passage of the public along footpaths, bridleways and restricted byways ~~to~~, will comply with the current British Standard 5709; Gaps gates and stiles. Equestrian gates ~~to~~will be provided on bridleways at access/egress locations and crossing points where access rights alter, while on footpaths, pedestrian gates ~~to~~will be installed where access points alter at access/egress locations and crossing points. Specifically, with regard to the crossing of AMES12 and the restricted byway on the old A303, this will be designed to maintain safe, clear and unhindered access for all users while minimising its visual impact on the WHS.	Scheme-wide	
Landscape and earthworks			
P-LE01	Planting strategy ~~to~~will have due consideration to the objectives of the WHS Management Plan, ~~where~~while also ensuring that this does not result in conflict with the ~~Schemes~~ ecological or visual mitigation ~~as illustrated~~that is identified on the Environmental Masterplan.	WHS	
P-LE02	New landscaping ~~to~~will reflect and integrate with the existing landscape character i.e. rolling species rich downland, and will not ~~to~~ seek to imitate the monuments within the landscape. The landscaping ~~to~~will include grading out of the embankments and rounding off the top of cuttings, to reflect the existing natural landform.	Scheme-wide	
P-LE03	The detailed landscape design approach ~~to~~will reflect the surrounding landscape character and have regard to the significance the monuments and monument groups derive from visual connectivity within their settings.	Scheme-wide	
P-LE04	The use of false cuttings (bunds) outside the WHS ~~to~~will aid in the softening of views of vehicles, particularly cars.	Scheme-wide	
P-LE05	The existing highway planting at Countess Junction ~~to~~will be retained, supplemented by additional tree planting where practicable.	Scheme-wide	
P-LE06	~~The use of excavated~~Excavated materials will be used to form chalk grassland and landscape features within the Order Limits to minimise the need to transport surplus material to off-site disposal facilities.	Scheme-wide	

5 Annexes

Annex A.1 – Environmental Constraints Plan



NOTES / LEGEND

- Indicative centreline
- Proposed tunnel
- Proposed Scheme boundary
- Risk of Flooding from Rivers and Sea

Revision Details	By / Check	Date	Suffix

Purpose of issue: DCO APPLICATION

Client: Highways England

Working on behalf of: highways england

Project Title: A303 AMESBURY TO BERWICK DOWN

Drawing Title: ANNEX A.1 FIGURE A.1A ENVIRONMENTAL CONSTRAINTS PLAN

Designed	Drawn	Checked	Approved	Date
HS	TD	CC	WB	13/09/19

Internal Project No.: 60541200

Scale @ A3: 1:75,000 | Zone: SW

Highways England
Temple Quay House
2 The Square, Temple Quay
Bristol
BS1 6HA

Drawing Number: Highways England PIN	Originator	Volume	Location	Type	Role	Number	Rev
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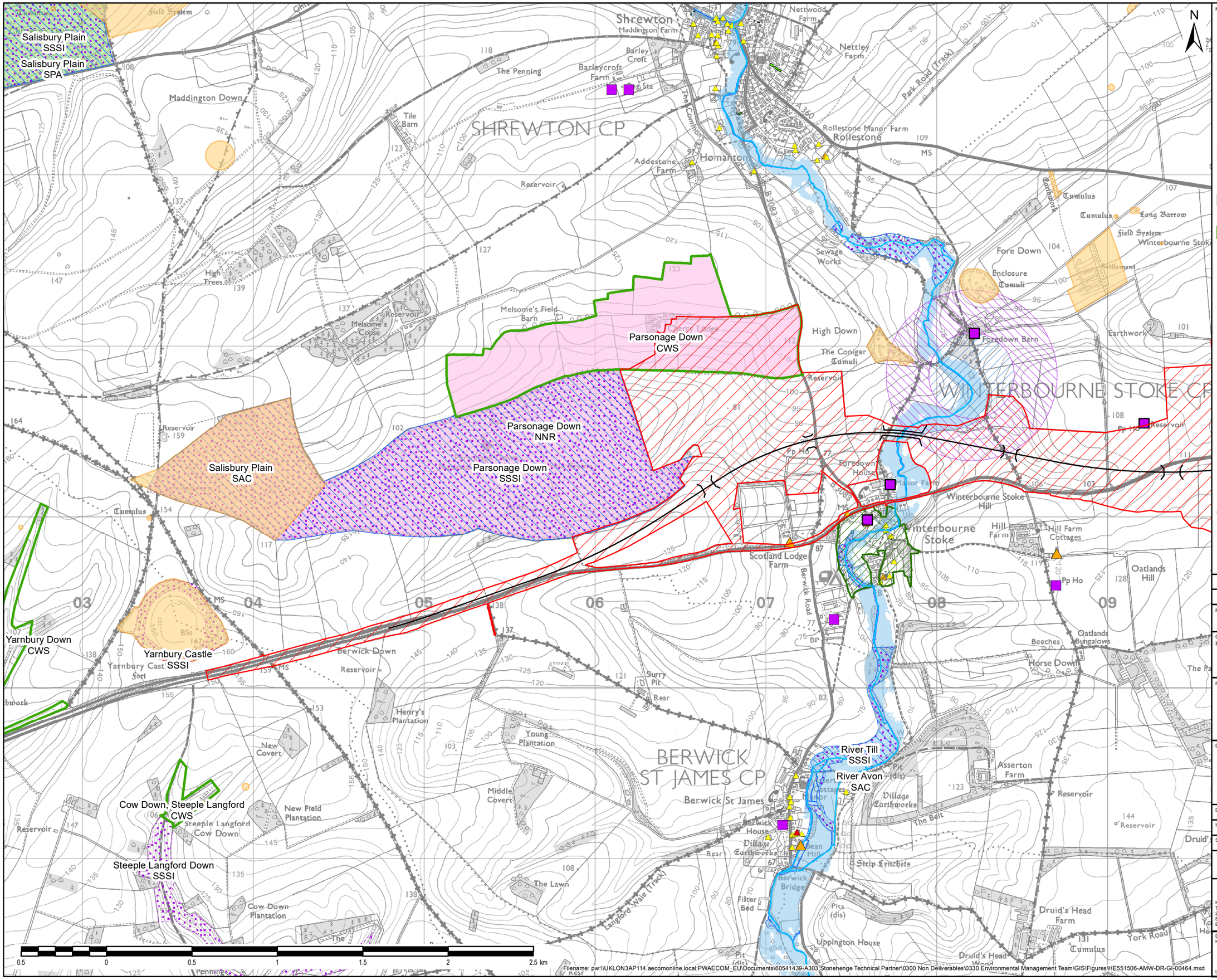

NOTES / LEGEND

- Private Water Supplies provided by Wiltshire Council
- Licensed Groundwater Abstraction provided by Environment Agency
- Grade I Listed Building
- Grade II* Listed Building
- Grade II Listed Building
- Indicative centreline
- Proposed tunnel
- Proposed Scheme boundary
- Tree Preservation Order (TPO)
- WFD River Waterbody
- Conservation Area
- Scheduled Monument
- County Wildlife Site (CWS)
- Special Area of Conservation (SAC)
- Site of Special Scientific Interest (SSSI)
- National Nature Reserve (NNR)
- Special Protection Area (SPA)
- GCN Pond - 250m Buffer
- GCN Pond - 500m Buffer
- Risk of Flooding from Rivers and Sea

Revision Details	By	Check	Date	Suffix

Purpose of issue: DCO APPLICATION

Client: Highways England

Working on behalf of: highways england

Project Title: A303 AMESBURY TO BERWICK DOWN

Drawing Title: ANNEX A.1 FIGURE A.1B ENVIRONMENTAL CONSTRAINTS PLAN

Designed	Drawn	Checked	Approved	Date
HS	TD	CC	WB	13/09/19

Internal Project No. 60541200

Scale @ A3: 1:20,000 | Zone: SW

Highways England
Temple Quay House
2 The Square, Temple Quay
Bristol
BS1 6HA

Drawing Number: Highways England PIN | Originator | Volume | Location | Type | Role | Number

