

A303 Amesbury to Berwick Down

TR010025

Deadline 2

8.12 Consolidated Environmental Mitigation Schedule

APFP Regulation 5(2)(q)

Planning Act 2008

The Infrastructure Planning (Examination Procedure) Rules 2010

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Infrastructure Planning

Planning Act 2008

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

A303 Amesbury to Berwick Down

Development Consent Order 2019

Consolidated Environmental Mitigation Schedule

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Foreword

The A303 Amesbury to Berwick Down scheme (“the Scheme”) forms part of a package of proposals for 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 (2015-2020/20). Subject to achieving an approved Development Consent Order (“DCO”), enabling works are planned are planned to start in 2020 with the main construction works following in late 2021, and the Scheme is due to open to traffic in late 2026.

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”): Client Scheme Requirements.

- **Transport** - To create a high quality reliable route between the South East and the South West that meets the future needs of traffic;
- **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;
- **Cultural Heritage** - To help conserve and enhance the World Heritage Site and to make it easier to reach and explore; and
- **Environment and Community** - To improve biodiversity and provide a positive legacy for nearby communities.

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 WHS. Key components comprise:

- a) A bypass to the north 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 World Heritage Site, replacing the

- existing Longbarrow roundabout;
- c) A twin-bore tunnel approximately 3km in length past Stonehenge;
 - d) A new flyover at Countess roundabout.

1 Introduction

- 1.1.1 This Consolidated Mitigation Schedule consolidates the information provided in the Environmental Mitigation Schedule (EMS) [APP-186] and the mitigation measures identified within the Outline Environmental Management Plan (OEMP) [APP-187] into one standalone document, in response to the Examining Authority's request in its Rule 6 letter dated 4 March 2019 for a document that is capable of being tracked and updated in the course of the Examination.
- 1.1.2 The ExA has asked a number of Written Questions relating to the content of the EMS and the OEMP. The Applicant's responses to these questions submitted at Deadline 2 note that changes to the OEMP will be brought forward in an updated OEMP to be submitted at Deadline 3. The updated OEMP will be accompanied by an updated version of this Consolidated Environmental Mitigation Schedule.

1.2 Environmental mitigation

- 1.2.1 The approach to securing mitigation is set out in paragraphs 2.3.61-62 of the Environmental Statement (ES) [APP-040].
- 1.2.2 The mitigation set out in the ES and illustrated in the indicative Environmental Masterplan [APP-059] is secured by Requirements in the draft DCO [APP-020] that the Scheme is to be undertaken in accordance with:
- the OEMP (which includes detailed provision on mitigation of environmental impacts);
 - specific mitigation obligations in key topic areas such as archaeology (including an obligation to comply with the Detailed Archaeological Mitigation Strategy), landscaping and drainage; and
 - the Scheme design shown on the plans submitted with the DCO.
- 1.2.3 It will also be secured by Highways England placing a contractual responsibility on the main works contractor and subcontractors to:
- comply with the DCO Requirements; and
 - subject to (a), deliver each mitigation measure as specified in the ES and Masterplan, unless the contractor is able to define an alternative measure or measures, approved by Highways England, which achieve the same level of mitigation.

1.3 Structure of Document

- 1.3.1 Tables 1.2 and 1.3 set out the measures contained in Tables 3.2a and 3.2b of the OEMP, known as the Record of Environmental Actions and Commitments (REAC) tables. These tables identify the environmental commitments proposed to address the potential environmental effects of the preliminary works and the main works identified within the OEMP and secured through paragraph 4 of Schedule 2 of the Draft DCO [APP-020].
- 1.3.2 As noted in the OEMP, the measures set out in these tables will be updated by a contractor when the contractor prepares the Construction Environmental Management Plan (CEMP) relevant to their scope of works and then as required as the Scheme progresses. Each CEMP or update will be prepared in accordance with the principles of the original OEMP and will require approval from Highways England (referred to in the REAC tables as 'The Authority') (see Table 1.2 PW-G1 for preliminary works and Table 1.3b MW-G5 and MW-G6 for main works).
- 1.3.3 The extant version of the CEMP at the end of each construction phase will be developed by the contractor into a Handover Environmental Management Plan (HEMP) relevant to that construction phase (see Table 1.3 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 and to the maintenance authority responsible for the future maintenance of the Scheme once it is operational.

Guide to the REAC tables

- 1.3.4 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.
- 1.3.5 Table 1.1 provides a summary of the scope of each column within the REAC tables.

Table 1.1 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
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

1.3.6 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.

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

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

- Table 1.2 - preliminary works
- Table 1.3 - main works

Table 1.2 - preliminary works

1.3.9 This table includes those actions to be incorporated into the preliminary works for the Scheme by the relevant ‘preliminary works contractor’.

1.3.10 The preliminary works would consist of archaeological and ecological mitigation works, remedial work in respect of any contamination or other adverse ground conditions, erection of temporary fencing, diversion and laying of underground apparatus, site clearance and the two sections of highways works (see OEMP paragraphs 1.2.5-7).

1.3.11 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 1.2, 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.

- 1.3.12 In preparing a CEMP for the extent of their works and contractual extent, each preliminary works contractor is required by the OEMP to review Table 1.2 in its entirety and justify the CEMP as consistent with the principles of the OEMP to the satisfaction of The Authority. Where actions are modified or excluded, this should be justified as consistent with the principles of the OEMP to the satisfaction of The Authority. Each CEMP requires the approval of The Authority.

Table 1.3 - main works

- 1.3.13 Table 1.3 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'¹ or the 'maintenance authority'².
- 1.3.14 In preparing a CEMP for the main works, the OEMP requires that the main works contractor or the maintenance authority shall update the full REAC table for the main works (Table 1.3). Where actions are modified, the OEMP requires that this should be justified as consistent with the principles of the OEMP to the satisfaction of The Authority. As set out in the OEMP, each CEMP requires the approval of The Authority.

Table 1.4 – mitigation referred to in the EMS

- 1.3.15 Table 1.4 sets out updated information contained in the EMS, i.e. mitigation considered in the Scheme's Environmental Impact Assessment that is not already referenced in the OEMP (and identified within REAC Tables 1.2 and 1.3), how it is to be implemented/secured and person or body responsible for delivery of the action. This information has been updated in this document to reflect the Applicant's response to Written Questions at Deadline 2 regarding securing of mitigation. That update has resulted in some items from the EMS being removed from Table 1.4, on the basis that they are secured by the OEMP. Those items are MS-CH1 and MS-B6.

¹ 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).

² 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.

Table 1.2 REAC table for the preliminary works³

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, prior to the commencement of their works.	The Authority approval of the CEMP.	Preliminary works contractor (all)
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 with relevant contact details prior to the commencement of construction and document this in the CEMP.	The Authority approval 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 Authority approval 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 will 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, any work required to be undertaken outside of core hours (not including repairs or maintenance) will be agreed with Wiltshire Council prior to undertaking the works under Section 61 of the Control of Pollution Act 1974 (refer to PW-NOI2). Any variations to core hours and/or additional hours required would be agreed with Wiltshire Council. <u>Additional working hours</u> The preliminary works contractor is able to undertake work within the existing highway boundary 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	n/a	Preliminary works contractor (all)

³ The measures are applicable to the works defined as preliminary works in Table 1.2 and will be delivered by preliminary works contractors.

Ref	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
		<p>longer durations. Activities outside core working hours that could give rise to disturbance will be kept to a reasonably practicable minimum.</p> <p>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.</p> <p>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.</p>		
PW-G5	n/a	<p>Method Statements:</p> <p>The preliminary works contractor (all) shall set out the procedures to address health and wellbeing, safety, site security and environmental issues in method statements prepared as part of their works.</p> <p>The method statements shall define any specific environmental control measures, to be implemented to meet the requirements of their CEMP.</p> <p>The preliminary works contractor (all) shall submit the method statements and risk assessments to The Authority.</p>	The Authority approval of the method statements.	Preliminary works contractor (all)
AIR QUALITY				
PW-AIR1	ES Chapter 13, Section 13.9	<p>Best Practicable Means:</p> <p>The preliminary works contractor (all) shall manage dust, air pollution and exhaust emission 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 the CEMP and could include:</p> <ol style="list-style-type: none"> 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. Remove materials that have the potential to produce dust from site as soon as possible, unless being re-used on site Cover, seed or fence stockpiles to prevent wind whipping. 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). 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-	ES Chapter 6,	Heritage Management Plan (HMP):	The HMP shall be prepared in	Preliminary works contractor

Ref	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
CH1	Section 6.8	<p>The preliminary works contractor (archaeology) shall produce a HMP based on the Detailed Archaeological Mitigation Strategy, 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 be prepared in consultation with Heritage Monitoring and Advisory Group (HMAG) and Wiltshire Council Archaeological Services (WCAS) and shall address:</p> <ul style="list-style-type: none"> a) all temporary and permanent works, which may include, as relevant, boundary fencing, vegetation clearance, ground investigations, demolition, utility diversions, access routes / haul roads and works compounds. b) potential indirect 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 weather events (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 unexpected archaeological discoveries. <p>The preliminary works shall be carried out in accordance with the Heritage Management Plan.</p>	consultation with HMAG and WCAS and approved by The Authority prior to works commencing.	(archaeology)
PW-CH2	DCO Requirement 5 ES Chapter 6, Section 6.8	<p>Works in accordance with Archaeological Mitigation Strategy:</p> <p>The preliminary works contractors (all) shall undertake the archaeological works, at all times, in accordance with the DAMS and DCO Requirement 5.</p>	Works undertaken in accordance with the DAMS and Requirement 5.	Preliminary works contractor (all)
PW-CH3	ES Chapter 6, Section 6.8	<p>Site Specific Written Schemes of Investigation:</p> <p>For sites or areas of interest that have been identified for archaeological investigation, either in the ES, the DAMS, or as a result of previous and on-going evaluation surveys, the preliminary works contractor (archaeology) shall prepare a Site Specific Written Scheme of Investigation (SSWSI) that describes the mitigation measures to be carried out.</p>	Production of SSWSI in consultation with HMAG and approval by The Authority prior to works commencing.	Preliminary works contractor (archaeology)
PW-CH4	ES Chapter 6, Section 6.8	<p>Fencing of heritage assets:</p> <p>The preliminary works contractor (archaeology) shall ensure all heritage assets identified in the DAMS for protective fencing are securely fenced during the early stages of the preliminary works (in conjunction with other mitigation measures).</p> <p>The preliminary works contractor (archaeology) shall consult with the HMAG (for works inside the WHS) and WCAS (for works outside of the WHS) to determine the type of fencing to be used.</p> <p>The contractor shall separately prepare a Method Statement for all fencing works which will include details of appropriate archaeological mitigation measures (detailed mitigation requirements shall be set out in a SSWSI).</p>	Consultation on Method Statements / SSWSIs with HMAG (for works within the WHS) and WCAS (for works outside of the WHS) and approval from The Authority prior to works commencing.	Preliminary works contractor (archaeology)
PW-CH5	ES Chapter 6, Section 6.8	<p>Limiting landtake:</p> <p>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 Table 1.2</p>	Production of SSWSI in consultation with HMAG and approval by The Authority prior to works commencing.	Preliminary works contractor (archaeology)