HE551506 | AMW | GEN | SCHEME WIDE | DR | GI | 00464

Rev: 01

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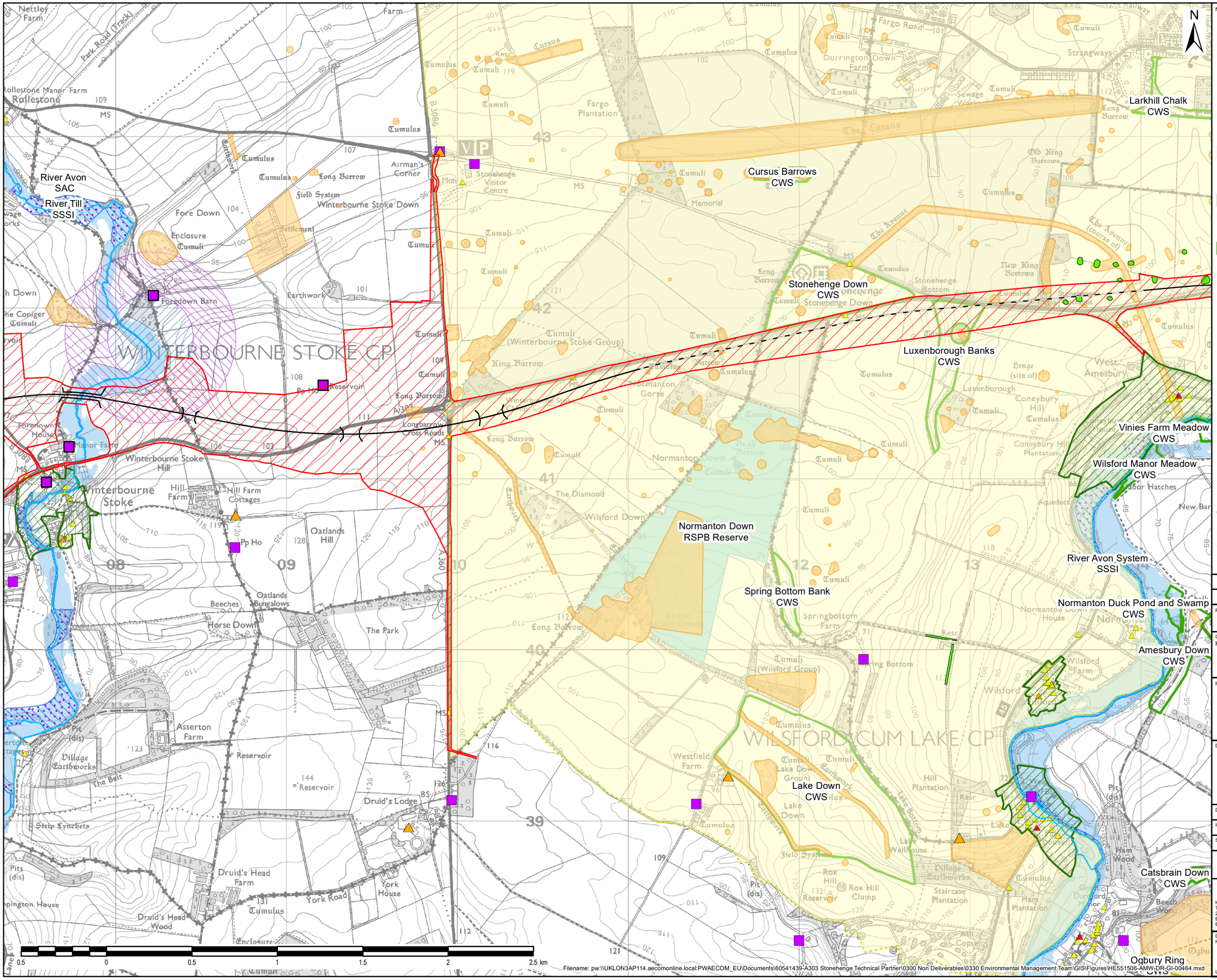

NOTES / LEGEND

- Private Water Supplies provided by Wiltshire Council
- Licensed Groundwater Abstraction provided by Environment Agency
- Grade I Listed Building
- Grade II* Listed Building
- Grade II Listed Building
- Indicative centreline
- Proposed tunnel
- Proposed Scheme boundary
- Tree Preservation Order (TPO)
- WFD River Waterbody
- Conservation Area
- Scheduled Monument
- World Heritage Site
- County Wildlife Site (CWS)
- Special Area of Conservation
- Site of Special Scientific Interest (SSSI)
- RSPB Reserve
- GCN Pond - 250m Buffer
- GCN Pond - 500m Buffer
- Risk of Flooding from Rivers and Sea

Revision Details	By	Check	Date	Suffix

Purpose of issue: DCO APPLICATION

Client: Highways England

Working on behalf of: highways england

Project Title: A303 AMESBURY TO BERWICK DOWN

Drawing Title: ANNEX A.1 FIGURE A.1C ENVIRONMENTAL CONSTRAINTS PLAN

Designed	Drawn	Checked	Approved	Date
HS	TD	CC	WB	13/09/19

Internal Project No. 60541200

Scale @ A3: 1:20,000 | Zone: SW

Highways England
Temple Quay House
2 The Square, Temple Quay
Bristol
BS1 6HA

Drawing Number: Highways England PIN | Originator | Volume | Location | Type | Role | Number

HE551506 AMW GEN SCHEME WIDE DR GI 00464

Rev: 01

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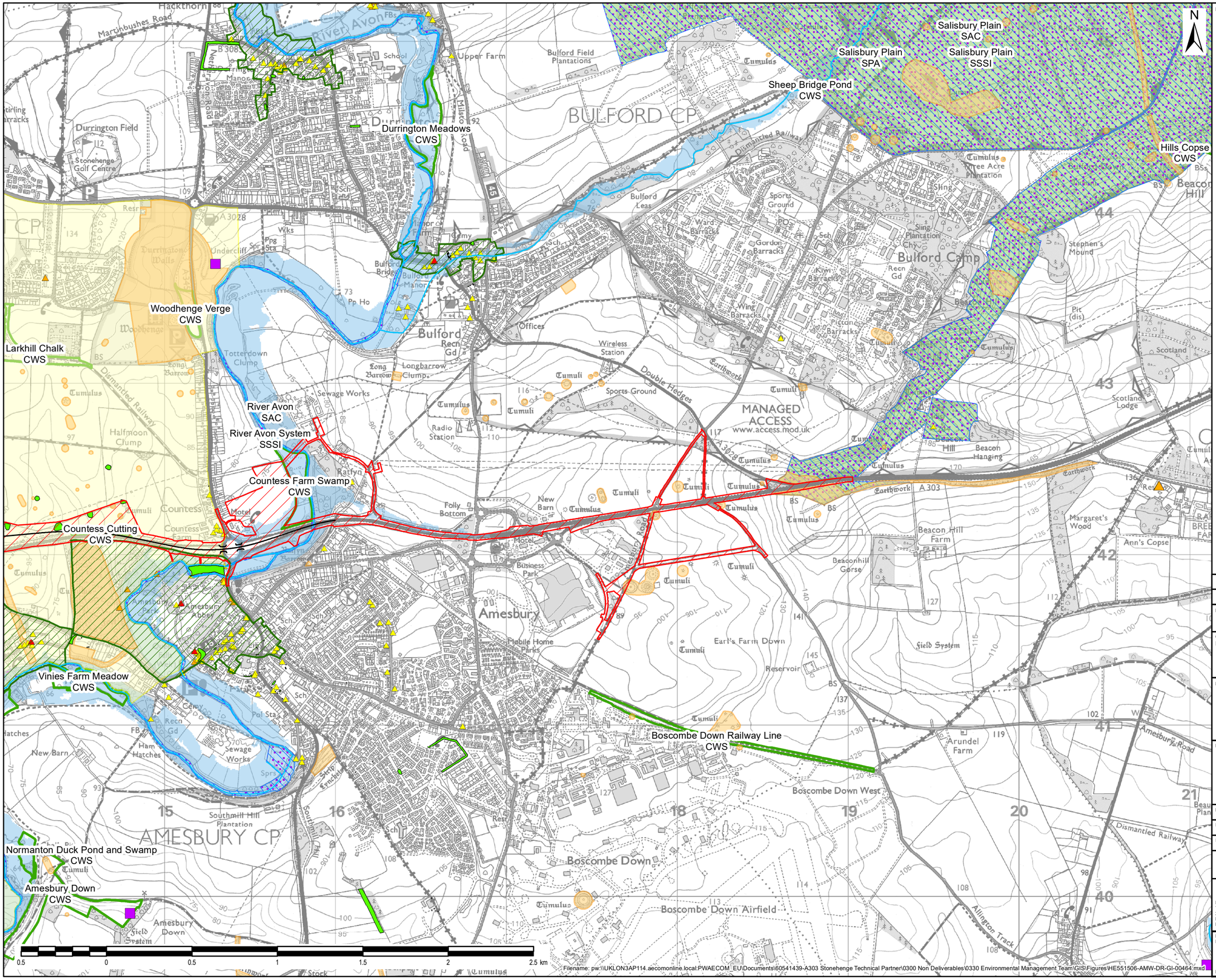


NOTES / LEGEND

- Private Water Supplies provided by Wiltshire Council
- Licensed Groundwater Abstraction provided by Environment Agency
- Grade I Listed Building
- Grade II* Listed Building
- Grade II Listed Building
- Indicative centreline
- Proposed tunnel
- Proposed Scheme boundary
- Tree Preservation Order (TPO)
- WFD River Waterbody
- Conservation Area
- Scheduled Monument
- World Heritage Site
- County Wildlife Site (CWS)
- Special Area of Conservation
- Site of Special Scientific Interest (SSSI)
- Special Protection Area (SPA)
- Risk of Flooding from Rivers and Sea

Revision Details	By / Check	Date	Suffix

Purpose of issue: DCO APPLICATION

Client: Highways England

Working on behalf of: highways england

Project Title: A303 AMESBURY TO BERWICK DOWN

Drawing Title: ANNEX A.1 FIGURE A.1D ENVIRONMENTAL CONSTRAINTS PLAN

Designed	Drawn	Checked	Approved	Date
HS	TD	CC	WB	13/09/19

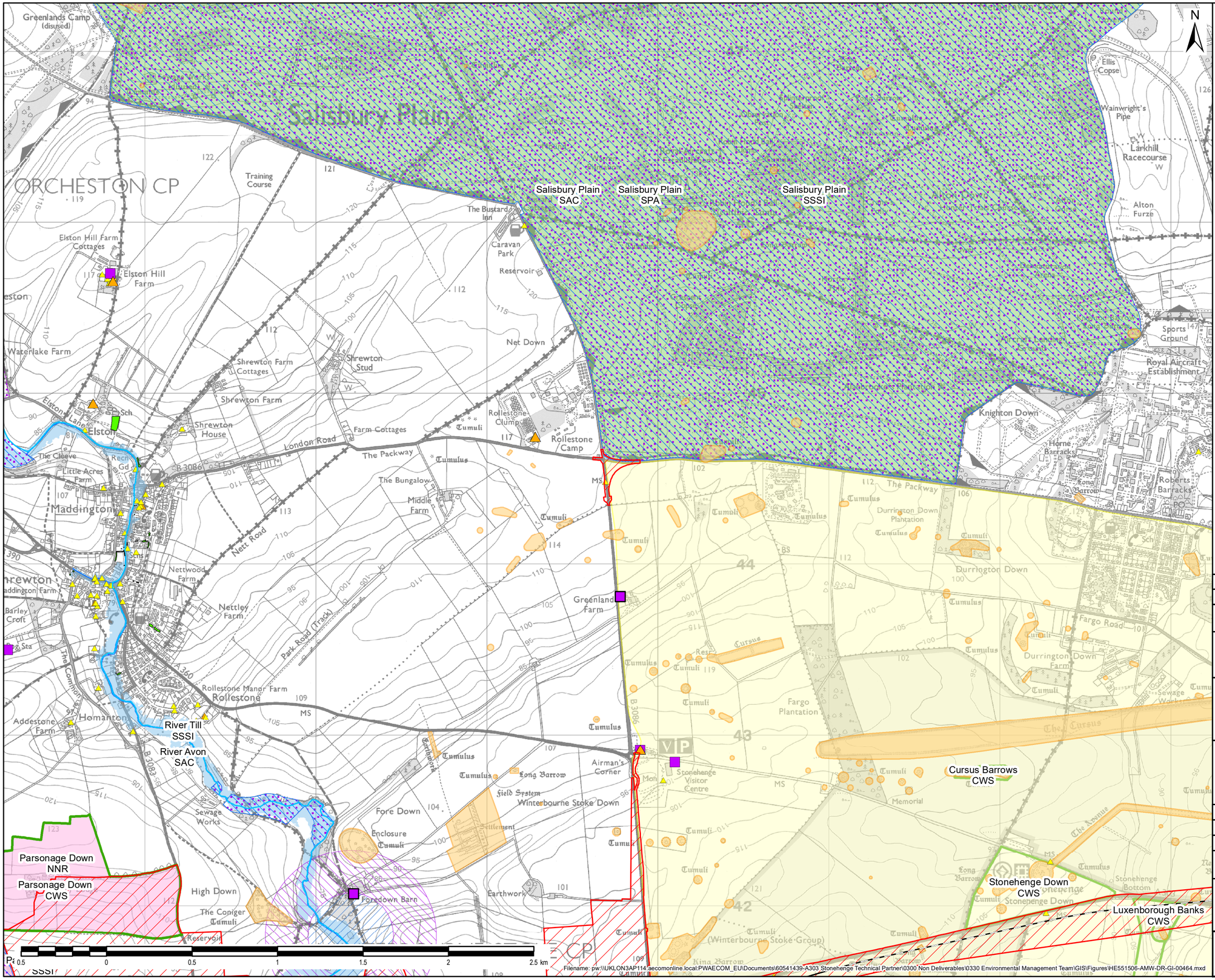
Internal Project No. 60541200

Scale @ A3: 1:20,000 | Zone: SW

Highways England
Temple Quay House
2 The Square, Temple Quay
Bristol
BS1 6HA

Drawing Number: Highways England PIN	Originator	Volume	Location	Type	Role	Number	Rev
HE551506	AMW	GEN	SCHEME WIDE	DR	GI	00464	01

Filename: pw:\\UKLON3AP114.aecomonline.local:PWAECOM_EU\Documents\60541439-A303 Stonehenge Technical Partner\0300 Non Deliverables\0330 Environmental Management Team\GIS\Figures\HE551506-AMW-DR-GI-00464.mxd



NOTES / LEGEND

- Private Water Supplies provided by Wiltshire Council
- Licensed Groundwater Abstraction provided by Environment Agency
- Grade II* Listed Building
- Grade II Listed Building
- Indicative centreline
- Proposed tunnel
- Proposed Scheme boundary
- Tree Preservation Order (TPO)
- WFD River Waterbody
- Scheduled Monument
- World Heritage Site
- County Wildlife Site (CWS)
- Special Area of Conservation (SAC)
- Site of Special Scientific Interest (SSSI)
- National Nature Reserve (NNR)
- Special Protection Area (SPA)
- GCN Pond - 250m Buffer
- GCN Pond - 500m Buffer
- Risk of Flooding from Rivers and Sea

Revision Details	By	Check	Date	Suffix

Purpose of issue: DCO APPLICATION

Client: Highways England

Working on behalf of: highways england

Project Title: A303 AMESBURY TO BERWICK DOWN

Drawing Title: ANNEX A.1 FIGURE A.1E ENVIRONMENTAL CONSTRAINTS PLAN

Designed	Drawn	Checked	Approved	Date
HS	TD	CC	WB	13/09/19

Internal Project No. 60541200

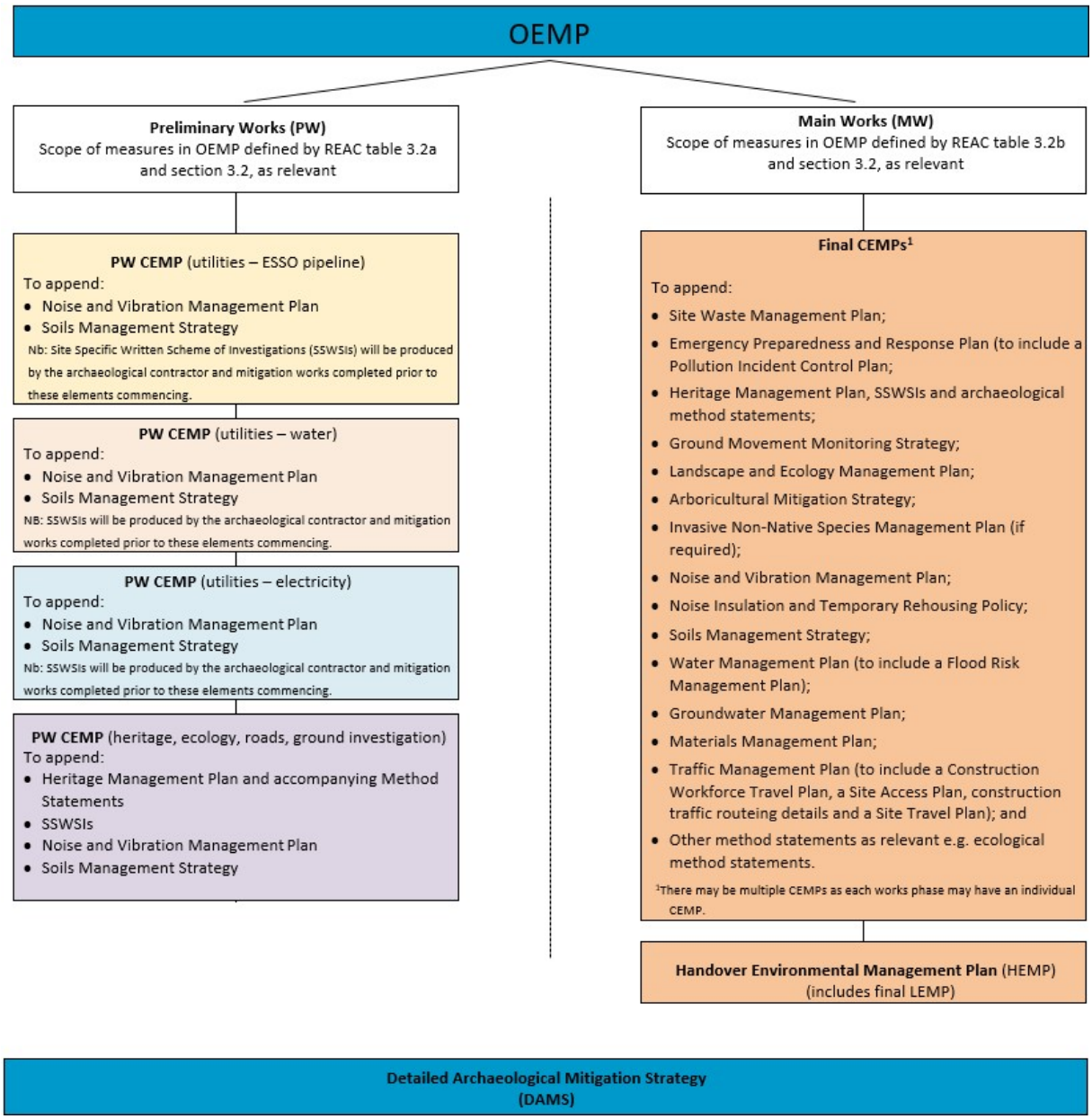
Scale @ A3: 1:20,000 | Zone: SW

Highways England
Temple Quay House
2 The Square, Temple Quay
Bristol
BS1 6HA

Drawing Number	Originator	Volume	Rev
Highways England PIN: HE551506	AMW	GEN	01
SCHEME WIDE	DR	GI	00464
Location	Type	Role	Number

Filename: pw:\\UKLON3AP114.aecomonline.local:PWAECOM_EU\Documents\60541439-A303 Stonehenge Technical Partner\0300 Non Deliverables\0330 Environmental Management Team\GIS\Figures\HE551506-AMW-DR-GI-00464.mxd

Annex A.2 – visual aid showing the relationship between the CEMPs and other management plans



Annex A.3 – Outline Soils Management Strategy

Table of contents

Chapter Pages

1 Introduction

1.1.1 This document sets out the Outline Soils Management Strategy (Outline SMS) that will be developed by the preliminary and main works contractor(s) (hereafter referred to as the Contractor) and applied to all soil resources that are disturbed either permanently or temporarily for the A303 Amesbury to Berwick Down Scheme (the Scheme).