Ref	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
		<p>within Annex A.2 and its associated figures).</p> <p>The preliminary works contractor (archaeology), or a contractor under their direction shall install, during the early stages of the preliminary works, temporary barrier fencing that demarcates the amount of land take at Sites 24 and 28.</p> <p>The preliminary works contractor (archaeology) shall produce a SSWSI for sites 24 and 28, including the identification and installation of appropriate fencing</p>		
PW-CH6	ES Chapter 6, Section 6.8	<p>Avoidance of archaeological remains:</p> <p>Where service / utility corridors require excavation the relevant preliminary works contractors (utilities) shall avoid significant archaeological remains wherever possible and implement appropriate archaeological mitigation measures where impacts are unavoidable. The contractor shall prepare a SSWSI where service utility corridors cross archaeologically sensitive areas shown on figures appended to Annex A.2.</p>	SSWSIs shall be developed in consultation with HMAG (for works inside the WHS) and WCAS (for works outside the WHS) and approved by The Authority prior to works commencing.	Preliminary works contractor (all)
LANDSCAPE AND VISUAL				
PW-LAN1	ES Chapter 7, Section 7.8	<p>Retained vegetation:</p> <p>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.</p>	Consultation with HMAG and approval from The Authority prior to any fencing being installed within the WHS.	Preliminary works contractor (all)
PW-LAN2	DCO Requirement 8	<p>Works in accordance with approved landscaping scheme:</p> <p>The preliminary works contractor (roads) will ensure that landscaping works associated with the preliminary works involving highways works which are carried out in accordance with the approved landscaping scheme produced in conformance with Requirement 8 of the DCO.</p>	Works undertaken in accordance with Requirement 8.	Preliminary works contractor (roads)
BIODIVERSITY				
PW-BIO1	ES Chapter 8, Section 8.8	<p>Biosecurity:</p> <p>The preliminary works contractor (all) shall implement measures to promote biosecurity and minimise the risk that invasive non-native species and diseases are spread as a consequence of the Scheme. This will include, Tool Box Talks, exclusion zones and method statements on the cleaning of equipment (including boots) and vehicles on and off site and between sites, and the segregation of vegetation arisings, including suitable disposal methods.</p>	Implementation of the identified actions.	Preliminary works contractor (all)
PW-	ES Chapter 8,	Great crested newts (GCN):	Implementation of the	Preliminary works contractor

Ref	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
BIO2	Section 8.8	<p>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.</p> <p>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.</p> <p>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.</p>	<p>identified actions. Completion / return of working permits or other relevant approvals.</p>	(ecology)
PW-BIO3	ES Chapter 8, Section 8.8	<p>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.</p> <p>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 temperature dependant, but ranges from October to February). Works should only commence within these areas on receipt of suitable permits or other relevant approvals.</p> <p>Following the habitat clearance, all areas shall be maintained in an unfavourable state to discourage reptiles from entering the working area.</p>	<p>Implementation of the identified actions. Completion / return of working permits or other relevant approvals.</p>	Preliminary works contractor (ecology)
PW-BIO4	ES Chapter 8, Section 8.8	<p>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.</p> <p>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.</p> <p>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.</p>	<p>Implementation of the identified actions Completion / return of working permits or other relevant approvals.</p>	Preliminary works contractor (all)
PW-BIO5	ES Chapter 8, Section 8.8	<p>Schedule 1 breeding birds: If works are carried out at a time or location that has the potential to disturb Schedule 1 breeding birds, works should only commence within these areas on receipt of suitable licences. All works should be undertaken under a method statement submitted as part of the licence process, whereby depending on the species present and the works to be undertaken, specialist supervision may be required.</p> <p>The actions required of the preliminary works contractor (ecology), should a Schedule 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 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</p>	<p>Completion / return of licences. Monitoring and reporting arrangements will be made in consultation with Natural England and approved by The Authority.</p>	Preliminary works contractor (ecology)

Ref	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
		<p>measures (such as visual or noise screens) may be used. Suitable requirements will be determined on a case by case basis.</p> <p>Stone curlews: Due to the sensitivity of stone curlews to human disturbance (they can be disturbed by human activities within 450m 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:</p> <ul style="list-style-type: none"> a) the use of visual screening to block line of sight and, to avoid disturbance to stone curlew outside of the Scheme boundaries; and b) planting areas of temporary bare ground with a quick growing crop or quick growing wild flower or game cover seed mix. <p>Even with the use of these deterrent measures, there may still be a risk of stone curlews nesting within the construction works area (or within 450m). In the event that nesting stone curlews are found located within the construction works area or within 450m, 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.</p> <p>Monitoring: An appropriate specialist, shall undertake monitoring of stone curlews at the retained breeding plots within 450m of the Scheme and at the newly created compensation nesting plots, associated with the mitigation defined in the ES (Chapter 8).</p>		
PW-BIO6	ES Chapter 8, Section 8.8	<p>Badgers: The preliminary works contractor (ecology) shall apply for a Scheme-wide Natural England badger sett closure licence. The preliminary works contractor (ecology) will be responsible for updating / amending the licence as required. The licence will include provision for the destruction of all setts within the works area and will include a detailed method statement setting out the measures to be implemented. Once vegetation clearance has been undertaken, the preliminary works contractor (ecology) shall resurvey these areas of the site to confirm the total number and extent of known setts affected by the works. Works 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.</p>	Natural England licence return.	Preliminary works contractor (ecology)
PW-	ES Chapter 8,	Bat roosts:	Application and return	Preliminary works contractor

Ref	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
BIO7	Section 8.8	<p>Should it be necessary to destroy a known bat roost, the preliminary works contractor (ecology) will be responsible for the application of a Natural England EPS licence in order to facilitate the works. The preliminary works contractor (ecology) will be responsible for ensuring that all works detailed within the licence are carried out in accordance with the method statements.</p> <p>Where bat roosts are being retained within the Scheme boundaries, the following methods should be incorporated:</p> <ul style="list-style-type: none"> 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. <p>Works involving felling or maintenance on trees with potential for bat roosts will follow best practise methods to protect bats and their roosts. This shall include the following:</p> <ul style="list-style-type: none"> a) All trees within 20m of the works area will be inspected by a Natural England licenced bat ecologist from the ground and categorised for their potential for bat roosts, in accordance with the current best practice; b) Trees which have no or 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. <p>Locations: To be updated following pre-construction surveys.</p>	of Natural England EPS licence (if necessary).	(ecology)
PW-BIO8	ES Chapter 8, Section 8.8	<p>Otters:</p> <p>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.</p> <p>Works should only commence within these areas on receipt of suitable permits or other relevant approvals.</p> <p>Locations: River Till chainages 4000m to 4100m; River Avon viaduct, chainages 12200m to 12300m</p>	Application and return of Natural England EPS licence (if necessary).	Preliminary works contractor (ecology)
PW-BIO9	ES Chapter 8, Section 8.8	<p>Water voles:</p> <p>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.</p>	Return of protected species licences from Natural England (if necessary).	Preliminary works contractor (ecology)

Ref	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
		Locations: River Till chainages 4000m to 4100m; River Avon viaduct, chainages 12200m to 12300m	required).	
PW- BIO10	ES Chapter 8, Section 8.8	Other notable species: Other notable species are present within the Scheme boundaries including brown hare (<i>Lepus europaeus</i>), hedgehog (<i>Erinaceus europaeus</i>), polecat (<i>Mustela putorius</i>), harvest mouse (<i>Micromys minutus</i>) and water shrew (<i>Neomys fodiens</i>). The preliminary works contractor (all) shall follow best practice to avoid harm for these species during the preliminary works. This should include covering and 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.	Implementation of the identified actions.	Preliminary works contractor (all)
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 CEMP or Noise and Vibration Management Plan as relevant. BPM should be included in the following order: a) control of noise and vibration at source - such as 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 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: Before any works are undertaken outside of core working hours and which comprise noise generating activities, the relevant preliminary works contractor (all) shall consider submission of an application to the Wiltshire Council (in a format as agreed) for prior consent under Section 61 of the CoPA. 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 contractors, 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. The plan shall include, but not limited to, the following:	The Authority approval of the Noise and Vibration Management Plan.	Preliminary works contractor (utilities, roads and ground investigation)

Ref	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
		<ul style="list-style-type: none"> 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 (if deemed required) 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; g) process for implementing corrective actions that may be required to avoid or address a potential non-compliance; and h) consider the need for a noise insulation and temporary rehousing policy for works in close proximity which have the potential to generate noise levels exceeding 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. 		
PW–NOI4	ES, Chapter 9, Section 9.8	<p>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:</p> <ul style="list-style-type: none"> a) BS 5228 – 2; 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 <p><i>Protection of building occupants from disturbance</i> 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, 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.</p> <p><i>Protection of buildings from damage</i> 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</p>	Completion of appropriate assessments, identification of buildings / properties at risk and consultation of actions with relevant parties as applicable	Preliminary works contractor (utilities, roads and ground investigation)