1.1.2 As stated within items PW-GEO3 and MW-GEO3 within Tables 3.2a and 3.2b of the OEMP respectively, the Contractor shall follow the guidance in the Construction Code of Practice for the Sustainable Use of Soils on Construction Sites[7] when handling agricultural soils and, in particular, the land to be reprofiled for use as permanent chalk grassland. These OEMP items also state that the preliminary and main works contractor(s) shall produce a detailed SMS based on the Outline SMS, and that the detailed SMS will identify:

a) the nature and types of soil that will be affected; and

b) the methods that will be employed for stripping soil and the restoration of agricultural land.

1.1.3 Item MW-GEO7 within Table 3.2b of the OEMP states that, as part of the SMS, the main works contractor shall develop a:

a) Soils Handling Strategy, with reference to BS3882: 2015 Specification for Topsoil[8],the Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Site[8]~~Error! Bookmark not defined.~~ and Historic England's Preserving Archaeological Remains guidance[9]This shall incorporate the soils handling measures outlined within the Detailed Archaeological Mitigation Strategy (DAMS), identify locations where archaeological in-situ preservation is required and consider areas to be returned to agricultural use; and

b) Soil Resource Plan, which will confirm the soil types, the most appropriate re-use for the different types of soils and proposed methods for handling, storing and replacing soils on-site.

1.1.4 Item MW-GEO7 sets out a number of other commitments in relation to soil, which should be read alongside this outline SMS.

---

[7] Defra (2009). Construction Code of Practice for the Sustainable Use of Soils on Construction Sites. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/716510/pb13298-code-of-practice-090910.pdf

[8] British Standards Institution (2015). BS 3882:2015 Specification for Topsoil

[9] Historic England (2016) Preserving Archaeological Remains. Available at: https://historicengland.org.uk/images-books/publications/preserving-archaeological-remains/heag100a-preserving-archaeological-remains/

1.1.5 This Outline SMS sets out the requirements of the detailed Soil Resource Plan and Soils Handling Strategy, that will together form part of the SMS to be prepared by the Contractor, depending on the stage of the Scheme at which the soil resource in a land parcel will be disturbed.

2 Soil Resource Plan

2.1.1 The Contractor shall prepare a detailed Soil Resource Plan for all land parcels within the Scheme where the soil resource will be disturbed for either temporary or permanent works.

2.1.2 The purpose of the Soil Resource Plan is to:

a) accurately record the existing soil resources within each land parcel that is to be used temporarily in the construction of the Scheme. This will then be used to inform Preconstruction Soil Statements (refer to items PW-COM2 and MW-COM4 of the OEMP) to provide a specification for its restoration following the construction period; and

b) identify the volume of each type of soil that will be available for re-use in the detailed design of the Scheme from land parcels that are affected by the works and that will not be returned to agricultural use.

2.1.3 Within each land parcel, the Soil Resource Plan shall identify:

a) the texture of each soil horizon present (refer to section 2.1.4);

b) the depth of each soil horizon;

c) the colour of each soil horizon by reference to the Munsell Soil Color Charts[10];

d) the stone content of each soil horizon;

e) the pH, organic matter and major nutrients of the topsoil horizon;

f) the pH, organic matter and major nutrients of the upper subsoil horizon; and

g) the Agricultural Land Classification (ALC) grade; and

h) the drainage characteristics (permeability, conveyance etc.) of each soil horizon.

2.1.4 For the purposes of (a) 'Soil texture' describes how the mineral element of soil comprises a mixture of mineral particles of different sizes, and a different texture class can be ascribed according to the proportions of sand, silt and clay. According to the BSI specifications for topsoil[8] and subsoil[11], the size ranges of these particles are:

a) clay (<0.002mm);

[10] Munsell Color (2009). Munsell Soil Color Charts
[11] British Standards Institution: BS 8601:2013 Specification for subsoil and requirements for use

b) silt (0.002mm to 0.06mm);

c) sand (0.06mm to 2.00mm) comprising:

i. fine sand (0.06mm to 0.2mm);

ii. medium sand (0.2mm to 0.6mm); and

iii. coarse sand (0.6mm to 2.0mm).

2.1.5 The Contractor shall be responsible for ensuring adequate data is available for the Soil Resource Plan, including, if necessary, collecting data on organic matter content and major nutrients.

2.1.6 Where required, the data on the physical attributes (texture, depth and stone content) shall be collected at an observation density of one observation per hectare (ha). The data on organic matter content and major nutrients shall be collected at a density of one sample per 3ha or, if the land parcel is smaller than 3ha, one sample per land parcel.

2.1.7 As stated within Table 2.1. of the OEMP~~.~~ the Agricultural Liaison Officer (ALO) will coordinate the provision of the detailed pre-construction condition soil surveys with agricultural land owners and occupiers.

2.1.8 Once complete, the Contractor shall use the information contained within the Soil Resource Plan to produce Preconstruction Soils Statements for areas of agricultural land within individual land holdings that will be temporarily occupied during the construction of the Scheme (refer to item MW-COM4 within the OEMP).

3 Soil Handling Strategy

3.1.1 As part of the SMS, the Contractor shall prepare a Soil Handling Strategy for each land parcel where there is the potential for the disturbance of soil resources.

3.1.2 Soils that are disturbed during the construction of the Scheme are likely to be associated with various aspects of the Scheme, including, but not limited to:

a) areas within the permanent Scheme footprint;

b) archaeological investigations;

c) the installation of underground apparatus;

d) areas to store landscape fill and excavated materials;

e) site compounds and working areas;

f) temporary haul roads;

g) temporary roads; and

h) topsoil stockpiles.

3.1.3 For land parcels affected by the Works, the Soil Handling Strategy will set out detailed Method Statements for protecting the soil resource in each land parcel during the construction period, ensuring compliance with the requirements of the OEMP and the DAMS in respect of the protection of archaeological assets (including necessary approvals). This will be determined on a case-by-case basis but, for the avoidance of doubt, will include any excavation or compaction activity (including construction traffic) associated with implementing the authorised development, and will be informed by:

a) the nature of and risk to the archaeological assets (below plough depths) from loads imposed by construction activities; and the risks to the archaeological assets from stripping and storing topsoils during the construction period;

b) the resilience of the existing topsoil and upper subsoil resources to the loads to be imposed by construction activities, which will depend on the depth, texture and structure of each soil horizon;

c) the ability to restore land to its current condition following the removal of construction platforms and works; and

d) the drainage characteristics of the soil both above and below ground.

3.1.4 The detailed Method Statements shall identify:

a) areas within each land parcel in which archaeological in-situ preservation is required as identified in the relevant SSWSI;

b) the construction methods and platforms to be used in relation to soil to achieve in-situ preservation and prevent deformation of the topsoil and subsoil horizons (where required);

c) the anticipated loads on the in-situ topsoil from construction activities;

d) the methods to be used to return agricultural land that is subject to archaeological in-situ preservation to good agricultural condition following the removal of the construction platform (where required)

e) the area in each land parcel in which the topsoil (and upper subsoil if required or present) will be stripped and placed in store during the construction period;

f) the working methods and plant to be used to strip topsoils (and upper subsoils if required and/or present) and place them in temporary stockpiles (refer to section 3.1.6);

g) the methods to be used to construct temporary soil stockpiles (refer to section 3.1.7);

h) the locations of temporary soil stockpiles;

i) the methods to be used to maintain temporary stockpiles according to the length of time the soil is in storage (refer to section 3.1.7);

j) the methods to be used to replace soils from the temporary stockpiles within each land parcel (refer to section 3.1.8~~).~~);

k) how topsoil excavated from inside the World Heritage Site (WHS) will be stockpiled separately and re-used within the WHS as close as practicable to the area from which it was derived (where relevant);

l) the origin and placement of topsoil that could contain archaeological artefacts to be mapped and for this information to be lodged with the Wiltshire and Swindon Historic Environment Record (WSHER); ~~and~~

m) how the soil handling process will incorporate the requirements of the DAMS; and

n) the methods to be used to maintain the existing drainage characteristics of each land parcel (infiltration, conveyance etc.) and manage the risk of compaction that may affect the drainage characteristics.

3.1.5 In all cases the Contractor shall have regard to and comply with good practice guidance on stripping, handling and restoring soils. In cases where

the construction platforms are constructed on in-situ topsoils, the preliminary and main works contractors shall agree the proposed methods for in-situ preservation and remediation of the soil profile with Natural England and Historic England.

3.1.6 Good practice guidance for stripping and handling topsoil and subsoil is contained in:

a) BS 3882:20152[8], Annex A, A.1;

b) BS 8601: 2013[12], Clause 6, 6.1;

c) Defra Construction Code of Practice for the Sustainable Use of Soils[1], sections 5.2 and 5.3

d) MAFF Good Practice Guide for Handling Soils[13], Sheet 1.

3.1.7 Good practice guidance on building topsoil and subsoil stockpiles, and maintaining soils in storage is contained in:

a) BS 3882:2015, Annex A, A.2;

b) BS 8601: 2013, Clause 6, 6.2

c) Defra Construction Code of Practice for the Sustainable Use of Soils, section 5.4

d) MAFF Good Practice Guide, Sheets 2 and 14.

e) Good practice guidance on excavating soils from stockpiles is contained in the MAFF Good Practice Guide, Sheet 3.

3.1.8 Good practice guidance on replacing topsoil and subsoil, including guidance on decompaction, is contained in:

a) BS 3882:2015, Annex A, A.3 and A.4;

b) BS 8601: 2013, Clause 6, 6.3, 6.4 and 6.5;

c) Defra Construction Code of Practice for the Sustainable Use of Soils, section 6.1; and

d) MAFF Good Practice Guide, Sheets 4, 15, 18 and 19.

3.1.9 The scheme-wide principle is that topsoils and subsoils that are permanently displaced for the construction of the Scheme should be re-

[12] British Standards Institution: BS 8601:2013 Specification for subsoil and requirements for use
[13] MAFF (2000). Good practice guide for handling soils. Available at: https://webarchive.nationalarchives.gov.uk/20090306103114/http:/www.defra.gov.uk/farm/environment/land-use/soilguid/index.htm

used within the Scheme in landscape mitigation areas, highway verges and batters as close to their source as feasible, as set out in the detailed Method Statement (refer to Section 3.1.4). The topsoils and subsoils within the permanent works are of good quality and there is no requirement to import any topsoils or subsoils to the Scheme for these uses. Any changes to the hydrological characteristics of soils as a result of the scheme will be considered together with assessment of any impact on runoff to surface watercourses and recharge to the aquifer. Furthermore, water flows from sites will be limited during construction to existing runoff rates, unless otherwise agreed with Wiltshire Council and the Environment Agency in accordance with relevant legislation.

3.1.10 Where land is to be used temporarily and returned to the landowner, the ALO will, further to the provisions of items MW-COM4 and MW-COM8 of the OEMP:

a) liaise with the landowner on the working methods and the detail for restoration of each specific land parcel;

b) undertake site inspections during construction to monitor working practices and compliance of the contractors with their obligations to landowners and occupiers under the OEMP;

c) liaise with the landowner/occupier on the reinstatement measures following completion of the works;

d) undertake further inspections of restored agricultural land with the landowner/occupier and Highways England's soils experts (and valuer, if required) to assess the progress of the restoration;

e) coordinate the appropriate remedial actions or compensation agreed within the parameters of the compensation code and/or any previous agreements made at the time of acceptance of the initial restoration works and handover to the landowner/occupier.

Annex A.4 – Illustrated Examples of Key Design Elements

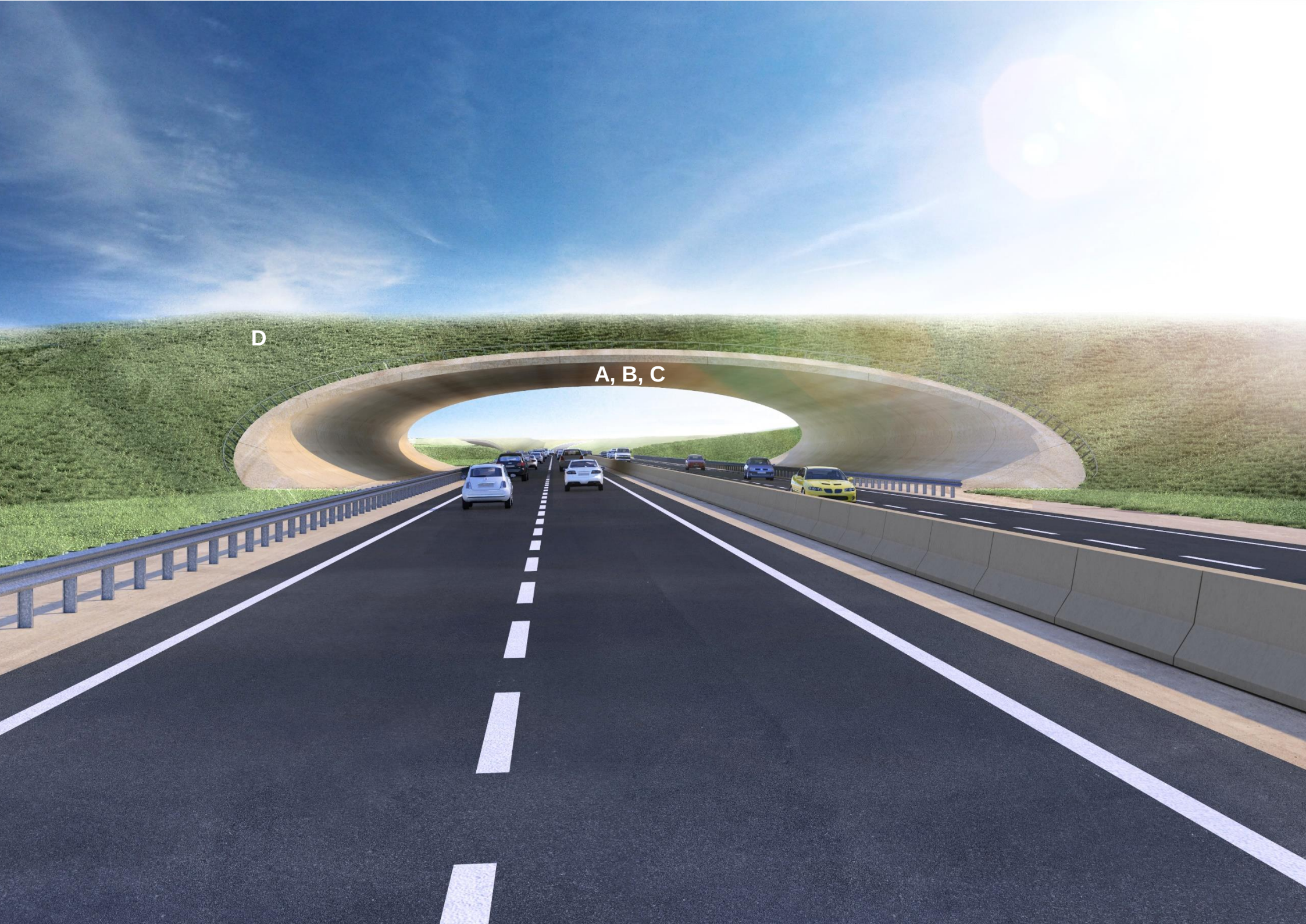
1 Introduction

This document presents illustrations which show how key elements of the Scheme could look, when designed in compliance with the Vision, Design Principles and Commitments presented in the OEMP. It should be noted that the illustrations do not show all potential aspects of the design at every location but focus primarily on the principal structural components. For images showing how all aspects of the DCO design could look, please refer to the photomontages provided under separate submission.

Each illustration is accompanied by a summary of the key components of the Vision, Design Principles and Design Commitments relevant to that element. Design Principles have driven the development of the DCO Design and will continue to inform the detailed design pursuant to the Vision. The Design Principles are discussed in Chapter 4 and presented in Table 4.1 of the OEMP. Design Commitments represent specific items that have already been agreed with relevant consultees as appropriate and are committed components of the Scheme and its construction. The Design Commitments are included in Table 3.2b of the OEMP with a D- precursor (e.g. D-CH1). The text accompanying the illustrations is taken directly from the OEMP as follows, and includes each item's respective reference for ease of identification:

- Vision - from Section 4.2 of the OEMP;
- Design Principles - from Table 4.1 of the OEMP;
- Design Commitments - from Table 3.2(b) of the OEMP.

These are not intended to be an exhaustive list of every relevant item, but a summary of the key items of relevance.


D
A, B, C

Green Bridges 1 and 2

(Illustration shows Green Bridge 2)

Vision

4.2.6 (b) Integration and Connectivity.

The detailed design should show careful and sensitive alignment of the proposed road in relation to cultural and ecological designations, landform, vegetation and features, so that the Scheme reflects the beauty of the natural, built and historic environment through which it passes. The earthworks design should reflect the rolling landform through its gradients and profiling, to reduce the visibility of the road. New structures should respond to the landform to maximise their concealment. The landscape and ecological design should maintain connectivity for existing habitats, and re-establish landcover whilst giving due consideration to the aims and objectives of the WHS Management Plan.

4.2.6 (c) High quality and imaginative design.

The engineering and architectural design of the Scheme should create a clear design rationale sympathetic to its context using a co-ordinated palette of materials and finishes, with imaginative design features, e.g. green bridges and green infrastructure.

4.2.6 (d) Unity and elegance.

All structures and features should be considered holistically, to deliver a unified approach sympathetic to their scale, form and mass and identify opportunities that minimise their visual impact. This should include all highway furniture and hard landscape features. Where highways furniture and structures are visible, they should be elegant and sympathetic to their setting for both the road user and those within the wider landscape. Road signage should be designed for minimal impact, ensuring no unnecessary clutter, while ensuring the route is safe.

4.2.9 (c) Increase access across the landscape.

The Scheme should enhance recreational opportunities across the western section and between the WHS via new routes.

Key Principles

A. P-PWS01 Any new infrastructure (and associated elements) ~~to~~will be designed to be sympathetic with the surrounding landscape character~~, which may include the integration of planting within areas immediately adjacent to that piece of infrastructure~~.

B. P-PWS02 All external scheme components ~~to~~will use a common materials palette; applying to a range of colours, surface finishes and textures. The palette and form ~~to~~will reflect the surrounding landscape character and local materials. The design ~~should~~will create spaces which are natural in appearance.

~~B.~~ The final details ~~to~~will be developed in consultation with the SDCG and will be subject to onsite trial panels or constructions at locations to be agreed~~..~~.

Key Commitments

C. D-BIO3 Green bridges shall be designed and delivered having regard to the guidance in the report: Natural England (2015), Commissioned Report NECR181, Green Bridges, Literature Review.

D. MW- LAN5 Earthworks shall be rounded at changes in grade and direction to provide a natural appearance and reflect the surrounding topography and landscape character.


G, H
F
C, D, E
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Green Bridge 4

(Illustration shows looking east)

Vision

4.2.6 (a) Respecting and Responding to the Historic Landscape.

The detailed design should take full account of the character of the unique historic landscape in which it sits. This includes the OUV of the WHS, the inter-visibility between monuments, heritage assets and the relationship between the WHS, its immediate setting and wider landscape. The Scheme should show due consideration of the objectives of the WHS Management Plan, to ensure that visibility of the Scheme is minimised, the design is elegant and it impacts positively on the user experience within the WHS.

4.2.6 (b) Integration and Connectivity.