Ref	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
		<p>ES) is likely to be exceeded. Activities requiring an appraisal could include tunneling, vibratory compaction, impact or vibratory piling and other driven processes.</p> <p>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:</p> <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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. <p>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.</p> <p><u>Protection of Sensitive Cultural Assets, excluding buildings</u></p> <p>The preliminary works contractor (utilities, roads and ground investigation shall identify any potentially vibration sensitive cultural heritage assets 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 investigation and the operator of the equipment. Wiltshire Council will be notified, as appropriate.</p>		
PW–NOI5	ES, Chapter 9, Section 9.8	<p>Noise Monitoring:</p> <p>The preliminary works contractor (roads) 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 CEMP approved for their works</p> <p>The preliminary works contractor (roads) 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:</p> <ul style="list-style-type: none"> 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 CEMP. 	Inclusion of monitoring proposal with the Noise and Vibration Management Plan. Adhering to the specified monitoring regime throughout the construction period	Preliminary works contractor (roads)

Ref	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
		The monitoring and compliance assurance process shall be set out in the noise and vibration management plans, 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.		
GEOLOGY AND SOILS				
PW– GEO1	ES Chapter 10, section 10.8	Ground investigation: All GI works will be undertaken in accordance with UK best practice., including BS 5930:2015 Code of Practice for ground investigations (Ref 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	In the event that contaminated land, including groundwater, is found at any time, which was not previously identified in the environmental statement, Requirement 7 of the DCO is applicable and preliminary works contractor (all) shall follow those provisions. Where contaminated land cannot be avoided, in association with part of a preliminary works, and/or where significant risks are identified, the relevant preliminary works contractor shall introduce 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.	Works undertaken in accordance with Requirement 7.	Preliminary works contractor (all)
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.	The Authority approval 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)
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)
TRAFFIC MANAGEMENT				

Ref	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
PW- TRA1	n/a	<p>Traffic management measures:</p> <p>The preliminary works contractor (all) shall implement appropriate traffic management measures during any relevant preliminary works, where these works could impact on all public roads and non-motorised user (NMU) paths.</p> <p>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 Traffic Signs Regulations and General Directions.</p>	Provision of appropriate traffic management measures.	Preliminary works contractor (all)

Table 1.3 REAC table 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	<p>BS EN 14001:</p> <p>The main works contractor shall have 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.</p> <p>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.</p> <p>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.</p>	<p>The Authority approval of the EMS.</p> <p>Project EMS certification to ISO140001, maintained for duration of construction.</p>	Main works contractor
MW-G2	n/a	<p>Environmental Policy:</p> <p>The main works contractor shall develop a Scheme specific environmental policy, prior to the EMS, and to be included as part of the EMS. This policy will be developed in line with Highways England's environmental policies and the scheme objectives and will set out how the main works contractor will:</p> <ol style="list-style-type: none"> adhere to the requirements of environmental legislation during the works; commit to mitigating the impacts associated with the works; commit to good practice in environmental performance throughout the phase of works; and identify opportunities to improve the Schemes whole life performance in terms of environmental and social implications. 	<p>Production of the policy and approval by The Authority.</p>	Main works contractor
MW-G3	n/a	<p>Monitoring of actions:</p> <p>The main works contractor's EMS and CEMP shall include procedures to monitor compliance with the Schemes environmental actions and requirements (as set out in these REAC tables) together with provisions for any corrective actions required.</p>	<p>Inclusion of commitment in approved EMS and CEMP.</p>	Main works contractor
MW-G4	n/a	<p>Considerate Constructors Scheme:</p> <p>The main works contractor shall sign up to and adhere to the Considerate Constructors Scheme (CCS).</p>	<p>Certification to CCS standard.</p>	Main works contractor
GENERAL PROVISIONS – CEMP AND RELATED PLANS, METHOD STATEMENTS				
MW-G5	n/a	<p>Preparation of a CEMP:</p> <p>The main works contractor shall prepare a CEMP, in accordance with this OEMP, prior to the commencement of the relevant project phase.</p> <p>In preparing the CEMP, the main works contractor shall consult with Wiltshire Council and the</p>	<p>The Authority approval of the CEMP.</p>	Main works contractor

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
		Environment Agency.		
MW-G6	n/a	Revision of the CEMP: The main works contractor shall consult with Wiltshire Council and the Environment Agency if the CEMP is to be updated or revised.	The Authority approval of proposed revisions.	Main works contractor
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 the following plans: <ul style="list-style-type: none"> a) Site Waste Management Plan; b) Emergency Preparedness and Response Plan; c) Heritage Management Plan; d) Arboricultural Mitigation Strategy; e) Noise and Vibration Management Plan; f) Noise Insulation and Temporary Rehousing Policy; g) Soils Management Strategy; h) Water Management Plan; i) Groundwater Management Plan; j) Materials Management Plan; and k) Traffic Management Plan. <p>These plans shall be appended to the CEMP as appropriate. 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. Some plans may require additional approvals as defined under the DCO Schedule 2: Requirements.</p>	The Authority approval of the plans.	Main works contractor
MW-G8	n/a	Method Statements: 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, any relevant Topic Specific Plans, 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).	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	The Authority approval of the risk assessments.	Main works contractor

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
		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 (see also MW-G20). This will include notifications to Wiltshire Council and the emergency services.		
MW-G11	n/a	<p>Handover Environmental Management Plan (HEMP):</p> <p>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 Highways England. This will then be implemented by the body responsible for the long-term management of the operational Scheme.</p> <p>The HEMP shall be based on the CEMP 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.</p> <p>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.</p> <p>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 and the maintenance authority.</p>	The Authority approval of the HEMP.	Main works contractor
GENERAL PROVISIONS – WORKING HOURS				
MW-G12	ES	<p>Core working hours:</p> <p>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).</p> <p><i>Normal working hours (for all works excluding earthworks and tunnelling)</i> 07:00 – 19:00 Monday to Friday 07:00 – 13:00 Saturday</p> <p><u>Earthworks</u> Summer: 07:00 – 22:00 Monday to Saturday with occasional working on Sundays and Bank Holidays Winter: As normal working hours above</p> <p><u>Tunnelling:</u> 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</p>	n/a	Main works contractor

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
		<p>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.</p> <p>To maximise productivity within the core hours, a period of up to one hour before and up to one hour after normal working hours will 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.</p> <p>Except in the case of an emergency, any work required to be undertaken outside of core hours (not including repairs or maintenance) will be agreed with Wiltshire Council prior to undertaking the works under Section 61 of the Control of Pollution Act 1974.</p> <p>Any variations to core hours and/or additional hours required would be agreed with Wiltshire Council.</p>		
MW-G13	n/a	<p>Site Specific Working hours: The main works contractor shall adhere to reduced working hours at the specified locations:</p> <p><u>Normal working hours</u> 07:30 – 18:00 Monday to Friday 07:30 – 13:00 Saturday</p> <p>Location: Chainage 3520 to Chainage 4180 and Chainage 11300 to Chainage 12400.</p> <p>As for MW-G12, a period of up to one hour before and up to one hour after normal working hours will 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.</p> <p>An approach to seeking approval for any variations to site specific working hours will be included within the CEMP following discussion with Wiltshire Council.</p>	n/a	Main works contractor
MW-G14	n/a	<p>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.</p> <p>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.</p> <p>In the case of work required in response to an emergency or which if not completed would be unsafe</p>	n/a	Main works contractor

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
		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.		
MW-G15	n/a	Abnormal Deliveries: The main works contractor shall seek approval from Highways England (with respect to the A303) and from Wiltshire Council (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), 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 include the tunnelling operation, tunnel related activities or transport of tunnel arisings from the tunnel boring machine to the arisings management area at Longbarrow. Location: chainage 6000 to chainage 7500	Periods of suspension defined in the main works contractor's approved CEMP. Consultation with HMAG for the proposed hours and Approval 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-	n/a	Management structure:	The Authority approval of	Main works contractor

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
G19		<p>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 ACoW, the CRM and other relevant roles (see Table 2.1 for roles).</p> <p>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.</p> <p>The main works contractor shall provide the regulatory authorities with relevant contact details prior to the commencement of construction and document this in the CEMP.</p>	the CEMP.	
GENERAL PROVISIONS – EMERGENCY PREPAREDNESS AND INCIDENT RECORDS				
MW-G20	n/a	<p>Emergency Preparedness and Response Plan:</p> <p>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.</p> <p>The plan will take into account any specific requirements determined by The Authority. The plan will include the following as a minimum:</p> <ul style="list-style-type: none"> 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. <p>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.</p>	The Authority approval of the CEMP, including the Emergency Preparedness and Response Plan.	Main works contractor
MW-G21	n/a	<p>Emergency Access:</p> <p>The main works contractor shall ensure that the requirements of the relevant fire authority are followed for the provision of site access points. The accesses may vary over time and shall also be suitable for ambulances.</p>	Letter of agreement with relevant fire authority.	Main works contractor
MW-G22	n/a	<p>Fire prevention and control:</p> <p>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.</p>	Letter of agreement with relevant fire authority.	Main works contractor
MW-G23	n/a	<p>Extreme weather events:</p> <p>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.</p> <p>The main works contractor shall ensure the CEMP identifies all measures deemed necessary and</p>	The Authority approval of the CEMP.	Main works contractor