The detailed design should show careful and sensitive alignment of the proposed road in relation to cultural and ecological designations, landform, vegetation and features, so that the Scheme reflects the beauty of the natural, built and historic environment through which it passes. The earthworks design should reflect the rolling landform through its gradients and profiling, to reduce the visibility of the road. New structures should respond to the landform to maximise their concealment. The landscape and ecological design should maintain connectivity for existing habitats, and re-establish landcover whilst giving due consideration to the aims and objectives of the WHS Management Plan.

4.2.6 (c) High quality and imaginative design.

the engineering and architectural design of the Scheme should create a clear design rationale sympathetic to its context using a co-ordinated palette of materials and finishes, with imaginative design features, e.g. green bridges and green infrastructure.

4.2.10 (a) Sustain the OUV of the WHS.**

The Scheme should maximise the concealment of structures and features outside of the tunnel from the wider landscape through their siting in the landscape in relation to existing ground levels, choice of materials and colour tone of the finishes. New landscaping and earthworks should not seek to imitate the monuments within the WHS landscape. The dark skies environment should be improved by avoiding road lighting wherever practicable and by the Scheme alignment having regard to Solstice alignments.

4.2.10 (b) Due consideration of the objectives and policies of the WHS Management Plan.

This should include reducing the dominance and negative impact of roads and traffic on the WHS, delivering non-motorised users (NMU) opportunities, the re-use of the existing A303 and connection to existing byways. The Scheme should acknowledge the potential for future access within the WHS and its wider landscape, e.g. the reconnection of the Avenue.

Key Principles

A. P-PWS02 All external scheme components ~~to~~will use a common materials palette; applying to a range of colours, surface finishes and textures. The palette and form ~~to~~will reflect the surrounding landscape character and local materials. The design ~~should~~will create spaces which are natural in appearance.

The final details ~~to~~will be developed in consultation with the SDCG and will be subject to onsite trial panels or constructions at locations to be agreed.

B. P-PWS03 The surface finish of the western cutting retaining walls (within the WHS) ~~to~~will reflect the character of the surrounding landscape.

Key Commitments

C. D-CH4 Green Bridge Four shall be 148m – 149.9m wide. The restricted byway shall be constructed to be suitable for use by any vehicle or tractor trailer combinations with a gross vehicle weight of a maximum of 44 tonnes, in accordance with Road Vehicle (Construction and Use) Regulations 1986 (as amended).

D. D-CH10 Lighting under Green Bridge Four will only occur between dawn and dusk, be dimmer controlled, and will be designed to minimise light spill outside of the bridge footprint.

E. D-CH11 No permanent road lighting of the Scheme during operation except under Green Bridge Four and Countess Roundabout and within the tunnel.

F. D-CH23 On Green Bridge Four, the finished ground level shall replicate the existing ground levels, subject to the limits of deviation.

G. D-CH24 Boundary fencing and gates in the WHS shall be visually recessive and have a low reflectivity finish.

H. D-CH25 The top of new highway boundary fencing within the western cutting shall be no higher than the ground level at the top of the cutting alongside which the fencing runs.

I. D-NOI1 The Contractor shall provide a thin surfacing solution on the mainline of the new A303 and its associated slip roads.


E, F, H
A, D
C, I
G
B

Tunnel West Portal Approach

Vision

4.2.6 (a) Respecting and Responding to the Historic Landscape.

The detailed design should take full account of the character of the unique historic landscape in which it sits. This includes the OUV of the WHS, the inter-visibility between monuments, heritage assets and the relationship between the WHS, its immediate setting and wider landscape. The Scheme should show due consideration of the objectives of the WHS Management Plan, to ensure that visibility of the Scheme is minimised, the design is elegant and it impacts positively on the user experience within the WHS.

4.2.6 (b) Integration and Connectivity.

The detailed design should show careful and sensitive alignment of the proposed road in relation to cultural and ecological designations, landform, vegetation and features, so that the Scheme reflects the beauty of the natural, built and historic environment through which it passes. The earthworks design should reflect the rolling landform through its gradients and profiling, to reduce the visibility of the road. New structures should respond to the landform to maximise their concealment. The landscape and ecological design should maintain connectivity for existing habitats, and- re-establish landcover whilst giving due consideration to the aims and objectives of the WHS Management Plan.

4.2.6 (c) High quality and imaginative design.

The engineering and architectural design of the Scheme should create a clear design rationale sympathetic to its context using a co-ordinated palette of materials and finishes, with imaginative design features, e.g. green bridges and green infrastructure.

4.2.6 (d) Unity and elegance.

All structures and features should be considered holistically, to deliver a unified approach sympathetic to their scale, form and mass and identify opportunities that minimises their visual impact. This should include all highway furniture and hard landscape features. Where highways furniture and structures are visible, they should be elegant and sympathetic to their setting for both the road user and those within the wider landscape. Road signage should be designed for minimal impact, ensuring no unnecessary clutter, while ensuring the route is safe.

4.2.10 (a) Sustain the OUV of the WHS.

The Scheme should maximise the concealment of structures and features outside of the tunnel from the wider landscape through their siting in the landscape in relation to existing ground levels, choice of materials and colour tone of the finishes. New landscaping and earthworks should not seek to imitate the monuments within the WHS landscape. The dark skies environment should be improved by avoiding road lighting wherever practicable and by the Scheme alignment having regard to Solstice alignments.

4.2.10 (b) Due consideration of the objectives and policies of the WHS Management Plan.

This should include reducing the dominance and negative impact of roads and traffic on the WHS, delivering non-motorised users (NMU) opportunities, the re-use of the existing A303 and connection to existing byways. The Scheme should acknowledge the potential for future access within the WHS and its wider landscape, e.g. the reconnection of the Avenue.

4.2.10 (c) Deliver a high quality user experience.

The Scheme design should include architectural detailing and a choice of materials to enhance the user experience and become a new point of reference while travelling along the A303, whilst being safe and easy to navigate.

Key Principles

A. P-PWS04 The Scheme within the WHS ~~to~~will be designed to enhance the driver experience and the quality of the design will recognise the presence of the World Heritage Site.

B. P-PWS02 All external scheme components ~~to~~will use a common materials palette; applying to a range of colours, surface finishes and textures. The palette and form ~~to~~will reflect the surrounding landscape character and local materials. The design ~~should~~will create spaces which are natural in appearance.

The final details ~~to~~will be developed in consultation with the SDCG and will be subject to onsite trial panels or constructions at locations to be agreed.

Key Commitments

C. D-CH5 The new A303 within the WHS western approach shall be in cutting to a minimum 7m depth with retaining walls. The front face of the retaining walls shall have a backwards incline from vertical away from the road of no shallower than 1 horizontal unit to every -10 vertical units-.

The top approximately 2.5m by depth of each side of the cutting shall be formed of grassed slopes at approximately 1 in 2.

D. D-CH9 Tunnel portal lighting will be designed to minimise light spill outside of the portals' footprint including design of lighting at the minimum luminosity that is necessary and safe.

E. D-CH13 No tunnel ventilation shafts within the WHS.

F. D-CH16. The opening height of the portal entrances to the tunnel shall be no more than that required to satisfy the requirements of Design Standards TD 27 (DMRB 6.1). and BD 78 (DMRB 2.9).

G. D-CH8 At the western end of the Scheme within the WHS no signs shall be set higher than the existing ground level on the lower of the adjacent sides of the cutting and the signs shall not be lit.

H. D-CH28 There shall be no new permanent raised earthworks within the WHS other than that required for the construction of the Countess Flyover.

I. D-CH21 Looking from above, the tops of the cutting retaining walls shall be set parallel to the adjacent carriageway alignment.


A
B, C, D, E
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G

Tunnel West Portal

Vision

4.2.6 (a) Respecting and Responding to the Historic Landscape.

-The detailed design should take full account of the character of the unique historic landscape in which it sits. This includes the OUV of the WHS, the inter-visibility between monuments, heritage assets and the relationship between the WHS, its immediate setting and wider landscape. The Scheme should show due consideration of the objectives of the WHS Management Plan, to ensure that visibility of the Scheme is minimised, the design is elegant and it impacts positively on the user experience within the WHS.

4.2.6 (b) Integration and Connectivity.

The detailed design should show careful and sensitive alignment of the proposed road in relation to cultural and ecological designations, landform, vegetation and features, so that the Scheme reflects the beauty of the natural, built and historic environment through which it passes. The earthworks design should reflect the rolling landform through its gradients and profiling, to reduce the visibility of the road. New structures should respond to the landform to maximise their concealment. The landscape and ecological design should maintain connectivity for existing habitats and, re-establish landcover whilst giving due consideration to the aims and objectives of the WHS Management Plan.

4.2.6 (c) High quality and imaginative design.

~~the~~The engineering and architectural design of the Scheme should create a clear design rationale sympathetic to its context using a co-ordinated palette of materials and finishes, with imaginative design features, e.g. green bridges and green infrastructure.

4.2.6 (d) Unity and elegance.

All structures and features should be considered holistically, to deliver a unified approach sympathetic to their scale, form and mass and identify opportunities that minimises their visual impact. This should include all highway furniture and hard landscape features. Where highways furniture and structures are visible, they should be elegant and sympathetic to their setting for both the road user and those within the wider landscape. Road signage should be designed for minimal impact, ensuring no unnecessary clutter, while ensuring the route is safe.

4.2.6 (e) User experience and safety.

The Scheme should improve the accessibility of the landscape to local communities, visitors and tourists through new recreational routes and crossings of the proposed road. The Scheme should aim to provide enjoyment and excitement for the road user, using materials and design features which engage with their sense of place and history of the landscape, whilst ensuring the road is easy to navigate through safe and secure infrastructure. The tunnel should enhance the driver experience and recognise the presence of the WHS.