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
		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.		
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.	The Authority approval of 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 following approaches to construction site management and define the approach to site management in the CEMP.	The Authority approval 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.	The Authority approval of the CEMP.	Main works contractor
MW-G28	ES Chapter 7, Table 7.5	Site hoardings around construction compounds: The main works contractor shall define within the CEMP the proposed approach to hoardings around construction compounds, giving consideration to the WHS context (refer also to MW-CH3) and other environmental constraints, including: a) Maintenance of adequate hoardings to an acceptable condition to prevent unwanted access to the construction compounds. b) Painting the side of hoardings facing away from the site, and to keep them 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. f) Retaining 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 habitats, trees or hedgerows. In order to minimise landscape impacts of the compounds, the main works contractor shall follow the below measures in relation to construction compounds:	The Authority approval of the CEMP.	Main works contractor

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
		<p>a) buffer zones shall be created between the compounds and construction works and existing retained vegetation through construction exclusion zones and suitable perimeter fencing;</p> <p>b) temporary earth bunds, created from excavated soil, shall be located around the perimeter of the compounds;</p> <p>c) all buildings within compounds shall be restricted to one storey in height and rendered / painted in suitable colours to aid in their integration within the landscape; and</p> <p>d) hoarding shall be installed around the perimeter of the compounds, stained in suitable approved colours, to aid in its integration within the landscape.</p> <p>Fencing and hoarding shall be kept well maintained throughout construction.</p> <p>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.</p> <p>The main works contractor shall ensure that hoarding and fencing in areas at risk of flooding, most notably within the River Till floodplain, 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.</p>		
MW-G29	ES Chapter 7, Section 7.8 ES Chapter 8, Section 8.8	<p>Site lighting:</p> <p>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.</p> <p>Lighting should be at the minimum luminosity necessary and use low energy consumption fittings and should avoid light spillage.</p> <p>Lighting should also be designed, positioned and directed so as not to unnecessarily intrude on adjacent buildings, ecological receptors, structures used by protected species and other land uses to prevent unnecessary disturbance, interference with local residents, or passing motorists. This provision will apply particularly to sites where night working will be required and in particular the tunnelling sites.</p>	The Authority approval of the CEMP.	Main works contractor
MW-G30	n/a	<p>Clearance and re-instatement of sites on completion:</p> <p>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 design as appropriate.</p>	Implementation of the specified actions.	Main works contractor
GENERAL PROVISIONS – COMMUNITY ENGAGEMENT, COORDINATION				
MW-G31	n/a	<p>Community Engagement:</p> <p>The main works contractor shall take reasonable steps to engage with nearby residents, especially those who may be detrimentally affected by the Scheme.</p>	The Authority approval of the approach. Consultation with the	Main works contractor

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
		<p>The main works contractor shall use the following materials to engage with residents and other stakeholders:</p> <ul style="list-style-type: none"> a) Online – the main works contractor shall provide materials to update the Highways England's website. The sites 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 and adjacent or affected parish councils, 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: <ul style="list-style-type: none"> 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, 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 regularly liaise with the Stonehenge Visitor Centre and shall maintain / update information at the centre to advise visitors of the works taking place. <p><u>Liaison with the MoD</u></p> <p>The main works contractor shall consult with the MoD to ensure that the construction design and plant, e.g. cranes, do not interfere with MOD's operations.</p>	MoD.	
MW-G32	n/a	<p>Coordination:</p> <p>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:</p> <ul style="list-style-type: none"> a) community liaison: communicating upcoming activity to affected communities and responding to questions/concerns raised, using the role of Community Liaison Officer (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 	The Authority approval of the approach.	Main works contractor

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
		<p>arrangements and minimising disruption to road users;</p> <p>d) access to site: communication and collaboration in respect of arrangements for site access and abnormal loads with highway authorities and emergency services;</p> <p>e) construction workforce: monitoring the impact of the workforce on the community in its travel to and from work; and</p> <p>f) other construction projects: maintaining communication between the works on the Scheme and those of other construction projects in the vicinity.</p> <p>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.</p>		
AIR QUALITY AND CLIMATE CHANGE				
MW-AIR1	ES Chapter 5, Section 5.8	<p>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). 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 the CEMP and could include:</p> <p>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.</p> <p>b) Remove materials that have the potential to produce dust from site as soon as possible, unless being re-used on site</p> <p>c) Cover, seed or fence stockpiles to prevent wind whipping.</p> <p>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).</p> <p>e) All construction plant would use fuel equivalent to ultra-low sulphur diesel (ULSD) where possible.</p>	Implementation of BPM.	Main works contractor
MW-AIR2	ES Chapter 5, Section 5.8	<p>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, which may include:</p> <p>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 site manager.</p> <p>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.</p> <p>c) Plan site layout so that machinery and dust causing activities are located away from receptors, as</p>	Implementation of BPM.	Main works contractor

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
		<p>far as is possible.</p> <p>d) Maintain and inspect on-site haul routes for integrity and operate a programme of routing maintenance and where necessary carry out repairs to the surface as soon as reasonably practicable.</p> <p>e) The details of the further standard mitigation will be outlined in the CEMP produced by the contractor.</p>		
MW-AIR3	ES Chapter 5, Section 5.8	<p>Tunnel Ventilation Strategy:</p> <p>The main works contractor shall develop a Tunnel Ventilation Strategy, which will include an appropriate ventilation system during construction of the tunnel.</p>	The Authority approval of the Tunnel Ventilation Strategy.	Main works contractor
MW-AIR4	ES Chapter 5, Section 5.8	<p>Construction Air Quality Monitoring:</p> <p>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)</p> <p>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.</p> <p>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.</p> <p>Monitoring will be continued until the site is deemed to be low risk (i.e. higher risk activities have ceased).</p> <p>The approach to the reporting of air quality monitoring information is to be discussed with Wiltshire Council.</p>	<p>Establishment of air quality baseline prior to construction.</p> <p>Implementation of the specified actions.</p>	Main works contractor
MW-AIR5	ES Chapter 5, Section 5.8	<p>Climate change mitigation:</p> <p>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, management and minimisation of energy use.</p>	Implementation of the measures.	Main works contractor
CULTURAL HERITAGE				
MW-CH1	DCO Requirement 5 ES Chapter 6, Section 6.8	<p>Heritage Management Plan:</p> <p>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</p>	The plan shall be prepared in consultation with HMAG and WCAS and approved by The Authority prior to works	Main works contractor

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
		<p>topics. The HMP shall be prepared in consultation with the HMAG and WCAS and shall address:</p> <ul style="list-style-type: none"> a) all temporary and permanent works, including boundary fencing, vegetation clearance, ground investigations, demolition, utility diversions, access routes / haul roads and works compounds. b) potential indirect 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 adverse ground conditions caused by weather events (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 Table 2 within Annex 2) 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 unexpected archaeological discoveries. 	commencing.	
MW-CH2	n/a	<p>Working in accordance with the Detailed Archaeological Mitigation Strategy: The main works contractor shall undertake the archaeological works, at all times, in accordance with the Detailed Archaeological Mitigation Strategy.</p>	Compliance with the Detailed Archaeological Mitigation Strategy.	Main works contractor
MW-CH3	ES Chapter 6, Section 6,8	<p>Fencing in the WHS and in the WHS setting: The main works contractor shall consult with 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 an archaeological Method Statement, in consultation with HMAG, for the installation of fencing. Any associated archaeological mitigation requirements in accordance with the Detailed Archaeological Mitigation Strategy shall be set out in a SSWSI.</p>	Consultation with HMAG and approval from The Authority on fencing within the WHS prior to works commencing.	Main works contractor
MW-CH4	ES Chapter 6, Section 6,8	<p>Location of slurry treatment plant and batching plant: The slurry treatment plant and tunnel batching plant at Longbarrow shall be located to the west of the existing tall hedgerow (being retained). If buildings are set-up to the east of the hedge, then they shall be of single storey height only and will be screened from the WHS and from Winterbourne Stoke by an earth bund and other appropriate measures.</p>	Adherence to compound layout requirements and building height restrictions.	Main works contractor
MW-CH5	n/a	<p>Archaeological Method Statements: Where potentially sensitive archaeological remains are required to be buried or sealed beneath fill material to ensure they are not disturbed during construction, the main works contractor shall prepare a Method Statement after consultation with HMAG (for sites within the WHS) or WCAS (for sites outside the WHS) and prior to the start of the work. The Method Statement will address:</p> <ul style="list-style-type: none"> 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); and b) 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. <p>Areas to be addressed in the Method Statement include:</p>	Method Statements developed in consultation with HMAG (for sites within the WHS) or WCAS (for sites outside the WHS) and approved by The Authority prior to works commencing.	Main works contractor

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
		<ul style="list-style-type: none"> a) All 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. 		
MW-CH6	n/a	<p>Utilities corridors during main works:</p> <p>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 Detailed Archaeological Mitigation Strategy where impacts are unavoidable. The main works contractor shall prepare a SSWSI where service utility corridors cross archaeologically sensitive areas, as shown in Annex A.2.</p>	SSWSIs prepared with HMAG (for sites within the WHS) and WCAS (for sites outside of the WHS) and approved by The Authority prior to works commencing.	Main works contractor
MW-CH7	n/a	<p>Monitoring of heritage assets:</p> <p>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.</p>	Monitoring arrangements prepared in consultation with HMAG (for sites within the WHS) and WCAS (for sites outside of the WHS) and approved by The Authority prior to works commencing.	Main works contractor
D-CH1	ES Chapter 6	Visual screening earth bunds 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 approximately 150m wide.	n/a	Main works contractor
D-CH5	ES Chapter 6	<p>The new A303 within the WHS western approach shall be in cutting to a minimum 7m depth with vertical retaining walls.</p> <p>Approximately 2.5m of the top of each side of the cutting shall be formed of grassed slopes at approximately 1 in 2</p>	n/a	Main works contractor

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
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 WHS, no road signs will be set higher than the top of the adjacent 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	n/a	Main works contractor
D-CH10	ES Chapter 6	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	n/a	Main works contractor
D-CH11	ES Chapter 6	No road lighting of the Scheme during operation except under Green Bridge Four and Countess Roundabout.	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 and Wiltshire Council and approved by The Authority.	The Authority approval of fencing and surfacing details within the WHS.	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 practise.	The Authority approval of the LEMP.	Main works contractor
MW-LAN2	DCO Requirement 8	Works in accordance with approved landscaping scheme: 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.	Works undertaken in accordance with Requirement 8.	Main works contractor
MW-LAN3	n/a	Arboricultural Mitigation Strategy: The arboricultural specialist 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;	The Authority approval of the AMS.	Main works contractor

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
		<p>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.</p> <p>Alternatively, where a British Standard does not exist, works will follow industry good practice, e.g. Natural England's Advice on managing, restoring, and creating grassland and agreement will be sought from Wiltshire Council.</p> <p>The AMS shall also define:</p> <p>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.</p>		
MW-LAN4	n/a	<p>Planting and seeding: 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.</p> <p>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.</p> <p>Maintenance: The main works contractor shall undertake appropriate maintenance of planting and seeding works 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.</p> <p>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.</p>	Successful establishment of all planting and seeding areas.	Main works contractor
D-LAN1	ES Chapter 7, Appendix 7.7 and	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

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
	7.8			
D-LAN2	ES Chapter 7, Appendix 7.7 and 7.8	1.5m high environmental barrier along the southern aspect 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).	n/a	Main works contractor
BIODIVERSITY				
MW-BIO1	OEMP Table 3.2(a)	<p>Protected and notable species:</p> <p>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:</p> <ul style="list-style-type: none"> a) nesting birds (non-Schedule 1); b) bat; c) reptile; d) water vole; e) otter; f) badger; and g) great crested newt <p>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.</p> <p>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.</p> <p>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.</p>	No recorded injury or mortality of protected species.	Main works contractor
MW-BIO2	Environmental Masterplan (Figure	<p>Habitat creation:</p> <p>The main works contractor shall establish the new habitats identified within the Environmental</p>	Successful delivery of habitats.	Main works contractor

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
	2.5, ES)	Masterplan (ES Figure 2.5) within the Order limits. These habitats shall be managed accordingly to ensure their establishment and develop to achieve their target purpose(s), through to any handover of the Scheme.		
MW-BIO3	ES Chapter 8, Section 8.8	<p>River Till ecological mitigation:</p> <p><u>Temporary bridge</u></p> <p>The main works contractor shall ensure that the temporary bridge over the River Till is raised above the valley floor with supports located outside of the river channel and at least 8m from the banks. The bridge shall be restricted to a single lane carriageway, approximately 6m wide, to reduce the shading of the riparian habitats below.</p> <p><u>Vegetation</u></p> <p>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), including alignment of the haul route, following construction. On-going 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.</p> <p><u>Low noise piling</u></p> <p>The main works contractor shall, if piling for viaduct piers is to be progressed when water is flowing within the River Till, use a low vibration and low noise piling method to reduce the vibration and noise impacts on the aquatic ecology within the river.</p> <p><u>Otters</u></p> <p>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.</p>	Agreement by The Authority of the temporary bridge design. Interim monitoring reports.	Main works contractor
MW-BIO4	ES Chapter 8, Section 8.8	<p>Lighting at important ecological sites:</p> <p>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.</p>	Implementation of the identified actions.	Main works contractor
MW-BIO5	n/a	<p>Biosecurity:</p> <p>The main works contractor shall implement measures to promote biosecurity and minimise the risk that invasive non-native species and diseases are spread as a consequence of the project. This will include, toolbox talks, exclusion zones, method statements on the cleaning of equipment (including boots) and vehicles on and off site and between sites, and audit compliance.</p>	Implementation of the identified actions. No recorded spread of invasive species and high standards of biosecurity maintained.	Main works contractor
MW-BIO6	n/a	<p>Invasive species:</p> <p>The main works contractor shall be cognisant of the invasive species survey undertaken by the preliminary works contractor (ecology) and adhere to the associated ISMP (if relevant).</p>	No recorded spread of invasive species.	Main works contractor

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
MW-BIO7	ES Chapter 8, Section 8.8	<p>Great crested newts (GCN):</p> <p>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).</p> <p>Currently it is not considered necessary to apply for an EPS licence, however this will be updated following the pre-construction surveys.</p> <p>At this point, no further great crested newt monitoring surveys are required, this will be dependent on the findings of the pre-construction checks.</p> <p>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.</p>	No recorded mortality to GCN.	Main works contractor
MW-BIO8	ES Chapter 8, Section 8.8	<p>Stone curlews:</p> <p>Following the preliminary works (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 450m 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:</p> <ul style="list-style-type: none"> a) the use of visual screening to block line of sight and, to avoid disturbance to stone curlew outside of the Scheme boundaries; and, b) 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. <p>These measures should be employed prior to the breeding season (March to August) to deter prospecting pairs.</p> <p>Even with the use of these deterrent measures, there may still be a risk of stone curlews nesting within the construction works area.</p> <p>In the event that nesting stone curlews are found located within the construction works area or within 450m, 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 450m from the nest, depending on nesting location. This will be confirmed following confirmation from the ECoW.</p> <p>Stone curlew monitoring: The contractors ECoW (or an appropriate specialist) shall undertake monitoring of stone curlews at the retained breeding plots within 450m of the Scheme and of the newly created compensation nesting plots.</p>	Implementation of the identified actions. Monitoring and reporting arrangements agreed between the ECoW and Natural England.	Main works contractor
MW-	ES Chapter 8,	Badgers:	Implementation of working methods and	Main works contractor

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
BIO9	Section 8.8	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).	monitoring regime.	
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 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 (<i>Lutra lutra</i>) 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, 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: The ECoW (or an appropriate specialist) will undertake a programme of botanical monitoring to assess the development of chalk 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.	Successful establishment of the landscape and ecology requirements outlined within the LEMP.	Main works contractor
D-BIO1	ES Chapter 8	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 outside of the extents of the SAC or SSSI.	n/a	Main works contractor

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
NOISE AND VIBRATION				
MW-NOI1	ES, Chapter 9, Section 9.8	<p>Best Practicable Means for noise:</p> <p>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.</p> <p>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.</p> <p>The main works contractor shall detail the application of BPM within the Noise and Vibration Management Plan (see MW-NOI3).</p> <p>BPM should be included in the following order:</p> <ol style="list-style-type: none"> a) control of noise and vibration at source - such as 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: <ol style="list-style-type: none"> i. noise insulation; or if that is not successful ii. temporary re-housing. 	Implementation of BPM.	Main works contractor
MW-NOI2	n/a	<p>Section 61 Consents:</p> <p>Before works outside of core working hours and site-specific working hours (as applicable) are undertaken which comprise noise generating activities, the main works contractor shall consider submission of an application to the Wiltshire Council (in a format as agreed) for prior consent under Section 61 of the CoPA.</p> <p>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.</p>	Agreement of Section 61s with Wiltshire Council.	Main works contractor
MW-NOI3	ES, Chapter 9, Section 9.8	<p>Noise and vibration management plan</p> <p>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:</p> <ol style="list-style-type: none"> 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, stages during 	The Authority approval of the Noise and Vibration Management Plan.	Main works contractor

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
		<p>construction at which monitoring will be undertaken, and methods of publishing the results;</p> <p>e) details of inspection and maintenance schedules to be undertaken;</p> <p>f) processes to ensure ongoing compliance with all controls and consent for the works; and</p> <p>g) process for implementing corrective actions that may be required to avoid or address a potential non-compliance.</p>		
MW-NOI4	n/a	<p>Noise insulation and temporary re-housing:</p> <p>The main works contractor shall have a Noise Insulation and Temporary Rehousing Policy for the Scheme. The policy will set out all roles, responsibilities and actions required in respect of these measures.</p> <p>Notwithstanding the measures set out in this OEMP and any agreements with Wiltshire County Council, noise insulation or temporary re-housing will be offered to qualifying parties when:</p> <p>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;</p> <p>b) the property complies with all other requirements of the Noise Insulation (Amendment) Regulations 1988;</p> <p>c) the property is lawfully occupied as a permanent dwelling; and</p> <p>d) noise insulation does not already exist that is of an equivalent standard to that which would be allowed for under the Noise Insulation (Amendment) Regulations 1988.</p> <p>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.</p>	Implementation of, and adherence to, the policy.	Main works contractor
MW-NOI5	ES, Chapter 9, Section 9.8	<p>Vibration</p> <p>The main works contractor shall take into account the following guidance when establishing criteria, controls and working methods for vibration management:</p> <p>a) BS 5228 – 2;</p> <p>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</p> <p>c) BS 7385 - 2 Evaluation and measurement for vibration in buildings – Part 2: Guide to damage levels from groundborne vibration</p> <p><u>Protection of building occupants from disturbance</u></p> <p>No start-up or shut down of vibratory plant e.g. rollers or compactors, within 50m of receptors.</p> <p>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, those potentially affected will be notified</p>	Completion of appropriate assessments, identification of buildings / properties at risk and consultation on actions with relevant parties as applicable.	Main works contractor

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
		<p>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 is required.</p> <p><i>Protection of buildings from damage</i></p> <p>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 (is likely to be exceeded. Activities requiring an appraisal could include tunneling, vibratory compaction, impact or vibratory piling and other driven processes.</p> <p>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:</p> <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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. <p>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.</p> <p><i>Protection of Sensitive Cultural Assets, excluding buildings</i></p> <p>The main works contractor shall identify any potentially vibration sensitive cultural heritage assets based on the sensitivity of the assets and proximity to tunneling works. 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.</p>		
MW-NOI6	ES, Chapter 9, Section 9.8	<p>Monitoring of noise and vibration:</p> <p>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).</p> <p>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:</p> <ul style="list-style-type: none"> a) compliance with hours of working; b) presence of mitigation measures e.g. engines doors closed, airlines not leaking, and site 	Inclusion of monitoring proposal with the Noise and Vibration Management Plan. Adhering to the specified monitoring regime throughout the construction period.	Main works contractor