4.2.10 (a) Sustain the OUV of the WHS.

The Scheme should maximise the concealment of structures and features outside of the tunnel from the wider landscape through their siting in the landscape in relation to existing ground levels, choice of materials and colour tone of the finishes. New landscaping and earthworks should not seek to imitate the monuments within the WHS landscape. The dark skies environment should be improved by avoiding road lighting wherever practicable and by the Scheme alignment having regard to Solstice alignments.

4.2.10 (b) Due consideration of the objectives and policies of the WHS Management Plan.

This should include reducing the dominance and negative impact of roads and traffic on the WHS, delivering non-motorised users (NMU) opportunities, the re-use of the existing A303 and connection to existing byways. The Scheme should acknowledge the potential for future access within the WHS and its wider landscape, e.g. the reconnection of the Avenue.

4.2.10(c) Deliver a high quality user experience.

-The Scheme design should include architectural detailing and a choice of materials to enhance the user experience and become a new point of reference while travelling along the A303, whilst being safe and easy to navigate.

Key Commitments (see Tunnel East Portal for Key Principles applicable to both portals)

- **A.** D – CH17. The central support wall of the tunnel canopy structures at each end of the tunnel shall be set back from the leading edge of the structure.
- **B.** D - CH19 Wherever the topography requires a variation in retaining wall height, there shall be no steps in the wall height and top of the wall shall follow a smooth alignment.
- **C.** D – CH22. The tunnel buildings shall be underground so that only the front façades of the tunnel buildings shall be visible.
- **D.** D – CH24 Boundary fencing and gates in the WHS shall be visually recessive and have a low reflectivity finish.
- **E.** D-CH25. The top of new highway boundary fencing within the western cutting shall be no higher than the ground level at the top of the cutting alongside which the fencing runs.
- **F.** D-NOI6- Use of a noise absorbent finish to the walls/roof at the entrances/exits of the tunnel and Green Bridge Four.
- **G.** D-CH16 The opening height of the portal entrances to the tunnel shall be no more than that required to satisfy the requirements of Design Standards TD 27 (DMRB 6.1). and BD 78 (DMRB 2.9).


D
A, B
G
F
C, E

Tunnel East Portal

Vision

4.2.6 (a) Respecting and Responding to the Historic Landscape.

The detailed design should take full account of the character of the unique historic landscape in which it sits. This includes the OUV of the WHS, the inter-visibility between monuments, heritage assets and the relationship between the WHS, its immediate setting and wider landscape. The Scheme should show due consideration of the objectives of the WHS Management Plan, to ensure that visibility of the Scheme is minimised, the design is elegant and it impacts positively on the user experience within the WHS.

4.2.6 (b) Integration and Connectivity.

The detailed design should show careful and sensitive alignment of the proposed road in relation to cultural and ecological designations, landform, vegetation and features, so that the Scheme reflects the beauty of the natural, built and historic environment through which it passes. The earthworks design should reflect the rolling landform through its gradients and profiling, to reduce the visibility of the road. New structures should respond to the landform to maximise their concealment. The landscape and ecological design should maintain connectivity for existing habitats and, re-establish landcover whilst giving due consideration to the aims and objectives of the WHS Management Plan.

4.2.6 (c) High quality and imaginative design.

the engineering and architectural design of the Scheme should create a clear design rationale sympathetic to its context using a co-ordinated palette of materials and finishes, with imaginative design features, e.g. green bridges and green infrastructure.

4.2.6 (d) Unity and elegance.

All structures and features should be considered holistically, to deliver a unified approach sympathetic to their scale, form and mass and identify opportunities that minimises their visual impact. This should include all highway furniture and hard landscape features. Where highways furniture and structures are visible, they should be elegant and sympathetic to their setting for both the road user and those within the wider landscape. Road signage should be designed for minimal impact, ensuring no unnecessary clutter, while ensuring the route is safe.

4.2.6 (e) User experience and safety.

The Scheme should improve the accessibility of the landscape to local communities, visitors and tourists through new recreational routes and crossings of the proposed road. The Scheme should aim to provide enjoyment and excitement for the road user, using materials and design features which engage with their sense of place and history of the landscape, whilst ensuring the road is easy to navigate through safe and secure infrastructure. The tunnel should enhance the driver experience and recognise the presence of the WHS.

4.2.10 (a) Sustain the OUV of the WHS.

The Scheme should maximise the concealment of structures and features outside of the tunnel from the wider landscape through their siting in the landscape in relation to existing ground levels, choice of materials and colour tone of the finishes. New landscaping and earthworks should not seek to imitate the monuments within the WHS landscape. The dark skies environment should be improved by avoiding road lighting wherever practicable and by the Scheme alignment having regard to Solstice alignments.

4.2.10 (b) Due consideration of the objectives and policies of the WHS Management Plan.

This should include reducing the dominance and negative impact of roads and traffic on the WHS, delivering non-motorised users (NMU) opportunities, the re-use of the existing A303 and connection to existing byways. The Scheme should acknowledge the potential for future access within the WHS and its wider landscape, e.g. the reconnection of the Avenue.

4.2.10 (c) Deliver a high-quality user experience.

The Scheme design should include architectural detailing and a choice of materials to enhance the user experience and become a new point of reference while travelling along the A303, whilst being safe and easy to navigate.

Key Principles

A. P-PWS01 Any new infrastructure (and associated elements) ~~to~~will be designed to be sympathetic with the surrounding landscape character.

B. P-PWS02 All external scheme components ~~to~~will use a common materials palette; applying to a range of colours, surface finishes and textures. The palette and form ~~to~~will reflect the surrounding landscape character and local materials. The design ~~should~~will create spaces which are natural in appearance.

The final details ~~to~~will be developed in consultation with the SDCG and will be subject to onsite trial panels or constructions at locations to be agreed.

C. P-PWS08 Tunnel canopies will be designed to minimise the visibility of tunnel supports and buildings from within the WHS. The surface finish to the tunnel service buildings ~~to~~will be compatible with the adjacent walls to further aid this.

Key Commitments

D. D-CH17. The central support wall of the tunnel canopy structures at each end of the tunnel shall be set back from the leading edge of the structure.

E. D-CH22. The tunnel buildings shall be underground so that only the front façades of the tunnel buildings shall be visible.

F. D-CH24 Within the WHS, all fencing above the top of the cuttings shall be post and wire with stock-proof netting, and be consistent with other fencing within the WHS.

G. D-CH16 The opening height of the portal entrances to the tunnel shall be no more than that required to satisfy the requirements of Design Standards TD 27 (DMRB 6.1). and BD 78 (DMRB 2.9).


E
D
B
A, C, F

PRoW on the line of the old A303

Vision

4.2.6 (b) Integration and Connectivity.

The detailed design should show careful and sensitive alignment of the proposed road in relation to cultural and ecological designations, landform, vegetation and features, so that the Scheme reflects the beauty of the natural, built and historic environment through which it passes. The earthworks design should reflect the rolling landform through its gradients and profiling, to reduce the visibility of the road. New structures should respond to the landform to maximise their concealment. The landscape and ecological design should maintain connectivity for existing habitats and, re-establish landcover whilst giving due consideration to the aims and objectives of the WHS Management Plan.

4.2.6 (d) Unity and elegance.

All structures and features should be considered holistically, to deliver a unified approach sympathetic to their scale, form and mass and identify opportunities that minimises their visual impact. This should include all highway furniture and hard landscape features. Where highways furniture and structures are visible, they should be elegant and sympathetic to their setting for both the road user and those within the wider landscape. Road signage should be designed for minimal impact, ensuring no unnecessary clutter, while ensuring the route is safe.

4.2.6 (e) User experience and safety.

The Scheme should improve the accessibility of the landscape to local communities, visitors and tourists through new recreational routes and crossings of the proposed road. The Scheme should aim to provide enjoyment and excitement for the road user, using materials and design features which engage with their sense of place and history of the landscape, whilst ensuring the road is easy to navigate through safe and secure infrastructure. The tunnel should enhance the driver experience and recognise the presence of the WHS.

4.2.10 (b) Due consideration of the objectives and policies of the WHS Management Plan.

This should include reducing the dominance and negative impact of roads and traffic on the WHS, delivering non-motorised users (NMU) opportunities, the re-use of the existing A303 and connection to existing byways. The Scheme should acknowledge the potential for future access within the WHS and its wider landscape, e.g. the reconnection of the Avenue.

Key Principles

A. P-PRoW1 ~~-~~Public Rights of Way (PRoW) and Private Means of Access (PMA) ~~to~~will have a surface that is appropriate to their use and location, developed in consultation with SDCG. ~~.~~

Within the WHS, the surface and material finishes of PRoWs / PMAs ~~to~~will be visually recessive and sympathetic to the landscape character and ~~setting~~the significance of ~~the~~ monuments in relation to their setting and suitable to accommodate use by, as appropriate, agricultural and land management vehicles, carriages, equestrians, cyclists and pedestrians, including people with impaired mobility, wheelchair users and parents with buggies and children.

Appropriately vegetated verges ~~to~~will be provided between~~-~~ the surfaced area and adjacent land boundaries.

B. P-PRoW2 Timber posts and strained wire fences ~~to~~will be used to separate PRoWs / PMAs from adjacent private land in accordance with Highway Construction Details in the Manual of Contract Documents for Highway Works (MCHW) and Design Manual for Road and Bridges (DMRB).

Where necessary for adjacent land use, appropriate stock-proof netting ~~to~~will be added to strained wire fences.

C. P-PRoW3 ~~No~~There will be no lighting on any PRoW / PMA within the Scheme.

Key Commitments

D. D-CH2 Break out the road surface of the redundant A303 within the WHS, except to the extent it is required to create a new Public Right of Way and/or Private Means of Access.