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
		<p>hording in place:</p> <p>c) number and type of plant;</p> <p>d) compliance with agreed working methods; and</p> <p>e) compliance with any specific requirements of the Noise and Vibration Management Plan.</p> <p>Proposals for all monitoring locations will be set out in the Noise and Vibration Management Plan. Vibration monitoring will be undertaken at Stonehenge Cottages commencing when the TBM is approaching the cottages. Vibration monitoring will also be undertaken at Stonehenge when tunneling is ongoing at the closest approach, the details of which will be set out in the Noise and Vibration Management Plan.</p>		
D-NOI1	ES Chapter 9, Appendix 9.3	Thin road surfacing on the mainline of the new A303 and its associated slip roads.	n/a	Main works contractor
D-NOI2	ES Chapter 9, Appendix 9.3	1.8m high absorptive noise barriers along both the north and south sides of the Countess Junction Flyover.	n/a	Main works contractor
GEOLOGY AND SOILS				
MW-GEO1	ES Chapter 10 Section 10.8.	<p>Contamination Risks:</p> <p>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 humans, e.g. construction workers, site visitors and nearby residents, resulting from the disturbance of contaminated land.</p>	The Authority approval of the CEMP, 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.	<p>Groundwater contamination:</p> <p>In the event that unexpected soil or groundwater contamination is encountered during construction 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). 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.</p> <p>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.</p>	Completion of appropriate GI works and remediation measures.	Main works contractor
MW-GEO3	ES Chapter 10 Section 10.8.	<p>Soils Management Strategy:</p> <p>The main works contractor shall produce a detailed Soils Management Strategy that will identify the</p>	The Authority approval of the Soils Management	Main works contractor

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
		<p>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.</p> <p>The main works contractor shall follow 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.</p>	Strategy.	
MW-GEO5	ES Chapter 10 Section 10.8.	<p>Naturally occurring radiation of materials:</p> <p>During the tunneling 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.</p>	Provision of appropriate ventilation and monitoring for confined space working.	Main works contractor
MW-GEO6	ES Chapter 10, section 10.8.	<p>Hazardous substances:</p> <p>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 banded. 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.</p>	Agreement with water companies for the disposal of contaminated water.	Main works contractor
MW-GEO7	ES Chapter 10, section 10.8.	<p>Excavated materials management:</p> <p>To form part of the Soils Management Strategy, the main works contractor shall develop a:</p> <ol style="list-style-type: none"> Soils Handling Strategy, with reference to BS3882: 2015 Specification for Topsoil and the Construction Code of Practice for the Sustainable Use of Soils on Construction Site. This shall identify locations where archaeological in-situ preservation is required (refer to Cultural Heritage section) and consider areas to be returned to agricultural use; and 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. <p>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.</p> <p>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.</p> <p>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</p>	Development of, and adherence to, the Soils Management Strategy.	Main works contractor

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
		<p>earthworks such as landscaping and bunds.</p> <p>The re-use of tunnel arisings (and other excavated materials) 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.</p> <p>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.</p>		
MW- GEO8	ES Chapter 10, Section 10.8.	<p>Construction on or adjacent to land affected by contamination</p> <p>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:</p> <ul style="list-style-type: none"> 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; and 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. 	Implementation of the specified actions.	Main works contractor

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
MW- GEO9	ES Chapter 10, section 10.8.	<p>Underground gas monitoring:</p> <p>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.</p> <p>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.</p>	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.	<p>Water Management Plan:</p> <p>The main works contractor shall produce a Water Management Plan to include identification of watercourses and aquifers, and taking into account of 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. 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.</p>	The Authority approval of the Water Management Plan.	Main works contractor
MW- WAT3	ES Chapter 11, Section 11.8	<p>Site drainage:</p> <p>The main works contractor shall utilise sustainable methods for construction discharges including site drainage, surface runoff, and dewatering discharges. This includes discharge to water courses subject to water quality and rate of discharges and scour assessments. 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 obtained. Sufficient time will be made for the Environment Agency to issue permits in accordance with relevant legislation.</p> <p>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, 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.</p> <p>The main works contractor shall incorporate the following measures during the construction works:</p> <p>a) all temporary land-take will include adequate areas of land set aside for robust control</p>	Granting of any permits / consents (if required outside of the DCO). Adherence to the most current standards.	Main works contractor

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
		<p>measures, for example sustainable drainage control;</p> <p>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;</p> <p>c) water flows from sites will be limited during construction to existing runoff rates, unless otherwise agreed with the Environment Agency in accordance with relevant legislation; and</p> <p>d) the relevant sections of BS 6031: Code of Practice for Earthworks for the general control of site drainage will be followed.</p>		
MW-WAT4	ES Chapter 11, section 11.8.8	<p>Spill response:</p> <p>The main works contractor shall include spill response procedures in the Emergency Preparedness and Response Plan (refer to MW-G20).</p> <p>This will include a Pollution Incident Control Plan, as part of the CEMP, 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.</p> <p>Environment Agency guidance on pollution incident response planning will be reflected in the emergency plan.</p> <p>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).</p> <p>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). 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.</p>	<p>Production of the Pollution Incident Control Plan, in consultation with the identified relevant organisations.</p> <p>The Authority approval of the Pollution Incident Control Plan.</p>	Main works contractor
MW-WAT5	ES Chapter 11, section 11.8	<p>Pollution incident monitoring:</p> <p>The contractor shall have in place effective arrangements to investigate and provide reports on any potential or actual significant pollution incidents, including:</p> <p>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);</p> <p>b) contributory causes;</p> <p>c) adverse effects;</p> <p>d) measures implemented to mitigate adverse effects; and</p> <p>e) any recommendations to reduce the risk of similar incidents occurring.</p>	The Authority approval of the CEMP.	Main works contractor
MW-	ES Chapter 11,	Protection of watercourses:	Granting of any permits /	Main works contractor

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
WAT6	Section 11.8	<p>The contractor shall incorporate protection measures for works in or adjacent to watercourses in accordance with requirements set out by the Environment Agency. Insofar as it is not dealt with in the DCO, approval will be obtained in advance for all crossings of, diversions to, and work affecting watercourses from the Environment Agency. Sufficient allowance will be made for the Environment Agency to issue a flood risk activity environmental permit. Insofar as it is not dealt with in the DCO, appropriate protective provisions will be agreed with the Environment Agency for works under, over or within a river channel and within 8m of a non-tidal river.</p> <p>The main works contractor shall adopt measures to prevent the deposition of 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.</p> <p>The main works contractor shall incorporate the following measures during the construction works:</p> <ul style="list-style-type: none"> 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. 	<p>consents (if required outside of the DCO). Adherence to the most current standards.</p>	
MW-WAT7	ES Chapter 11, Section 11.8	<p>Control of pollution to waterbodies:</p> <p>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:</p> <ul style="list-style-type: none"> 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. 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). <p>The main works contractor shall consult with the relevant regulatory bodies regarding specific</p>	<p>Consultation with the Environment Agency where required (concrete batching plant). The Authority approval of the Water Management Plan.</p>	Main works contractor

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
		<p>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.</p> <p>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.</p> <p>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.</p> <p>The main works contractor shall incorporate the following measures during the construction works:</p> <ul style="list-style-type: none"> 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 refueling 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 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 Plan) and in particular at refueling areas. Spillage kits will also be kept with mobile bowsers and staff will be trained in their use; 		

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
		<p>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;</p> <p>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</p> <p>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.</p>		
MW-WAT8	ES Chapter 11, Section 11.8	<p>Dewatering and abstraction:</p> <p>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.</p> <p>The main works contractor shall be responsible for obtaining the necessary approvals and permits to enable and abstraction and discharge of pumped water in an approved manner.</p>	Granting of any permits / consents (if required outside of the DCO).	Main works contractor
MW-WAT9	ES Chapter 11, Section 11.7	<p>Ground treatment:</p> <p>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.</p> <p>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 areas subject to ground treatment and visual inspection of adjacent watercourses, where relevant.</p>	Approval of materials to be used from the Environment Agency.	Main works contractor
MW-WAT10	ES Chapter 11, section 11.7	<p>Groundwater Management Plan:</p> <p>The main works contractor shall develop a Scheme-wide Groundwater Management Plan), outlining how groundwater resources are to be protected in a consistent and integrated manner. The Plan shall be prepared in consultation with the Environment Agency and address:</p> <ol style="list-style-type: none"> Potential effects on groundwater (resources and quality) that fall outside other regulations such as the Environmental Permitting Regulations. An update to the Groundwater Risk Assessment for the final design and construction plan. The groundwater level and water quality monitoring and reporting programme. Development of baseline groundwater conditions and derivation of trigger levels and action levels/Mitigation/action plans for exceedances and accidents/incidents. 	The Authority approval of the Groundwater Management Plan.	Main works contractor
MW-WAT11	ES Chapter 11, section 11.7	<p>Management of impact on abstraction boreholes:</p> <p>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.</p> <p>The main works contractor shall recognise the rights of existing abstractors and consult them on</p>	<p>Consultation with abstractors / licence holders and the Environment Agency.</p> <p>Granting of any permits / consents (if required</p>	Main works contractor

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
		<p>measures to avoid or minimise loss or interruption of supply, or provision of alternative supplies. The Environment Agency will also be consulted through the permitting of discharges for the dewatering schemes required. The Environmental Permitting (England and Wales) Regulations 2016, as amended, apply to discharges of water to ground and surface waters that are controlled waters.</p> <p>The main works contractor shall, to limit and manage residual risk from groundwater pollution at abstraction points, apply the following precautionary actions, where applicable:</p> <ul style="list-style-type: none"> a) where determined, and agreed with the owners/operators or other abstraction license 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 license 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 (license 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. <p><u>Management of impact on Environment Agency monitoring borehole</u></p> <p>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.</p>	<p>outside of the DCO). Groundwater monitoring and reporting in accordance with the Groundwater Management Plan.</p>	
MW-WAT1 2	ES Chapter 11, section 11.8	<p>Flood Risk Management Plan:</p> <p>The main works contractor shall prepare a Flood Risk Management Plan to the Authority for approval, as part of the Water Management Plan. The plan will summarise:</p> <ul style="list-style-type: none"> a) any areas within Flood Zone 3, areas susceptible to groundwater flooding, and other flood risk sources, such as sewer flooding; b) any applications made, or likely to be made, for an environmental permit, 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 <p>The plan shall be developed following consultation with the Environment Agency.</p>	The Authority approval of the Flood Risk Management Plan.	Main works contractor