E. D-CH24 Within the WHS, all fencing above the top of the cuttings shall be post and wire with stock-proof netting, and be consistent with other fencing within the WHS.

F. D~~-~~-CH26 Any bound or unbound surface on new PRoW within the WHS shall be a maximum of 3m in width. The surface on the PRoW in the WHS shall be suitably coloured at year one of operation to be visually recessive and sympathetically integrated within the WHS. Trial panels or areas shall be constructed early in the construction period and at least one year in advance of the surface being laid. Consultation with the SDCG on the proposed location, colour and materials of the bound and unbound surfaces of the PRoW in the WHS shall take into account the results of the trial panels.

PRoW~~/~~ / PMA in WHS shall not have raised edgings, surface markings, lighting, litter bins or other such street furniture.

PRoWs within the WHS shall be suitably drained.

The surface of PRoW shall be agreed with the adopting authority following consultation with the SDCG, where relevant.


D
B
A, C, F
E

Byway AMES12 crossing the line of the old A303

Vision

4.2.6 (b) Integration and Connectivity.

The detailed design should show careful and sensitive alignment of the proposed road in relation to cultural and ecological designations, landform, vegetation and features, so that the Scheme reflects the beauty of the natural, built and historic environment through which it passes.

4.2.6 (d) Unity and elegance.

All structures and features should be considered holistically, to deliver a unified approach sympathetic to their scale, form and mass and identify opportunities that minimises their visual impact. This should include all highway furniture and hard landscape features.

Where highways furniture and structures are visible, they should be elegant and sympathetic to their setting for both the road user and those within the wider landscape. Road signage should be designed for minimal impact, ensuring no unnecessary clutter, while ensuring the route is safe.

4.2.6 (e) User experience and safety.

The Scheme should improve the accessibility of the landscape to local communities, visitors and tourists through new recreational routes and crossings of the proposed road. The Scheme should aim to provide enjoyment and excitement for the road user, using materials and design features which engage with their sense of place and history of the landscape, whilst ensuring the road is easy to navigate through safe and secure infrastructure. The tunnel should enhance the driver experience and recognise the presence of the WHS.

4.2.6 (f) Sustainability and Resilience. Where possible, materials should be locally sourced, reclaimed, recycled and have low carbon impact. All materials should be durable and age well across the lifecycle of the Scheme.

4.2.10 (b) Due consideration of the objectives and policies of the WHS Management Plan.

This should include reducing the dominance and the negative impact of roads and traffic on the WHS, delivering non-motorised users (NMU) opportunities, the re-use of the existing A303 and connection to existing byways. The Scheme should acknowledge the potential for future access within the WHS and its wider landscape, e.g. the reconnection of the Avenue.

Key Principles

A. P-PRoW1 Public Rights of Way (PRoW) and Private Means of Access (PMA) ~~to~~will have a surface that is appropriate to their use and location, developed in consultation with SDCG.

Within the WHS, the surface and material finishes of PRoWs / PMAs ~~to~~will be visually recessive and sympathetic to the landscape character and ~~setting~~the significance of ~~the~~ monuments in relation to their setting and suitable to accommodate use by, as appropriate, agricultural and land management vehicles, carriages, equestrians, cyclists and pedestrians, including people with impaired mobility, wheelchair users and parents with buggies and children.

B. P-PRoW2 Timber posts and strained wire fences ~~to~~will be used to separate PRoWs / PMAs from adjacent private land in accordance with Highway Construction Details in the Manual of Contract Documents for Highway Works (MCHW) and Design Manual for Road and Bridges (DMRB).

Where necessary for adjacent land use, appropriate stock-proof netting ~~to~~will be added to strained wire fences.

C. P-PRoW3 ~~No~~There will be no lighting on any PRoW/PMA within the Scheme.

D. P-PRoW4 ~~No~~There will be no new gates on byways open to all traffic.

~~D.~~ On restricted byways, full width gates with Kent Carriage Gaps ~~to~~will be used at access/egress locations and crossing points where access rights alter, based on details in BS5709, the Manual of Contract Documents for Highway Works - Highway Construction Details, and in accordance with the Design Manual for Roads and Bridges and the relevant elements of the 'Advice on Gate installation' and 'Advice on Vehicle Barriers' published by the British Horse Society.

Gates ~~to~~will be sufficiently wide and appropriately placed to accommodate users with restricted mobility and authorised users as necessary, including agricultural vehicles and other agricultural machinery and appropriate locking measures ~~to~~will be employed to ensure that those entitled to exercise rights of vehicular access over restricted byways would be capable of doing so freely.

All gates and barriers, where required as limitations on the free passage of the public along footpaths, bridleways and restricted byways ~~to~~will comply with the current British Standard 5709; Gaps gates and stiles.

Specifically, with regard to the crossing of AMES12 and the restricted byway on the old A303, this will be designed to maintain safe, clear and unhindered access for all users while minimising its visual impact on the WHS.

Key Commitments

E. D-CH2 Break out the road surface of the redundant A303 within the WHS, except to the extent it is required to create a new Public Right of Way and/or Private Means of Access.D-CH24 Within the WHS, all fencing above the top of the cuttings shall be post and wire with stock-proof netting, and be consistent with other fencing within the WHS.

F. D–CH26 Any bound surface within the WHS shall be a maximum of 3m in width. The bound surface on the PRoW in the WHS shall be suitably coloured at year one of operation to be visually recessive and sympathetically integrated within the WHS. Trial panels shall be constructed early in the construction period and ~~-~~at least one year in advance of the surface being laid. Prior to the surface being laid, the Authority shall consult with the members of HMAG on the proposed colour of the surface of the PRoW in the WHS, taking into account the results of the trial panels. ~~D – CH 26~~

~~F.~~ PRoW~~/~~ / PMA in WHS shall not have raised edgings, surface markings, lighting, benches, litter bins or other such street furniture

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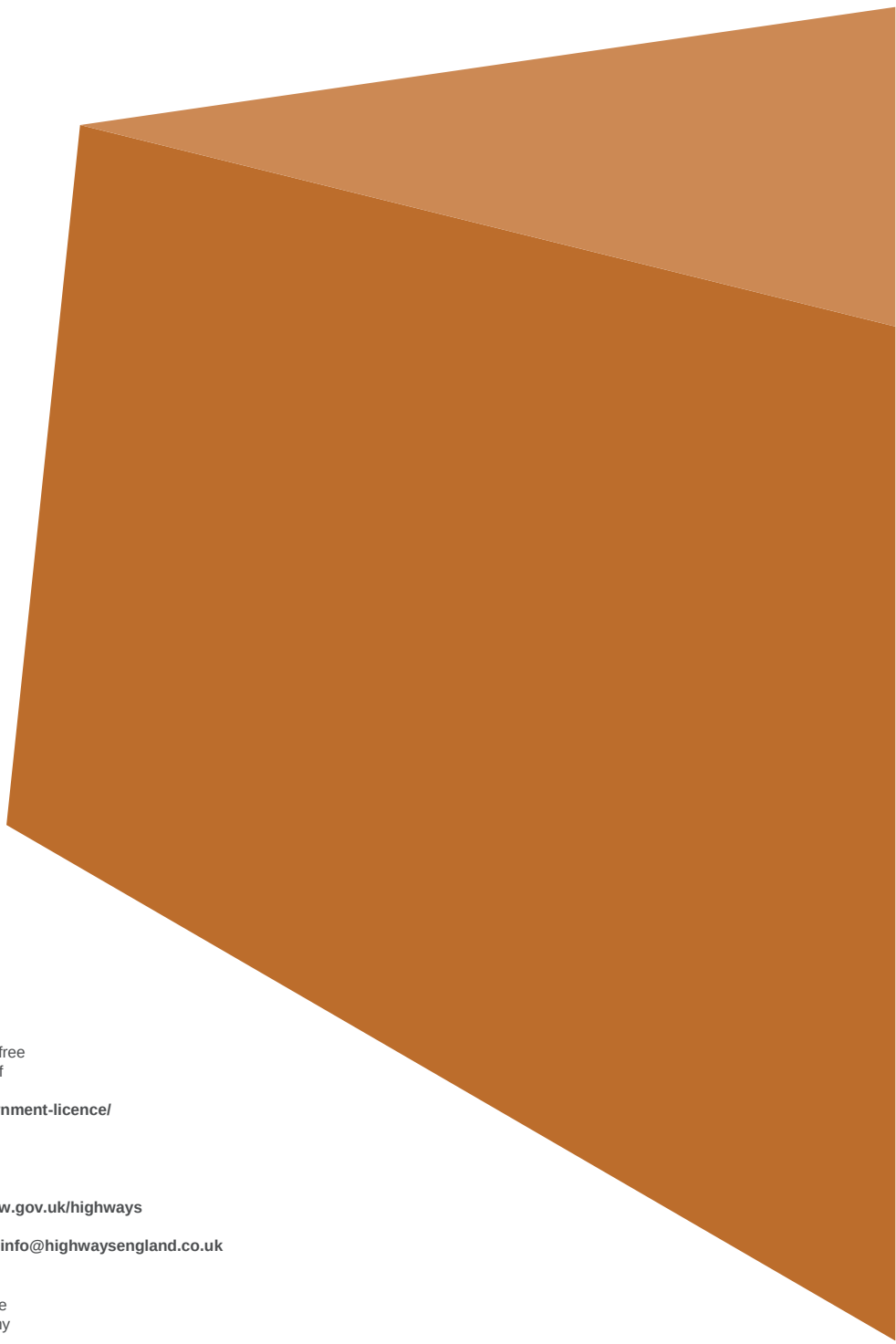

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