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
MW-WAT13	ES Chapter 11, section 11.8	<p>Flood Risk – general provisions:</p> <p>The main works contractor shall, where reasonably practicable, minimise works within the floodplain. Temporary compounds and haul routes will be located outside of EA Flood Zones 2 and 3 and primary overland flow paths wherever reasonably practicable.</p> <p>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.</p> <p>The main works contractor shall ensure that flood risk is managed safely throughout the construction and implementation period, and that all designs do not cause increased risk levels from those assessed in the Flood Risk Assessment (FRA) included in the ES (Appendix 11.5), and include the provision of a safe refuge during a flood event.</p> <p>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 FRA.</p> <p>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 details provided within the FRA. This will include consideration of potential flow paths within the site 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. If this is not possible, other appropriate protection measures will be incorporated.</p> <p>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.</p>	Implementation of stated measures.	Main works contractor
MW-WA14	DCO Requirement 10	<p>Surface water drainage:</p> <p>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.</p>	Works undertaken in accordance with Requirement 10.	Main works contractor
MW-WAT15	ES Chapter 11, Section 11.8	<p>Monitoring of water resources:</p> <p><u>General</u></p> <p>The main works contractor shall carry out regular monitoring to identify:</p> <ul style="list-style-type: none"> a) pollution risks that are unacceptably high; b) spillages and leakages; c) non-compliance with the CEMP; and 	Development of the identified monitoring requirements in consultation with the Environment Agency and other relevant bodies.	Main works contractor

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
		<p>d) suspected pollution incidences.</p> <p>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. The main works contractor shall also consult with the relevant regulatory body regarding the pollution incident control plan which will set out the measures to be implemented to address any adverse findings from the monitoring procedures during and following completion of construction works.</p> <p><u>Groundwater</u></p> <p>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 will be in defined within the groundwater management plan.</p>		
MATERIALS				
MW-MAT1	ES Chapter 12, Section 12.8	<p>Site Waste Management Plan (SWMP):</p> <p>The main works contractor shall, in accordance with industry good practice, develop and implement a SWMP to:</p> <ol style="list-style-type: none"> identify and record the types, quantities and destination of waste arisings from the Scheme in the SWMP; and report this information to The Authority on a periodic basis; and update the SWMP as appropriate. 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. 	The Authority approval of the SWMP.	Main works contractor
MW-MAT2	ES Chapter 12, Section 12.8	<p>Materials Management Plan (MMP):</p> <p>The main works contractor shall prepare a MMP in accordance with the CL:AIRE Definition of Waste: Code of Practice.</p>	The Authority approval of the MMP.	Main works contractor
MW-MAT3	ES Chapter 12, Section 12.8	<p>Recovery target:</p> <p>The main works contractor shall seek to achieve a recovery rate of 70% for construction and demolition waste (excluding excavated soil and stones).</p>	Recovery of 70% of construction and demolition waste	Main works contractor
MW-MAT4	ES Chapter 12, Section 12.8	<p>Secondary and recycled aggregates target:</p> <p>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.</p>	22% use of use of secondary and recycled aggregates (where feasible)	Main works contractor
MW-MAT5	ES Chapter 12, Section 12.8	<p>Waste storage on site:</p> <p>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</p>	Provision of storage containers as described.	Main works contractor

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
		any necessary permits or exemptions for on-site management of waste.		
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 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	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 and set out the detail for restoration on each specific area of farmland. The land restoration will proceed with full consultation between with the landowner/tenant and the main works contractor including inspection of works where applicable and in accordance with requisite site health and safety procedures.	Effective communication with landowners / tenants and the production of the SMS and adherence to measures within.	Main works contractor
MW-COM5	n/a	Monitoring of agricultural land: The main works contractor 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	Implementation of the specified actions.	Main works contractor

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
		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.		
TRAFFIC MANAGEMENT				
MW-TRA1	n/a	<p>Traffic Management Measures (general):</p> <p>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. 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.</p> <p>Temporary signs erected during the works will be consistent with the Traffic Signs Manual: Chapter 8: Traffic Safety Measures and Signs for Road Works and Temporary Situations. Traffic signs will 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.</p>	Provision of appropriate traffic management measures.	Main works contractor
MW-TRA2	DCO Requirement 9	<p>Traffic Management Plan (TMP):</p> <p>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.</p> <p>The main works contractor shall consult with the following agencies / organisations when developing the TMP:</p> <ul style="list-style-type: none"> 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 d) other relevant organisations regarding traffic management and control measures to be implemented to accommodate abnormal traffic. <p>The TMP shall include:</p> <ul style="list-style-type: none"> 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 the works on or adjacent to public roads; c) procedures to be followed for the temporary or permanent closure or diversion of roads 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) 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 NMU routes; f) procedures for informing local communities of all traffic management schemes in advance and the works; 	Works undertaken in accordance with Requirement 9. The Authority approval of the TMP.	Main works contractor

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
		<ul style="list-style-type: none"> g) measures to be implemented to reduce construction traffic impacts or impacts associated with over-parking on residential streets; h) 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; i) a register of applications for consents associated with temporary traffic management measures; and j) an organogram identifying the named Traffic Control Officer and their lines of reporting. 		
MW-TRA3	n/a	<p>Construction Workforce Travel Plan:</p> <p>The main works contractor shall prepare a Construction Workforce Travel Plan. The plan shall include:</p> <ul style="list-style-type: none"> a) identification of a travel plan coordinator and a description of their responsibilities; b) key issues to consider for each compound/construction site or group of sites; c) site activities and 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. 	The Authority approval of Construction Workforce Travel Plan.	Main works contractor
MW-TRA4	n/a	<p>Site Access Plan:</p> <p>The main works contractor shall develop a Site Access Plan (to be included within the TMP identifying site access and egress routes 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.</p>	The Authority approval of Site Access Plan.	Main works contractor
MW-TRA5	n/a	<p>Site Travel Plan:</p> <p>The main works contractor shall develop a Site Travel Plan (to be included within the TMP). 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.</p> <p>Access routes for construction traffic will be via special and trunk road network(s) and main roads on the local road network unless it is considered necessary for other local roads to be used. 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 will be kept informed of the timing of the works in advance.</p>	The Authority approval of the Site Travel Plan.	Main works contractor
MW-TRA6	n/a	<p>Traffic management measures:</p> <p>Where deemed necessary, following consultation, the main works contractor shall;</p> <ul style="list-style-type: none"> a) provide speed detection cameras at temporary traffic management schemes and undertake road 	Consultation with the relevant bodies and implementation of	Main works contractor

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
		<p>safety audits in accordance with DMRB;</p> <p>b) install CCTV cameras at agreed locations to monitor the traffic management schemes; and</p> <p>c) during construction on the line of the existing trunk road, operate a vehicle recovery system to minimise the impact of breakdowns or accidents on the flow of traffic.</p>	actions (if required).	
MW-TRA7	n/a	<p>Haul routes:</p> <p>The main works contractor shall provide haul routes through the works for use by construction vehicles.</p> <p>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.</p>	Provision of haul routes within the works.	Main works contractor
MW-TRA8	n/a	<p>Abnormal loads:</p> <p>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.</p> <p>Movement of abnormal loads is controlled by MW-G17.</p>	Development of the TMP in consultation with the identified agencies and organisations.	Main works contractor
MW-TRA9	n/a	<p>Temporary roads / accesses:</p> <p>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.</p> <p>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.</p>	The provision of suitable temporary roads and application / granting of required consents.	Main works contractor
MW-TRA10	n/a	<p>Mitigation for traffic management measures:</p> <p>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. This will take in account the particular needs of groups with protected characteristics as defined under the Equality Act 2010.</p> <p>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.</p>	Provision of the specified actions.	Main works contractor
MW-TRA11	n/a	<p>Monitoring of traffic management measures, traffic flows, and public services:</p> <p>The main works contractor shall outline a monitoring regime within the TMP, to include the below points:</p> <p>a) The main works contractor shall monitor traffic management schemes, traffic levels on roads 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</p>	Application of an appropriate monitoring regime and implementation of remedial actions (if required).	Main works contractor

Ref.	Source Ref.	Action / commitment (including specific location and any monitoring required)	Reporting criteria	Responsible person(s)
		<p>staff during traffic management works.</p> <p>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 to identify any changes in public transport passenger numbers as a consequence of service alterations.</p> <p>The main works contractor will provide information regarding any delays to traffic or public transport services due to construction works to The Authority and Wiltshire Council.</p>		

Table 1.4 Environmental Mitigation Schedule

Ref.	Source	Mitigation / commitment (including specific location and any monitoring required)	How the action is to be implemented / secured	Responsible person(s)
AIR QUALITY				
MS-AQ1	ES Chapter 5, Section 5.8	An appropriate mechanical ventilation system to manage air quality in the tunnel. A pollution monitoring system to monitor air quality in the tunnel to inform the use of the ventilation system.	Contractual requirement between The Authority and the main works contractor.	Main works contractor
CULTURAL HERITAGE				
MS-CH2	ES Chapter 6; Section 6.8	Longbarrow Junction and approach roads set in cutting.	DCO Requirement 8 DCO design.	Main works contractor
MS-CH3	ES Chapter 6; Section 6.8	a) Green Bridge Four located to provide visual and physical connectivity between the barrow groups at the western end of the WHS. b) Chalk grassland created on Green Bridge Four with the finished ground level replicating existing ground levels within limits of deviation.	a) DCO design b) DCO Requirement 8	Main works contractor
MS-CH4	ES Chapter 6; Section 6.8	Public Right of Way / Private Means of Access (PRoW/PMA) surface in WHS suitably coloured to be sympathetically integrated into the WHS landscape. PRoW/PMA in WHS to not have hard edging, surface markings, signage, lighting, benches, litter bins or other such street furniture.	DCO Requirement 8. DCO design	Main works contractor
LANDSCAPE				
MS-L1	ES Chapter 7; Table 7.5	Bunds and chalk grassland with intermittent scrub and trees to both sides of the new carriageway between SLAN3 and Green Bridge One.	DCO Requirement 8.	Main works contractor / Maintenance authority
MS-L2	ES Chapter 7; Table 7.5	Regrading of the earthworks and new chalk grassland to the south and east of Parsonage Down NNR.	DCO Requirement 8.	Main works contractor / Maintenance authority
MS-L3	ES Chapter 7; Table 7.5	Break out of the road surface of the redundant B3083 and planting of native species woodland between the redundant and realigned B3083, including native hedgerow along the western boundary, and creation of chalk grassland.	DCO Requirement 8.	Main works contractor / Maintenance authority
MS-L4	ES Chapter 7; Table 7.5	Woodland planting to the north of Scotland Lodge Farm between Green Bridge One and the realigned B3083 underbridge.	DCO Requirement 8.	Main works contractor / Maintenance authority
MS-L5	ES Chapter 7;	Regrading of landscape earthworks to integrate with the existing landform to the north of Winterbourne	DCO Requirement 8.	Main works contractor /

Ref.	Source	Mitigation / commitment (including specific location and any monitoring required)	How the action is to be implemented / secured	Responsible person(s)
	Table 7.5	Stoke, with a false cutting between Green Bridge One and the realigned B3083.		Maintenance authority
MS-L6	ES Chapter 7; Table 7.5	Bund on the B3083 underbridge to connect to the false cutting either side of the bridge.	DCO Requirement 8.	Main works contractor
MS-L7	ES Chapter 7; Table 7.5	False cutting and new native hedgerow along south side of the new A303 between the B3083 underbridge and the River Till viaduct.	DCO Requirement 8.	Main works contractor / Maintenance Authority
MS-L8	ES Chapter 7; Table 7.5	Woodland planting around the River Till Viaduct abutments.	DCO Requirement 8.	Main works contractor / Maintenance Authority
MS-L9	ES Chapter 7; Table 7.5	Regrading of the earthworks between the River Till viaduct and Longbarrow Junction, north and south of the new A303, with false cuttings and native hedgerows.	DCO Requirement 8.	Main works contractor / Maintenance authority
MS-L10	ES Chapter 7; Table 7.5	Replacement of existing hedgerow on the western edge of the realigned Byway WST06B, running north-south of Green Bridge Two, as well as along existing field boundary running parallel to the north of the new A303 / Green Bridge Two.	DCO Requirement 8.	Main works contractor / Maintenance authority
MS-L11	ES Chapter 7; Table 7.5	Retention or replanting of hedgerow along the northern boundary of the redundant A303 between Longbarrow Junction and the WHS.	DCO Requirement 8.	Main works contractor / Maintenance authority
MS-L12	ES Chapter 7; Table 7.5	Woodland planting adjacent to Longbarrow Junction.	DCO Requirement 8.	Main works contractor / Maintenance authority
MS-L13	ES Chapter 7; Table 7.5	Creation of chalk grassland adjacent to both sides of the retained cutting in the western part of the WHS.	DCO Requirement 8.	Main works contractor / Maintenance authority
MS-L14	ES Chapter 7; Table 7.5	Native hedgerows adjacent to the Longbarrow junction along the on/ off slip-roads, the A360 north and south links and the downgraded Winterbourne Stoke link.	DCO Requirement 8.	Main works contractor / Maintenance authority

Ref.	Source	Mitigation / commitment (including specific location and any monitoring required)	How the action is to be implemented / secured	Responsible person(s)
MS-L15	ES Chapter 7; Table 7.5	Regrading of landscape earthworks adjacent to Longbarrow Junction, including between Green Bridge Three and the edge of the WHS, and along the A360 south link road.	DCO Requirement 8.	Main works contractor
MS-L16	ES Chapter 7; Table 7.5	Retention or replanting of hedgerow along western boundary of broken out A360.	DCO Requirement 8.	Main works contractor / Maintenance authority
MS-L17	ES Chapter 7; Table 7.5	Creation of chalk grassland over the western and eastern cut and cover tunnel sections, with the finished ground level replicating existing ground levels within the limits of deviation.	DCO Requirement 8. DCO design	Main works contractor / Maintenance authority
MS-L18	ES Chapter 7; Table 7.5	Replacement planting around the north and south of the Countess Flyover slip roads.	DCO Requirement 8.	Main works contractor / Maintenance authority
MS-L19	ES Chapter 7; Table 7.5	Countess Junction to include earthworks within the centre of the roundabout and in front of the retained earth embankments with tree and shrub planting.	DCO Requirement 8.	Main works contractor / Maintenance authority
MS-L20	ES Chapter 7; Table 7.5	Woodland planting around Countess Junction and directly east of Countess Services.	DCO Requirement 8.	Main works contractor / Maintenance Authority
MS-L21	ES Chapter 7; Table 7.5	Creation of chalk grassland across the Scheme as shown in the Environmental Masterplan, except where alternative landscape treatments are proposed within the Environmental Masterplan.	DCO Requirement 8.	Main works contractor / Maintenance authority
BIODIVERSITY				
MS-B1	ES Chapter 8; Section 8.8	All the green bridges sown or planted with suitable chalkland plant species.	DCO Requirement 8	Main works contractor / Maintenance authority
MS-B2	ES Chapter 8; Section 8.8	Green Bridge One and Green Bridge Two to include bunds and chalkland planting.	DCO Requirement 8	The Authority / Maintenance

Ref.	Source	Mitigation / commitment (including specific location and any monitoring required)	How the action is to be implemented / secured	Responsible person(s)
				authority
MS-B3	ES Chapter 8; Section 8.8	Gaps in hedgerows leading to the B8083 underbridge to be filled and the hedgerow linked to existing woodland habitat.	DCO Requirement 8	The Authority / Maintenance authority
MS-B4	ES Chapter 8; Section 8.8	Cutting extending on both sides of the Scheme from east of the Green Bridge One to the B3083 bridge and continuing across the bridge east to where the Scheme is within cutting before crossing the Till valley.	DCO Requirement 8	Main works contractor
MS-B5	ES Chapter 8; Section 8.8	Mammal underpasses located as closely as reasonably practicable along known badger paths.	Contractual requirement between The Authority and the main works contractor.	Main works contractor
MS-B7	ES Chapter 8; Section 8.8	The road level on the River Till viaduct will be approximately 10m above the River Till where it crosses the river channel. Each deck of the viaduct will be approximately 14m wide and 210m in length. The vegetated banks to be retained during construction, wherever practicable. After construction of the viaduct, the area underneath near the River Till to be reinstated to its former use and fenced to protect the limit of the SAC.	DCO Requirement 8 Contractual requirement between The Authority and the main works contractor.	Main works contractor
MS-B8	ES Chapter 8; Section 8.8	Hedgerows that cannot be retained, either during construction or following landscaping activities, to be replaced or the gaps filled where necessary.	DCO Requirement 8	Main works contractor
MS-B9	ES Chapter 8; Section 8.8	Fencing to protected species habitat and to areas into which protected species are temporarily displaced.	Contractual requirement between The Authority and the main works contractor.	Main works contractor
NOISE AND VIBRATION				
MS-N1	ES Chapter 9, Section 9.8	Use of a noise absorbent finish to the walls at the entrances/exits of the tunnel and Green Bridge Four.	Contractual requirement between The Authority and the main works contractor.	Main works contractor
SOILS AND GEOLOGY				
MS-SG1	ES Chapter 10; Section 10.8	Road edge channels to intercept carriageway runoff with outfalls via a carrier pipe network to drainage treatment areas.	DCO Requirement 10.	Main works contractor
MS-SG2	ES Chapter 10; Section 10.8	To the west of the tunnel, infiltration basins to store and treat the runoff before discharging to ground. At Countess junction a series of linear ponds planted to attenuate and treat the highway runoff before outfalling to existing ditches, incorporating suitable mechanism to contain spillages of contaminants.	DCO Requirement 10.	Main works contractor

Ref.	Source	Mitigation / commitment (including specific location and any monitoring required)	How the action is to be implemented / secured	Responsible person(s)
ROAD DRAINAGE AND THE WATER ENVIRONMENT				
MS-RD1	ES Chapter 11; Section 11.8	Road edge channels to prevent runoff discharging directly to the River Till and River Avon or infiltrating the runoff to ground without treatment. Discharges of the drainage system to be outside any Source Protection Zones for licensed groundwater abstractions.	DCO Requirement 10.	Main works contractor
MATERIALS				
MS-M1	ES Chapter 12; Section 12.8	Deposition of excavated material on land to the east of Parsonage Down National Nature Reserve for landscape integration and creation of chalk grassland habitats	DCO Requirement 8 DCO design	Main works contractor
PEOPLE AND COMMUNITIES				
MS-PC1	ES Chapter 13; Section 13.8	New restricted byways on the north and the south side of the new alignment both tying in with PRow SLAN3, and a new segregated cycleway east from Winterbourne Stoke to the new Longbarrow Junction.	DCO design	Main works contractor
MS-PC2	ES Chapter 13; Section 13.8	Provision of Green Bridges, one of which facilitates the realignment of the existing WSTO6B PRow and two of which each provide a new NMU route.	DCO design	Main works contractor
MS-PC3	ES Chapter 13; Section 13.8	Provision of access to severed agricultural land.	Agreements with landowners. DCO design	Main works contractor

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